

Spring 5-16-2015

Exploring the Relationships of Power, Attitudes regarding Intermittent Fetal Monitoring, and Perceived Barriers to Research Utilization with a Labor and Delivery Nurse's Attitude toward Patient Advocacy

Lisa Heelan
lisa.heelan@student.shu.edu

Follow this and additional works at: <https://scholarship.shu.edu/dissertations>

 Part of the [Bioethics and Medical Ethics Commons](#), and the [Maternal, Child Health and Neonatal Nursing Commons](#)

Recommended Citation

Heelan, Lisa, "Exploring the Relationships of Power, Attitudes regarding Intermittent Fetal Monitoring, and Perceived Barriers to Research Utilization with a Labor and Delivery Nurse's Attitude toward Patient Advocacy" (2015). *Seton Hall University Dissertations and Theses (ETDs)*. 2027.

<https://scholarship.shu.edu/dissertations/2027>

EXPLORING THE RELATIONSHIPS OF POWER, ATTITUDES REGARDING
INTERMITTENT FETAL MONITORING, AND PERCEIVED BARRIERS TO
RESEARCH UTILIZATION WITH A LABOR AND DELIVERY NURSE'S
ATTITUDE TOWARD PATIENT ADVOCACY

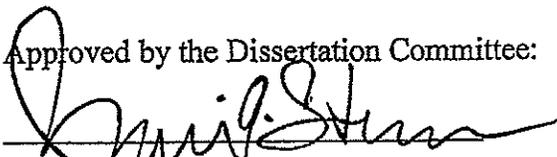
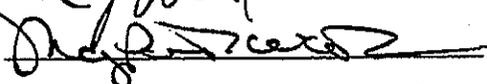
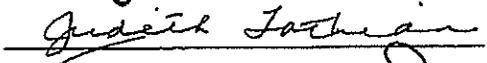
BY

LISA HEELAN

Dissertation Committee

Dr. Bonnie A. Sturm, Chair
Dr. Mary Patricia Wall
Dr. Judith Lothian
Dr. Violet Malinski

Approved by the Dissertation Committee:


Date 2-11-2015
Date 2-11-2015
Date 2-11-2015
Date 2-11-2015

Submitted in partial fulfillment of the
Requirements for the degree of Doctor of Philosophy in Nursing
Seton Hall University.
2015

Copyright © Lisa Heelan 2015

ACKNOWLEDGEMENTS

I want to thank my family, particularly my parents Ellen Carol Nelson and John Heelan, and my grandmother, Ellen O'Meara, for instilling in me the importance of an education and a love for learning. I also want to recognize the many amazing teachers and fellow nursing colleagues who taught me what nursing is, and role modeled exceptional nursing practice. A special thank you needs to be given to Dr. Maura Ryan who has been my mentor and has become my friend over these many years, and to Dr. Elizabeth Barrett who has given her time and expertise to support me, my work, and my understanding of Rogerian science.

Among the exceptional nurse educators I have had, four were on my dissertation committee. My dissertation committee worked as a team with each member contributing her gifts, talents, and time to support me and guide my work so that the whole was different from the sum of the parts. I am grateful to my Chair, Dr. Bonnie Sturm for always getting me to think outside of the box by asking the "why" question, or "can you tell me more," and for always being there for me to provide a guiding hand and to get me to the finish line; Dr. Mary Patricia Wall for her attention to details, especially as it relates to methodology; Dr. Judith Lothian for her passion in supporting childbearing women and newborns; and Dr. Violet Malinski for championing Rogerian science.

A special thank you needs to be given to the Robert Wood Johnson Foundation. In addition to completely funding my studies, the Robert Wood Johnson Foundation provided me with opportunities to learn from national speakers on topics related to

health policy, nursing education, and the future of nursing and health care. Through my association with the Robert Wood Johnson Foundation, I was especially fortunate to have met and become acquainted with Dr. Diane Billings, a nurse leader who goes above and beyond to promote nursing and support nurses wherever they might be.

However, this study would not have been completed without AWHONN, and the labor and delivery nurses from AWHONN who took time out of their busy lives to complete an almost two hundred item survey! Thank you for your support of this work, for it is your work too. Thank you for what you do every day.

I also want to acknowledge Dr. William Bannon who guided me through the greater world of statistics! At times the data appeared overwhelming, but between his book and calm demeanor, I learned so much. And I would like to thank Chelsea Olstrom, a recent graduate from Seton Hall University's undergraduate nursing program, who assisted me with the reference pages.

A special note of thanks to my family and friends who have contributed to making me who I am, and for whom I am eternally grateful to have in my life: my husband, Paul; my mother, Ellen Carol Nelson; my father, John Heelan; my sisters, Grace and Mary; my brothers Jack and Michael, and their spouses Kevin, Al, Mary, and Kathy. My stepmother Jackie and my stepfather Dick, and my godmother, Mary Roberta Maguire, who told me that Seton Hall University had a PhD in nursing program and to go to Seton Hall! And of course, my nieces and nephews---Christopher, Allison, Laura, Joseph, Matthew, and Sarah---may you chart your own paths, dream big, and reach for the stars.

DEDICATION

I dedicate this work to my husband, *Paul Michael Fancher*, a human being who lovingly contributes to my awareness of choices and life's possibilities while always being at my side.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	3
DEDICATION.....	5
LIST OF TABLES.....	9
LIST OF FIGURES.....	10
ABSTRACT.....	11
I. INTRODUCTION	13
The Problem.....	13
Purpose of Study.....	17
Definitions.....	21
Delimitations.....	23
Theoretical Rationale.....	23
Research Questions.....	32
Hypotheses.....	33
Significance of Study.....	34
II. REVIEW OF THE LITERATURE.....	36
Introduction.....	36
Science of Unitary Human Beings.....	38
Power as Knowing Participation in Change.....	41
Attitudes regarding Intermittent Fetal Monitoring.....	45
Perceived Barriers to Research Utilization.....	50
Attitude toward Patient Advocacy.....	60
Conclusion.....	62
III. METHODOLOGY.....	64
Introduction.....	64
Research Design.....	64
Description of the Population and Sample.....	64
Ethical Considerations.....	65
Research Setting.....	66
Research Instruments.....	66
Power as Knowing Participation in Change Tool (PKPCT).....	67
Attitudes regarding Intermittent Fetal Monitoring Instrument.....	70
Barriers to Research Utilization Scale (BARRIERS Scale).....	73

Attitude toward Patient Advocacy Scale (APAS).....	77
Demographic Questionnaire.....	81
Data Collection Procedures.....	82
Data Analysis Plan.....	83
Summary.....	89
IV. RESULTS.....	90
Introduction.....	90
Data Integrity.....	91
Description of the Sample.....	94
Description of Major Study Variables.....	103
Statistical Analysis.....	110
Analysis of Research Questions and Hypotheses.....	114
Summary.....	116
V. DISCUSSION OF FINDINGS.....	117
Introduction.....	117
Hypothesis 1.....	117
Hypothesis 2.....	120
Hypothesis 3.....	122
Limitations of the Study.....	128
Strengths of the Study.....	129
Summary.....	130
VI. SUMMARY, IMPLICATIONS FOR NURSING, NURSING PRACTICE, EDUCATION, AND RESEARCH, AND CONCLUSION...	133
Introduction.....	133
Summary.....	133
Implications for Nursing.....	135
Implications for Nursing Practice.....	136
Implications for Nursing Education.....	137
Implications for Nursing Research.....	139
Conclusion.....	143
VII. REFERENCES.....	146

VIII. APPENDICES.....	163
A. Seton Hall University IRB Approval Letter.....	163
B. AWHONN Approval Letter.....	165
C. Power as Knowing Participation in Change Tool (PKPCT)....	167
D. Attitudes regarding Intermittent Fetal Monitoring Instrument (AIFM).....	170
E. Barriers to Research Utilization Scale (BARRIERS Scale)....	173
F. Attitude toward Patient Advocacy Scale (APAS).....	175
G. Demographic Questionnaire.....	176
H. Permission to Use PKPCT.....	180
I. Permission to Use AIFM.....	181
J. Permission to Use BARRIERS Scale.....	182
K. Permission to Use APAS.....	185
L. Permission to Use the Revised APAS.....	186
M. Initial Email to AWHONN Members.....	188
N. Follow-up Email #1 to AWHONN Members.....	189
O. Final Email Reminder to AWHONN Members.....	190

LIST OF TABLES

Table 1. National Distribution of Participants.....	95
Table 2. Initial and Highest Education, Number of Conferences and webinars Attended in 2013.....	97
Table 3. Number of Years as an RN, L & D nurse, and at Current..... Work Setting	99
Table 4. Employer Support for Continuing Education.....	100
Table 5. Characteristics of Institution.....	101
Table 6. Characteristics of Personnel in L & D.....	102
Table 7. Survey Results of Instruments Used in Study.....	104
Table 8. Means, Standard Deviations, and Intercorrelations..... for Scores of Main Study Variables Using Pearson Product-moment Correlations	112
Table 9. Regression Analysis Summary for Attitude toward Patient Advocacy Using Main Study Variables	113

LIST OF FIGURES

Figure 1. C-T-E of Study Design.....	25
Figure 2. Distribution of Power Profiles on the PKPCT of Study..... Participants	105
Figure 3. Distribution of Scores on the AIFM of Study Participants.....	106
Figure 4. Distribution of Scores on the BARRIERS Scale of Study..... Participants	108
Figure 5. Distribution of Scores on the APAS of Study Participants.....	109

ABSTRACT

EXPLORING THE RELATIONSHIPS OF POWER, ATTITUDES REGARDING
INTERMITTENT FETAL MONITORING, AND PERCEIVED BARRIERS TO
RESEARCH UTILIZATION WITH A LABOR AND DELIVERY NURSE'S
ATTITUDE TOWARD PATIENT ADVOCACY

Lisa Heelan
Seton Hall University
2015

Chair: Dr. Bonnie A. Sturm

A problem identified in nursing practice is the routine use of continuous fetal monitoring with low risk laboring women. Continuous fetal monitoring is associated with worsened outcomes for the low risk laboring woman with no benefit to the newborn. In addition, this routine practice does not allow most laboring women the right to make an informed choice regarding treatment options. Nursing includes the role of patient advocacy. There was a need to better understand what is associated with a labor and delivery nurse's attitude toward patient advocacy.

This descriptive correlational research design examined the relationships of power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a labor and delivery nurse's attitude toward patient advocacy using the theoretical framework of M. Rogers' science of unitary human beings (SUHB). Labor and delivery staff nurses ($N = 248$), who were also members of the Association of Women's Health, Obstetric, and Neonatal Nurses

Association (AWHONN), participated in a web-based survey over the course of a month in 2014.

A moderate positive relationship was found between power as knowing participation in change and patient advocacy ($r = .39, p < .01$). A smaller, yet statistically significant positive relationship was also found between attitudes regarding intermittent fetal monitoring and patient advocacy ($r = .16, p < .01$). Inverse relationships were found between the variable perceived barriers to research utilization and patient advocacy ($r = -.18, p < .05$). The R^2 indicated that collectively the three independent variables in this sample accounted for 16% of the variance of labor and delivery nurse's attitudes toward patient advocacy. However, power as knowing participation in change was found to have the most impact in explaining a labor and delivery nurse's attitude toward patient advocacy as evidenced by the standardized Beta (.36), and showed a small to medium effect size of .19. Additionally, only power as knowing participation in change remained significant ($p \leq .001$) in the final regression model.

The findings from this study support empirical literature showing nurses do have a positive attitude toward patient advocacy and intermittent fetal monitoring. Although barriers to research utilization are present, the participants in this study are open to change, and actively engaging in change as it relates to patient advocacy and the use of intermittent fetal monitoring.

Chapter I

INTRODUCTION

The Problem

The role of a nurse includes being a patient advocate (American Nurses Association [ANA], 2001; International Council of Nurses [ICN], 2012). Some examples of nurses advocating for patients include being sensitive and respectful of patients' views even if the nurse does not share the patient's viewpoint, participating in shaping unit policies that provide good care based on evidence, and raising questions regarding routine orders or treatments that may cause harm to a patient (Bu, 2005).

While labor and delivery nurses believe good nursing care should be supportive of a woman's values and perspectives, and be based on evidence, nurses' theoretical viewpoints on right action can be different from their actual practices (Altaf, Oppenheimer, Shaw, Waugh, & Dixon-Woods, 2006; Birch & Thompson, 1997; Dover & Gauge, 1995; Hindley, Hinsliff, & Thomson, 2006a). One specific nursing practice in labor and delivery is fetal assessment. Fetal assessment can be done by intermittent fetal monitoring or by continuous electronic fetal monitoring (CEFM). The practice issue identified as a problem is the routine application of CEFM on the vast majority of laboring women (Declercq, Sakala, Corry, & Applebaum, 2006).

The routine practice of using CEFM in a labor setting is a problem because this practice is not based on best evidence. Specifically, CEFM is known to contribute to poor outcomes for healthy women in labor with low risk pregnancies (Alfirevic,

Devane, & Gyte, 2006). In addition, this routine practice does not allow most laboring women the right to make an informed choice based on evidence and her values and needs. What is not understood from the literature are the factors associated with influencing a labor and delivery nurse's attitude toward patient advocacy and a decision to choose to advocate for intermittent fetal monitoring in low risk pregnancies.

Continuous Electronic Fetal Monitoring

Continuous electronic fetal monitoring (CEFM) is an assessment tool used to evaluate if the fetus is receiving adequate oxygenation, or if the fetus is in distress (American Congress of Obstetricians and Gynecologists [ACOG], 2009; Hon & Lee, 1963). In the only national survey in the United States (US) to elicit mothers' feedback on their childbirth experiences, 93% of the mothers ($N = 1573$) reported receiving CEFM throughout their labor (Declercq et al., 2006). The prevalence of CEFM in labor is further supported by revised birth certificates no longer having a check off box for CEFM (Chen, Chauhan, Ananth, Vintzileos, & Abuhamad, 2011; US Department of Health and Human Services, 2004). Kardong-Edgren (2001) believes that "reliance on fetal monitors is an accepted part of socialization into today's role of a labor and delivery nurse" (p. 373). ACOG (2009) views CEFM as the most common obstetric procedure. This evidence strongly suggests that the vast majority of laboring women are receiving CEFM.

CEFM in low risk pregnancies. CEFM use in healthy women with a low risk pregnancy is associated with increases in cesarean surgery rates, instrumental vaginal

births, and maternal infection with no evidence to suggest that it reduces neonatal death or decreases the number of fetus' born with cerebral palsy (Alfirevic et al., 2006). The use of CEFM in low risk pregnancies has not improved outcomes for the fetus, but has worsened outcomes for the laboring woman. As a result of the evidence, professional nursing, medical (including the American College of Obstetricians and Gynecologists), government, and international organizations recommend intermittent fetal monitoring, and not CEFM for healthy and low risk laboring women (ACOG, 2009; Anderson, 1994; Association of Women's Health and Obstetric and Neonatal Nurses [AWHONN], 2008; National Institute of Clinical Excellence [NICE], 2007; The Royal Australian and New Zealand College of Obstetricians and Gynecologists [RANZCOG], 2009; US Preventative Services Task Force [USPSTF], 1996; World Health Organization [WHO], 1996).

Nursing Role as Patient Advocate

Patient advocacy is a moral obligation in nursing (Chambliss, 1996; Dierckx de Casterle, Izumi, Godfrey, & Denhaerynck, 2008; MacDonald, 2006; Murphy, 1979; Penticuff, 2011; Sorlie, Jansson, & Norberg, 2003; Varcoe, et al., 2004), and a central value of nursing (ANA, 2001; American Association of Colleges of Nursing [AACN], 2008; National League of Nursing [NLN], 2011). Nursing philosophers have suggested that a patient's dignity is realized through the nursing practice of patient advocacy (Curtin, 1979; Gadow, 1980; Kohnke, 1982). Patient advocacy in nursing is theoretically defined as *safeguarding a patient's autonomy, acting on a patient's behalf, and championing social justice* (Bu & Jezewski, 2007).

Nurses' attitudes toward patient advocacy. The literature suggests that nurses have a positive attitude toward patient advocacy (Barrett-Sheridan, 2009; Boyle, 2005; Curia, 2008; Godkin, 2006; Gosselin-Acomb, Schneider, Clouch, & Venstra, 2007; Hanks, 2008; Hanks, 2010; James, Simpson, & Knox, 2003; McSteen & Peden-McAlpine, 2006; Ware, Bruckenthal, Davis, & O'Connor-Von, 2011). However, only two studies have been conducted to examine how nurses would actually apply patient advocacy in practice (Millette, 1993; Nahigian, 2003). The findings from these two studies do support nurses favoring patient advocacy, but when given a case scenario, the nurses did not support the patient advocacy model. Instead, the nurses sampled chose institutional and physician advocacy models over the patient advocacy model (Millette, 1993; Nahigian, 2003). This suggests that there are additional factors other than having a positive attitude toward patient advocacy that are associated with a nurse's engagement in advocacy.

Problem Statement

The routine practice of CEFM does not improve patient outcomes, and is associated with worse outcomes for the laboring woman. This routine practice also denies many laboring women the right to make an informed choice based on the evidence and her values and needs. Nursing includes the role of patient advocacy. Patient advocacy is theoretically defined as safeguarding a patient's autonomy, acting on their behalf when they are unable, and championing social justice (Bu & Jezewski, 2007). There is a need to better understand the factors associated with influencing a

labor and delivery nurse's attitude toward patient advocacy as it relates to the use of intermittent fetal monitoring.

Purpose of Study

The purpose of this study was to examine the factors associated with a labor and delivery nurse's attitude toward patient advocacy. Two factors have been identified in the literature influencing a nurse's decision to advocate: power to influence change on a labor unit and perceived barriers to research utilization in practice. Perceived barriers to research utilization include a labor and delivery nurse's attitude toward research and knowledge of research. As intermittent fetal monitoring is the innovation of change identified for this study, a nurse's attitude regarding intermittent fetal monitoring was also studied.

Power. The literature suggests that there are a substantial number of nurses who do not perceive that they can influence nursing practice in a labor and delivery setting. This finding is supported by Grace (2001) who believed that nurses know the right thing to do, but due to institutional obstacles are prevented from taking action. Kohnke (1982) believed that nurses have a sense of powerlessness to advocate for patients, a view shared by Hindley and Thomson (2005) who reported that many nurses are supportive of intermittent fetal monitoring but feel powerless to go against a system favoring an interventionist approach in childbirth.

