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Birth Practice Beliefs of Undergraduate Nursing Students

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BIRTH PRACTICE BELIEFS OF UNDERGRADUATE NURSING STUDENTS

by

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Abstract

BIRTH PRACTICE BELIEFS OF UNDERGRADUATE NURSING STUDENTS

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Spontaneous labor and normal birth are associated with optimal maternal-fetal outcomes for healthy women with low-risk pregnancies. Despite that fact, medicalized management of childbirth predominates the maternity health culture of the United States. Childbirth outcomes have been linked to the care provided by intrapartum nurses, and that care has been influenced by nurses' beliefs about birth. As potential future intrapartum nurses, it is important to explore if nursing students who have completed a maternity nursing course have medicalized or normal birth beliefs. No studies were found in which undergraduate nursing students and their birth practice beliefs were examined after completing their maternity courses. Ajzen's Theory of Planned Behavior was used to guide this study. There were four research questions:

1. What are the birth practice beliefs of undergraduate nursing students?
2. Do select demographic characteristics such as age, gender, region, and personal birth and education experiences predict an undergraduate nursing student's birth practice beliefs?
3. How do undergraduate nursing students describe their beliefs about the birth process?
4. How do nursing students interpret the role of the intrapartum nurse?

A descriptive correlational research survey design with convenience and snowball sampling methods was used for this study. Data were collected using the Student Nurse's Beliefs Related to Birth Practice (SNBBP) instrument and analyzed using descriptive statistics, multiple regression, and content analysis.

Keywords: physiological childbirth, medicalized childbirth, normal childbirth, nursing students, birth practice beliefs

Chapter One

Introduction

In 2017, there were 3,855,500 births reported in the United States (Martin, Hamilton, Osterman, Driscoll, & Drake, 2018). Of those births, 62,228 were reported to have taken place outside of the hospital in homes or birthing centers (MacDorman & Declercq, 2019). This means that over 3.7 million births took place in hospitals where medicalized, interventive practices are the standard.

Nursing students attend their maternity nursing lectures and experience associated clinical rotations, predominantly in the hospital setting. Some students have previous life experience and opinions about childbirth; others have given little thought to the matter until their maternity coursework begins. In either case, they begin to develop their views on childbirth which will ultimately be displayed in the care they will provide after their transition to professional practice (McAlister, 2019). When conceptualizing birth beliefs on a continuum, childbirth can be viewed as a normal physiological process or as a medical condition filled with risk and in need of interventive care.

Background

A physiological, or normal birth, is defined as a birth consisting of labor and delivery that does not use medical interventions such as episiotomy or analgesia (Wong, He, Shorey, & Koh, 2017). Labor for a full-term pregnancy is described as a sequence of hormonal shifts that are mediated by the fetus, placenta, fetal membranes, and maternal endocrine system (Lothian, 2014a). Labor support carried out by intrapartum nurses has the potential to promote a normal,

physiological birth and decrease the rates of cesarean births (Lothian, 2014b; Sauls, 2006). Intrapartum nurses provide most of the care for women during labor and birth, and the attitudes that they have towards childbirth can be reflected in their care which can affect patient outcomes (Barrett & Stark, 2010; Levine & Lowe, 2014; Payant, Davies, Graham, Peterson, & Clinch, 2008; Sauls, 2007).

Sanchez-Birkhead, Callister, Fletcher, Holt, and Curtis (2012) explained that experienced nurses are concerned that most new graduates do not come into clinical practice prepared to adequately provide care that supports normal birth such as comfort measures, emotional and physical support, and continuous teaching for women throughout the labor and delivery experience. Although normal, physiologic birth for low-risk women has been associated with better maternal-fetal outcomes, the prevailing model of childbirth management in the United States (US) is medicalized and interventive (Sanchez-Birkhead et al., 2012). Medicalized childbirth is thus the predominating model that nursing students experience during their clinical rotations. Hospitals are equipped with the latest technology to care for high-risk births, and to the uninformed consumer the availability of this equipment has become synonymous with expert care (Sanchez-Birkhead et al., 2012).

Over the past 30 years, the paradigm of evidence-based practice has become widely espoused throughout the academic and clinical health care communities. The American Association of Colleges of Nursing (AACN, 2008) has suggested that it is essential for student nurses, whether in undergraduate or graduate studies, to engage in the best practices and to be equipped with the skills to identify gaps in evidence-based practices and make appropriate changes. The AACN focus on teaching evidence-based care may create the impression that students learn about normal, physiologic birth, the associated optimal maternal-fetal outcomes in

low-risk pregnancies, and what nurses can do to provide care that supports this childbirth model (McAlister, 2019). Unfortunately, the medicalized model is the predominant model that students see practiced during their maternity clinical rotation (Sanchez-Birkhead et al., 2012), so some nursing faculty are concerned that teaching normal, physiologic birth may be disingenuous and serve to confuse students.

Statement of the Problem

Spontaneous labor and normal birth are associated with optimal maternal-fetal outcomes for healthy women with low-risk pregnancies, but medicalized management of childbirth predominates the maternity health culture of the US. The care that intrapartum nurses provide has been linked to childbirth outcomes, and that care has been influenced by nurses' beliefs about birth. As potential future intrapartum nurses, it is important to explore nursing students' beliefs about childbirth after completion of their maternity nursing course. No studies were found in which undergraduate nursing students and their birth practice beliefs after completing their maternity courses were examined.

Purpose of the Study

The purpose of this study was to explore the birth beliefs of undergraduate nursing students. Birth beliefs on a continuum of normal to medicalized were explored after successful completion of their maternity nursing course. Demographic characteristics were also examined to determine if certain characteristics predict birth beliefs.

Theoretical Framework

This research was guided by Icek Ajzen's theory of planned behavior (TPB; 1991). This is an extension of the theory of reasoned action in which a person uses information in a reasonable way to come to behavioral decisions, and the resulting behaviors are observable and

measurable. In the TPB, an individual's intention to perform a certain behavior can be predicted by looking at that same individual's attitude toward the behavior, the related subjective norms, and their perceived behavior control (Ajzen, 1991). The relationships among the concepts of the theory of planned behavior are shown in Figure 1.

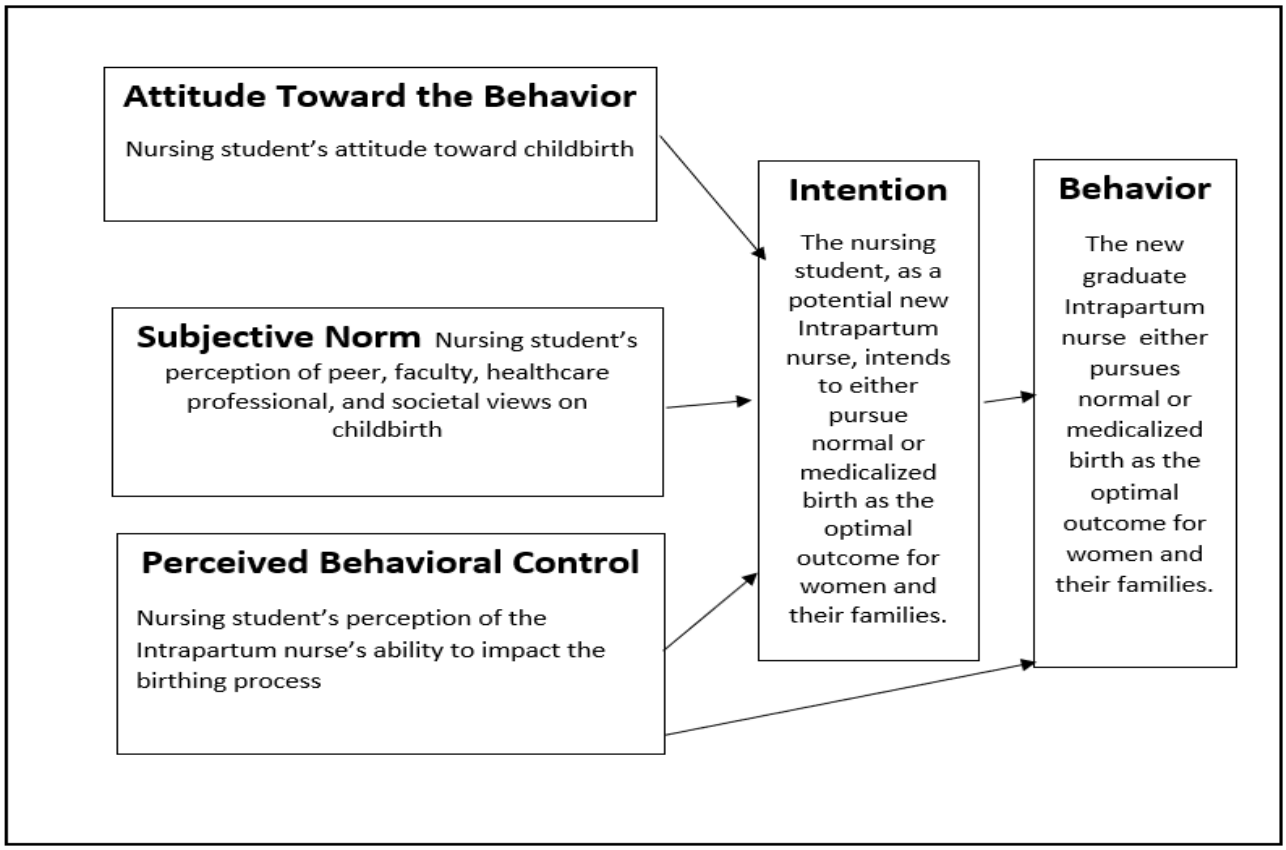

Figure 1. Theoretical Framework: The Theory of Planned Behavior (Adapted)

According to Ajzen (1991), the first determinant of intention is the attitude toward the behavior. Attitude is the degree to which a person has a favorable or unfavorable assessment toward an identified behavior. Simply put, an attitude is a person's beliefs about the

consequences of a behavior (Payant et al., 2008). The second determinant of intention is subjective norms (Ajzen, 1991). This refers to the perceived social pressures that a person feels to make him or her either engage or not engage in a behavior (Payant et al., 2008). If peers are perceived to believe that a certain behavior is unfavorable, then the person is unlikely to perform that behavior as well. The final determinant of intention is perceived behavioral control (Ajzen, 1991). Perceived behavioral control describes an individual's perception about the challenges surrounding performing a certain behavior (Payant et al., 2008). Ajzen (1991) explained that perceived behavioral control may also reflect past experiences as projected barriers and obstacles. In summary, Ajzen (1991) explained that if an attitude and subjective norm are favorable, then the perceived behavioral control will be great and there is a strong likelihood that an individual will intend to perform a certain behavior.