Labor and delivery nurses' power and work setting. Walker, Shunkwiler, Supanich, Williamsen, and Yensch (2001) found that 59.3% of the labor and delivery nurses ($N = 145$) did not feel that their input had any effect on changing their unit's

policies, with another 20% having a neutral opinion ($M = 2.49$, $SD = 1$). Siebens and colleagues (2006) examined nurses employed in twenty-two hospitals in Belgium ($N = 9638$). In their study, 31.5% of the nurses reported that they felt they could not practice based on their individual values, and 62.9% of the nurses sampled in the same study felt they could not speak up regarding ethical concerns within their team.

Penticuff and Walden (2000) found that labor and delivery nurses ($N = 127$) were more likely to involve themselves in advocacy when they perceived themselves as having influence in their work settings. Of the nurses sampled in their study, 45% responded that staff nurses had little influence on their units. Additionally, 36% of the nurses sampled claimed they would take no action when confronted with an ethical dilemma in practice, and another 24% expressed being uncertain as to whether they would take any action.

Attitudes regarding intermittent fetal monitoring. Graham, Logan, Davies, and Nimrod (2004) found that nurses expressed feeling comfortable and secure in just knowing that a labor unit had central fetal monitoring and cardiographic machines in every labor room. Grol (1997) has suggested that a person's beliefs, not the evidence, affect the translation of knowledge into practice. A belief is what lays the foundation for the development of an attitude (E. Rogers, 2003). An attitude can be either positive or negative (E. Rogers, 2003), and can be socially learned and socially changed (Smith & Hogg, 2008). Following a meta-analysis, Glasman and Albarracin (2006) found that attitudes are not static and can be adjusted based on available

information, and the person's direct experience with the attitude object. For purposes of this study, the attitude object is intermittent fetal monitoring.

Labor and delivery nurses' attitudes regarding IFM and work setting. Labor and delivery nurses are more likely to advocate based on the dominant attitude of the unit (Penticuff & Walden, 2000). This view is supported by Payant, Davies, Graham, Peterson, and Clinch (2008) who found that labor and delivery nurses' attitudes are influenced by other nurses. Liva, Hall, Klein, and Wong (2012) found that a nurse's attitude regarding intermittent fetal monitoring was influenced by exposure to workplace provider practices. These findings might explain why studies suggest that although nurses' attitudes favor the use of intermittent auscultation in low risk laboring women (Dover & Guage, 1995; McKevitt, Gillen, & Sinclair, 2011; Sinclair, 2001; Walker et al., 2001), nurses continue the practice of using CEFM on most laboring women (Altaf et al., 2006; Birch & Thompson, 1997; Dover & Gauge, 1995; Hindley et al., 2006a).

Perceived barriers to research utilization. Kohnke (1982) suggested that to be a patient advocate, the nurse must have, or know how to obtain information. Kardong-Edgren (2001) has proposed that fulfilling the nursing role of being a patient advocate requires evidence based practice being incorporated into nursing care. Evidence based practice (EBP) includes the integration of the best evidence from well-designed quantitative and qualitative studies, clinical expertise, and the perspectives and values of the patient (Fineout-Overholt, Melnyk, & Schultz, 2005; Institute of Medicine, 2001; Melnyk & Fineout-Overholt, 2011; Polit & Beck, 2012). In addition, theory

needs to be integrated into EBP so that there is a rationale to guide practice issues (Green, 2000; Pipe, 2007). Research utilization is the translation of evidence into practice (Burns & Grove, 2009).

Nurses' attitudes toward research as a potential barrier. In the majority of studies examining nurses' attitudes toward research, nurses have a positive attitude toward research (Bryar et al., 2003; Fink, Thompson & Bonnes, 2005; McCloskey, 2008; Parahoo & McCaughan, 2001; Thiel & Ghosh, 2008; Thompson et al, 2001; Veeramah, 2004). However, Olade (2003) found that 76.4% of nurses ($N = 106$) had a lukewarm or unfavorable attitude toward research. Pravikoff, Tanner, and Pierce (2005) discovered that 71.8% of their nurse respondents ($n = 540$) reported never evaluating a research report in the last year, with another 12.2% ($n = 92$) doing so once in the past year.

Labor and delivery nurses and research utilization. Estabrooks, Midodzi, Cummings, and Wallin (2007) found that obstetric nurses ($N = 4421$; 9.2% obstetric nurses) scored slightly below the mean ($M = 0$) for research utilization which was better than the nurses working in medical-surgical units ($M = -0.25$), but worse than the nurses working in the neonatal intensive care unit ($M = 0.25$). In their scale, the research utilization score was scaled to zero (Estabrooks et al., 2007). In a study that examined knowledge of continuous labor support, not fetal monitoring, Payant and colleagues (2008) found 36.1% of the labor and delivery nurses ($n = 35$) unaware of research findings regarding continuous labor support to women. Additionally, Siebens and colleagues (2006) found 28.1% of the nurses surveyed ($N = 9638$) did

not believe they had the necessary knowledge to participate in exchanges of information with others.

Nurses implementing research in a work setting. Fink and colleagues (2005) found some nurses feel powerless within an organization to change practice based on research. Within the instrument, Barriers to Research Utilization Scale, the item *the nurse does not have the authority to change practice procedures*, has consistently been ranked by nurses as one of the top three barriers to implementing research findings in practice (Fink, et al., 2005; Funk, Champagne, Wiese, & Tornquist, 1991; Gerrish & Clayton, 2004; Parahoo, 2000; Parahoo & McCaughan, 2001).

Definitions of Study Variables

Power. Power is conceptually defined as the capacity to participate knowingly in change (Barrett, 1983, 2010). Power is manifested through the concepts of awareness, choices, freedom to act intentionally (on one's choices), and involvement in creating change. Every person is born with power; power cannot be given to you from someone else. Power was operationalized using the Power as Knowing Participation in Change Tool (PKPCT) developed by Barrett (1983). The PKPCT is a fifty-two item semantic differential instrument.

Attitudes regarding intermittent fetal monitoring. Attitudes are a view or feeling held by a labor and delivery nurse regarding intermittent fetal monitoring in low risk pregnancies. Intermittent fetal monitoring can be accomplished by using a fetoscope, Doppler, or an electronic fetal monitor (providing it is only used intermittently). This concept was operationalized using the Attitudes regarding

Intermittent Fetal Monitoring Scale, a seventeen item instrument designed to elicit labor and delivery nurse's attitudes regarding intermittent fetal monitoring (Walker et al., 2001).

Perceived barriers to research utilization. Perceived barriers to research utilization are conceptualized as: characteristics of the adopter (nurse), characteristics of the organization (work setting), characteristics of the innovation (qualities of the research), and characteristics of the communication (accessibility of the research) (Funk et al., 1991). This variable was operationalized using the Barriers to Research Utilization Scale (Funk et al., 1991). The Barriers to Research Utilization Scale is a twenty-nine item Likert type instrument and includes three open ended questions. The opened ended questions can be answered in one to two words, and provide the participant with an opportunity to share additional perceived barriers to research utilization that may not be addressed in the instrument. For purposes of this study, only the scored items were included in the analysis.

Attitude toward patient advocacy. Patient advocacy is defined as safeguarding a patient's autonomy, acting on behalf of a patient, and championing social justice (Bu & Jezewski, 2007). Advocacy at the micro-social level of advocacy requires patients to possess the information and understanding needed to make an informed choice based on their own values, beliefs, and personal circumstances (ANA, 2001; Bu & Jezewski, 2007; Yeo & Moorehouse, 1996). This aspect of advocacy focuses on patient self-determination, and is associated with respecting a patient's human dignity (ANA, 2001; Curtin, 1979; Gadow, 1980; Kohnke, 1982). Acknowledging the

importance of a nurse respecting a patient's self-determination, and subsequently their human dignity, is well supported in the nursing literature (ANA, 2001; Curtin, 1979; Gadow, 1980; Kohnke, 1982).

Advocacy at the macro-social level is social advocacy, or championing social justice on behalf of society (Bu & Jezewski, 2007; Ballou, 2000; Fowler, 1989; Grace, 2001). This form of advocacy is needed when systemic problems found in the delivery of healthcare require a more comprehensive way to solve the problem rather than by one patient at a time (Mahlin, 2010).

In this study, labor and delivery nurses' attitudes towards patient advocacy were operationalized using the Attitude towards Patient Advocacy Scale (APAS) (Bu, 2005). This instrument is comprised of sixty-four items.

Delimitations

Only members of AWHONN who were actively working in labor and delivery as a staff or charge nurse, and who had completed a minimum of six months on a labor and delivery unit, were able to participate in the study.

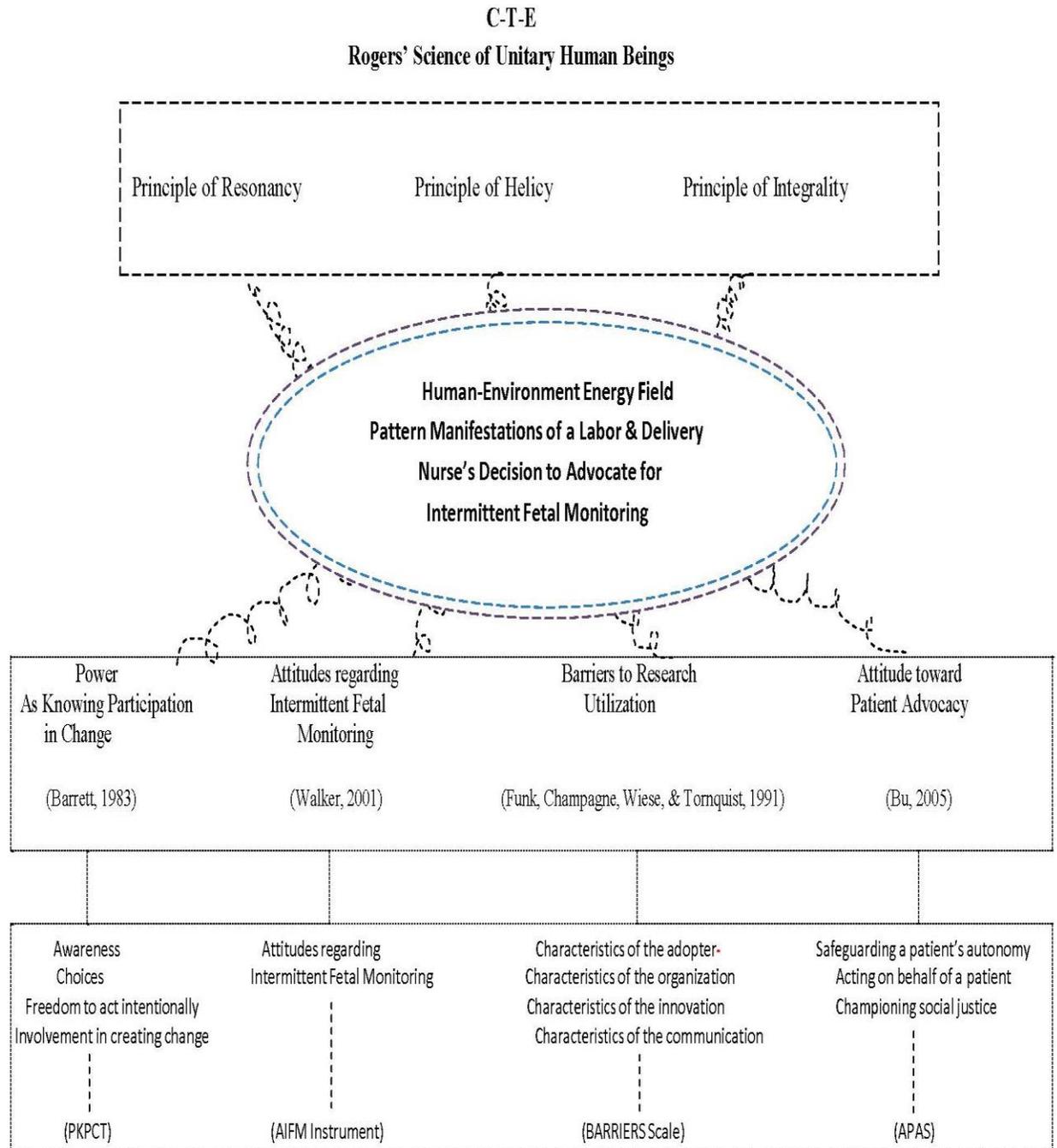
Theoretical Framework

The conceptual nursing model of Martha Rogers' science of unitary human beings (1992), Everett Rogers' theory of diffusion of innovations (E. Rogers, 2003), and the nursing theories of power as knowing participation in change (Barrett, 1983, 2010), and patient advocacy (Bu & Jezewski, 2007) were the theoretical basis for this study. These theories were selected to examine the relationships of the role of power,

attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a labor and delivery nurse's attitude toward patient advocacy.

Barrett's theory (1983, 2010) is derived from the science of unitary human beings (SUHB). The theory of diffusion of innovations (E. Rogers, 2003) and theory of patient advocacy (Bu & Jezewski, 2007) are related to the conceptual model of the SUHB through the manifestations of the human-field pattern (see Figure 1. p. 25). Human-field manifestations of pattern in this study were represented as labor and delivery nurses' power profiles, attitudes regarding intermittent fetal monitoring, perceived barriers to research utilization, and attitudes toward patient advocacy. Manifestations of a human-field pattern occur in open systems that are acausal and focus on some aspect of change.

Figure 1.



Heelan (2014).

Figure 1. C-T-E of study design.

The Science of Unitary Human Beings. The SUHB was conceptualized by Martha Rogers as a foundation for the science and art of nursing (M. Rogers, 1986). As a broad and abstract conceptual nursing model, the SUHB reflects the influences of many of the contemporary scientists and thinkers during Martha Roger's life time (1914-1994) (Fawcett, 2005). Some of the scientific underpinnings found within the SUHB include Einstein's theory of relativity in relation to space-time, von Bertalanffy's theory regarding open systems, and Burr and Northrop's theory related to energy fields (Alligood & Tomey, 2010). These ideas can be found in the SUHB as the concepts of energy fields, openness, pattern, and pandimensionality (M. Rogers, 1992).

M. Rogers supported the new worldview of science which was open-ended, continuously changing, and unitary. This new way of looking at science provided M. Rogers with a different way of perceiving people and their environment (M. Rogers, 1992). With a view of science as open and acausal, the world could no longer be perceived as static, but instead is alive with no limit to a human being's energy field or pattern (Phillips, 2010). From this vantage point, change was viewed as natural and desirable, and reflected innovation (Fawcett, 2005).

Energy fields and mutual process. At the core of the SUHB is concern for human beings and their environment (M. Rogers, 1986). The SUHB views unitary human beings as irreducible wholes. The concept *unitary* is reflected when a labor and delivery nurse is considered as more than a pair of hands fulfilling a nursing task on a specific labor unit. As an irreducible whole, the labor and delivery nurse's

beliefs, values, life experiences, knowledge, attitudes, and skills are all taken into consideration, and are the whole. As a unitary human being, the individual nurse is an energy field.

The environment in which the nurse works is its own energy field. A major tenet of the SUHB is that a unitary human being cannot be viewed as separate from his or her environment. The labor and delivery nurse and the environment are, therefore, in *mutual human-environmental process* (see Figure 1., p. 25) as each labor setting has a culture of its own which includes incorporating how things are done (McCormack et al., 2002). Understanding labor and delivery nurses from a unitary perspective values each nurse's uniqueness and helps to better understand the nurse and the environment in which the nurse practices (M. Rogers, 1990).

However, while the literature shows that the hospital unit influences a labor and delivery nurse's ability to practice (Kennedy & Lyndon, 2008; Lyndon, 2008; Penticuff & Walden, 2000; Payant et al., 2008), the conceptual understanding of the environmental energy field in the SUHB is much broader than the four walls of a hospital. Specifically, the environment includes, and is not limited to, the hospital, society, culture, or governmental policies.

The process of change. Through the Rogerian principles of homeodynamics, nurses participate in the process of change for the betterment of people (M. Rogers, 1986). The principles of homeodynamics are about the nature of change, and are tied to pattern (M. Rogers, 1992). Manifestations of pattern can be seen, but the pattern

itself cannot be seen. Attitudes are examples of manifestations of pattern that emerge from the mutual human and environmental process.

The three principles of homeodynamics are: resonancy, helicy, and integrality. With the first principle of change, *resonancy*, wave patterns in the human and environmental fields are continuously changing, shifting among lower and higher rhythms and increasing in frequency. With the second principle of change, *helicy*, a continuous and unpredictable pattern evolves. Both principles characterize the Rogerian view that change is continuous and unpredictable, with manifestations of pattern becoming more frequent and diverse as change accelerates (M. Rogers, 1992). The third principle, *integrality*, specifies that the human energy field is in mutual process with the environment thus inseparable (M. Rogers, 1992).

Human-environment manifestations of pattern are distinct but not separate from each other (see Figure 1. p.25). Although energy fields are continuously changing and are in constant motion, the desired change is not always observable in outward behavior. This is best demonstrated when a labor and delivery nurse holds a favorable attitude toward intermittent fetal monitoring in low risk pregnancies, but continues the practice of using CEFM in low risk pregnancies in the work setting.

Barrett's Theory of Power. Barrett's theory of power of knowing participation in change (2010), a middle range nursing theory, is derived from the conceptual model of the SUHB. Barrett's theory of power is fully congruent with the SUHB, and is linked to the homeodynamic principles of change postulated by the SUHB (Barrett, 1983, 2010).

According to Barrett (2010) change is occurring *with* human beings all the time, but the difference is whether or not human beings (either individually or as a group) choose to participate in the change. Power, as viewed by Barrett, is not just about participating in change, but participating in a *knowing* manner in the change process (2010). Within Barrett's theory are four inseparable and non-sequential dimensions of power: awareness, choices, freedom to act intentionally, and involvement in creating change.

Theory of Diffusion of Innovations. Everett Rogers (2003) believed that there is a gap in the translation of knowledge from theory to practice. The theory of diffusion of innovations (2003) was developed to better understand the decision process of people either accepting, or rejecting a new innovation. An innovation is defined as, "an idea, practice, or object that is perceived as new by an individual or unit of adoption" (E. Rogers, 2003, p. 12). The innovation in this study is the application of intermittent fetal monitoring in low risk pregnancies.

There are four elements in the diffusion process: the innovation, the way the communication is shared, the time it takes an individual to make the decision to either adopt or reject an innovation, and the social system (E. Rogers, 2003). E. Rogers (2003) indicates that both the individual adopter and the organizational setting participate in the diffusion process.