Undergraduate nursing students' attitudes about childbirth may already be formed to some extent prior to their enrollment in nursing school. According to Levine and Lowe (2014), personal experiences of pregnancy and childbirth, or experiences with friends and family members influence formation of birth beliefs. They explained that regardless of the presence or absence of preconceived birth beliefs, as the maternity nursing didactic and clinical coursework unfold, students' perspectives on birth are either formed, validated, or reconsidered. Students will be influenced not only by this new knowledge and unique clinical experiences but also by interactions with their peer group and faculty as new information and experiences are assimilated. Levine and Lowe (2014) explained that after students have developed or refined their beliefs, they will be aligned with either the medicalized or normal approach to childbirth.

Because the beliefs that students develop are likely to remain intact after they enter professional practice, consistent with Ajzen's TPB (1991), the behaviors of new intrapartum

nurses will be influenced by their birth beliefs. Both the medicalized and normal approaches to childbirth are inherently associated with control, but in juxtaposition. The medicalized approach to birth empowers health care providers and limits the control of the woman. The normal approach puts the woman in charge of her childbirth experience with the health care provider in the role of expert consultant and guardian of safety. Experienced intrapartum nurses know and Wong et al. (2017) concluded from their integrative review of the literature, that nurses can wield control working under both models of childbirth management.

Research Questions

Four research questions about undergraduate nursing students and their birth beliefs after successfully completing their maternity nursing courses were explored in this study.

1. What are the birth practice beliefs of undergraduate nursing students?
2. Do select demographic characteristics such as age, gender, region, and personal birth and education experiences predict an undergraduate nursing student's birth practice beliefs?
3. How do undergraduate nursing students describe their beliefs about the birth process?
4. How do nursing students interpret the role of the intrapartum nurse?

Definitions of Study Variables

Table 1 includes the main terms and variables within the study. They are conceptually and operationally defined.

Table 1. Conceptual and Operational Definition of Study Variables

Variable	**Conceptual Definition**	**Operational Definition**
Birth Beliefs	A medicalized belief is a belief that birth is a pathological process to be monitored by technological means in a clinical environment. A normal birth belief is a belief that birth is a	Intrapartum Nurse's Beliefs Related to Birth Practice (IPNBBP) is a 28-item instrument that is used to identify birth beliefs that are either medicalized or are normal. Items are rated on a

Table 1 (continued)

Variable	Conceptual Definition	Operational Definition
	physiological process that occurs spontaneously and is different for each woman. Interventions are not technologically based but are supportive (Adams & Sauls, 2014b).	6-point Likert scale. Higher scores (112-168) indicate a belief that is more aligned with normal birth and lower scores (28-111) indicate a belief that is more aligned with medicalized birth. There are 2 sub-scales related to medicalized birth beliefs and normal birth beliefs. Medicalized belief responses must be reverse scored. On the medicalized sub-scale, there are 11 items (score range 11-66) and 17 items for the normal birth beliefs (score range 17-102). There are also two open-ended questions about specific birth practice beliefs and the role of the intrapartum nurse (Adams, 2014; Adams & Sauls, 2014b).
Completion of the maternity nursing course	Having experienced both the didactic and clinical components of a maternity nursing course.	Student self-report that the maternity class has been completed on the demographic section of the Modified IPNBBP
Educational experience	Didactic and clinical maternity course work and interactions with an obstetrician and/or a Certified Nurse Midwife/Certified Midwife.	Demographic section of the Modified IPNBBP
Role of the intrapartum nurse	Providing labor support (e.g. physical comfort measures, emotional support, information and instruction, and advocacy; Sauls, 2006).	Qualitative section of the Modified IPNBBP

Summary

This chapter contains a discussion of the background of the problem and the basis for the proposed study. For low-risk pregnancies, the normal, physiologic approach to childbirth

produces optimal outcomes for women and their newborns. Nurses' birth beliefs influence the care they provide and that care, in turn, influences childbirth outcomes. This study fills a gap in the literature about the childbirth beliefs of nursing students after having completed their maternity nursing course. The research questions of the study, the theoretical framework that guided the study, and the conceptual and operational definitions of variables were presented in this chapter.

Chapter Two

Review of the Literature

There has been abundant research on normal, physiologic childbirth and its multiple benefits for mothers and infants, but medicalized childbirth is the most common model followed in the US. This chapter includes a review of research literature about the contrasting approaches to birth: normal and medicalized. The literature pertaining to maternity nursing education and birth beliefs is also discussed. The gap in the literature is explained that supported the need for this study of birth practice beliefs of undergraduate nursing students.

Normal, Physiologic Birth

Within the paradigm of normal birth, pregnancy and childbirth are viewed as natural, developmental life experiences for a healthy woman. A normal, physiologic birth is defined as a birth in which the mother is experiencing a low-risk pregnancy, has spontaneous onset of labor that progresses with minimal medical interventions, and vaginally births a full-term infant; the mother and newborn are not separated so that breastfeeding is initiated shortly after birth (Lothian, 2014a; Sanchez-Birkhead et al., 2012; Wong et al., 2017). Although birth is an intricate process, it can occur without interventions; the only intervention that should take place is to adhere to medicine's fundamental principle of first doing no harm (Calik, Karabulutlu, & Yavuz, 2018). In a review of literature, Lothian (2014b) described the six care practices identified by Lamaze International in 2004 that promote the physiologic birth process: allowing labor to start on its own, freedom of movement during labor, continuous labor support, spontaneous pushing in non-supine positions, not separating the mother and baby after birth, and avoiding use of routine interventions.

Allowing labor to start on its own decreases the need for analgesia, epidural anesthesia, and neonatal resuscitation, and there is a reduced risk of cesarean section or the use of instruments to aid in vaginal delivery (Amis, 2014). Although obstetricians manage most US births, care by midwives has been associated with an increased likelihood of women achieving a spontaneous vaginal delivery (Wong et al., 2017).

Wong et al. (2017) explained in their literature review that it is common practice for women laboring in the hospital to be in bed. When laboring women have the freedom of movement, they can position their body in different ways that are not possible when they are bed-bound. This freedom not only helps women cope with the pain of labor, but it also facilitates uterine contractility, usually helping labor progress more efficiently, thus shortening the length of labor (Romano & Lothian, 2008).

Continuous labor support consists of three elements of supportive care that were explained by Sauls (2006): emotional support, tangible support, and informational support. Emotional support includes encouragement, reassurance, and continual physical presence. Tangible support includes physical comfort measures (massages, cool compresses, ice chips). Informational support includes instructions, advice, and feedback. Continuous labor support has been shown to contribute to the likelihood of normal, physiologic birth, in part by reducing laboring women's anxiety. Anxiety in labor can produce hormones that can reduce blood flow to the uterus and cause labor to slow down, neither which facilitate fetal well-being (Romano & Lothian, 2008).

Spontaneous pushing in an upright position decreases both the amount of pain experienced by women in labor and the incidence of abnormal fetal heart rate (Hofmeyr et al., 2018). Non-supine positions such as squatting, opens the pelvis and allows more room for the

baby to descend the birth canal (Romano & Lothian, 2008). Other benefits of non-supine positions are decreased length of the second stage of labor and higher infant Apgar scores (Jahdi, Shahnazari, Kashanian, Farahani, & Haghani, 2011).

Keeping mothers and their baby together after birth, another hallmark of a normal birth experience, has many benefits. Greydanus-Rutgers and Meyers (2015) described the benefits of skin-to-skin contact that can only occur when mothers and babies are kept together. Infants cry less when being kept warm by skin-to-skin contact with their mother instead of warming in a crib. Temperature control and accessibility of breast milk are two major benefits of skin-to-skin contact (Sanchez-Espino, Zuniga-Villanueva, & Ramirez-Garcia Luna, 2019). During this period of skin-to-skin bonding, infants are also exposed to their mother's normal bacteria, thus lowering newborns' risk of acquiring a hospital-associated infection (Greydanus-Rutgers & Meyers, 2015). Nyqvist (2016) explained additional benefits of this skin-to-skin contact as including that infants' sleep is regulated, bonding and attachment are enhanced, and parental stress and depression are reduced.

Medicalized Birth

In general, medicalization is a process by which non-medical and social problems are defined and treated as medical problems (Mobarakabadi, Najmabadi, Tabatabaie, & Esmaily, 2017). Brubaker and Dillaway (2009) described medicalization as a process during which behaviors or conditions take on medical meanings or are defined in terms of health or illness. During this process of medicalization of childbirth, low-risk mothers are treated as medical concerns (Mobarakabadi, Najmabadi, & Tabatabaie, 2015). In other words, childbirth is not seen as a physiological process but as a condition that needs to be treated by medical interventions. These interventions have become routine, but when they are implemented in low-risk situations,

they may increase risk for both women and their infants (Mobarakabadi et al., 2015). Most of these interventions are widely practiced and accepted as standard care under the medicalized model of birth. Eating and drinking restriction, intravenous fluids, continuous electronic fetal monitoring, induction, or augmentation of labor, and epidural analgesia are among the most common of these interventions (Lothian, 2014a; Mobarakabadi et al., 2015; Mobarakabadi et al., 2017).

Obstetricians routinely manage low-risk as well as high-risk births with a similar predisposition to use of interventions (Johanson, Newburn, & Macfarlane, 2002; Preis, Lobel, & Benyamini, 2019). Brubaker and Dillaway (2009) surmised that the natural processes that occur in women such as childbirth, pregnancy, conception, menstruation, menopause, and breastfeeding have, over time, become socially constructed as pathological, abnormal, and unnatural, which at the very least need to be monitored due to men's control of the practice of science, development of technology, and establishment of modern medicine. This attitude of medicalization is associated with increased dependence on more technology, surgical procedures, and medication use (Mobarakabadi et al., 2015). Other medicalized interventions such as fetal monitoring, artificial rupture of membranes, cesarean sections, epidural analgesia, labor induction and augmentation have increased in use or implementation (Lothian, 2014a; Mobarakabadi et al., 2015). Calik et al. (2018) explained that indiscriminately using medical interventions, such as enema, perineal shaving, routine rupture of membranes, and frequent vaginal examinations when they are not needed can disrupt the natural process of labor and cause complications such as ketosis, dehydration, prolonged labor, postpartum hemorrhage, hypoglycemia, restriction of options for subsequent births, and longer hospitalization periods. Tari (2019) suggested that even if unnecessary interventions do not lead to maternal-fetal

morbidity or mortality, they can result in lasting psychological damage to the mother related to perceived loss of autonomy and human dignity. It is therefore a possibility that teaching or guiding students into having a more medicalized birth belief may introduce a potential for harm to mothers and infants, which highlights the need for more research about formation of birth beliefs.

Nursing Education

Nursing faculty face multiple challenges when teaching undergraduate nursing students about physiologic childbirth in maternity courses (Sanchez-Birkhead et al., 2012). These challenges include the lack of opportunities for placing students in birthing centers for their clinical experiences, incongruence between didactic education about physiologic birth when clinical experiences in hospitals include mostly medicalized care, limited support in clinical sites for the evidence-based benefits of physiologic birth, and limited research on educational strategies for teaching maternal-newborn nursing. Raman et al. (2019) also attributed the difficulties of teaching maternity nursing to the complexity of healthcare, nursing faculty shortages, limited clinical placement areas, and increased student admission. They proposed substituting 25% of clinical hours with high fidelity simulation, which can be as effective as traditional clinical training in acquisition of knowledge and clinical competency in students.

Besides the difficulties nursing faculty face in educating undergraduate nursing students about physiological births, Mullen and Murray (2002) explained the importance of understanding the crucial role of nurse clinicians as role models for student learning in clinical settings. Students are vulnerable at this time because the professional behavior of the clinicians is accepted as the norm even if those behaviors are less than ideal (Mullen & Murray, 2002). This concept can be applied to students' experiences when learning about normal or medicalized birth

with the influences of faculty, clinicians, and opportunities in clinical areas. If students are exposed to more medicalized interventions and are educated by clinicians who implement these same interventions, then those students are more likely to carry out medicalized interventions despite their knowledge of normal birth.

The Gap in the Literature

Information about the decrease in normal births, the increase in and effects of the medicalization of childbirth, and the difficulties that exist in educating students about maternity nursing has been reported in the literature. There is a gap in the literature concerning how undergraduate nursing students perceive childbirth and the role of the intrapartum nurse upon completion of their maternity nursing course. We know that birth beliefs of an individual labor nurse influence the care provided and ultimately the outcome of birth. It is crucial to understand if schools of nursing are creating a workforce that values the evidence-based pursuit of normal birth for healthy women.

Summary

Normal, physiologic labor and birth are spontaneous events through which the woman delivers her infant with little or no interventions. Medicalized childbirth uses medical interventions routinely even when unnecessary on low-risk level patients. Providing maternity nursing education is challenging because the research evidence supporting normal birth is not readily used in US hospitals. Most students' maternity care experiences are therefore within the medicalized model of birth. It is anticipated that the research findings may suggest that nursing students' birth beliefs are more closely aligned with the medicalized model of childbirth. If so, this will highlight the need for nurse educators and nurse researchers to collaborate on ways to

facilitate students' understanding that for low-risk women, supporting normal, physiologic birth is evidence-based maternity nursing care.

Chapter Three

Materials and Methods

This chapter includes an overview of the methodology of the study. The purpose and design of the study, data collection methods, and statistical analysis are described. Information about the protection of human subjects as well as the instrument and its reliability and validity are presented.

Purpose and Design of the Study

The purpose of this study was to determine if undergraduate nursing students form a medicalized or normal birth belief after successfully completing maternity nursing courses. Demographic characteristics were explored to determine if there were any predicting factors that may have influenced acceptance of one belief over the other. Specific birth practice beliefs were also investigated along with how these students interpreted the role of intrapartum nurses. A descriptive correlational study design with an online instrument was used. This design was appropriate for the study because the goal of a descriptive correlational research design is to describe the relationships between variables instead of inferring a causal connection (Lappe, 2000).

Methods

Sample

The sample was collected through convenience and snowball sampling. The population consisted of nursing students in prelicensure nursing programs. The nursing students were recruited mainly from the National Student Nurses' Association (NSNA) after the research request approval was received (see Appendix A). To obtain approval to recruit their members, NSNA required a copy of the university institutional review board (IRB) acceptance,

documentation of successful proposal defense, survey questions, and the introductory email participants would receive. After approved, a monetary fee of $350 was required to broadcast the link to NSNA members. The NSNA members were also encouraged to share the link to the instrument with other student nurses. An incentive of $50 to a popular online retailer was offered in a random drawing for participants.

Students were eligible for participation in the study if they were (a) age 18 years or older, (b) enrolled in a prelicensure nursing program, (c) able to read and write English, (d) able and willing to complete an instrument online, and (e) had completed maternal nursing content. There were no exclusion criteria.

The sample size needed for the study was determined by using G*Power software version 3.1.9.4. The sample size of 138 was required given a power of .95, alpha of .05, and an effect size of .15, with five predictors: age, gender, region, personal birth experiences, and educational experiences. A total sample of 152 participants was targeted to allow for the potential that some students may not complete the instrument.

Protection of Human Subjects

The study proposal was approved by the University of Texas at Tyler IRB (see Appendix B). Upon notification of the online instrument, the potential subjects had the option to read the requirements, risks, and benefits of participating in the study. Full disclosure of the purpose of the study, the data collection procedures, participants' rights to privacy, the information that participation could be withdrawn at any time without penalty, and the researcher's contact information were provided before consent was requested. Completion and submission of the online instrument was considered full consent. The only risk to participants was the potential for a breach in confidentiality after completing the instrument. This risk was minimized by not

attaching identifying information to the results of the data collection and by requiring a password to gain access. There were no direct benefits to participants. Indirectly, participation in this research may benefit future nursing students, faculty, and expecting mothers and their infants when receiving care, which may include themselves or family members.

Instrument/Measures

Student Nurse's Beliefs Related to Birth Practice (SNBBP)

The Student Nurse's Beliefs Related to Birth Practice (SNBBP) is a 28-item instrument that is used to identify birth beliefs that are either medicalized or normal (see Appendix C). It was designed in collaboration with the author and based on the Intrapartum Nurse's Beliefs Related to Birth Practice instrument (Adams, 2014). There are three sections of the SNBBP. The first section consists of demographic questions and solicits information about age, gender, race, region of the US, personal birthing experiences, and nursing education. The second section of the instrument contains questions related to normal and medicalized birth beliefs. Items are rated on a 6-point Likert scale in which higher scores (112-168) indicate normal birth beliefs and lower scores of (28-111) indicate medicalized birth beliefs (Adams, 2014). Responses to the items representing medicalized birth beliefs must be reverse scored (Adams, 2014). The third section includes two open-ended questions intended to elicit perspectives about birth beliefs regarding the birth process and the role of intrapartum nurses. In creating the demographic section of the SNBBP, items that were only germane to nurses such as degrees, certifications, continuing education, and work environment were deleted from the IPNBBP. Items appropriate for student nurses were added such as type of degree pursued and educational experiences including didactic, clinical, and simulation. Only minor changes were made to two of the 28

items. The term uterine tachysystole was defined and "labor curve assessment" replaced Friedman's Curve.

Reliability and validity of the IPNBBP have been previously reported by Adams and Sauls (2014b). The IPNBBP had a Cronbach's alpha of 0.797, which supported its reliability. The IPNBBP had a positive relationship with the Labor Support Questionnaire 1 (r = 0.48), which supported convergent validity of the IPNBBP. The Cronbach's alpha of 0.82 for the medicalized birth beliefs subscale and 0.78 for the normal birth beliefs subscale supported construct validity of the IPNBBP. Because the SNBBP so closely resembles the constructs of the IPNBBP it was appropriate for testing in the student population.

Although the Nurse Attitudes and Beliefs Questionnaire Revised (NABQ-R) is another instrument that measures attitudes and beliefs about childbirth, the IPNBBP was chosen as a model for the SNBBP because it measures both normal and medicalized attitudes toward childbirth. The NABQ-R is a 42-item instrument that measures nurses' attitudes and beliefs about physiological childbirth in six theoretically derived domains which include primary patient of concern, childbirth interventions, safety of birth, childbirth technologies, the laboring woman's role, and the nurse's role (Levine & Lowe, 2015). More information was needed that the NABQ-R does not provide for the intended purposes of this study. In addition, the SNBBP is based on the same theoretical framework as the IPNBBP, the TPB (Adams & Sauls, 2014a). The IPNBBP also had the additional advantage in that it was developed for the potential purposes of assessing birth beliefs of current and potential employees, as a self-assessment tool for nursing students, and for other educational purposes in the future to improve birth outcomes (Adams & Sauls, 2014b).