Similarities between the Theories of Diffusion and Power. In diffusion theory, there are five stages in the decision making process to either accept or reject an innovation (E. Rogers, 2003). Four of the stages are similar to the concepts that

Barrett (2010) uses to conceptualize power. For instance, E. Rogers' stage of *knowledge* is similar to Barrett's power domain of awareness. An example of this relationship is evident when a nurse is aware of intermittent fetal monitoring and the evidence regarding its use and relevance to nursing care practice. The second stage *persuasion* is similar to Barrett's power domain of choices. During the second stage in diffusion theory, the nurse would develop an attitude, good or bad, regarding intermittent fetal monitoring. In the third stage *decision* the nurse would make a decision and decide on whether to accept or reject intermittent fetal monitoring. This third stage is similar to Barrett's dimension of freedom to choose with intent. And finally the fourth stage *implementation* occurs when intermittent fetal monitoring is adopted into practice (E. Rogers, 2003). Applying best practices in low risk pregnancies is similar to Barrett's power domain *involvement in creating change*.

The fifth stage *confirmation* continues the process of seeking out information to either validate the new change, or continue the process of change (E. Rogers, 2003). This suggests that although E. Rogers' theory is sequential, his theory is not linear. Non linearity supports the idea that the theory of diffusion is dynamic as it has no end. Specifically, his theory suggests that the process of change is continuous as innovation evolves.

Theory of Patient Advocacy. Following an extensive literature review, Bu and Jezewski (2007) developed a middle range nursing theory of patient advocacy. The theory of patient advocacy unifies the philosophical nursing ideas of Curtin (1979), Gadow (1980), Kohnke (1982), and Fowler (1989) with the findings from empirical

studies examining nurses' understanding of patient advocacy. Prior to this theory, the context of a nurse's work setting was not recognized in patient advocacy literature (Bu & Wu, 2008). The attributes found to be contributing toward patient advocacy are: safeguarding patients' autonomy, acting on behalf of patients, and championing social justice in the provision of health care.

According to Bu and Wu (2008), a nurse's attitude toward patient advocacy is "a nurse's personal judgment that he or she is in favor of or against performing a series of specific actions" (p. 65) as it relates to patient advocacy. While attitudes are important, holding a favorable attitude toward an innovation of change does not automatically lead to a nurse exhibiting the changed behavior. Attitudes cannot predict behavior (Glasman & Albarracin, 2006). As this theory assesses a nurse's attitude toward patient advocacy, it is acausal.

The SUHB and Theories of Power, Diffusion, and Patient Advocacy. The three theories identified are acausal and focus on some element of change: Barrett's theory of power (1983, 2010) is about *knowing* participation in change; E. Roger's theory of diffusion and innovations (2003) recognizes the influence of the work setting and the role of communication channels in creating change; and Bu and Jezewski's theory of patient advocacy (2007) includes the idea of championing social justice and engaging in change when needed.

A factor necessary for change to occur is an awareness or knowledge about an innovation (Barrett, 1983, 2010; E. Rogers, 2003). In a labor setting, this would involve the nurse being aware of the evidence regarding intermittent fetal monitoring.

As knowledge is gained, attitudes are formed, which are either favorable or unfavorable toward the innovation (E. Rogers, 2003). In a labor setting, the nurse would then have the freedom to choose from various options (Barrett, 1983, 2010; E. Rogers, 2003). Options include either doing things the way they have always been done, or changing to best practices as it relates to fetal monitoring. A decision is then made between the choices (Barrett, 1983, 2010; E. Rogers, 2003) with the nurse either going on toward implementation of a new innovation, or choosing to not implement the new innovation into practice (Barrett, 1983, 2010; E. Rogers, 2003).

Patient advocacy in a labor setting is represented as an attitude a nurse has toward engaging in changing policies and procedures that are either not based on research or a patient's values. Safeguarding a patient's autonomy is represented when the nurse has an attitude of valuing a laboring woman's beliefs and personal values regarding whether she wants to remain in bed and be continuously monitored, or would prefer to move around and be monitored intermittently. Regardless of what the laboring woman chooses, a favorable attitude toward patient advocacy would be observed when a nurse accepts a patient's decision, even if the patient's choice or decision disagrees with the nurse's viewpoint (Bu, 2005).

Research Questions

What are the relationships between and among power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a labor and delivery nurse's attitude toward patient advocacy?

Sub research questions.

1. What is the relationship between a labor and delivery nurse's power profile as knowing participation in change and the labor and delivery nurse's attitude toward patient advocacy?
2. What is the relationship between a labor and delivery nurse's attitudes regarding intermittent fetal monitoring and a labor and delivery nurse's attitude toward patient advocacy?
3. What is the relationship between a labor and delivery nurse's perceived barriers to research utilization and the labor and delivery nurse's attitude toward patient advocacy?

Research Hypotheses

Power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization are significantly related to attitude toward patient advocacy among labor and delivery nurses.

H₁: Power as knowing participation in change has a positive relationship with attitude toward patient advocacy.

H₂: Attitudes regarding intermittent fetal monitoring are related to attitude toward patient advocacy.

H₃: Perceived barriers to research utilization have an inverse relationship with attitude toward patient advocacy.

Null Hypothesis: There are no relationships between and among power as knowing participation in change, attitudes regarding intermittent fetal monitoring,

perceived barriers to research utilization, and a labor and delivery nurse's attitude toward patient advocacy.

Significance of Study

Childbirth is the number one reason for hospitalization in the US (Russo, Wier, & Steiner, 2009). The preliminary number of US births reported in 2013 was 3,957,577 (Hamilton, Martin, Osterman, & Curtin, 2014). In 2006, childbirth accounted for \$14.8 billion in hospital costs (Russo et al., 2009). Since that time, costs have increased. Between 2009 and 2010, the average cost of care for an inpatient hospital stay increased by 3.8%; between 2010 and 2011, the cost of hospital inpatient care rose by 4.6% for adults under the age of 65 with private insurance (Health Care Cost Institute, 2013).

Healthy women with low risk pregnancies are prevented from moving while in labor due to the application of CEFM. This routine practice slows down the labor process which is what contributes to a cascade of events leading to worsened outcomes for the laboring woman (Klein, 2006). Routinely using CEFM in low risk laboring women does not comply with evidence based research guidelines (ACOG, 2009; Anderson, 1994; AWHONN, 2008; NICE, 2007; RANZCOG, 2009; USPSTF, 1996; WHO, 1996). Not adopting and following evidence based practice guidelines contributes to a third or more of the waste found in US annual health care spending (RWJF, 2012), and increases the cost of health care spending. Specifically, almost 1/3 of all births in the US are by cesarean surgery (Hamilton et al., 2014), yet the World Health Organization reports that cesarean surgeries should be less than 15% of

all deliveries (1996). For women with private insurance, the average cost of a cesarean surgery in 2010 was \$27,866, and a vaginal delivery was \$18,329 (Center for Healthcare Quality & Payment Reform [CHQPR], 2013). On average, Medicaid paid \$4,000 more for a woman to have a cesarean surgery than a vaginal birth (CHQPR, 2013). A reduction in cesarean surgeries by 50% is expected to save \$5 billion per year in health care costs (CHQPR, 2013).

Patient advocacy improves patient outcomes (Ciliska, 2006; Hanks, 2010). Being a patient advocate is evident when a nurse safeguards a patient's autonomy, acts on their behalf when they are unable, and champions social justice when a systemic problem exists. Patient advocacy is manifested when laboring women make an informed choice regarding the type of fetal monitoring they want used while in labor, and when nurses engage in change to correct systemic problems when they exist. As the largest group of professionals in the delivery of health care, nurses represent the key to improving the quality and safety for all involved in childbirth.

This study contributes to nursing theory, nursing education and practice, and was designed to examine potential factors associated with a labor and delivery nurse's attitude toward patient advocacy and decision to advocate for the implementation of intermittent fetal monitoring in low risk pregnancies, the merits of which are documented in the research as described.

Chapter II

REVIEW OF THE LITERATURE

This chapter provides an overview of Martha Rogers' conceptual nursing model science of unitary human beings (SUHB) (1992), Barrett's theory of power as knowing participation in change (1983, 2010), Everett Rogers' theory of diffusion of innovations (2003), and Bu and Jezewski's theory of patient advocacy (2007). The SUHB and the three theories identified provide the theoretical framework for this study to understand the role of power, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a labor and delivery nurse's attitude toward patient advocacy. All three theories are associated with the conceptual model of the SUHB through the human-environment field manifestation of patterning (see Figure 1. p. 25). Human-environment field manifestations of pattern occur in open systems that are acausal and focus on some aspect of change. A review of the literature focusing on the identified variables, the theoretical linkages between variables, and an explanation of congruency with the SUHB is discussed.

Literature Search

A literature search was conducted to determine the significant characteristics of each concept with nurses: power as knowing participation in change, attitudes regarding intermittent fetal monitoring, perceived barriers to research utilization, and patient advocacy. Searches were conducted in the databases of Cumulative Index to Nursing and Allied Health (CINAHL), Proquest, LexisNexus Academic, Science Direct, PubMed, and Google Scholar. The search was further refined when primary

sources were limited to full text peer-reviewed journals written in English from 1979 to 2013. Additional empirical studies were obtained from citations located in the reference section of retrieved articles and journals focused on nursing theory.

The key words used to obtain studies examining power were “power as knowing participation in change,” “Barrett’s theory of power,” “Barrett’s theory of power and nursing,” “PKPCT and nurses,” and “Rogerian science, science of unitary human beings, and nurses.” Key terms used to identify empirical studies regarding nurses’ attitudes regarding intermittent fetal monitoring were “attitudes on fetal monitoring,” “nurses’ attitudes regarding fetal monitoring,” “intermittent fetal monitoring and nurses,” “attitudes of nurses regarding intermittent fetal monitoring,” and “Nurses’ Attitudes toward Intermittent Fetal Monitoring Scale.” The search words used to understand the attributes of barriers to research utilization were: “research utilization,” “evidence based practice,” “research utilization and nurses,” “Rogers’ theory of diffusion and nurses,” “evidence based practice and maternity nurses,” “patient outcomes,” and “evidence based practice and nurses.” The key terms used to understand patient advocacy were “patient advocacy,” “patient advocacy and nursing,” “nurses’ attitudes regarding patient advocacy,” “patient advocacy in childbirth,” “patient advocacy and qualitative studies,” “patient advocacy and quantitative studies,” “the concept of patient advocacy,” “models of patient advocacy,” and “Attitudes toward Patient Advocacy Scale.”

The Science of Unitary Human Beings

The science of unitary human beings (SUHB) was conceptualized by Martha Rogers as a foundation for the art and science of nursing (M. Rogers, 1986). As an abstract conceptual nursing model, concern for human beings and their environment is at its core. The SUHB is grounded in a philosophy that is acausal and includes a belief that the whole person is different from the sum of the parts (M. Rogers, 1992). There are four postulates proposed as basic to the SUHB: energy fields, openness, pattern, and pandimensionality (M. Rogers, 1992). One of the assumptions of the SUHB is that “People have the capacity to participate knowingly in the process of change” (M. Rogers, 1986, p. 4).

Energy fields. Human beings are viewed as more than parts, and are best envisioned as an energy field. According to M. Rogers, “*Field* is a unifying concept. *Energy* signifies the dynamic nature of the field. *Energy fields* are infinite” (M. Rogers, 1986, p. 4). With this understanding, every human being is its own energy field, and the environment in which a human being is in mutual process, is its own energy field. Each field, be it human or environmental, is viewed as distinct but not separate from the other. This concept reflects the nurse and the environment of practice representing an irreducible, infinite, and open energy field (M. Rogers, 1986).

Pattern. A pattern is defined as “the distinguishing characteristic of an energy field” (M. Rogers, 1986, p. 5), and represents the uniqueness and diversity of each human-environment energy field (M. Rogers, 1992). Although a pattern cannot be

observed or measured, manifestations of patterning can be observed and measured. Manifestations of patterning are open, pandimensional, and shift among lower and higher rhythms with increasing frequency (M. Rogers, 1992). This means that manifestations of patterning are not static and are always changing. Examples of manifestations of patterning include labor and delivery nurses' power profiles, attitudes regarding intermittent fetal monitoring in low risk pregnancies, perceived barriers to research utilization, and attitudes toward patient advocacy.

Pandimensionality. Pandimensionality occurs in a universe of open systems that have no limits. The term *pandimensionality* is defined as “a non-linear domain without spatial or temporal attributes” (M. Rogers, 1992, p. 29). This means that a human-environment manifestation of pattern isn't limited to the present, but includes the past and the future (Jones, 2001). This concept of pandimensionality is congruent with E. Rogers (2003) who believes that an innovation, such as the use of intermittent fetal monitoring in low risk pregnancies, needs to be compatible with the values, beliefs, and past experiences of other individuals within the individual's social network before the innovation is adopted.

Mutual Process. The human energy field and environmental energy field through ongoing mutual process are continuously changing. Every manifestation of pattern is diverse and unique. According to M. Rogers (1986), “The human and environmental energy fields evolve together and are integral with one another” (p. 7). The term *mutual human-environment process* is the term that describes the interrelatedness of the human energy field with the environmental energy field. The environmental

energy field in this study includes, but is not limited to, other labor and delivery nurses, colleagues, patients, and hospital protocols. This conceptual understanding of mutual human-environment process is best reflected as the hospital unit influencing a labor and delivery nurse's practice (Kennedy & Lyndon, 2008; Lyndon, 2008; Penticuff & Walden, 2000; Payant et al., 2008).

Openness. The SUHB is consistent with von Bertalanffy's general systems theory regarding open systems (M. Rogers, 1992). Open systems are associated with the environment, not separate from the environment (Fawcett, 2005). With this theoretical understanding, human energy fields and environmental energy fields are in mutual process in an open system (M. Rogers, 1986). According to M. Rogers (1992), "energy fields are open, not a little bit or sometimes, but continuously" (p. 30). This description represents a unitary worldview where open systems are limitless and do not allow for causality (M. Rogers, 1992). Participating in change can only occur in open systems.

Principles of homeodynamics. Every human-environment energy field is continuously changing, and is in constant motion. As the principles of homeodynamics are about the nature of change, they are tied to pattern (M. Rogers, 1992). The principles of homeodynamics provide a way for nurses to participate in the process of change for the betterment of people (M. Rogers, 1986).

The three principles of homeodynamics are: resonancy, helicy, and integrality. The first principle of change, *resonancy*, is a wave pattern of the human and environment field. This wave pattern is continuously changing, shifting among lower

and higher rhythms, and increasing in frequency. The second principle of change, *helicy*, describes change in field patterning as increasing, diverse, and creative. Both principles characterize the Rogerian view that change is continuous and unpredictable. As change accelerates the manifestations of patterning become more diverse and frequent (M. Rogers, 1992). The third principle, *integrality*, states that the human energy field is in mutual process with the environment thus inseparable (M. Rogers, 1992).

Power as knowing participation in change. Change is continuous, and is *with* human beings, not around human beings (E. Barrett, personal communication, April 4, 2014). M. Rogers (1986) postulated that human beings have the capacity to knowingly participate in this change. Power, as defined by Barrett, is participating in a *knowing* manner in change. Power as a continuous process is composed of the concepts of awareness, choices, freedom to act intentionally, and involvement in creating change (Barrett, 2010). Barrett's middle range theory of power is derived from the SUHB, and is fully congruent with the tenets and principles of the SUHB (Barrett, 2010).

Although the Rogerian perspective represents a unitary worldview, M. Rogers did not deny the existence of other worldviews, including worldviews that were causal (E. Barrett, personal communication, April 4, 2014). As a result of this understanding, power-as-freedom (unitary in nature) exists side by side with power-as-control (causal in nature) (Barrett, 2010). The hierarchies of power that originate with causality (power-as-control) have the capability of creating oppressive systems,

whereas power-as-freedom (acausal) doesn't interfere with another person's freedom. When a nurse has the freedom to act on choices, then the nurse can actively be involved in creating change.

Findings from empirical studies using the PKPCT with nurses.

Power and demographics of age, education, experience, and nursing role. Ciarcia (1998) found that nurses in the age category of twenty-two to twenty-eight years of age scored the lowest in every category of power ($M = 62.88$), while nurses in the age range of twenty-nine to thirty-five had the highest overall power measurement ($M = 71.42$). Yet, it was the age category of thirty-six to forty-two in this study that had the highest measurement in creating change ($M = 83.23$).

In a different study, McGarvey (2002) did not find any significant correlations with any demographic variable and a nurse's power profile. Trangenstein (1988) found 18.7% of the variance of power accounted for by all the demographics combined, which included age, years of experience and education.

Education degree. Ciarcia found that a nurse's educational degree also affected a nurse's power measurement. Specifically, masters prepared nurses had the highest power measurement ($M = 73.82$), and diploma and associate degree nurses had the lowest power measurement ($M = 60.58$).

Nursing experience. Ciarcia found that length of nursing experience also affected a nurse's power measurement; nurses with eighteen to twenty-five years had the highest power measurement ($M = 70.15$).

Nursing role. Ciarcia found that nursing specialty or role also influenced a nurse's power profile with administrators ($M = 74.31$) and educators ($M = 72.86$) having the highest power measurements, while the staff nurses on medical surgical units ($M = 60.53$) and intensive care units ($M = 61.17$) had the lowest power measurements.

Power and work setting. McGarvey (2002) examined variables which might influence a staff nurse's ($N = 756$) adherence to best practice response when faced with an ethical dilemma in an occupational health setting. In this study, the ethical dilemma had to do with releasing health information without an employee's consent. Of the nurses sampled, 83.9% of the nurses chose the best practice response as the ideal response; however, only 55% of the nurses said it would be a likely action.

The major finding from this study was that regardless of whether a nurse was directly employed by the company ($n = 633$) or was a contract nurse ($n = 120$), an organization's ethics played a major role in the nurse choosing the best practice response ($OR = 1.26$, 95% $CI [1.11, 1.43]$, $p < .001$). Specifically, the higher the perceived ethical climate of an organization, the greater the likelihood the nurse would choose the best practice response. This finding supports the association between a nurse's work setting and the action a nurse may take when faced with an ethical dilemma.

In addition, McGarvey (2002) found that power was significantly associated with choosing the best practice response in the contract nurses ($OR = 2.33$, 95% $CI [1.35, 4.03]$, $p < .002$) but not in the nurses directly employed by the organization. A reason

for this could be that the contract nurse is directly employed by the agency, and not by the organizational company. However, McGarvey (2002) considered additional factors to account for the differences between a contract and company nurse. Specifically, McGarvey (2002) suggested that contract nurses may be more comfortable with taking risks and initiating change.

Trangenstein (1988) examined the concept of power with a staff nurse's job satisfaction and job diversity. Job diversity was essentially defined by the researcher as the nurse using skills and abilities in practice that were not repetitive or routine. Findings from this study demonstrated that power was strongly correlated with job diversity ($r = .53$). Job diversity was then related to feelings of positive job association and job satisfaction. This finding suggests that the work setting and what the nurse does in practice contributes to the power profile of a nurse.

Talley (1998) examined nurses ($N = 319$) from fifty hospitals in eight US rural states. The major finding was that 60% of the variance in quality of care was related to power and organizational commitment. Although power was found to be statistically significant, its correlation with participation in decision making was small ($r = .291$) and therefore not clinically significant. However, power was moderately correlated with organizational commitment ($r = .404, p < .01$). The moderate correlation of power with organizational commitment proposes that nurses are in mutual process with their work setting. This study further suggests that the nurse's work setting influences a nurse's power profile.

Summary of literature on power as knowing participation in change. There are limited studies that have examined nurses and power as knowing participation in change. Two of the identified studies looked exclusively at staff nurses (McGarvey, 2002; Trangenstein, 1988) with only one of these studies conducted with nurses in a hospital setting (Trangenstein, 1988). Trangenstein (1988) and Ciarcia (1998) found that the characteristics of the individual nurse (age, years of experience, education degree, nursing specialty) influenced a nurse's power profile; however, McGarvey (2002) did not. Trangenstein (1988), Tally (1998), and McGarvey (2002) identified the work setting as being related to a nurse's power profile. Only two of the identified studies included labor and delivery nurses in their sample (Tally, 1998; Trangenstein, 1988). Specifically, 11% of the nurses (Talley, 1998) and 21% of the nurses (Trangenstein, 1988) sampled practiced in the obstetric setting.

Attitudes regarding intermittent fetal monitoring. According to Sandelowski (2000), the cardiograph machine was "designed to be a nurse's tool" (p. 317). During the 1960s and 1970s, Corometrics Medical Systems, the maker of the cardiograph machine, hired nurses to sell, promote, and educate other nurses and physicians on the benefits of CEFM (Sandelowski, 2000). By the mid-1970s, CEFM was used in about one-half of all labors (Williams & Hawes, 1979). The use of CEFM occurred despite clinical trials that did not support its use in low risk pregnancies (Banta & Thacker, 1979; Dixon, 1981; Havercamp, Thompson, McFee, & Cetrulo, 1976).

Empirical studies of nurse's attitudes regarding intermittent fetal monitoring. There are limited studies ($n = 11$) examining nurses' attitudes regarding intermittent

fetal monitoring. Only two of the studies located have been conducted in the US (Cranston, 1980; Walker, et al., 2001). While the health care system and type of nursing education in Europe are different from the US, the role of the nurse midwife in Europe and staff nurse in Canada is similar to the role of staff nurse in labor and delivery in the US (Hindley et al., 2006a). The non US studies were included in this review as the nursing role was considered similar.

Attitudes and various demographics, including education. In the very first study conducted to examine US labor and delivery nurses' attitudes regarding fetal monitoring, Cranston (1980) did not find any differences in attitude based on the nurse's primary working shift, basic nursing education, or length of experience in nursing ($p < .05$). Twenty years later, Walker and colleagues (2001) examined US labor and delivery nurses' ($N = 145$) attitudes regarding intermittent fetal monitoring. In their study, a nurse's education level was the only demographic variable found to be statistically significant. Specifically, nurses who had a bachelor's degree (BSN) or higher, were more supportive of intermittent fetal monitoring when compared to those who had less than a BSN ($t = -2.97$, $df = 135.65$, $p = .004$).

In the UK, Sinclair (2001) found that younger midwives between twenty to twenty-nine years of age ($n = 30$) were more likely to view CEFM as giving rise to problems when compared to their older colleagues ($M = 3.72$, $F = 2.84$, $p < .05$).

Attitudes and confidence in intermittent auscultation. Dover and Gauge (1995) found that the more confidence a nurse midwife in the UK had in the use of intermittent fetal monitoring, the less likely the nurse believed in the safety of CEFM

($F = 6.134, p < .05$). In a more recent study from the UK, Hindley and colleagues (2006a) examined nurse midwives ($N = 58$) views regarding fetal monitoring with women at low obstetric risk at two different hospitals. Although the nurse midwives in this study were supportive of intermittent fetal monitoring, many expressed being unable to practice confidently without CEFM.

Attitudes and experience. Altaf and colleagues (2006) conducted semi-structured interviews of midwives ($N = 20$) from a large teaching hospital in the UK to assess their practices and views of fetal monitoring. Eleven of the purposively selected midwives worked with women considered high risk, while nine worked with women who were considered low risk. The low risk labor unit was midwifery, not physician led, and midwives who worked on the low risk unit rarely used CEFM. The findings from this study suggest that less experienced midwives working in the high risk labor setting were more likely to have faith in CEFM. A reason given was less experienced midwives had not yet developed the confidence to trust their own abilities.

In a study conducted in Canada, Liva and colleagues (2012) found that years of experience did correspond with nurses having more negative attitudes toward CEFM ($rs = 0.14, p < .01$); however, this finding did not hold true for nurses currently working in labor and delivery.

Attitudes and work setting. Liva and colleagues (2012) conducted a study in Canada to examine if a nurse's attitude regarding fetal monitoring may be influenced by exposure to their workplace provider care practices. Major findings from this study suggest that nurses ($N = 545$) who worked at a tertiary care hospital ($n = 130$)

were more likely to select an obstetrician for their own personal labor experience (45%, ASR = 3.8), while nurses who worked at a community hospital ($n = 70$) were more likely to select a family physician (56%, ASR = 2.5). Overall, the nurses in this study had a negative attitude toward CEFM ($M = 2.15$, $SD = .70$). However, nurses who chose an obstetrician were likely to have a slightly more favorable attitude toward CEFM ($M = 2.33$, 95% CI) than a nurse who chose a family physician ($M = 2.00$, 95% CI) or midwife ($M = 2.00$, 95% CI). This finding is supported by Hindley and colleagues (2006a) who found that fetal monitoring choices and adherence to evidenced based practice are influenced by the culture and available resources of the institution.

Attitudes and what nurses would want for themselves. Birch and Thompson (1997) examined attitudes regarding fetal monitoring of nurse midwives ($n = 80$), senior house officers ($n = 5$), consultants ($n = 4$), middle grade doctors ($n = 5$), and unidentified practitioners ($n = 2$) in the north western part of England. Every participant in this survey indicated that intermittent fetal monitoring was the most appropriate method of monitoring a single fetus at term in the cephalic position and part of a spontaneous and normal birth; however, all women in labor at this hospital received CEFM. Experience was viewed by the participants as more important than literature reviews in determining the way they practiced. When asked what they themselves would want during childbirth, 82% of the respondents would prefer intermittent fetal monitoring; however, 33% of all nurse midwives and 40% of all senior house officers preferred to use CEFM when caring for laboring women.

Changing attitudes. Cranston (1980) found that 73% of the nurse participants ($N = 124$) felt that CEFM was one of the best obstetric inventions, 90% felt that the benefits of CEFM outweighed the restrictions imposed on laboring women, 88% felt that CEFM was superior to intermittent fetal monitoring, and 76% supported CEFM in normal labors because potential complications could occur at any time. However, fifteen years later in the second study conducted to examine nurses' attitudes regarding fetal monitoring, Dover and Gauge (1995) found 55% ($n = 64$) of the nurses were supportive of intermittent fetal monitoring as their first choice for low risk pregnancies.

In a study conducted in Northern Ireland, 74% of the nurse midwives sampled ($N = 446$) believed CEFM was often used unnecessarily, with 8% undecided (Sinclair, 2001). The majority of the nurse midwives sampled (80%) did not believe that CEFM was essential for ensuring a safe delivery, and 61% believed that CEFM could lead to unnecessary medical interventions. In a different study in Northern Ireland, McKevitt and colleagues (2011) sampled nurse midwives ($n = 29$) and obstetricians ($n = 11$). Of the participants, 90% ($n = 36$) did not believe that CEFM was necessary to ensure a safe delivery, and 82.5% ($n = 33$) responded that CEFM can lead to unnecessary interventions.

Summary of attitudes regarding intermittent fetal monitoring. Labor and delivery nurses do not have a homogenous view of fetal monitoring. Nurses' attitudes regarding fetal monitoring appear to be changing since Cranston (1980) found that 88% of the nurses ($N = 124$) sampled felt that CEFM was superior to intermittent

fetal monitoring, and 73% believed that CEFM was the best obstetric invention.

Since that time, research studies have found a majority of nurses support intermittent fetal monitoring, and not CEFM in low risk pregnancies (Dover & Guage, 1995; McKeivitt et al., 2011; Sinclair, 2001; Walker et al., 2001), with 82% ($N = 96$) of the respondents wanting intermittent auscultation should they themselves personally experience labor (Birch & Thompson, 1997).

Nurses' attitudes have been found to be influenced by their exposure to workplace provider practices (Liva et al., 2012). Mixed findings have been found regarding younger or less experienced nurse midwives favoring intermittent fetal monitoring (Sinclair, 2001), and education level (Cranston, 1980; Walker et al., 2001). Research studies suggest that there is a major gap between the values of providing woman centered care with intermittent fetal monitoring, and practice (Altaf et al., 2006; Birch & Thompson, 1997; Dover & Gauge, 1995; Hindley et al., 2006a). In Smith, Begley, Clarke, and Devane's systematic review (2012), nurses' attitudes appear to favor intermittent fetal monitoring in low risk pregnancies, yet nurses express barriers to implementing intermittent fetal monitoring in a labor setting.

Perceived Barriers to Research Utilization. Everett Rogers (2003) developed the theory of diffusion. A key tenet of his theory is that acceptance of new ideas is a social process. What this means is that both the individual adopter and the organizational setting are participants in the diffusion process. There are four elements that influence the diffusion process: the innovation, the way the

communication is shared, the time it takes an individual to make the decision to either adopt or reject an innovation, and the social system (E. Rogers, 2003).

Different innovations have different rates of adoption. Adopting an innovation is primarily chosen by the degree of advantage the new innovation has over the old way of doing things, and whether it is compatible with the values and norms of the people adopting it (E. Rogers, 2003). This would be exemplified by the labor and delivery nurse having an attitude that intermittent fetal monitoring is better than CEFM for low risk laboring women based on evidence and the values of the laboring woman. However, according to E. Rogers (2003) the nurse cannot implement the change without the change being formally adopted by the organization.

The five stages of the innovation-decision process. The innovation-decision process of accepting or rejecting a new innovation occurs in five stages (E. Rogers, 2003). The five stages are: knowledge, persuasion, decision, implementation, and confirmation. The stage *knowledge* takes place when evidence regarding a particular innovation becomes known. This stage is followed by *persuasion* whereby favorable or unfavorable attitudes regarding the innovation are formulated. Choosing to engage in activities that lead to the innovation being adopted or rejected occurs in the stage of *decision*. During the stage *implementation* an innovation is put into practice. It is within the *confirmation* stage that the process of seeking out information to either validate the new change, or continue the process of change, occurs. The rate of adoption is influenced by new communication technologies such as the Internet, cell phones, iPhones, twitter, Facebook, and professional networks such as LinkedIn.

Each of these technologies provides a way to speed up the way communication is spread and at the same time, expands diffusion networks.

The decision to incorporate an innovation occurs along a continuum. Specifically this means that the adoption of an innovation can be spearheaded by an individual adopter, a collective group decision, or by a top down authoritarian decision (E. Rogers, 2003). Most innovations are adopted by collective group decision, or by an authority decision. When decisions are made top down from a position of authority, the individual adopter has no say in the innovation decision. This strategy may conveniently speed up the adoption of the innovation; however, the actual change may be prevented from being fully implemented (E. Rogers, 2003).

E. Rogers (2003) identified five categories of adopters: innovators (2.5%), early adopters (13.5%), early majority (34%), late majority (34%), and laggards (16%). Innovators are more likely to be cosmopolitan, have higher incomes, more years of education, and work in larger settings when compared to late adopters (Gross, 1942 as cited by E. Rogers, 2003).

Empirical studies with nurses' perceived barriers to research utilization. To measure what nurses perceived as barriers to research utilization in practice, Funk and colleagues (1991) developed the Barriers to Research Utilization Scale (BARRIERS Scale). The BARRIERS Scale is modeled on the concepts of E. Roger's diffusion theory. A gap in the literature identified by Funk and colleagues (1991) was that the actual adopters (nurses) were never asked what they perceived as preventing them from translating knowledge into practice. When designing and developing the

BARRIERS Scale, Funk and colleagues (1991) included nurse clinicians ($n = 924$) as well as administrators and academics in their sample of full time registered nurses ($N = 1948$).

There are four subscales within the BARRIERS Scale: characteristics of the adopter (nurse), characteristics of the organization (work setting), characteristics of the innovation (quality of the research), and characteristics of the communication (presentation and accessibility of the research) (Funk et al., 1991). The characteristics of the adopter include the nurse's research values, skills, and awareness. The characteristics of the organization include the perceived barriers and limitations of the work setting (Funk, 2001).

Characteristics of the individual adopter (the nurse).

Attitudes regarding research. Estabrook, Floyd, Scott-Findlay, O'Leary, and Gushta (2003) conducted a systematic review on barriers to research utilization. The main finding of this review was that a nurse's attitude regarding research was the only variable that had any influence on a nurse's utilization of research. In the majority of studies examining nurse's attitudes toward research, most nurses had a favorable attitude (Bryar et al., 2003; Fink et al., 2005; McCloskey, 2008; Parahoo & McCaughan, 2001; Thiel & Ghosh, 2008; Thompson et al, 2001; Veeramah, 2004). However, Olade (2003) found that 76.4% ($N = 106$) of nurses had a lukewarm or unfavorable attitude toward research. This finding is supported by Pravikoff and colleagues (2005). In their study, the number one item reported by nurses ($N = 760$) as a barrier to research utilization was "lack of value for research in practice" (p. 48).

Within their study, 71.8% ($n = 540$) of the respondents reported never evaluating a research report in the last year, with another 12.2% ($n = 92$) doing so once in the past year.

Education. Champion and Leach (1989) conducted one of the first studies looking at the role of education and attitudes toward research utilization by nurses. In their study, nurses ($N = 59$) who had had a research course, had a more favorable attitude toward research ($t = 2.27, p < .03$). The association between education and a nurse having a positive attitude toward research was also found by Olade (2003) ($r = .51, p < .001$). Koehn and Lehman (2008) found significant differences in attitudes toward evidence based practice (EBP) based on a nurse's educational preparation.

Specifically, nurses who had a master's degree had higher attitudes toward EBP scores ($M = 5.59$) when compared to associate degree nurses ($M = 4.90$), diploma nurses ($M = 5.03$), and baccalaureate prepared nurses ($M = 5.34$). However, when pairwise comparisons of groups were performed, the baccalaureate nursing degree group was the only group that had statistically significant higher scores when compared to the associate degree group ($M = 6.97, p < .001$). Estabrook, Floyd and colleagues (2003) conducted a systematic review and could not identify any trends showing a definitive association between a nurse's educational level and research utilization.

Internet use. Estabrooks and colleagues (2007) conducted a multilevel analysis to predict research utilization in a nursing organization. The major finding was that 87% of the variance in research utilization was accounted for by the individual

characteristics of the nurse ($p < .01$). One identified individual characteristic of the nurse found to be statistically significant was the amount of time the nurse spent on the Internet. In an earlier study, Estabrooks, O'Leary, Ricker, and Humphrey (2003) found that many nurses have access to the Internet at work, yet Internet use among nurses while at work was low.

Characteristics of the organization (work setting).

Top barriers identified. In systematic reviews of studies using the BARRIERS Scale, Carlson and Plonczynski (2008) and Kajermo and colleagues (2010) found the top three reasons consistently reported by nurses as barriers to research utilization were insufficient time on the job to implement new ideas, the nurse does not have time to read research, and the nurse does not have the authority to change patient care procedures. The barriers *lack of time* and *lack of authority to change practices* have been reported for over thirty years, regardless of geographic location, varying sample sizes, and response rates (Carlson & Plonczynski, 2008; Kajermo et al., 2010). The barrier "administration will not allow implementation" from the BARRIERS Scale was identified in eight of the sixty-three empirical studies comprising Kajermo and colleagues' (2010) literature review.

Estabrooks and colleagues (2007) used a cross sectional survey with three levels of modeling analyses to determine research use among nurses ($N = 4420$) in Canada. In their study, 8% of the variance in research utilization was accounted for by specialty level influences ($p < .05$). The concept *specialty level influences* focused on

the context of a nurse's work environment and included a nurse's perceived ability to control policy and nurse to nurse collaboration.

Size of the hospital. Estabrooks and colleagues (2007) found the size of the hospital represented 4% of the variance for research utilization ($p < .01$). Specifically, hospitals that had over one hundred fifty-one beds (the definition of a large hospital in their study) were reported to have increased research utilization when compared to small and medium size hospitals. Estabrooks and colleagues (2007) suggested that the size of the hospital may be a marker for other organizational characteristics that a large hospital may be providing that smaller hospitals cannot or do not provide. Although Estabrooks and colleagues (2007) did find that hospital indicators such as staff development, responsive administration, adequate staffing, and support services were statistically significant, only the size of the hospital was found to be statistically significant in the final statistical model.

Characteristics of the communication.

Nursing is an oral tradition. The top barrier identified in the category of the adopter (nurse) in the two systematic reviews was being unaware of the research (Carlson & Plonczynski, 2008; Kajermo et al., 2010). When nurses need information, they frequently (51.3%) or always (15.5%) ask a colleague or peer (Pravikoff et al., 2005). Thiel and Ghosh (2008) reported that 72.5% ($n = 88$) of the nurse respondents surveyed prefer to consult colleagues and peers rather than use textbooks or journals, a finding similar to that of Estabrooks, O'Leary, and colleagues (2003). Jeffs and colleagues (2013) did not find nurses relying more heavily on personal opinion than

written sources. However, a problem in their study was that nurses were interviewed after EBP had been implemented at their hospital which may have influenced the results of this study. These findings support E. Rogers' (2003) claim that for individuals to form an attitude regarding an innovation, they seek out the opinions of their peers.