Data Collection

With the assistance of the executive director of the NSNA, the link was distributed via email to approximately 60,000 members (see Appendix E). The email included an invitation for the students to participate in the study along with the study purpose, procedures, and risks and benefits of participating in the study. Prelicensure nursing students could choose to access the link in the email and proceed with completion of the SNBBP through the Qualtrics online platform. The participants also had the option of submitting their email addresses for a chance to win the gift card incentive. They were also reminded that their identities were kept confidential and any personal information provided was password-protected. The survey was open for six weeks. The participants were sent a reminder to complete the survey after six days if the initial email was not opened.

Data Analysis

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). The information gathered from the instrument was coded and uploaded into the software for analysis. Descriptive statistics were used to describe the sample and birth beliefs. Multiple regression was used to explore the relationship between the normal or medicalized birth beliefs and five predictors: age, gender, region, personal birth experience, and educational experiences. Multiple regression is used to investigate two or more explanatory variables which can be either categorical or continuous (Sedgwick, 2013). Statistical significance was set at $p < .05$.

Content analysis was used for the analysis of the two open-ended questions in section three of the instrument in which students were asked about their specific beliefs about the birth process and the role of the intrapartum nurse. Content analysis was used to explore large

amounts of textual information without making assumptions and to determine patterns and their relationships (Vaismoradi, Turunen, & Bondas, 2013). According to Vaismoradi et al. (2013), inductive content analysis is well-suited for analysis of sensitive phenomena of nursing about which not much is known.

Procedures to Control Rigor

Meticulous records were kept ensuring that the data were interpreted consistently. The intention to recruit from the NSNA membership ensured that participants came from a variety of regions and backgrounds to achieve heterogeneity of the sample. The G*Power software calculation suggested a sample of 138 participants. However, to avoid a type II error in the data analysis, a target sample size of 152 was determined to avoid potential loss of power due to the possibility of students not finishing the instrument. To ensure trustworthiness in handling the qualitative data, the preparation phase, which includes the data collection method, sampling strategy, and the selection of the unit of analysis, was carefully planned to ensure that the research questions would be answered (Elo et al., 2014).

Summary

The study's purpose and methods including design, sample, data collection, and data analysis procedures were presented in this chapter. Information about the instrument and the protection of human subjects were described. This chapter was concluded with a description of procedures to control the rigor of both the quantitative and qualitative areas of the study.

Chapter Four

Results

This chapter includes the study findings after the data were uploaded to the Statistical Package for the Social Sciences (SPSS). The results include descriptive data for the population, bivariate and multivariate analysis of quantitative data to answer the research questions. Following the presentation of quantitative results, the two open-ended questions are examined using content analysis to determine the trends and patterns of the undergraduate students' beliefs about the birth process and the role of the intrapartum nurse in the birth process.

Descriptive Analysis

There was a total of 824 responses from the members of the National Student Nurses Association (NSNA) who responded to one of the two emails sent with the link to the Qualtrics instrument. Of those 824 responses, it was found that 819 consented to the survey, and 388 of those participants had also completed the demographics section. After determining which of the remaining participants had completed at least 75% of the actual instrument, it was determined that (N = 385). Table 2 and Table 4 contain the descriptive data for the participants and their mean scores for the Student Nurse's Beliefs Related to Birth Practice (SNBBP). The sample consisted largely participants who were female (n = 357), White/Caucasian (n = 244), with a mean age of (M = 28.87). Descriptive questions also included information about participants' personal delivery experiences which were labeled "select all that apply," and may contain multiple responses from the same participant (see Table 3).

Table 2**.** Descriptive Statistics- Gender, Race, Region, Personal Birth and Educational Experiences

Demographic Variable	**Frequency (*f*) N = 385**	**Percent (%)**
Gender		
Male	28	7.3

Table 2 (continued)

Demographic Variable	Frequency (*f*) N = 385	Percent (%)
Female	357	92.7
Race		
White/Caucasian	244	63.4
Black/African American	26	6.8
Hispanic/Latino	54	14.0
American Indian/Alaskan Native	2	.5
Pacific Islander	9	2.3
Two or more races	19	4.9
Other	30	7.8
Region		
Midwest	86	22.3
Northeast	77	20.0
Southeast	99	25.7
Southwest	34	8.8
West	88	22.9
Nursing Program		
ADN	80	20.8
BSN	303	78.7
Didactic Portion of Maternity Course		
Face-to-face	234	60.8
Online	71	18.4
Hybrid	80	20.8
Witnessed Obstetrician Providing Care in Clinical Setting		
Yes	294	76.4
No	89	23.1
Witnessed Certified Nurse Midwife &/or Certified Midwife Provide Care in Clinical Setting		
Yes	146	37.9
No	238	61.8
Maternity Course Included Labor and Delivery Simulation		
Yes	320	83.1
No	64	16.6
Had a Certified Nurse Midwife/Certified Midwife as maternity nursing faculty for clinical &/or didactic content		
Yes	168	43.6
No	215	55

*Case numbers may vary due to missing data

Table 3. Descriptive Statistics- Participants' Cumulative Birth Experiences: Mode of Delivery, Delivery Location, and Perception of Delivery

Delivery Experience	**Frequency (*f*) N = 127**
Mode of Delivery	
Vaginal	103
Cesarean Section	40
Forceps	4
Vacuum Extraction	5
Location of Delivery	
Home	6
Hospital	126
Freestanding Birthing Center	4
Other	7
Perception of Personal Delivery	
Positive	107
Negative	29
No Opinion	2
Other	15

Table 4. Descriptive Statistics – Age

Age (ranging from 18-65 years)	
Mean	28.87
Median	26
Mode	22

Table 5 displays the mean scores of the 28 items of the SNBBP and the median, mode, and standard deviation. The mean score was 124.94 showing that the beliefs align with the normal birth belief since these scores range from 112-168 and the medicalized birth belief has a score range of 28-111. There were no missing values, all 385 participants responded to all 28 items.

Table 5. Mean, Median, and Mode of the SNBBP Scores

IPNBBP Scores (28 items)	
Mean	124.94
Median	126.00
Mode	126.00
Std Deviation	11.74

The demographic section of the instrument included questions about the students' exposure to several situations and interventions within their individual maternity clinical rotations. According to Table 6, continuous fetal monitoring was the most commonly encountered intervention (n = 302) while home births (n = 6) and lay midwives (n = 6) were encountered by the fewest number of participants.

Table 6. Descriptive Statistics - Maternity Clinical Rotation Exposure & Mean SNBBP Scores

Experiences in Maternity Clinical Rotation	**n**	**Percent (%)**	**M**	**SD**
Elective Induction	189	49.1	122.05	15.14
Augmented Labor	157	40.8	123.76	16.11
Cesarean Section	256	66.5	121.11	14.50
Elective Cesarean Section	83	21.6	121.86	16.57
Epidural Anesthesia	282	73.2	121.40	14.54
Unmedicated Vaginal Birth	136	35.6	121.76	14.69
Forceps Delivery	46	11.9	117.10	14.06
Vacuum Extraction	53	13.8	119.66	15.57
Episiotomy	129	33.5	121.57	15.94
Ambulation During Labor	140	36.4	121.94	13.69
Continuous Fetal Monitoring	302	78.4	121.96	14.71
Intermittent Fetal Monitoring	151	39.2	120.14	20.14
Laboring Down	124	32.2	120.16	20.16
Birth Plans	162	42.1	120.30	14.07
Laboring Patient Holding Breath During Push	102	26.8	121.82	15.52
Pushing with Urges and Making Noise	233	60.8	120.18	13.96
Doulas	38	9.9	125.50	17.25
Breathing and Relaxation Techniques	238	61.8	120.40	13.63
Hydrotherapy	27	7	128.95	16.39
Water Birth	10	2.6	128.60	20.01
Upright Positioning During Labor	98	25.5	119.36	14.03
Certified Nurse Midwives	129	33.5	122.93	14.07
Certified Midwives	50	13	120.07	14.12
Certified Professional Midwives	30	7.8	114.87	15.24
Lay Midwives	6	1.6	127.67	24.24
Obstetricians	276	71.7	121.97	14.45
Family Physicians	85	22.1	116.77	13.97
Obstetric Medical Students and Residents	146	37.9	119.62	13.79
Freestanding Birthing Centers	10	2.6	129.30	21.13
Home Birth	6	1.6	134.33	24.88

The SNBBP was developed from the IPNBBP with the purpose of exploring birth beliefs of student nurses. The Cronbach's alpha of the original instrument was .797, and the Cronbach's alpha for the 28 modified items was .827. The Cronbach's alphas for the subscales were .834 for the 11 medicalized birth belief items and the 17 normal birth belief items had a Cronbach's alpha of .805. The SNBBP was reliable in this sample.

Bivariate Analysis

To analyze if there were any demographic characteristics that would affect the scoring of the survey, independent t-tests, one-way analysis of variance, and correlations were conducted. Independent t-tests were conducted to compare differences by gender, personal birth experiences, and degree type for the SNBBP scores, which is displayed in Table 7. After the differences in gender and degree type were explored, male participants were removed from the data set prior to conducting the t-test to assess differences in birth belief scores between women who had and had not given birth.

Table 7. SNBBP Scores by Gender, Degree Type, and Personal Birth Experiences

Variable	N	M	SD	*df*	*t*	*p*
Gender				383	-2.53	.012
Male	28	113.94	12.30			
Female	357	121.02	14.41			
Degree Pursued				381	1.99	.048
ADN	80	123.27	14.44			
BSN	303	119.70	14.28			
Have given birth				355	-4.87	.000
No	230	118.26	13.32			
Yes	127	126.02	15.00			

A one-way between groups ANOVA was conducted to compare the effects of the regions in which the participants lived, type of didactic maternity course, and race to the scores on the

instrument. There were no significant differences between the type of didactic course and region lived, but there were significant differences between races. GAMES-Howell post hoc was selected because equal variance was not assumed [$F(6, 377) = 7.44$, $p < .001$]. There were significant differences in the means for the scores of the SNBBP between the White/Caucasian participants and Pacific Islander participants ($p = .001$), those identifying two or more races ($p = .012$), and the category of "Other," which mostly consisted of participants of the Asian race ($p < .001$). Table 8 displays the mean and standard deviations of the scores of the SNBBP for race.