Other sources of information. While nurses appear to prefer face to face discussions, nurses do use a variety of ways to obtain information (Gerrish, Ashworth, Lacey, & Bailey, 2008). Gerrish and Clayton (2004) found nurses rely on hospital policies and protocols to inform their practice, while Mills, Field, and Cant (2009) reported nurses ranked in-service education and educational opportunities as the main way nurses acquire knowledge. However, Mills and colleagues (2009) suggested that educational formats such as in-service education programs incorporate the oral culture of nursing. In a study to explore the construct *research utilization*, Estabrooks and colleagues (2011) did not find reading journals, valuing research based practice, attending conferences, ongoing research in the facility, or presence of research based information on the unit as being related to research utilization.

Use of the Internet. The use of the Internet has been explored to examine if online technology is a viable way for nurses to access information and improve knowledge (Estabrooks, O'Leary, et al., 2003; Gosling, Westbrook, & Spencer, 2004; Morris-Docker, Tod, Harrison, Wolstenholme, & Black, 2004). Gosling and colleagues (2004) surveyed nurses ($N = 3128$) and the reasons they use online technology. Senior nurses/managers ($n = 340$) when compared to junior nurses/staff nurses

($n = 567$) used online technology to improve patient outcomes ($p < .0001$), review policies ($p < .0001$), educate others ($p < .0001$), and for research ($p < .0001$). Gosling and colleagues (2004) did not report the values for each finding.

Morris-Docker and colleagues (2004) conducted a study with nurses from four different clinical areas in one hospital. Nurses ($N = 97$) who chose to participate were given their own password and an email address to log into a computer while at work. The study lasted one year. Of the nurses who agreed to participate, 90% ($n = 88$) used this service. Overall, most of the nurses in the study used the Google search engine site to access medical information, but rarely accessed the library database. In addition, this study showed that nurses do find time to use the Internet during work time, especially at night or during times that are slow, if the technology is present.

McGowan and colleagues (2010) conducted a Cochrane systemic review on electronic retrieval of health information to assess if educational interventions improved practice. Only two studies met their inclusion criteria. Neither study found that the interventions used to educate health professionals led to changes in behavior.

Characteristics of the innovation.

Personal use of research utilization, fewer perceived barriers to utilization. In a grounded theory study design, Hannes and colleagues (2007) explored nurses' ($N = 53$) understanding of EBP. Staff nurses working in the community had less knowledge regarding EBP than nurses working in an institutional setting. In addition, nurses with a higher educational degree had more knowledge regarding the concept of EBP. In a different study, McCleary and Brown (2003) found an association between

a recent completion of a research design course, and a nurse's ($n = 73$) understanding of how to conduct a literature review and use the library ($p < .01$). This association was not found to be related to any other indicators of a nurse's knowledge.

Olade (2003) found a statistically significant correlation between research attitude and desire for research utilization ($\rho = .36, p < .0001$). Three studies reported an association between nurses' use of research and perceived barriers to research utilization (Bostrom, Kajermo, Nordstrom, & Wallin, 2008; Brown, Wickline, Ecoff, & Glaser, 2008; McCleary & Brown, 2003). Brown and colleagues (2008) found a relationship between increased difficulty in finding and understanding research, with a lower perception by the nurse ($N = 458$) as possessing the skills and knowledge of EBP; McCleary and Brown (2003) found nurses ($N = 176$), who reported higher levels of using research, as slightly less likely to characterize the nurse as a barrier to research utilization; and Bostrom and colleagues (2008) found nurses ($N = 140$), who reported using research, as less likely to perceive the presentation of research as a barrier to research utilization.

However, no study using the BARRIERS Scale found an association between nurses' perceived barriers to research utilization, and the actual use of research in practice (Carlson & Plonczynski, 2008). Brown, Ecoff, and colleagues (2010) found a similar finding. Specifically, perceived barriers to research utilization had very little effect on predicting a nurse's practice, attitude, or knowledge of EBP.

Summary of perceived barriers to research utilization. Overall, nurses have a positive attitude toward research utilization. Lack of time and a perception by nurses

that they lack power to influence decisions in their work settings, all play a role in the slow translation of research in a practice setting. Nurses who have a higher perception of their knowledge and skills related to research, higher levels of using research, and reporting more research use, were less likely to perceive barriers to the implementation of research in practice. Nurses continue to prefer to learn new information by asking peers, colleagues, and patients, rather than by using the Internet or using library databases.

Attitude toward patient advocacy. The theory of patient advocacy is based on the nursing philosophies of Curtin (1979), Gadow (1980), Kohnke (1982), and Fowler (1989); and a review of the empirical literature (Bu & Jezewski, 2007). In developing the Attitude toward Patient Advocacy Scale (APAS), factor analysis identified three core attributes of patient advocacy: safeguarding a patient's autonomy, acting on behalf of patients, and championing social justice (Bu & Wu, 2008). The APAS instrument and theory of patient advocacy are mutually congruent.

Empirical literature regarding patient advocacy. Patient advocacy was identified by nurses in the empirical literature to include the idea of self-determination or choice in decision making (Boyle, 2005; Curia, 2008; Godkin, 2006; Mallick, 1997; McGrath, Holewa, & McGrath, 2006; McSteen & Peden-McAlpine, 2006; Seal, 2007; Vaartio, Leino-Kilpi, Salanterä, & Suominen, 2006; Ware et al., 2011). Six different studies defined patient advocacy as protecting a patient from harm and keeping the patient safe (Boyle, 2005; Bull & Fitzgerald, 2004; Carnwell, 2009;

Davis, Konishi, & Tashiro, 2003; Hanks, 2008; Hanks, 2010). Few studies have been done to explore the attribute of championing social justice with nurses.

Empirical studies using the attitude toward patient advocacy scale. Few studies have used the Attitude toward Patient Advocacy Scale (APAS) (Barrett-Sheridan, 2009; Hanks, 2010). The APAS has been used with oncology registered nurses (Bu, 2005), registered nurses in California (Barrett-Sheridan, 2009), and medical surgical registered nurses in Texas (Hanks, 2010).

A modified version of the APAS was developed to examine nurses' attitudes toward patient advocacy in Sweden (Eklund, Petzall, Sandin-Bojo, & Wilde-Larsson, 2013). Although the modified version of the APAS has similar Cronbach's alphas to the APAS, it does not include the macro-social component of patient advocacy, championing social justice, and is not discussed further in this review.

Findings from studies using the APAS. Barrett-Sheridan (2009) examined registered nurses' attitudes regarding patient advocacy using the APAS in a pilot study ($N = 20$), and then in the main study ($N = 205$). In the main study, the sample was comprised of registered nurses from California, with 57% ($n = 114$) providing direct patient care as staff nurses, and 62% ($n = 128$) being over the age of fifty. Following data analysis, only the predictor *political participation* explained 5.3% of the variance in a nurse's attitude toward championing social justice ($p < .001$). Age, experience, education, and gender were not found to be associated with nurses' attitudes in championing social justice. Registered nurses who discussed politics reported more favorable attitudes toward patient advocacy in all three subscales.

Hanks (2010) tested the APAS when comparing it with the Protective Nursing Advocacy Scale (PNAS), an instrument he developed. A moderate correlation of .310, $p < 0.01$ was obtained between the PNAS and the APAS scores.

Summary. Empirical literature indicates nurses do have a favorable attitude toward patient advocacy (Barrett-Sheridan, 2009; Boyle, 2005; Curia, 2008; Godkin, 2006; Gosselin-Acomb et al., 2007; Hanks, 2008; Hanks, 2010; James et al., 2003; McSteen & Peden-McAlpine, 2006; Ware et al., 2011). The literature also indicates that nurses identify patient advocacy as including the concepts safeguarding a patient's autonomy, acting on their behalf when they are unable, and championing social justice.

Conclusion

Nursing grounded in science protects a patient's safety. The way things have always been done, the "sacred cows" and traditional practices in nursing are not always supported by the evidence (Makic, Martin, Burns, Philbrick, & Raven, 2013). While change of any kind is not easy, the process of change consists of a series of choices (Barrett, 2010; E. Rogers, 2003).

Patient advocacy improves patient outcomes (Ciliska, 2006; Hanks, 2010). One of the tenets of patient advocacy includes the role of a nurse safeguarding a patient's autonomy. Patient autonomy is the basic human right of all patients to make informed decisions as it relates to their health care (Bu & Jezewski, 2007; Curtin, 1979; Gadow, 1980; Kohnke, 1982). Patient advocacy as social justice is about being

engaged in problem solving and change when a perceived need exists (Bu & Jezewski, 2007; Fowler, 1989).

A tenet of the SUHB is that the labor and delivery nurse is a human energy field and as such, is distinct, but not separate from the environmental energy field. Together, the nurse and the environment are in mutual process as each is shown to be part of the other. Mutual process is evident from the literature when examining the characteristics of the nurse and the work setting, individually and then jointly as it pertains to the pattern manifestations of attitude toward patient advocacy, power, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization.

While the role of a nurse includes being a patient advocate (ANA, 2001; ICN, 2012) there is little guidance for nurses on how to apply this in clinical practice (Hewitt, 2002). Research studies suggest that there is a major gap between the values of providing woman centered care with intermittent fetal monitoring in low risk pregnancies, and practice (Altaf et al., 2006; Birch & Thompson, 1997; Dover & Gauge, 1995; Hindley et al., 2006a). The SUHB and the theories of power, diffusion of innovations, and patient advocacy provided the theoretical framework to study the relationships of power, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization as pattern manifestations of a labor and delivery nurse's attitude toward patient advocacy and decision to choose to advocate for intermittent fetal monitoring in low risk pregnancies.

Chapter III

METHODOLOGY

The purpose of this study was to examine power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a labor and delivery nurse's attitude toward patient advocacy using a descriptive correlational design. This chapter provides an overview of the study's research design, description of population and sample, ethical considerations, research setting, research instruments, data collection procedures, data analysis plan, and summary of this study.

Research Design

A descriptive correlational study design was chosen to better understand what variables are associated with labor and delivery nurses' attitudes toward patient advocacy. As a Level II study, correlational analysis can be done to find out if significant *relationships* exist between or among the variables being studied; independent variables are not manipulated (Wood & Ross-Kerr, 2011). Studies using the descriptive correlational design do not reflect causality but do describe relationships among variables and the strength of the relationship (Polit & Beck, 2012); this is in keeping with the Rogerian concept of acausality (Barrett, 2010).

Description of Population and Sample

The sample was comprised of nurses who were currently practicing full-time, part-time, per diem, or as agency nurses with a minimum of six months experience in a labor and delivery setting. To be included in this study, the participant had to be

working as either a staff nurse or a charge nurse in a labor and delivery setting, and be a member of the Association of Women's Health, Obstetrics, and Neonatal Nurses (AWHONN). While the position of charge nurse can be permanent, it is usually rotated among nurses and changes shift to shift. Charge nurses are not unit managers. A convenience sample of labor and delivery nurses was obtained through AWHONN.

Sample size and statistical power. The results obtained from the G 3 Power calculator after accounting for an effect size of .20, error (.05), and power (1-B=.80) reflected the sample size needed to be eighty-eight participants for a two tailed test. However, different sources recommend different formulas for determining an adequate sample size between numbers of subjects to one variable. Nunnally and Bernstein (1994) recommend a 10:1 ratio, Arrindell and van der Ende (1985) recommend a 20:1 ratio, and many statisticians commonly recommend a 30:1 ratio between numbers of subjects to one variable. As a result of different sources recommending varying sample size calculations, a minimum of two hundred completed surveys by labor and delivery nurses was sought.

Ethical Considerations

Approval to conduct this study was given by the Seton Hall University Institutional Review Board (IRB) and AWHONN (see Appendices A and B).

To reach participants for this study, an email was sent by AWHONN to their electronic member list serve. Within the email was a secure encrypted link that once clicked brought the participant to "The Letter of Solicitation" and Web based survey. The letter of solicitation explained the overall intent of the study, how they would be

treated ethically and included all the components of the informed consent. The researcher's contact information, along with the researcher's advisors contact information, was included. Completion and submission of the four instruments and the demographic questionnaire implied informed consent. Participants were also informed that only the aggregate findings, not their individual findings, would be reported.

Strict confidentiality was maintained throughout the study, and continues to be maintained. Email addresses were not collected; however, Survey Gizmo did collect IP addresses to prevent the duplication of survey responses. No attempt was made to trace an IP address. AWHONN never had access to the data or the participants' responses. The data remains on a USB flash drive and stored in a locked cabinet in the researcher's home.

Research Setting

The setting for this study was of the participant's choosing, allowing completion of the survey materials in more than one sitting and at different computers. The participant could use an iPhone, iPad, laptop, or desk computer. An advantage of an online format is that the setting can be anywhere, and at a time and place that is best for the participant to complete the survey.

Research Instruments

Instruments chosen for this study were based on the instrument's measurement properties, availability, and previous use among nurses. Power was measured using the Power as Knowing Participation in Change Tool (PKPCT)(Barrett, 1983),

attitudes regarding intermittent fetal monitoring was measured using the Attitudes toward Intermittent Fetal Monitoring instrument (AIFM) (Walker et al., 2001), perceived barriers to research utilization was measured using the Barriers to Research Utilization Scale (BARRIERS Scale) (Funk et al., 1991), and patient advocacy was measured with the Attitude toward Patient Advocacy Scale (APAS) (Bu, 2005). A demographic questionnaire was used to better describe the sample of nurses completing the survey and their work environment (see Appendices C, D, E, F, and G). Approval to use the identified instruments was obtained from each author and/or copyright owner (see Appendices H, I, J, K, and L).

Power as knowing participation in change tool. The concept of power was operationalized using the Power as Knowing Participation in Change Tool (PKPCT) developed by Barrett (1983, 1990). The four inseparable dimensions of power represent the continuous patterning of the human and environmental fields and are manifested as: awareness, choices, freedom to act intentionally, and involvement in creating change (Barrett, 2010). For purposes of this current study, only the total instrument score was used.

There are two versions of the PKPCT, Version I and Version II. There were no statistically significant differences found between Version I and Version II (Barrett & Caroselli, 1998). For this study, Version II of the PKPCT was used. Both versions have fifty-two items (twelve bipolar adjectives) on a semantic differential scale that ranges from 1.00-7.00. The last item of each scale is a retest item, and is not scored (Barrett, 1983, 2010).

Validity. Face and content validity of the PKPCT occurred through the use of two different sets of judges to study the items generated from a list of words that described power: a pilot study ($N = 267$) and a validation study ($N = 625$). Following factor analysis, the instrument was revised (Barrett, 1990). In the validation study, the factor loadings ranged from a low of .56 (chaotic-orderly) to .70 (avoid-seeking) for the bipolar items identified in this tool (Barrett, 1990).

Reliability. Internal consistencies and reliabilities for each subscale demonstrated Cronbach's alpha of over .85, and between .93 to .99 for the entire instrument; however, many of the studies in the literature review did not cite which version of the PKPCT was used (Kim, 2009). Additionally, two of the studies in the literature review were found to have lower Cronbach's alpha for the PKPCT (Kim, 2009). In one of these identified studies, the PKPCT was given to nursing home residents who had difficulty understanding how to complete the PKPCT. The inability to understand the PKPCT was suggested as contributing to a lot of missing data in that study. In the second identified study, the participants had attained only a grade school education (Kim, 2009). As a result of these findings, the PKPCT needs to be completed by participants who have a minimum of a high school education, and can read and write English (Kim, 2009).

Scoring the PKPCT. Twenty-four identical words are found in each of the subscales that comprise the PKPCT. These words are paired with a word that represents its opposite meaning. An example of this would be the words, *worthless*

and *valuable*. Each paired set of words is found in a different location in each of the four subscales, and in a reversed direction in two of the subscales.

The scores are summed, but the last adjective score in each scale (total of four items) is a test-retest item which is not included in the score (Barrett & Caroselli, 1998). Although summation scores can be obtained with the PKPCT, Barrett (1990) recommended that for hypothesis testing, factor scores, not summation scores should be used as they provide greater measurement precision.

The means of the scores for the PKPCT (factor scores) ranged from 5.06-6.07, with standard deviations from 1.00-1.35 (Barrett, 1990). Lower scores indicate lower power; higher scores indicate higher power (Barrett, 1990). The scaled score (or summation score) for the entire PKPCT has a range of 48-336; and for each subscale, the range is from 12-84 (Barrett, 1990). Barrett and Caroselli (1998) cited one study that normed scores into low (48-143), midrange (144-287), and high (288-336). No other mention of norming has been mentioned. For purposes of this current study the mean of the scores (factor scores) were used, not summation scores.

Missing data. In the literature regarding the development of the PKPCT (Barrett, 1983, 1990, 2010), there were no formal instructions regarding what to do with missing data, nor were missing data reported. In the literature review of studies using the PKPCT, Kim (2009) found two studies that reported lower than expected Cronbach's alpha. In both studies, missing data were considered to be the cause, but no mention was made as to how much data were missing.

E. Barrett (personal communication, October 9, 2014) reported missing data in her study. When discussing how to handle the missing data in the PKPCT, Barrett agreed with using the actual data of a particular participant. What this means is that if an instrument has ten items, and one of the items is missing, the factor score is based on the nine response items. By using this technique, the mean score (factor score) would not be artificially created by inputting the mean of the group to account for the missing data of an individual participant (Bannon, 2013).

Skew and kurtosis. Barrett (1990) did report a negative skew in the PKPCT when reporting findings. No mention was made as to the extent of the skew, or how it was addressed in the study. This inherent bias toward the high frequency items (high means) was believed to have occurred because the national sample was highly educated. Specifically, 79% of the sample had a bachelor's degree or higher.

Barrett (1983) did suggest that the high means could have been due to lack of precise discrimination in the PKPCT or possibly due to the social desirability of the participant. Although a negative skew was present, her sample size was six hundred twenty-five. Large sample sizes are more likely to decrease the effects of a skew and reflect a more normal distribution of scores (Tabachnick & Fidell, 2013).

Attitudes regarding intermittent fetal monitoring. The Attitudes regarding Intermittent Fetal Monitoring (AIFM) instrument was developed by Walker and colleagues (2001) to ascertain labor and delivery nurses' attitudes regarding intermittent fetal monitoring. One item was deleted from the original instrument due to the item being viewed as ambiguous (Walker et al., 2001). The final instrument

version has seventeen items: attitudes toward intermittent and continuous fetal monitoring ($n = 5$), hospital policies regarding fetal monitoring ($n = 3$), nurses' perceptions of laboring women's preferences regarding fetal monitoring ($n = 4$), barriers to intermittent fetal monitoring ($n = 3$), and two statements regarding evidence based outcomes of intermittent fetal monitoring.