Table 8. Mean and Standard Deviation of Scores of the SNBBP According to Race

	n	***M***	***SD***
Race			
White/Caucasian	244	123.33	14.81
Black/African American	26	123.07	9.57
Hispanic/Latino	54	117.46	13.98
American Indian/Alaskan Native	2	112.50	9.19
Pacific Islander	9	107.67	7.14
Two or more races	19	113.40	10.51
Other	30	110.23	8.64

Multivariate Analysis

A multiple linear regression analysis was conducted to investigate whether age, gender, race, degree type pursued, or personal birth experience could significantly predict the birth beliefs of the undergraduate nursing students. Data for race were dichotomized for inclusion in the regression into Black/African American and White/Caucasian participants, who scored similarly, compared to all other races. The data were statistically significant $F(5, 268) = 9.77$, $p < .001$ and the model explained over 15.4% ($R^2 = .154$, Adjusted $R^2 = .138$) of the variance of the SNBBP scores. Table 9 presents the multiple linear regression analysis showcasing the predicting variables of the SNBBP scores. Age ($p = .006$) and race ($p < .001$) were found to be

significant predictors. Summarily, the impact of age and race on birth beliefs was made by older participants and those who were Black/African American or White/Caucasian and scored higher on the SNBBP than younger participants and those of other races more specifically those of the Pacific Islander and other (primarily Asian) races.

Table 9. Multiple Linear Regression Analysis of Predicting Variables for SNBBP Scores

Variable	**B**	**SE**	**β**	**p**
Constant	108.03	4.99		.000
Age	.35	.13	.21	.006
Birth Experience	1.39	2.26	.05	.538
Degree Type Pursued	-1.19	1.95	-.04	.544
Gender	5.21	3.00	.10	.084
Race	-7.07	1.67	-.24	.000

For Model: R^2 = .15, Adjusted R^2 = .14, $F(5, 268) = 9.77$, $p < .001$).

A multiple linear regression was also conducted to examine if there were other predicting variables of the SNBBP scores. Some of the "medicalized birth" interventions such as exposure to continuous fetal monitoring, augmenting labor, elective inductions of labor and epidural anesthesia were examined. The model explained only 5.3% of the variance (R^2 = .053, Adjusted R^2 = .043), but was still statistically significant $F(4, 379) = 5.29$, $p < .001$. The last multiple linear regression was performed on some of the "normal birth" interventions and practitioners: home birth, freestanding birthing centers, hydrotherapy, doulas, and certified nurse midwives. The model for this regression was also statistically significant $F(5, 379) = 3.29$, $p = .006$ and explained 4.2% of the variance (R^2 = .042, Adjusted R^2 = .029). The only significant predictors from these two regressions were continuous fetal monitoring ($p = .013$), augmenting labor ($p = .013$), and hydrotherapy ($p = .039$). Table 10 presents the multiple linear regression for the medicalized birth and normal birth experiences.

Table 10. Multiple Linear Regression Analysis of "Medicalized Birth" and "Normal Birth" Experiences

Variable	B	SE	β	p
"Medicalized Birth"				
constant	115.351	1.636		.000
continuous fetal monitoring	5.524	2.202	.158	.013
augmenting labor	4.059	1.627	.136	.013
elective inductions of labor	.272	1.611	.009	.866
epidural anesthesia	-1.272	2.012	-.039	.528
"Normal Birth"			.	
constant	118.987	.893		.000
home birth	7.974	6.430	069	.216
freestanding birthing centers	1.589	5.118	.018	.756
hydrotherapy	6.513	3.142	.116	.039
doulas	1.747	2.688	.036	.810
certified nurse midwives	2.157	1.632	.071	.187

For Models: "Medicalized Birth" R^2 = .053, Adjusted R^2 = .043), $F(4, 379) = 5.29$, $p < .001$.
"Normal Birth" R^2 = .042, Adjusted R^2 = .029, $F(5, 379) = 3.29$, $p = .006$.

Factor Analysis

Because the sample in this study was student nurses as opposed to the original study of intrapartum nurses by Adams and Sauls (2014), exploratory factor analysis was conducted on the 28 items of the SNBBP. Oblique rotation was employed since the factors were assumed to be related to each other and two-factor extraction was specified. Sampling adequacy was verified with the Kaiser-Meyer-Olkin (KMO = .877). The Bartlett's test of sphericity revealed significance in the correlations between the variables $p < .001$. There were two factors which had eigenvalues over Kaiser's criterion of one and explained 37.16% of the variance. Before rotation, factor one accounted for 17.86% of the variance and factor two accounted for 15.03% of the variance. The scree plot shows the justification of retaining 2 factors since there were only 2 factors to the left of the "elbow" of the curve.

In the two-factor solution, 14 items loaded on factor one and represent normalized birth beliefs and 12 items loaded on factor 2 and represent medicalized birth beliefs. Two of the items characterized as normalized birth beliefs by Adams and Sauls (2014), loaded on the medicalized beliefs scale completed by students: Item 9 (I believe that most routine interventions such as continuous fetal monitoring are unnecessary to promote the health of the laboring woman) and Item 10 (I believe that most routine interventions such as indwelling urinary catheters are unnecessary to promote the health of the laboring woman). Additionally, two items did not load on either scale: Item 7 (I believe that most pregnancies are considered low risk at the start of labor) loaded as a normal birth belief on the original IPNBBP instrument and Item 15 (I believe that breastfeeding is a personal choice and patient teaching about the benefits of breast feeding may cause emotional distress) loaded as a medicalized birth belief when examined by Adams and Sauls (2014).

Content Analysis

To provide additional information about nursing students' perspectives on the birth process and the nurse's role in the process, two open-ended questions were included on the instrument. Although there are different ways to analyze qualitative content, most of them aim to facilitate organization and understanding of written or visual data (Elo & Kyngas, 2008; Vaismoradi et al., 2013). The nursing students' descriptions of their birth beliefs served as the unit of analysis and were analyzed first for manifest and then for latent content. The analysis was conducted systematically within the framework presented by Hsieh and Shannon (2005).

Of the 385 participants, 324 answered the first open-ended question: *According to my beliefs related to birth practice, the birth process is:* _____. To minimize bias, self-reflection on the PI and dissertation chair's "pre-understanding" of the topic was done before the data were

prepared for analysis (Elo et al., 2014). Responses were read and reread multiple times. Some students provided single word responses while others expounded their points of view, potentially providing multiple concepts for consideration within one student's response. First open coding was completed to create meaning units and a coding table was created to increase reliability of the analysis. These inductively derived codes provided the foundation for the analysis. Because content analysis can also provide quantitative information regarding the frequency of concepts mentioned, the table was expanded to include the number of times each meaning unit was mentioned. These numbers do not imply assigned degrees of importance to select categories, but rather to convey a sense of the overall responses gathered. As analysis progressed and more insight was obtained, some codes were changed to reflect the researchers' increased understanding of the concepts (Hsieh & Shannon, 2005). The initial coding focused on manifest content; as the coded concepts were grouped into categories, deeper analysis into latent content became possible. To enhance validity the PI and chair separately analyzed the content, then discussed results, and achieved consensus.

From the 324 student responses, 655 meaning units were derived. During the final phase of the analysis, it became clear that the responses fell into two unique categories: students' descriptions of what they perceived the birth process to be (398 meaning units) and their perceptions of what they perceived the birth process should be or their vision for the ideal birth process (257 meaning units). Approximately two-thirds of the descriptions of perceptions of the birth process were one-word answers (Figures 2 and 3), while the remainder consisted of phrases or multiple sentences.

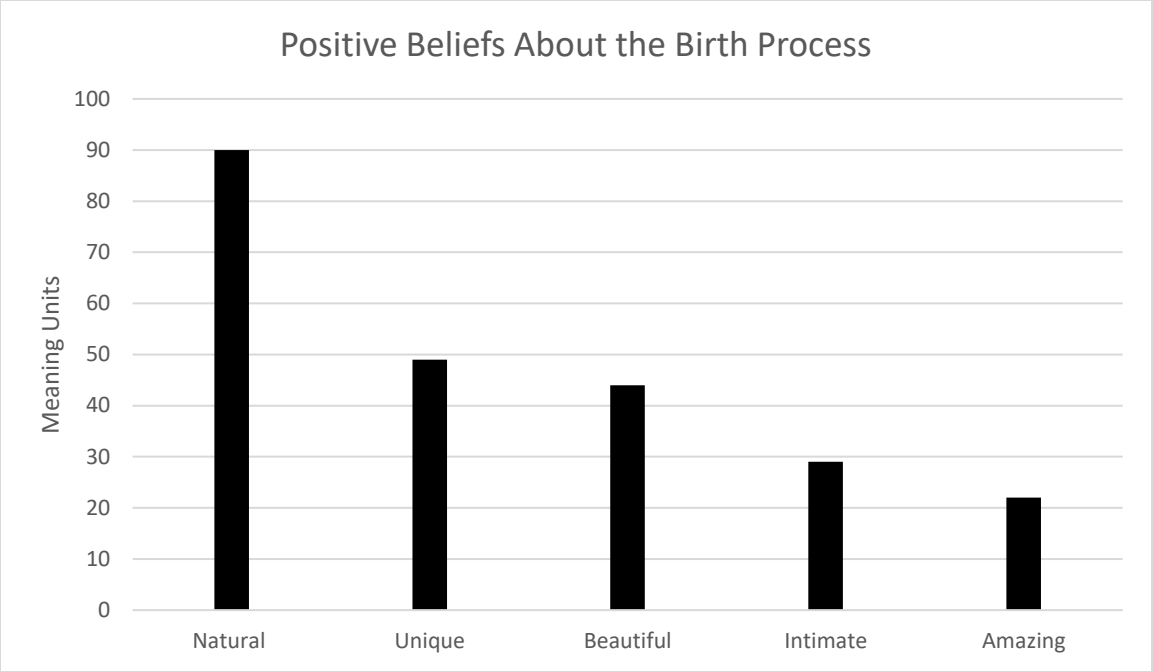

Figure 2. Positive One-word Responses About the Birth Process

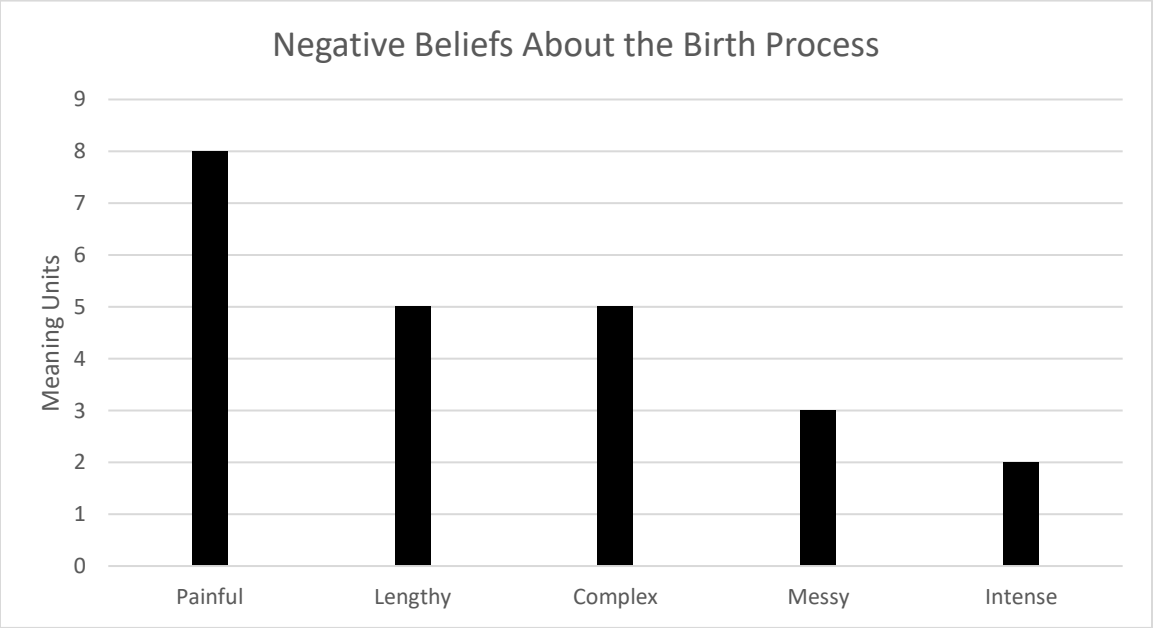

Figure 3. Negative One-word Responses About the Birth Process

The two most frequently mentioned categories identified from students' lengthy descriptions of the birth process were ongoing assessment for the mother and baby is crucial (44 meaning units) and birth is a purely physiologic process (35 meaning units). Categories that represent all the remaining responses (14.8%) regarding what students perceived the birth process to be were:

- An emotional, physical, and/or spiritual journey
- Intervention is required when life is threatened
- Can be wonderful or horrible depending on the nurses, doctors, and midwives
- Life changing event that builds character, requires mental toughness, and builds a bond between mother and baby
- More dangerous for women of color
- Challenging but bearable and worthwhile
- Major medical event

Although these categories did not contain large numbers of responses, they represented powerful data and comprised a full accounting of the student population's birth beliefs.

The following responses to question one described students' perceptions of the ideal birth process. The most frequently mentioned concepts are represented by the six categories included in Table 11.

Table 11: Students' Predominant Perceptions of the Ideal Birth Process

Perceptions of the Ideal Birth Process **Category (Meaning units)**
• Care should be individualized or woman-centered (54) • Care should be driven by the woman. (42) • The woman deserves knowledgeable, compassionate, care. (38) • Birth should be allowed to occur without unnecessary intervention. (31) • The woman and her family deserve excellent communication and ongoing education. (31) • The woman, her family, and the healthcare team should have a common goal of a safe birth. (20)

There was a subtle yet discernable difference between the top two categories. *Woman-centered* implied that a healthcare provider should actively choose to individualize care. *Woman-driven* implied that the woman should proactively position herself as the leader of the birth. Additional categories that together represent the remaining 16% of the responses regarding what students perceived the birth process should be are:

- Women and health professionals should be educated to treat birth as normal human experience.
- Women should be respected.
- Birth should be empowering.
- The childbirth system is broken and should be fixed.
- Women with low-risk pregnancies should be allowed to birth outside the hospital.
- More options for childbirth should be offered.

- Life event that should be characterized by mutual respect between the woman and her provider.

Although it was tempting to collapse some of the categories below, care was taken during the analysis to ensure that they described sufficiently unique attributes of students' perception of the ideal birth.

The second open-ended question was: *According to my beliefs related to birth practice, I believe the role of an intrapartum nurse in the birth process is* _____. Of the 385 participants who completed the SNBBP, 327 responded, supplying the same number of units of analysis. From those 327 units of analysis, 768 meaning units were generated, as most of the responses provided multiple concepts for coding. The majority of responses were provided in the context of action verbs. The most frequently cited concepts are represented by the following categories listed in Table 12 below.

Table 12. Students' Perceptions on the Role of the Intrapartum Nurse

Students' Perceptions on the Role of the Intrapartum Nurse **Category (Meaning units)**
Monitor and Facilitate Safe Outcomes (169)
Support/Encourage/Reassure (168)
Communicate. Educate. Guide (122)
Create a Positive Experience (87)
Honor the Woman's Wishes (60)
Advocate for the Woman and Family (52)
Provide Emotional and Psychological Comfort (49)

Although monitoring and facilitating safe outcomes were most frequently mentioned, supporting and encouraging were mentioned nearly as often. Beyond the first category that involves physiological oversight, the six categories that follow all represent fewer tangible concepts. Categories that represented the remaining meaning units (approximately 20% of the total meaning units generated for this question) included: provide all care and interventions, coach/manage labor, listen and plan woman-centered care, collaborate with health care team, promote physiologic birth, protect dignity, assist provider, develop trust, and manage newborn care. A few responses could be categorized as outliers but warrant consideration: the nurse should not try to convince a woman to take pain medication or an epidural, the nurse should prevent trauma, and the nurse should not rush a delivery just to satisfy a physician.

Summary

This chapter presents the results of the study to explore the demographic information of the undergraduate nursing student participants along with bivariate and multivariate analysis related to SNBBP scores. The sample was composed of 385 undergraduate nursing students of which 357 were female and 28 were males. Most of the sample were White/Caucasian. The descriptive statistics also found that despite most of the sample experiencing "medicalized" interventions in the clinical rotations, the overall scores still aligned with having normal birth beliefs. Continuous fetal monitoring was the most common intervention experienced while home births and lay midwives equally, were the least frequently encountered. Age and race were found to be predictors of birth beliefs, and continuous fetal monitoring, augmented labors, and hydrotherapy were found to be predicting variables of the SNBBP scores.

The students had both positive and negative perceptions about the birth process, but most of the perceptions were given in positive, one-word responses. Also, the students who responded

with lengthy text either detailed how they perceived the birth process to be or how they perceived the birth process should be. Students cited monitoring and facilitating safe outcomes as their most predominant belief about the role of the intrapartum nurse.

Chapter Five

Discussion and Conclusion

This chapter focuses on the study findings, limitations, and recommendations for future research. The study examined the gender, race, region, and personal birth and educational experiences of 385 undergraduate nursing students in the US. Furthermore, the study explored the birth beliefs of the students.

White Caucasian female undergraduate nursing students comprised most of the participants; males only constituted 7.3% of the sample. The mean age of the sample was 28.87 years and the participants in the "Other" category for race were mostly of Asian descent. There was an excellent distribution of the population for the Midwest, Northeast, Southeast, and West regions of approximately 20-25% each. However, only 8.8% of the participants were from the Southwest. Many participants reported having had personal birth experiences; the majority birthed vaginally in a hospital and recalled positive experiences. Also, the findings showed that most of the sample were pursuing a BSN and their didactic maternity course was face-to-face. During clinical rotations, 76.4% of the students witnessed an obstetrician provide care in the clinical setting, while 61.8% of the students had not witnessed a certified nurse midwife or a certified midwife provide care within the clinical setting However, 43.6% did have a midwife as maternity course faculty.

The mean scores for the 28 items on the Student Nurse's Beliefs Related to Birth Practice (SNBBP) was 124.94 which indicates that the sample has a normal birth belief. After comparing the scores of both genders, the male students had a lower mean score, yet the score was still aligned with having normal birth beliefs. After comparing the students in the ADN and BSN programs, the mean score was lower for those in the BSN program than the ADN program, but

the BSN cohort was still considered to hold normal birth beliefs. After removing the males, the mean scores of the females who have and have not given birth were compared; the female students who have not given birth had lower scores yet were still found to have normal birth beliefs.

The mean scores of the White/Caucasian and Black/African American were considerably higher when compared to the mean scores of the Pacific Islander. For those who identified as "Other," and Pacific Islander, the mean scores aligned with medicalized birth beliefs. The participants of the Hispanic/Latino, American Indian/Alaskan, and being two or more races produced mean scores that were in the lower range of normal birth beliefs.

Age and race were found to be predicting variables of the birth practice beliefs of undergraduate nursing students. Gender, degree pursued, and birth experience were not found as predictors. Hydrotherapy, continuous fetal monitoring, and augmented labor were the predicting variables for the scores of the SNBBP.