Validity. The pilot study consisted of a panel of doctorally prepared nursing faculty, certified nurse midwives, and a woman's health nurse practitioner.

Following the face and content validity of the instrument, the researchers reported making a few minor changes to the instrument. The instrument was then tested with a convenience sample of labor and delivery nurses ($N = 145$) from five hospitals in the Detroit area of Michigan. The findings suggested that labor and delivery nurses were willing to intermittently monitor essentially healthy women in labor ($M = 4.19$), but some barriers such as insufficient time ($M = 3.14$) and nurse to patient ratios ($M = 3.36$) were problems in implementing intermittent fetal monitoring in practice (Walker et al., 2001).

Reliability. No alpha coefficients were cited in the study. Although the findings from Walker and colleagues (2001) were cited in eleven different research articles, it appears that this instrument was only used in the original study. Based on email correspondence with Dr. Walker, it is unknown if this instrument had been used in other studies as Dr. Walker did not know. However, this instrument was the only one currently available that measured a labor and delivery nurse's attitude regarding intermittent fetal monitoring, so it was used in this study.

Scoring the AIFM. The range of possible scores with this instrument was 1.00-5.00. The lowest mean found in Walker and colleagues (2001) was with the item *Women want to be continuously monitored in labor* ($M = 2.18$, $SD=0.82$). The highest reported mean was for the item *As a nurse, I am willing to intermittently monitor essentially healthy women in labor* ($M = 4.19$, $SD = 0.99$).

There are three items in this instrument that address the issue of barriers: *the labor nurse has sufficient time to provide intermittent fetal monitoring*, *nurse to patient ratios is a problem in providing intermittent fetal monitoring*, and *there are few barriers to implementation of intermittent fetal monitoring*. These three items represent possible barriers to intermittent fetal monitoring being posed from opposite directions to better understand what the true barriers might be.

The five point Likert scale used in this instrument ranged from strongly disagree (1) to strongly agree (5) and contains a “neutral” response in the middle. What this means is that a labor and delivery nurse with a higher score will be more supportive of intermittent fetal monitoring. According to Walker and colleagues (2001) for the negatively worded items, reverse coding was used for statistical analysis. The items that were reverse coded were: 2, 4, 9, and 11. There was no identification of a norming guide in this study.

Missing data. Walker and colleagues (2001) did address missing data. Specifically, surveys with more than four items missing from an original eighteen item instrument (this represents 22.2% of the survey items) were not included in the study. Walker and colleagues (2001) reported four of the one hundred forty-nine

surveys collected had four or more items missing. For surveys with fewer than four items missing, the data were prorated and weighted accordingly (Walker et al., 2001). There was no mention in their study of how many surveys had missing data of less than four items.

Skew and kurtosis. Walker and colleagues (2001) did not mention skew or kurtosis in their development of the AIFM instrument. No other study has used this instrument to compare findings.

Barriers to research utilization scale. The Barriers to Research Utilization Scale (BARRIERS Scale) was developed by Funk and colleagues (1991). The instrument was designed to identify areas nurses perceive to be problematic when applying research to practice. The BARRIERS Scale is based on E. Roger's theory of diffusion of innovations and incorporates the stages influencing the way the innovation is adopted. Within the BARRIERS Scale are the characteristics of the adopter (nurse) (eight items), the characteristics of the organization (work setting) (eight items), the characteristics of the communication (presentation and accessibility of the research) (six items), and the characteristics of the innovation (qualities of the research) (six items).

There are a total of twenty-nine items with a five point Likert scale ranging from one which represents "To no extent," to four which represents "To a great extent." The fifth column in this scale represents a "no opinion" response, and was scored as zero (Funk, 2001). Additionally, item number twenty-seven *the amount of research information is overwhelming* was not scored, but remains in the instrument based on

researchers liking the item (Funk, et al., 1991). Each of the twenty-nine items is written in a negative direction. Having all the items scaled in the same direction meant the items did not need to be reverse coded (Green & Salkind, 2011).

In addition to the scored items in the BARRIERS Scale, there are three open ended questions that are not scored. The additional questions provided the participant with an opportunity to share perceived barriers that may not have been addressed in the scored segment of the instrument. One of the open ended questions allowed the participant to list and rate other perceived barriers to research utilization that were not already identified in the instrument. The second open ended question asked the participant to rank the top three items they would identify from the list of barriers as number 1, 2, and 3. The last question allowed the participant to write in what they perceived would facilitate research utilization. For purposes of this study, the responses to these three questions were not used as they did not contribute toward answering the research questions and testing the hypotheses.

Validity. The instrument was designed to identify areas nurses perceived to be problematic when applying research into practice. Items for the instrument were generated from the literature on research utilization, and from the findings from the Conduct and Utilization of Research in Nursing Project Research Utilization Questionnaire (Funk et al., 1991). Face and content validity were obtained when the instrument was pilot tested with graduate nursing students. The pilot test resulted in the retention of twenty-nine items which were then tested on a random sample of

nurses who were members of the American Nurses Association, and worked full time in nursing ($N = 1948$).

Following factor analysis, four scales were identified. After the initial study using the BARRIERS Scale, Funk and colleagues (1991) did a test-retest on a different sample ($N = 17$ graduate nurses) on two separate occasions one week apart. The test-retest was done to determine the reliability of the four scales. Pearson correlations on the two tests ranged from .68-.83.

Reliability. The BARRIERS Scale has been used extensively in the US, and globally ($n = 63$, 10 of which were in dissertations) (Kajermo et al., 2010). The initial testing of the instrument achieved Cronbach's alpha in each domain: characteristics of the adopter (nurse) (.80), characteristics of the organization (work setting) (.80), character of the innovation (quality of the research) (.72), and characteristics of the communication (presentation and accessibility of the research) (.65) (Funk, 2001).

Although the Cronbach's alpha in the communication domain was less than .70, Funk and colleagues (1991) made the decision to keep this domain in the instrument. This decision was based on the item-total correlations of .30-.53 for each item (Funk et al., 1991). Fourteen studies reported a Cronbach's alpha for the entire scale (.84-.96); 24 studies reported Cronbach's alpha for the subscales, which varied from .47-.94; however, of these studies, 18 reported alphas less than .70 in the communication domain, which would be consistent with Funk's original work (Kajermo et al., 2010). For purposes of this current study, the total instrument score was used to answer the research question.

Scoring the BARRIERS Scale. The range of possible scores for each item is 1.00-4.00. The range for each subscale is also 1.00-4.00. To get a subscale score, all of the scores for each item within a subscale were added together and then divided by the number of items in the particular subscale being measured. Higher scores are associated with more perceived barriers to research utilization, and lower scores are associated with fewer barriers. The mean for the category of nurse was 2.78 (.61), work setting was 2.87 (.58), research was 2.35 (.56), and communication (presentation) was 2.74 (.53) (Funk et al., 1991). No mean for the total score of the BARRIERS Scale was reported in the initial study (Funk et al., 1991). However, fourteen studies since the BARRIERS Scale was first developed reported a Cronbach's alpha of between .84 and .96 for the entire scale (Kajermo et al., 2010).

Missing data. Funk and colleagues (1991) did not mention how many items were missing in their original study, but did address how to deal with missing data. Specifically, for items left blank within the scale, the mean is to be determined by summing the score of items with valid responses and then dividing this number by the number of items answered, not by the number of items in the scale. In addition, if more than 50% of the items on a scale have a "no response" they recommend assigning a missing value for the scale as the scale score would be viewed as unstable (Funk, 2001).

Skew and kurtosis. Funk and colleagues (1991) reported that the kurtosis and skew were modest. The actual skew for each category varied and ranged from -.40 for the category of nurse, -.31 for the work setting, .07 for research, and -.32 for

communication (presentation of research). Bulmer (1979) identified a modest skew score as being between -1.00 and +1.00. However, other literature reports that as long as a sample size is over 100, a normal distribution can be assumed as the mean would fall where it should (Tabachnick & Fidell, 2013).

Funk and colleagues (1991) did not mention if data transformation or non-parametric testing was done in the development of the BARRIERS Scale, although their sample size was 1,989, with 78.3% of their sample having a bachelor's degree or higher. Their study does imply that the modest skew was accepted as a normal distribution of scores for this instrument.

Attitude toward patient advocacy scale. The Attitude toward Patient Advocacy Scale (APAS) was developed by Bu (2005) to measure a nurse's attitude toward patient advocacy. Sixty-four items comprise this instrument (Bu, 2005; Bu & Wu, 2008). Barrett-Sheridan (2009) revised the APAS with the approval of Dr. Bu. Specifically, Barrett-Sheridan incorporated all sixty-four items found in the APAS and reworded some of the sentences. The revised APAS (Barrett-Sheridan, 2009) is the only published form of the APAS available. Both the APAS (Bu, 2005; Bu & Wu, 2008) and the revised APAS (Barrett-Sheridan, 2009) are based on the middle range nursing theory of patient advocacy which defines patient advocacy as safeguarding a patient's autonomy, acting on behalf of a patient, and championing social justice (Bu & Jezewski, 2007). The definition of patient advocacy is represented as the three subscales found in the APAS.

Validity. The initial step in the development of the APAS was to generate items defining the construct of patient advocacy found from the nursing literature. Two nurse researcher advocacy experts evaluated the pool of items for repetition or poor wording. To assess if the items contained within the APAS were valid, a different panel of experts was selected. This second panel was composed of seven experts: two nurse researchers with measurement expertise, two experts on patient advocacy research, two master's prepared nurses with various clinical experiences, and a bioethicist (Bu & Wu, 2008).

Factor analysis was done after the instrument was completed by oncology nurses. Forty-five items loaded onto Factor 1 (Attitude toward Micro-social Advocacy [AMIA]); nineteen items loaded onto Factor 2 (Attitude toward Macro-social Advocacy [AMAA]). Factor analysis did reduce the items in the APAS from 72 to 64. This occurred because six different items had low factor loadings to either Factor 1 or 2, and two additional items were excluded because they did not measure either of the underlying factors.

However, Bu and Wu (2008) had initially hypothesized a three factor model for the APAS: *safeguarding a patient's autonomy, acting on behalf of a patient, and championing social justice* and not a two factor model (micro-social advocacy and macro-social advocacy). A confirmatory factor analysis was done to compare the hypothesized three factor model with the two factor model. The findings from the confirmatory factor analysis showed that the two models were congruent.

Reliability. The Cronbach's alpha for the overall original APAS instrument was .96 when used with oncology nurses (Bu, 2005). Cronbach's alpha was also calculated for each subscale: safeguarding a patient's autonomy (.89), acting on behalf of a patient (.85), and championing social justice (.95). Test-retest correlation for reliability of the instrument was .94 to .96 (Bu, 2005).

Barrett-Sheridan (2009) used the revised APAS in her pilot ($N = 20$) and main study ($N = 205$). The sample population was comprised of RNs from California with approximately 57% of the RNs sampled providing direct patient care. The Cronbach's alpha of the revised APAS from the pilot and main study were similar to Bu and Wu's Cronbach's alpha (Barrett-Sheridan, 2009). Specifically, Cronbach's alpha for the total revised APAS in the pilot study was .96, and in the main study was .97 (Barrett-Sheridan, 2009). The subscales of the revised APAS each reported high Cronbach's alpha in the pilot study: safeguarding a patient's autonomy (.91), acting on behalf of patients (.85), and championing social justice (.96). In the main study, the Cronbach's alphas obtained were: safeguarding a patient's autonomy (.94), acting on behalf of patients (.93), and championing social justice (.96) (Barrett-Sheridan, 2009).

Scoring the APAS. The APAS contains sixty-four items which are all written in a positive direction. Each item is rated on a six point Likert scale that ranges from strongly disagree (1) to strongly agree (6). The range of scores is from 1.00-6.00, with a score of six indicating a more favorable attitude toward patient advocacy.

According to Bu (2005), scores above the midpoint indicate a more favorable attitude toward patient advocacy.

The mean score for each item of the sixty-four item instrument ranged from 4.08 (SD = 1.35) to 5.87 (SD = .36) (Bu, 2005). When the psychometric properties of the APAS were published, the mean for the total APAS was calculated as 340.68 (SD = 29.28), the twenty-eight item subscale *safeguarding a patient's autonomy* had a mean score of 151.14 (SD = 12.05), the seventeen item subscale *acting on behalf of a patient* had a mean score of 93.53 (SD = 7.45), and the nineteen item subscale *championing social justice* had a mean score of 96.01 (SD = 14.10) (Bu & Wu, 2008). There was no norming guide identified.

In the only other study that used the APAS, Barrett-Sheridan (2009) reported the means in her pilot study ($N = 20$) as: ($M = 5.55$, $SD = .28$) for the subscale *Attitudes toward safeguarding a patient's autonomy*, ($M = 5.77$, $SD = .22$) for the subscale *attitudes toward acting on behalf of patients*, ($M = 5.29$, $SD = .42$) for the subscale *championing social justice*, and 5.33 ($SD = .62$) for the total instrument. In the main study ($N = 205$), the means were reported as: safeguarding a patient's autonomy ($M = 5.44$, $SD = .36$), acting on behalf of patients ($M = 5.56$, $SD = .38$), championing social justice ($M = 4.98$, $SD = .77$), and for the total instrument ($M = 5.33$, $SD = .38$). The Cronbach's alpha for the total instrument was reported as .97.

Missing data. Bu (2005) reported that fifty-one surveys out of four hundred seventy-four returned surveys did have missing data (10.76%). Surveys with more than 30% of the data missing in one or more subscales were not included in data

analysis. Surveys with less than 30% of the data missing were included in data analysis with the missing data inputted with the item mean. After accounting for missing data ($n = 13$) and extreme acquiescence bias ($n = 2$), the final sample size was reduced to four hundred fifty-nine reflecting that 96.8% of the returned surveys were included in the study findings (Bu, 2005).

In the revised APAS, Barrett-Sheridan (2009) did not find any systematic patterns of missing data, but did report that twenty-five of the two hundred and five surveys returned did have some missing data. No one survey had more than 30% missing data on one subscale, or 15% of the total responses for the entire survey. Barrett-Sheridan (2009) did replace the missing data using the calculated means from all the responses to the item. Missing data were not replaced in the demographic section (Barrett-Sheridan, 2009).

Skew and kurtosis. Barrett-Sheridan (2009) reported a severe skew with her sample when using the APAS. Due to the skew being severe with her sample of nurses, non-parametric statistical analysis was employed as the scores of the APAS did not approximate a normal distribution. Bu (2005) and Bu and Wu (2008) did not address or mention skew or normal distribution of scores in the development of the APAS.

Demographic questionnaire. Demographic questions were asked so that the sample of labor and delivery nurses could be described. The items on the demographic instrument were drawn from the literature review, and were the last instrument the participants completed. This was consistent with Dillman (2000), who

recommended that demographic questions be at the end of a survey. The demographic questions were divided into two content areas: the individual characteristics of the participant and the characteristics of the participant's work setting. The demographic questionnaire can be found in Appendix G.

Data Collection Procedures

Labor and delivery nurses, who were members of AWHONN, were given an opportunity to participate in this study. The study was conducted online with AWHONN generating the email that contained the encrypted link to the Web based survey. Survey based paper and pencil surveys and Internet surveys have been found to be comparable (Weigold, Weigold, & Russell, 2013). Internet data collection has also been viewed as having possible benefits. Specifically, some advantages are that a participant can complete the online survey in the comfort of his/her own home or familiar surroundings and at times that are convenient. Cantrell and Lupinacci (2007) have also suggested that online Internet surveys can decrease the cost of conducting research, and provide a way to reach more diverse samples of participants than would have been obtained with the paper and pencil method.

Recruiting participants. Advertising for this study was not done. Based on previous studies with their members, AWHONN believed that the goal of achieving two hundred participants for this current study would be achieved without advertising. Two hundred sixty participants did complete the survey. To solicit participation, an initial email with the encrypted link to the Web based survey and letter of solicitation, was sent to all self-identified labor and delivery nurses from

AWHONN's member list ($N = 8033$). Two follow-up reminder emails were also sent over the course of a month.

The first follow-up reminder email was sent two weeks after the initial email. The purpose of sending this email was to encourage potential participants to participate in the study if they hadn't already done so. The second follow-up email was sent ten days after the first follow-up email (or about 3 ½ weeks from the initial email). The purpose of the second follow-up reminder email was to give participants a final opportunity to participate in this study (see Appendices M, N, and O).

An advantage of Survey Gizmo was that participants could stop and then later return to the survey at their convenience. Informed consent was given when the completed survey was submitted. Following this step, the participant was directed to the thank you page where a note of thanks for participating in this study was placed. No monetary or other incentive was offered as a thank you for participating in this study.

Data Analysis Plan

This study was a Level II study as it had more than two variables with each variable's actions (or relationships) with each other not yet known (Wood & Ross-Kerr, 2011). Specifically, what was not known was the relationship between and among power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization and how these variables relate to a labor and delivery nurse's attitude toward patient advocacy. The goal of data analysis was to answer the research questions, and test the hypotheses.

Prior to analyzing the data, the data were screened for accuracy of data entry and missing data.

Assessing missing data. Checking for missing data is important to do so the findings are valid (Bannon, 2014). To determine how much missing data were present in this study, a two-step process was planned. The first step necessary was to ascertain the percentage of individual items in the survey with missing data. Tabachnick and Fidell (2013) suggest additional testing is needed when 5% or more of the data are missing. Additionally, Tabachnick and Fidell (2013) report missing data of less than 5% as not serious and as such, whatever method is chosen to deal with the missing data would obtain similar results.

After this initial step, the overall percent of data missing from each study participant was considered (Bannon, 2014). Unless instrument instructions rule otherwise, an acceptable level of missing data using Likert scales is less than 20% (Downey & King, 1998). For purposes of this study, participants were required to complete at least 80% of each instrument.

Accounting for missing data. To account for missing data in this study, the plan was to consider the mean score as based on a participant's valid responses, which would ignore the items that had missing data. By using this method, the data were deemed to have more integrity as it used the mean score of the individual participant's valid responses to represent the missing data, and not the mean of the group (Bannon, 2013).

Test assumptions. Prior to conducting a multiple regression analysis, four test assumptions had to be met: normal distribution, multicollinearity, linearity, and homoscedacity (Bannon, 2013).