The IPNBBP had a Cronbach's alpha of 0.797 for the total scale while the Cronbach's alpha of the SNBBP was .827. The Cronbach's alphas for the SNBBP's subscales were .805 for the 17 normal birth belief items and .834 for the 11 medicalized birth belief items, demonstrating reliability of the new instrument in this population.

Regarding the open-ended questions, when the students were asked to describe their beliefs about the birth process, the most frequent positive responses were natural, unique, beautiful, intimate, and amazing. Positive comments far outnumbered the negative ones. The most common negative responses were painful, lengthy, complex, messy, and intense.

When responding to the item asking for their interpretation of the role of the intrapartum nurse in the birth process, the most common response was monitoring and facilitating safe

outcomes. Other popular responsibilities attributed to the intrapartum nurse were supporting, communicating, educating, honoring, advocating, and comforting. There were also some categories that represented few responses but were interesting enough to include: intrapartum nurses should not try to convince women to get pain medications or an epidural, the nurse should prevent trauma, and should not rush the delivery to satisfy the physician.

Strengths, Limitations, and Indications for Future Research

Strengths

The SNBBP instrument was a strength in this study. It was designed to mirror the IPNBBP with adaptations for the student nurse population. The reliability of the new instrument was excellent for this study population. The sample size was also a major strength; there were enough responses to gather a wealth of information about the birth beliefs of the students. Also, this research was based on a sound theoretical framework, Azjen's Theory of Planned Behavior. For the content analysis, bias was minimized by using self-reflection by the PI and the dissertation chair to review their prior understanding of the topic before conducting the analysis. Also, the dependability of the study was enhanced because the PI and the chair analyzed the content separately, discussed their findings, and came to a consensus.

Limitations and Indications for Future Research

There were three major limitations in this study that should be addressed for future research. The first limitation is selection bias. The survey was sent to approximately 60,000 members of the National Student Nurses Association (NSNA). Self-selection resulted in certain demographic categories being under-represented among the participants. These include participants in the Southwest region and those who identify with the American Indian/Alaskan Native and Pacific Islander races. To avoid this in the future, researchers should strive for

population samples that are more diverse. The second limitation is the possibility that a few of the birthing practice experiences on the checklist that preceded the 28-items on the SNBBP were not clearly understood by some students. For instance, certain terms or titles such as certified nurse midwife, certified midwife, and lay midwife may have been confusing. The last limitation, which was beyond the control of the researcher, was the effect the COVID-19 Pandemic had on the clinical experiences for the students due to being on lockdown and other safety precautions that were taken during this time. There were several students who typed in the free-text areas that they either did not know about or had not experienced certain interventions due to the pandemic.

Summary

Chapter 5 discussed the findings of this descriptive correlational research study to investigate the birth beliefs of undergraduate nursing students. This study fills a gap in the literature by contributing to the knowledge of birth beliefs of nursing students instead of nurses. The study sought to understand not only the birth practice beliefs, but to also understand if there are predictive variables for those birth beliefs. Insight into how students perceive the birth process, and the role of the intrapartum nurse was gained through the students' responses to open-ended questions.

The results showed that overall, the undergraduate nursing students did have normal birth beliefs, however, there are certain groups within the sample that scored in the lower range of normal birth beliefs. The scores for Pacific Islander and "Other" race groups indicated medicalized birth beliefs; however, their representation within the sample was very low. It was also found that most students who provided responses to the open-ended questions believed the birth process to be natural, unique, beautiful, intimate, and amazing. Most of the responses

placed the birth process in a positive light, but there were also a few negative opinions such as painful, lengthy, complex, messy, and intense. Some students described the birth process in terms of their ideal. Students most often mentioned that the intrapartum nurse should monitor and facilitate safe outcomes, but support, encourage, and reassure was another high priority category.

Childbirth in America is a predominantly medicalized experience. Because nurses provide direct care for women during labor, it's important to understand what birth beliefs are held by students after finishing their maternity coursework. Nursing students should be educated on both the medicalized and normal paradigms of childbirth but should understand that for low-risk women, less intervention is associated with better outcomes. The results of this study indicate that there is much more to be explored about maternity nursing education. Nursing students should graduate equipped to provide and advocate for evidence-based maternity care. Future research should explore how to integrate more normal birth practice exposure most effectively for students, so they understand and feel prepared to deliver care that increases the woman's chance of a safe, low-intervention birth.

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Appendix A

NSNA Approval

National Student Nurses Association, Inc.
45 Main Street, Suite 606, Brooklyn, NY
11201

February 4, 2020

Dr. David Pearson
University of Texas at Tyler

Dear Dr. Peterson:
After reviewing the proposed study by PhD student, Cassandra Land, " Birth Practice Beliefs of Undergraduate Nursing Students," NSNA will make its database of undergraduate nursing students available for this study.

The NSNA will send out the study link via broadcast email to its entire database. The broadcast email message will be sent twice: once to the entire database; and then 5 days later to those who did not open the first email.

To ensure that the participants in the study are protected, Ms. Land has agreed to provide to me a copy of University of Texas at Tyler IRB-approved consent document before she can recruit participants at NSNA.

If the IRB has any concerns about the permission being granted by this letter, please contact me at (718) 210-0705 Ext 1103 or diane@nsna.org

Sincerely,

Diane J. Mancino, EdD, RN, CAE,
FAAN Executive Director

Appendix B

UT Tyler IRB Approval

The University of Texas at TYLER
Office of Research and Scholarship

INSTITUTIONAL REVIEW BOARD

uttyler.edu/research ▪ 903-565-5858

February 6, 2020

Dear Ms. Land,

Your request to conduct the study: *Birth Practice Beliefs of Undergraduate Nursing Students,* IRB # Sp2020-05 has been approved by The University of Texas at Tyler Institutional Review Board as a study exempt from further IRB review, Category #2. While this approval includes a waiver of signed, written informed consent, please ensure prospective informed consent is provided unless special circumstances are indicated in the approval email. In addition, please ensure that any research assistants are knowledgeable about research ethics and confidentiality, and any co-investigators have completed human protection training within the past three years, and have forwarded their certificates to the Office of Research and Scholarship (research@uttyler.edu).

Please review the UT Tyler IRB Principal Investigator Responsibilities, and acknowledge your understanding of these responsibilities and the following through return of this email to the IRB Chair within one week after receipt of this approval letter:

- Prompt reporting to the UT Tyler IRB of any proposed changes to this research activity.
- **Prompt reporting to the UT Tyler IRB and academic department administration will be done of any unanticipated problems involving risks to subjects or others.**
- Suspension or termination of approval may be done if there is evidence of any serious or continuing noncompliance with Federal Regulations or any aberrations in original proposal.
- Any change in proposal procedures must be promptly reported to the IRB prior to implementing any changes except when necessary to eliminate apparent immediate hazards to the subject.
- Submit Progress Report when study is concluded.

Best of luck in your research, and do not hesitate to contact me if you need any further assistance.

Sincerely,

DocuSigned by:
David Pearson
D0228914C851460...

David Pearson, Ph.D.
Associate Professor
Department of Pharmaceutical Sciences
Ben and Maytee Fisch College of Pharmacy
Chair Institutional Review Board

Appendix C

STUDENT NURSE'S BELIEFS RELATED TO BIRTH PRACTICE

Cassandra S. Land, PhD(c), RN and Ellise D. Adams PhD, CNM

Section 1:

Demographics

My age is: _____

My gender is: Female_____Male_____

My race is: _____White/Caucasian_____Black/African American_____Hispanic/Latino
_____American Indian/Alaskan Native_____Pacific Islander_____Two or more races
_____Other

Which region of the country do you live in?
_____Midwest - IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI
_____Northeast - CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT
_____Southeast - AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV
_____Southwest - AZ, NM, OK, TX
_____West - AK, CA, CO, HI, ID, MT, NV, OR, UT, WA, WY

Select all that apply, I have given birth: _____vaginally_____by cesarean_____with forceps_____with vacuum extraction_____NA

Select all that apply, I have given birth:
_____at home_____at a hospital_____in a freestanding birth center_____NA_____other (please specify)_____

Select all that apply, I would describe my birth experiences as:
_____Positive_____negative_____no opinion_____NA_____other (please specify) _____

Nursing Education

I am currently pursuing a degree in nursing. My program is: _____ADN _____BSN

The didactic portion of my maternity course was: _____in class _____online _____hybrid

In the clinical setting, I witnessed Obstetricians providing care to women in Labor & Delivery. ____Yes ____No

In the clinical setting, I witnessed Certified Nurse Midwives &/or Certified Midwives providing care to women in Labor & Delivery. ____Yes ____No

The clinical portion of my maternity course included simulation of care of the laboring and/or delivering woman. _____ Yes _____No

A Certified Nurse Midwife/Certified Midwife was on the maternity nursing faculty, for clinical &/or didactic content. ____ Yes ____ No

Select all that apply. In my maternity clinical rotation, I was exposed to the following:
_____Elective inductions of labor _____augmented labors ____cesarean birth
_____Elective cesarean birth (no medical indication) _____epidural anesthesia
_____Unmedicated vaginal birth _____forceps delivery _____vacuum extraction
_____Episiotomy _____ambulation during labor _____continuous fetal monitoring
_____Intermittent fetal monitoring _____laboring down _____birth plans
_____Laboring woman coached to hold her breath to push
_____Laboring woman pushed when she felt the urge, possibly making noise while pushing
_____Doulas _____Use of breathing and relaxation techniques _____hydrotherapy _____water birth
_____Encouraging upright positioning during labor and birth _____certified nurse-midwives
_____Certified midwives _____certified professional midwives _____lay midwives
_____Obstetricians _____family physicians _____obstetric medical students and residents
_____Freestanding birth centers _____home birth

I have attended _____ vaginal births.

I have attended _____cesareans.