Checking for a normal distribution. To perform parametric tests (Pearson correlation, *t* tests, or analysis of variance [ANOVA]), scores on continuous variables need to be normally distributed (Bannon, 2013; Pallant, 2013). Checking for a normal distribution can be done visually by histogram, quantile-quantile (Q-Q) scatter plot, or by performing a Kolmogorov-Smirnov or Shapiro-Wilk statistical test in SPSS (Bannon, 2013).

Options for addressing non-normal distributions depend on the degree of skew. One option is to avoid parametric tests, and instead do non-parametric tests (Spearman's rho, Kruskal-Wallis, chi-square, Mann-Whitney) (Pallant, 2013). This is what Barrett-Sheridan (2009) did with her severely skewed distribution in the APAS instrument. Another option is to accept a skew between -.5 and +.5 as an approximately normal distribution, which is what Funk and colleagues (1991) did with the BARRIERS Scale. Or the skew can be accepted as is because the sample size was large enough which is what Barrett did with the PKPCT (1983). However, when the data are severely skewed, data transformation can be used. For purposes of this study, the most suitable method used to address an instrument's skew was based upon the degree of the skew.

Multicollinearity. To assess for multicollinearity, bivariate correlations between pairs of all independent variables were examined. Correlations of greater than .80

indicate that each independent variable shares the same variance (and therefore explains the same variance) on the dependent variable (Bannon, 2013; Licht, 2012). Two additional tests were used to assess for multicollinearity: tolerance and variance inflation factor (VIF). Scores less than 2.50 (but closer to 1.00) on the VIF, and above .20 on the tolerance scale, would suggest that the assumption of multicollinearity was not violated (Bannon, 2013).

Homoscedacity and linearity. To have confidence in the results of parametric tests, this study had to also meet two additional test assumptions: homoscedacity and linearity. Both of these assumptions were assessed visually by using a residual scatterplot. A scatterplot that has residuals scattered symmetrically over the predicted values of the dependent variable *attitude toward patient advocacy* indicates that the two assumptions are met.

Descriptive statistics. Descriptive statistics convey information about the study sample (Polit & Beck, 2012). The purpose of descriptive analysis is to summarize the data using either frequency distributions or measures of central tendency (Wood & Ross-Kerr, 2011). The measures obtained were based on whether the variable was categorical, ordinal, or continuous. Participants' survey scores were also included in the descriptive statistics analysis.

Univariate statistics of sample. The participants' responses to the demographic portion of the questionnaire were used to describe the sample of labor and delivery nurses in this study, not to answer the research question. Frequencies and

percentages were done for each categorical and ordinal variable to add meaning to the interpretation of the survey data.

Descriptive statistics of instruments. The PKPCT, AIFM, BARRIERS Scale, and APAS each use Likert type formats to measure the variable identified with their respective instrument. The AIFM and the BARRIERS Scale use a five point Likert response format, and the APAS has a six point Likert response. The PKPCT has a semantic differential format with a seven point range of options from which to choose.

Measures of central tendency, standard deviations, the actual and potential range of scores, and Cronbach's alpha were the measures used to describe the instrument responses from the sample of nurses in this study. Their responses were then compared to previous studies.

Bivariate statistics. The relationships examined in this study were between power and attitude toward patient advocacy, attitudes regarding intermittent fetal monitoring and attitude toward patient advocacy, and perceived barriers to research utilization and attitude toward patient advocacy. Based on the literature, it was hypothesized that each of the three independent variables would be related to the dependent variable *attitude toward patient advocacy*. Additionally it was proposed that in *hypothesis 1* power would be positively related to attitude toward patient advocacy; *hypothesis 2*, attitudes regarding intermittent fetal monitoring would be related to attitude toward patient advocacy; and *hypothesis 3*, perceived barriers to research utilization would be inversely related to attitude toward patient advocacy.

Parametric tests. The parametric test, Pearson r , was used to individually measure the continuous variables of power, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a labor and delivery nurse's attitude toward patient advocacy. A Pearson r correlation as a method of statistical analysis is able to measure the magnitude of the relationship between two variables and can range from -1.00 to +1.00. A Pearson r correlation of $\leq .30$ represents a weak correlation, and a correlation of $\geq .80$ represents a strong correlation (Polit & Beck, 2012).

Multiple regression. Prior to conducting a multiple regression analysis, the four test assumptions (normality, linearity, homoscedacity, and multicollinearity) had to be met so that the study findings would be valid (Licht, 2012). In addition, bivariate correlations need to be statistically significant at the p value of $\leq .05$ prior to being included in a regression analysis.

The Pearson r and the effect size indicate the strength of the relationship between the two variables. The R represents how much of the variance in the dependent variable is shared by the independent variables (Bannon, 2013). The R^2 reflects how collectively the three independent variables influence the variance (up/down in labor and delivery nurse's attitude toward patient advocacy) (Licht, 2012). This is a limitation of R^2 as it focuses on how the independent variables collectively influence a labor and delivery nurse's attitude toward patient advocacy, not how each independent variable influences patient advocacy (Licht, 2012). To account for this,

partial regression coefficients allowed for each independent variable to show its independent contribution and influence on the dependent variable (Licht, 2012).

Regression models used in this study. To test the null hypothesis, this was done:

1. Power as knowing participation in change (IV) and attitudes regarding intermittent fetal monitoring (IV) + attitude toward patient advocacy (DV)
2. Power as knowing participation in change (IV) and perceived barriers to research utilization (IV) + attitude toward patient advocacy (DV)
3. Attitudes regarding intermittent fetal monitoring (IV) and perceived barriers to research utilization (IV) + attitude toward patient advocacy (DV)
4. Power as knowing participation in change (IV), attitudes regarding intermittent fetal monitoring (IV), perceived barriers to research utilization (IV) + attitude toward patient advocacy (DV)

Summary

A descriptive correlational research design was used for this research study to examine the relationships between and among attitude toward patient advocacy, power, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization among labor and delivery nurses. The PKPCT (Barrett, 1983), AIFM (Walker et al., 2001), BARRIERS Scale (Funk et al., 1991), and APAS (Bu, 2005) were used to conduct this study. A demographic form was used to describe the characteristics of the sample of labor and delivery nurses completing the survey. All variables were statistically analyzed using IBM (2013) SPSS for Windows (Version 22.0).

Chapter IV

RESULTS

This study explored the relationships of power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a labor and delivery nurse's attitude toward patient advocacy. The data used to answer the research questions and test the hypotheses were obtained from labor and delivery nurses ($N = 248$) who were also members of the Association of Women's Health, Obstetrics, and Neonatal Nursing (AWHONN).

Survey data were collected electronically over the course of one month (July 7, 2014 through August 7, 2014) using Survey Gizmo software. Data were analyzed utilizing IBM (2013) SPSS for Windows (Version 22.0).

Response rate. All AWHONN members who self-identified as labor and delivery nurses ($N = 8033$) were emailed the encrypted link that once clicked, brought them to a Web-based survey. However, it is difficult to determine exactly how many AWHONN members received and opened the email. What is known is that five hundred sixty-eight members (7.1% of the AWHONN labor and delivery staff nurses) clicked on the encrypted link to learn more about the study. A condition of participation was that the participant had to be working in a staff nurse position for at least six months on a labor and delivery unit. Of the five hundred sixty-eight members who started the survey, two hundred sixty completed the survey and provided informed consent to have their responses included in the study findings.

The final percent of AWHONN labor and delivery nurses choosing to complete the survey was 3.24%.

Data Integrity

Prior to conducting the statistical analysis for this study, data were screened for missing data and outliers. Missing data were minimal for each item, and five outliers were identified and not included in the study analysis. All data were examined for normality, homogeneity of variance, homoscedasticity, and multicollinearity. The assumptions of normality, linearity, independence of residuals, multicollinearity, and homoscedacity were met for all study variables.

Normal distribution. The *attitude toward patient advocacy* variable had a negative skew (ratio of 4.2x the standard error of the skew; -.64 skew). The literature supports the claim that nurses have a positive attitude toward patient advocacy (Barrett-Sheridan, 2009; Boyle, 2005; Curia, 2008; Godkin, 2006; Gosselin-Acomb et al., 2007; Hanks, 2008; Hanks, 2010; James et al., 2003; McSteen & Peden-McAlpine, 2006; Ware et al., 2011), which is the most likely reason for the negative skew in this current study. In the only other study using the APAS and reporting a skew result, Barrett-Sheridan (2009) also found a negative skew with her sample of registered nurses.

The *power as knowing participation in change* variable was also negatively skewed (ratio of 3.5x the standard error of the skew; -.55 skew), and unlike the patient advocacy variable, only one outlier was identified. Removing this outlier would not have affected the skew as the outlier was a low score, not a high score.

Barrett (1990) reported that the PKPCT was negatively skewed. As in Barrett's sample (1983), the participants in this study were highly educated and skilled, which was considered a possible reason for the negative skew.

The *barriers to research utilization* variable also had a negative skew (ratio of 2.26x the standard error of the skew; -.35 skew). A negative skew with this instrument was reported by the developers of the instrument (Funk et al., 1991). No reason for the negative skew was given (Funk et al., 1991).

The kurtosis for each instrument was less than -.271 for each instrument (which represented less than 2x the standard error of the kurtosis). The decision to not transform the data for this study was supported in the literature, and was further supported by the central limit theorem as the sample size was greater than two hundred. Although a negative skew was present for each variable, the magnitude of the skew indicated that the distribution of scores represented a moderately to approximately normal distribution and, therefore, did not need to be transformed.

Outliers. To assess for outliers in this study, a boxplot was performed. The boxplot identified five outlier scores (more than three standard deviations from the mean) on the dependent variable *attitude toward patient advocacy*. After the five outliers were identified, their inclusion in the study findings was tested on the distribution of scores. When these five outliers were removed, the skew for *attitude toward patient advocacy* went from 1.6 to .64. Explained another way, the skew ratio was 4.2x the standard error of the skew.

Once the five outliers were removed from the sample, two new outliers were identified. To determine if these two new outliers were affecting the skew, the data were re-examined with the two outliers not included. Although the skew ratio was further reduced from 4.2 to 3.5x the standard error of the skew, removing the two new outliers did not unduly change the study findings. As a result, only the initial five outliers were removed from the sample, and the other two outliers were retained in the sample.

Multicollinearity. To assess if multicollinearity was present, the bivariate correlations between pairs of all independent variables were evaluated. Multicollinearity was not found as there were no correlations greater than .80 present between the independent variables of power, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization.

In addition to using correlation, two other tests were used to assess for multicollinearity: tolerance and variance inflation factor (VIF). In this study, the tolerance for each independent variable was between .873 and .925; and the VIF was close to 1.00. Both of these test results support the finding that none of the variability of the independent variables were explained by each other which indicated that the assumption of multicollinearity was not violated (Pallant, 2013).

Homoscedasticity and linearity. A residual scatterplot was done to test the assumption of homoscedasticity and linearity. To check that these test assumptions were met, the residual scatterplot was visually inspected. The residual scatterplot for this study showed that the residuals were scattered symmetrically from the center, and

were not curved, an indication that the two assumptions were met and an added reason why data transformation was not needed.

Description of the Sample

Two hundred and sixty labor and delivery nurses completed the survey. However, the total sample size in this study was two hundred forty-eight reflecting twelve participants excluded from the analysis. The reasons for survey data not being included in the study findings were as follows: six participants did not complete at least 80% of each instrument, five were outliers with undue influence on the patient advocacy scale, and one participant answered “no opinion” on the entire BARRIERS Scale instrument.

Data regarding the participant’s personal demographics and work setting are presented in Tables 1 through 6. For this study, demographic items were collected to better understand the individual characteristics of the participant and to learn more about the work setting in which the participant was employed. The demographic items were not used for analysis or to answer the research questions. Unreported data (missing) are represented and accounted for in each table with the percent of each demographic item based on two hundred forty-eight participants.

Very little data were missing in the demographic section. However, as these demographic items were not collected to be used for statistical analysis, and the amount of data missing for an individual item was less than 3.6%, further tests to account for missing data among the demographic items were not done (Tabachnick & Fidell, 2013).

Characteristics of the participants.

National distribution of participants. Labor and delivery nurses from all regions of the United States (US) participated in this survey as defined by the US Census Bureau. The breakdown by region follows in Table 1.

Table 1

National Distribution of Participants (N = 248)

Demographic	Grouping	Frequency	Percent
Northeast	Mid-Atlantic	30	12.10%
	New England	16	6.50%
Southern	South Atlantic	37	14.90%
	East South Central	10	4.00%
	West South Central	25	10.10%
Midwest	East North Central	37	14.90%
	West North Central	23	9.30%
West	Mountain region	32	12.90%
	Pacific region	38	15.30%

Note. Regions defined by US Census Bureau.

Age and gender. Overall, the labor and delivery nurses participating in this study ranged in age from twenty-five to seventy-five years ($M = 47.77$, $SD = 10.54$) and were predominantly female (99.6%). Among AWHONN members, 59% are over the age of fifty, and 8% are under the age of thirty (T. Heinle, personal communication, October 14, 2014). Of the participants in this study, 50.4% reported being over the

age of fifty, and 3.6% were under the age of thirty. Of the remaining participants, 45.8% were between the ages of thirty to forty-nine.

While men account for 9.1% of all nurses in the US (HRSA, 2013), they represent less than 1% of AWHONN members (T. Heinle, personal communication, October 14, 2014). Labor and delivery nursing, therefore, is overwhelmingly represented by female nurses as evidenced by AWHONN membership and this sample of nurse participants (99.6%).

Education. Nationally, 6.9% of all US nurses have a diploma in nursing, 37.9% an associate's degree, 44.6% a bachelor's degree, and 10.6% a graduate degree as their highest degree (HRSA, 2013). Participants in this current study were well educated when compared to other nurses in the US. Comparisons with AWHONN's membership could not be done due to AWHONN not collecting demographics on the educational preparation of their members.

The vast majority of participants in this study pursued higher education after their basic nursing education. Specifically, 82.6% of the diploma prepared participants and 66.7% of the associate prepared nurses returned to school and received at a minimum, a bachelor's degree. It is much more of a challenge to determine the number of participants prepared at the bachelor's level that went on and earned a graduate degree. However, what is known is that 29.8% of the participants in this sample did continue with their education and receive a graduate degree after their initial education. These data are presented in Table 2.

Table 2

Initial and Highest Education, Number of Conferences and Webinars Attended in 2013
(*N* = 248)

Demographic	Grouping	Frequency	Percent
Initial education	Diploma	23	9.20%
	Associate Degree	99	40.20%
	Bachelors in Nursing	111	44.60%
	Bachelors, other discipline	3	1.20%
	Masters in Nursing	6	2.40%
	Other	5	2.00%
	Missing	1	0.40%
	Highest education	Diploma	4
Associate Degree		33	13.30%
Bachelors in Nursing		113	45.60%
Bachelors, other discipline		14	5.60%
Masters in Nursing		64	25.80%
Masters, other discipline		13	5.20%
DNP		2	0.80%
PhD		1	0.40%
Other		4	1.60%
Number of conferences		0- 1	130
	2-3	90	36.30%
	4 or more	28	11.30%
Number of webinars	0-1	109	44.00%
	2-3	66	26.60%
	4-5	39	15.70%
	6 or more	34	13.70%

Note. Percent = percentage of 248 participants.

Other ways that nurses fulfill the role of life long learner is to attend conferences and webinars. Among the participants in this current study, 47.6% attended two or more conferences in 2013, and 56% attended two or more webinars in 2013. The demographic information regarding number of conferences and webinars the participants attended in 2013 are presented in Table 2.

Experience and employment status. Most births (98.6%) in the US occur in a hospital setting (Martin, Brady, Osterman, Curtin, & Mathews, 2013). In this study, 95.1% of all participants reported working in a hospital, and 3.6% at a birth center. Although participants were given an opportunity to check “home birth only” as an option of where they practice, no participant chose this option. However, three participants (1.2%) did check “other” as their primary place of employment.

The participants in this study were experienced labor and delivery nurses with longevity at their respective institution (see Table 3). The primary shift worked was either an eight or twelve hour day shift (67.9%) followed by 26% working primarily on the night shift. The vast majority of the participants also worked full time (77.2%) which is a higher percent reporting when compared to the national population of US nurses (63.2%) (HRSA, 2010).

Table 3

Number of Years as an RN, L & D Nurse, and at Current Work Setting (N = 248)

Demographic	<i>M</i>	<i>SD</i>	Range
Years as an RN	21.61	11.76	2-50
Years as a L & D Nurse	18.84	11.24	1-50
Length of Time at Current Work Setting	12.99	9.9	1-44

Personal birth experiences. Data were also collected on the individual participant's personal experience of birth, including personal experience with continuous fetal monitoring (CEFM). Of the one hundred ninety-seven participants in this study who had personally given birth, one hundred sixty-two gave birth vaginally; 74.7% of these women received CEFM, while 25.3% did not.

Characteristics of the work environment. Participants were asked about their work environment specifically as it related to employer support of continuing education, type of medical personnel in labor and delivery, presence of additional support services for mom-baby, for instance neonatal intensive care units (NICU), Baby-Friendly initiatives, number of annual births at institution, and if a shared decision making model was present at their place of employment. A breakdown of these data is described in Tables 4, 5, and 6.

Table 4

Employer Support for Continuing Education (N = 248)

Demographic	Grouping	Frequency	Percent
Paid time off to attend conferences	No	111	44.80%
	Yes	128	51.60%
	I don't know	9	3.60%
	Missing	0	
Employer contributions toward conference fees	No	104	41.00%
	Yes	135	54.40%
	I don't know	9	3.60%
	Missing	0	
Access to Internet databases on unit	No	39	15.70%
	Yes	173	69.80%
	I don't know	33	13.30%
	Missing	3	1.20%

Note. Percent = percentage of 248 participants.

Mom-baby support services. A little over 70% of the participants (71.3%) worked at institutions that had NICUs, with Level III NICUs being the most common (30.6%), followed by Level II NICUs (26.6%). Level III NICUs provide care to newborns born at less than thirty-two weeks gestation, weigh less than 1500 grams, and/or regardless of gestational age, are critically ill (Barfield, 2012). The cost of NICU care is more than \$3,500 per day (Muraskas & Parsi, 2008). Approximately 88% of all newborns born in the US are born at term and do not need NICUs (Martin et al., 2013). Conversely, only 33.5% of the participants reported working at institutions with a Baby-Friendly designation. The Baby-Friendly Initiative fosters mother-baby

bonding with a goal of protecting, promoting, and supporting breast feeding (WHO, 2009). Breast feeding is relatively free.