Section 2:

Review the following statements related to intrapartum (IP) nursing. Think about your individual maternity clinical rotation. Choose the number associated with each item that most closely matches your current beliefs related to birth practice on the scale of 1 – 6: 1 = strongly differs from my beliefs related to birth practice to 6 = strongly aligns with my beliefs related to birth practice.

	Strongly Differs					Strongly Aligns
1. When I think about my beliefs related to birth practice, I believe that: To recognize uterine tachysystole (6 or more contractions in a 10-minute period) the IP nurse must use an intrauterine pressure catheter.	1	2	3	4	5	6
2. When I think about my beliefs related to birth practice, I believe that: Birth environments should provide a homelike environment to optimize privacy and comfort for the laboring woman and her family.	1	2	3	4	5	6
3. When I think about my beliefs related to birth practice, I believe that: Maternal pushing during the second stage requires directions from the IP nurse including counting to 10 during each push.	1	2	3	4	5	6
4. When I think about my beliefs related to birth practice, I believe that: Certified nurse-midwives, are appropriate birth practitioners for low-risk women.	1	2	3	4	5	6
5. When I think about my beliefs related to birth practice, I believe that: Continuous fetal monitoring is a standard of care that is appropriate for use with all laboring women.	1	2	3	4	5	6
6. When I think about my beliefs related to birth practice, I believe that: Intravenous fluids are necessary for the laboring woman.	1	2	3	4	5	6
7. When I think about my beliefs related to birth practice, I believe that: Most pregnancies are considered low-risk at the start of labor.	1	2	3	4	5	6
8. When I think about my beliefs related to birth practice, I believe that: Pain in labor represents a physiological process.	1	2	3	4	5	6
9. When I think about my beliefs related to birth practice, I believe that: Most routine interventions such as continuous fetal monitoring are unnecessary to promote the health of the laboring woman.	1	2	3	4	5	6
10. When I think about my beliefs related to birth practice, I believe that: Most routine interventions such as indwelling urinary catheters are unnecessary to promote the health of the laboring woman.	1	2	3	4	5	6

Appendix C (continued)

11. When I think about my beliefs related to birth practice, I believe that: Ice chips provide laboring women with necessary oral hydration.	1	2	3	4	5	6
12. When I think about my beliefs related to birth practice, I believe that: IP nurses can have a positive effect on birth outcomes.	1	2	3	4	5	6
13. When I think about my beliefs related to birth practice, I believe that: Positions for the first stage of labor that are supported by research and are therefore appropriate for use by the IP nurse include standing, wedging, sitting and hands and knees.	1	2	3	4	5	6
14. When I think about my beliefs related to birth practice, I believe that: Labor support includes physical comfort measures such as providing ice chips, sips of water, wet washcloth and oral hygiene.	1	2	3	4	5	6
15. When I think about my beliefs related to birth practice, I believe that: Breastfeeding is a personal choice and patient teaching about the benefits of breastfeeding might cause emotional distress.	1	2	3	4	5	6
16. When I think about my beliefs related to birth practice, I believe that: Visual focal point, imagery and social conversation are effective methods of distraction appropriate for use in labor.	1	2	3	4	5	6
17. When I think about my beliefs related to birth practice, I believe that: Plotting the progress of labor and comparing to a labor curve assessment tool is necessary to prevent poor birth outcomes.	1	2	3	4	5	6
18. When I think about my beliefs related to birth practice, I believe that: The laboring woman's desires are more important than the care provider.	1	2	3	4	5	6
19. When I think about my beliefs related to birth practice, I believe that: Labor support includes explanations to the client as to what is occurring with the labor process.	1	2	3	4	5	6
20. When I think about my beliefs related to birth practice, I believe that: Hydrotherapy (shower or bath) in labor is a risk to patient safety.	1	2	3	4	5	6

Appendix C (continued)

21. When I think about my beliefs related to birth practice, I believe that: Squatting is an appropriate position for second stage of labor.	1	2	3	4	5	6
22. When I think about my beliefs related to birth practice, I believe that: Labor support includes listening and respecting the client's opinion and wishes.	1	2	3	4	5	6
23. When I think about my beliefs related to birth practice, I believe that: When the laboring woman expresses pain, a priority nursing intervention is to prepare for epidural anesthesia.	1	2	3	4	5	6
24. When I think about my beliefs related to birth practice, I believe that: Providing explanations about procedures is a necessary nursing intervention for partners attending labor and birth with the laboring patient.	1	2	3	4	5	6
25. When I think about my beliefs related to birth practice, I believe that: Labor support includes providing reassurance and praise such as telling the client she is doing well or that labor is progressing normally.	1	2	3	4	5	6
26. When I think about my beliefs related to birth practice, I believe that: Effectiveness in IP nursing is mainly related to years of experience.	1	2	3	4	5	6
27. When I think about my beliefs related to birth practice, I believe that: The preferred methods of warming a newborn is radiant heat.	1	2	3	4	5	6
28. When I think about my beliefs related to birth practice, I believe that: Labor support includes ensuring privacy and protecting modesty.	1	2	3	4	5	6

Section 3:

Please use thoughtful consideration when answering the 2 items below. You may use up to 1000 characters for each response. There are no right or wrong answers.

1. According to my beliefs related to birth practice, the birth process is:

2. According to my beliefs about birth practice, the role of an intrapartum nurse in the birth process is:

Contact information:
Cassandra Land
Cland2@patriots.uttyler.edu

Appendix D

Approval to Modify IPNBBP

Dear Cassandra,

Thank you for your interest in the IPNBBP and for contacting me about using it. You have my permission to use it with the following stipulations:

- Acknowledgment of authorship remains on the instrument
- Citation of the two publications authored by me re. IPNBBP in any publications generated from your research
- to provide the validation and reliability statistics gathered during your study to ellise.adams@uah.edu.

Further, you are granted permission to modify the IPNBBP to fit your dissertation focus. Please provide me a copy of the modification.

Attached is a pdf copy of the instrument and guidelines for use. I wish you well in your study.

Dr. Ellise Adams

Ellise D. Adams PhD, CNM

Professor, College of Nursing

UAH Ph.D. Program Coordinator, Joint Nursing Science Ph.D. Program

The University of Alabama in Huntsville

Office, College of Nursing, South wing, 214D

1610 Ben Graves Drive, Huntsville, AL 35899

256-824-2442

http://www.uah.edu/nursing/faculty-and-staff/directory/1211-ellise-adams

Appendix E

Email to NSNA Members

Hello!
My name Cassandra Land-Ratliff and I am a doctoral student at the University of Texas at Tyler. I am currently working on an UTTyler IRB approved research study (IRB approval # - Sp2020-05). I am writing to ask for your help! I am exploring the birth practice beliefs of undergraduate nursing students who have successfully completed their maternity course. The information learned from this study may help improve better birth outcomes for mothers and babies. The only risk to this study is a small investment of time.

To participate you must be:
· 18 years or older
· Currently enrolled in a prelicensure nursing program
· Able to read and write in English
· Able and willing to complete an online survey

If you participate in this study, you need to know that:
· You will be asked to answer questions online which may take up to 30 minutes
· Your answers are anonymous
· You have the option of entering a drawing for a $50 Amazon gift card
· This study was approved by the Institutional Review Board at the University of Texas at Tyler · If you have questions about the study you may email me at cland2@patriots.uttyler.edu
· If you have questions about the rights of research, contact the Office of Sponsored Research and Scholarship at (903) 565-5858 or email at research@uttyler.edu

Thank you for taking the time to consider participating in this study. Please feel free to share the link to the questionnaire with your friend who might be eligible.

Your participation is valuable and much appreciated!

Sincerely,
Cassandra Land, PhD(c)

Here is the link to the survey:

https://uttyler.az1.qualtrics.com/jfe/form/SV_bQxaNLSuyyYEWhf

Appendix F

Biographical Sketch

NAME: Cassandra Land, MSN, RN

POSITION TITLE: Nurse Investigator

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	Completion Date	FIELD OF STUDY
Grambling State University Grambling, Louisiana	BSN	12/2005	Nursing
University of Texas at Tyler Tyler, TX	MSN	05/2012	Nurse Administration
University of Texas at Tyler Tyler, TX	Ph.D.	present	Nursing

A. Personal Statement

Although my nursing career did not start in maternal health, I knew in nursing school that is what I wanted to do, and I did not stop until I reached my goal of becoming a labor and delivery nurse. I began my nursing career in geriatrics and physical rehabilitation. Once I got into a position in labor and delivery, I enjoyed it, and stayed in this position for almost six years. I had various promotions during my time in this role, and I received my MSN during this time. Throughout my work, I noticed that there were many interventions that were standard for each laboring woman regardless of the risk. This was something that always stuck with me. Also, a new doctor had come to the unit who was from another country, and the doctor allowed the natural process of birth to happen and tailored care to individual women. These are only 2 of the many instances that have piqued my interests and encouraged me to delve deeper into childbirth, birth beliefs, and the influences on childbirth outcomes.

B. Positions and Employment

2006-2007 Nurse, Inpatient Physical Medicine and Rehabilitation Unit, El Dorado, AR

2007-2008 Nurse/House Supervisor, Long Term Care Facility, El Dorado, AR

2008-2013 Nurse/Charge Nurse/Preceptor, Inpatient Labor and Delivery Unit, Camden, AR

2013-2016 Telephonic Triage Nurse, Medcor, McHenry, IL

2016-2019 Content Developer for NCLEX, Pearson VUE, Chicago, IL

2020-2021 Nurse Investigator, General Dynamics Information Technology, Little Rock, AR

C. Professional Organizations and other Experiences

2020 American Nurses Association

2020 The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN)

2020 The Honor Society of Nursing Sigma Theta Tau International (STTI)

2017 Study Abroad, Tzu Chi University of Science and Technology, Hualien City, Taiwan

D. Honors

2005 Magna cum laude, Grambling State University School of Nursing