Table 5

Characteristics of Institution (N = 248)

Demographic	Groupings	Frequency	Percent
Number of births in 2013	51-500	48	19.30%
	501-1,500	85	34.20%
	1,501-2,500	35	14.10%
	2,501-5,000	59	23.80%
	Over 5000	20	8.10%
	Missing	1	0.40%
NICU at institution	No	69	27.80%
	Yes	173	69.80%
	I don't know	1	0.40%
	Missing	5	2.00%
Level of NICU	Not applicable	62	25.00%
	I don't know	4	1.60%
	Level 1	13	5.20%
	Level 2	66	26.60%
	Level 3	76	30.60%
	Level 4	18	7.30%
	Missing	9	3.60%
Baby-Friendly designation	No	154	62.10%
	Yes	83	33.50%
	I don't know	9	3.60%
	Missing	2	0.80%

Note. Percent = percentage of 248 participants.

Shared decision making models. The vast majority of participants in this study did not belong to a union (74.6%) or work at a Magnet designated institution (70.6%).

Both of these models provide a structure for nurses to participate in and influence the way patient care is provided (Porter-O'Grady, 2004). Specifically, unionization provides legal protection for nurses to be proactive and respond to patient care issues and practices (Budd, Warino, & Patton, 2004), and institutions with a Magnet designation promote the idea of fostering a collaborative culture of care (American Nurses Credentialing Center [ANCC], 2014). What these data suggest are that models to support patient advocacy are not present for the vast majority of participants in this study.

Table 6

Characteristics of Personnel in L & D (N = 248)

Demographic	Groupings	Frequency	Percent
Midwives	No	107	43.10%
	Yes	139	56.00%
	I don't know	0	0.00%
	Missing	2	0.80%
Family physicians	No	139	56.00%
	Yes	106	42.70%
	I don't know	2	0.80%
	Missing	1	0.40%
Medical students/OB fellows	No	139	56.00%
	Yes	105	42.30%
	I don't know	1	0.40%
	Missing	3	1.20%

Note. Percent = percentage of 248 participants.

Description of Major Study Variables

The four instruments used in this study were: Power as Knowing Participation in Change Tool (PKPCT), Attitudes regarding Intermittent Fetal Monitoring Instrument (AIFM), Barriers to Research Utilization Scale (BARRIERS Scale), and Attitude toward Patient Advocacy Scale (APAS). Each instrument measured the variable with which it was identified. All four instruments had previously been used with registered nurses.

The AIFM instrument was reportedly used only once prior to this study, and the author of the instrument had not examined its Cronbach's alpha. As this was the only instrument available to assess a labor and delivery nurse's attitude regarding intermittent fetal monitoring, it was used in this study. The other three instruments reported high Cronbach's alpha. In Table 7 the survey results for each instrument are presented and include the mean score (M), standard deviations (SD), actual range of scores, potential range of scores, and Cronbach's alpha coefficient (reliability coefficient).

Table 7

Survey Results of Instruments Used in Study

Instruments	Mean (SD)	Range of Scores		Alpha
		Potential	Actual	
PKPCT (Power)	5.80 (.78)	1.00-7.00	3.19-7.00	.97
AIFM (Intermittent fetal monitoring)	3.39 (.47)	1.00-5.00	2.29-4.63	.72
BARRIERS	2.55 (.52)	1.00-4.00	1.04-3.68	.90
APAS (Patient advocacy)	5.41 (.41)	1.00-6.00	4.11-6.00	.95

Power as knowing participation in change tool (PKPCT). The PKPCT uses a semantic differential design and has fifty-two bipolar adjectives (items). In determining a power profile, only forty-eight of the items are scored. Within the instrument there are four subscales; however, to answer the research question, only the score for the entire instrument was used. A higher score on the PKPCT was associated with a participant having a higher power profile. Participants in this current study had high power profiles as evidenced by the mean score ($M = 5.80$, $SD = .78$) on a scale of 1.00-7.00. Figure 2 shows the distribution profile of scores for the PKPCT.

Figure 2. Distribution of Power Profiles on the PKPCT of Study Participants

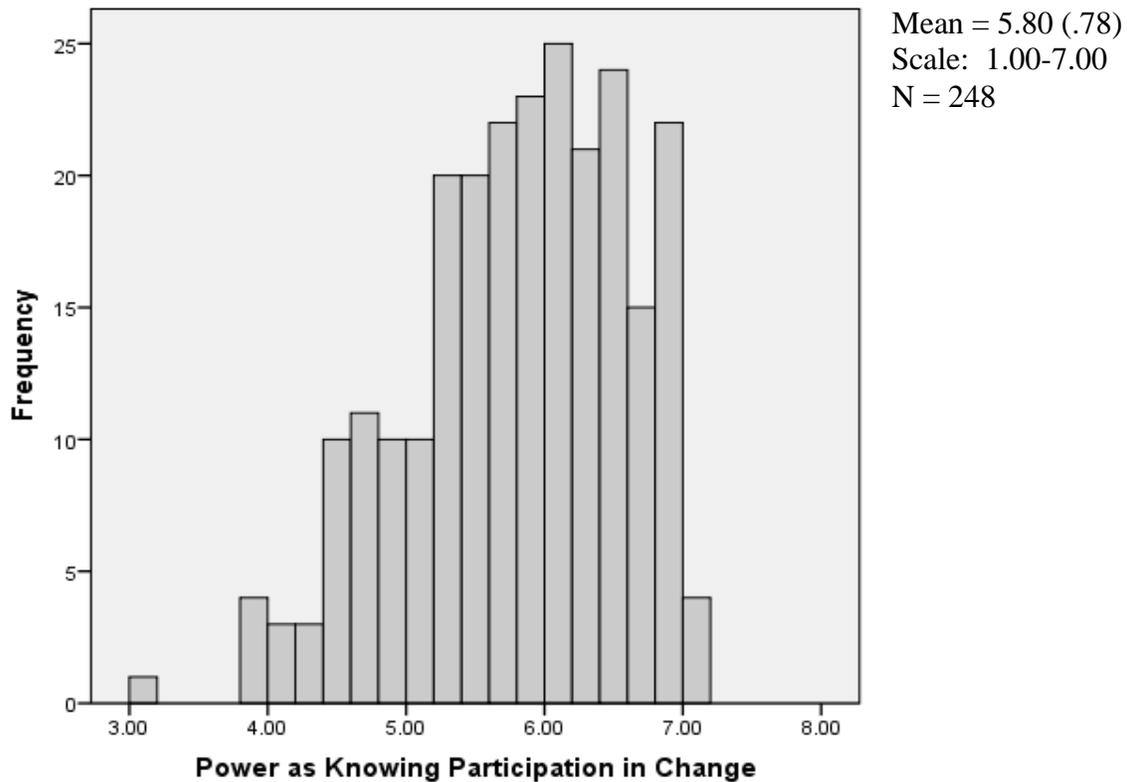


Figure 2: Higher power profiles on the Power as Knowing Participation in Change Tool (PKPCT) are associated with L & D nurses having higher power as knowing participation in change

Attitudes regarding intermittent fetal monitoring instrument (AIFM). The AIFM has seventeen items, with four of the items reverse coded. There are no subscales in this instrument. A higher score on the AIFM was associated with a participant having a more positive attitude toward intermittent fetal monitoring. Participants in this study had a positive attitude toward intermittent fetal monitoring as evidenced by the mean

score ($M = 3.39$, $SD = .47$) on a scale of 1.00–5.00. Figure 3 shows the distribution of scores from the participants completing this instrument.

Figure 3. Distribution of Scores on the AIFM of Study Participants

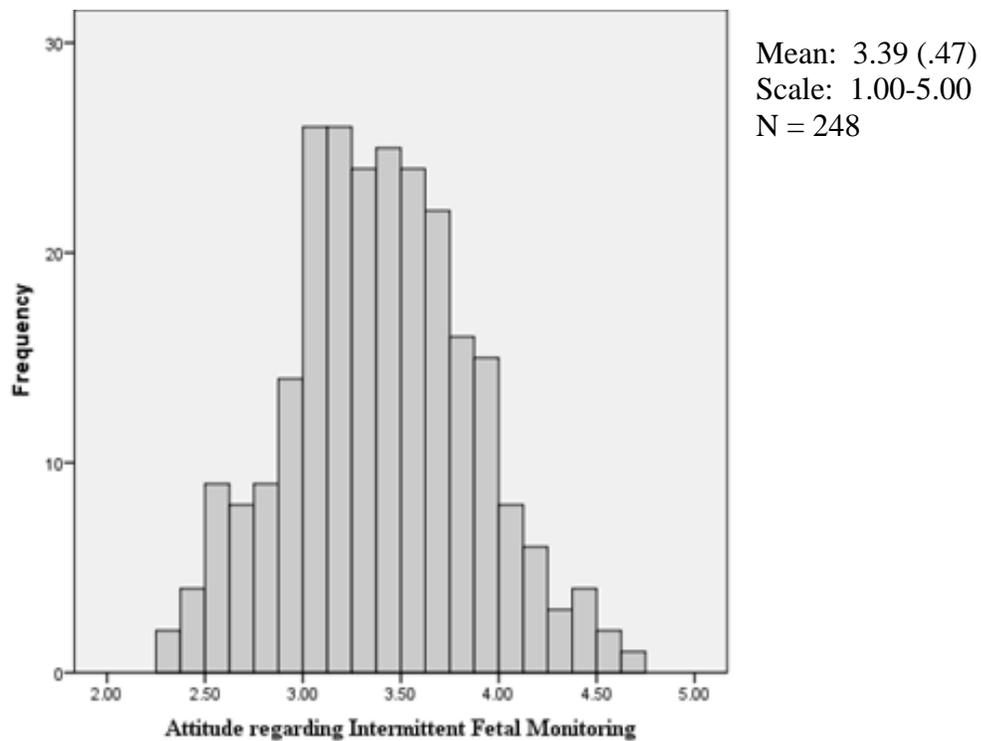


Figure 3. Higher scores on the Attitudes regarding Intermittent Fetal Monitoring (AIFM) instrument are associated with L & D nurses having a more favorable attitude regarding IFM.

Barriers to research utilization scale (BARRIERS Scale). The BARRIERS Scale has twenty-nine items plus an additional three questions where participants can rank what they perceive as the greatest barriers to research utilization, add any additional barriers not listed in the instrument, and include what they believe would

facilitate research utilization in practice. None of the scored items are reverse coded. A response of “no opinion” was scored as zero as per the instruction of the author. Although the instrument has twenty-nine items, the score is formulated based on twenty-eight items. The reason for this is that although the identified item *the amount of research is overwhelming* was not found to be statistically significant, it was considered important by the authors of the instrument and was retained. A higher score on the BARRIERS Scale was associated with a participant perceiving more barriers to research utilization. Participants in this current study perceived barriers to research utilization as evidenced by the mean score ($M = 2.55$, $SD = .52$) on a scale of 1.00-4.00. Figure 3 presents the distribution of scores from this sample of nurses completing the BARRIERS Scale.

There are four subscales in this instrument; however, to answer the research question, only the total instrument score was used. The three additional questions were optional for participants to complete and were never intended by the authors of the instrument to be included in the instrument score. Therefore for purposes of this study, the three additional questions were not included in the analysis or study report.

Figure 4. Distribution of Scores on the BARRIERS Scale of Study Participants

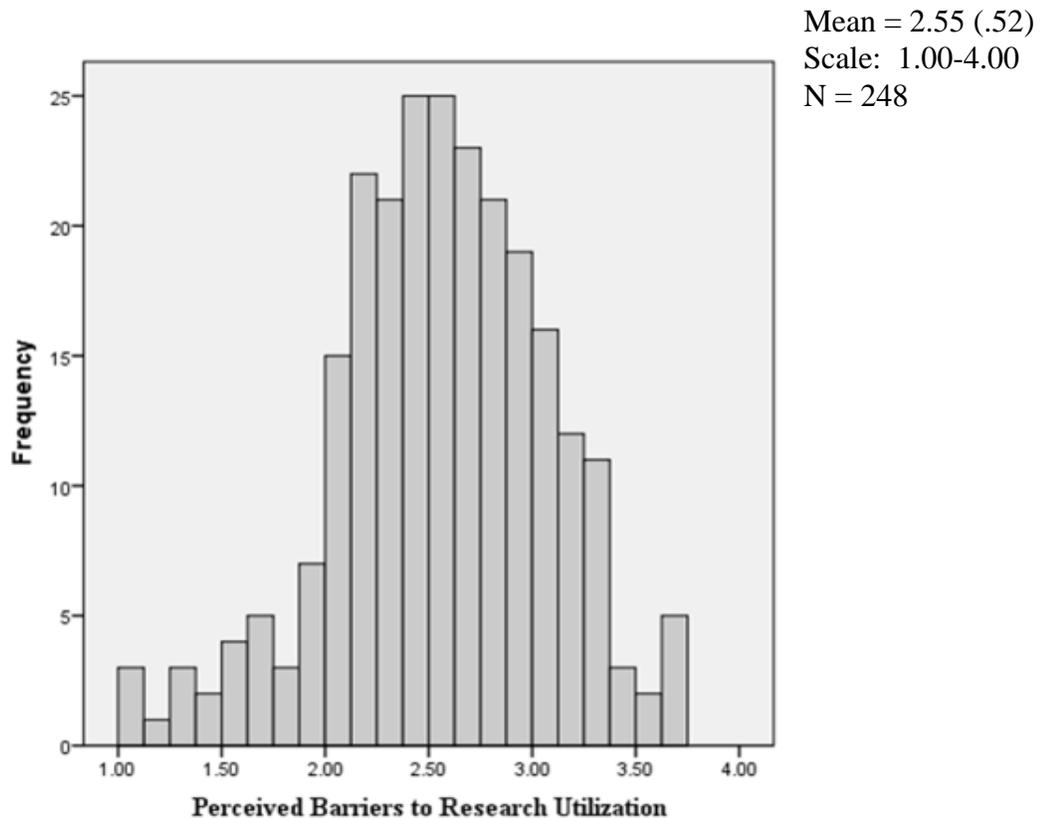


Figure 4. Higher scores on the BARRIERS Scale are associated with L & D nurses perceiving more barriers to research utilization.

Attitude toward patient advocacy scale (APAS). The APAS has sixty-four items and three subscales. For purposes of this study, only the total instrument score was used. None of the items are reverse coded. Higher scores on the APAS are associated with nurses having a more favorable attitude toward patient advocacy. Participants in this study had a more positive attitude toward patient advocacy as evidenced by the mean score ($M = 5.41$, $SD = .41$) on a scale of 1.00-6.00.

Figure 4 provides the distribution of scores for the APAS from this sample of labor and delivery nurses.

Figure 5. Distribution of Scores on the APAS of Study Participants

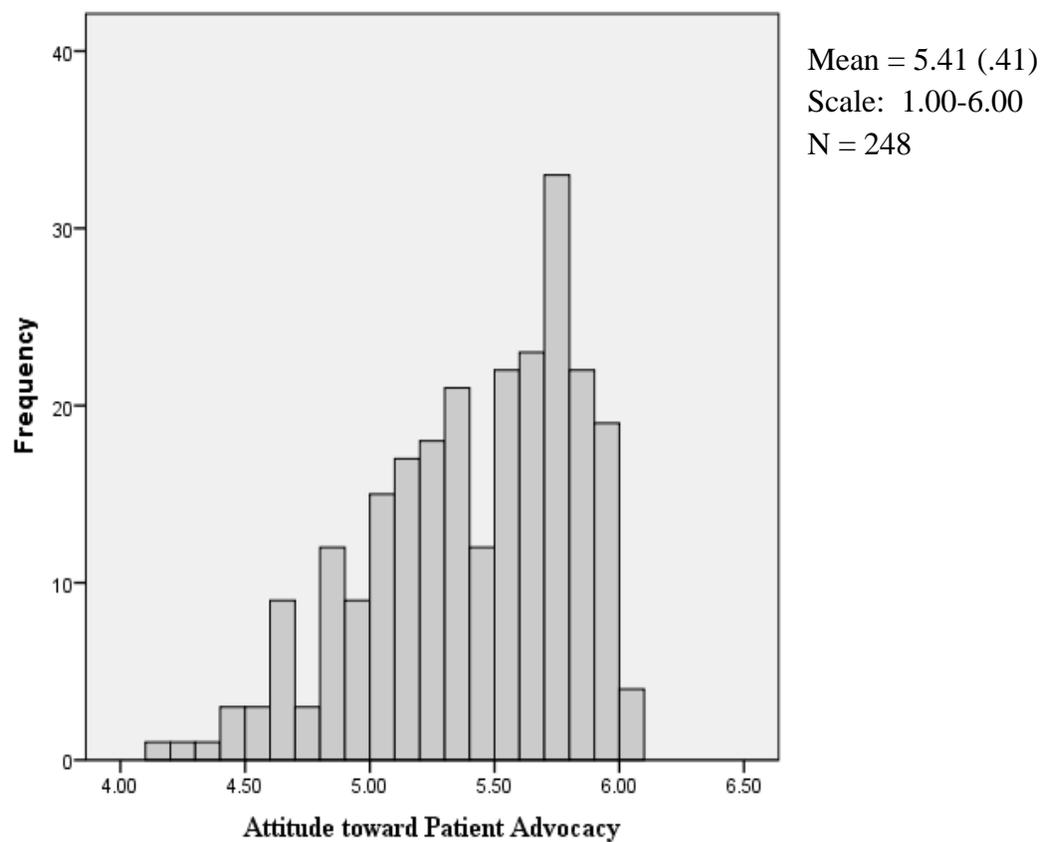


Figure 5. Higher scores on the Attitude toward Patient Advocacy Scale (APAS) are associated with L & D nurses having a more positive attitude toward patient advocacy.

Statistical Analysis

Prior to conducting the statistical analysis for this study, data were screened for missing data and outliers. Missing data were minimal for each item, and five outliers were identified and not included in the study analysis. All data were examined for normality, homogeneity of variance, homoscedasticity, and multicollinearity. The assumptions of normality, linearity, independence of residuals, multicollinearity, and homoscedacity were met for all study variables.

Missing data. A two-step process was done to assess for missing data (Bannon, 2013). The first step evaluated the percent of missing data for each item in the four instruments. The second step examined the percent of missing data from each study participant. Overall, there was very little missing data.

Percent of items missing data. One hundred and fifty-seven items comprised the four instruments used to answer the research questions and test the hypotheses. Although this was a lengthy survey, only one item in this survey had 3.5% of its data missing with the rest of the items having much lower percentages of missing data.

Percent of missing data from sample. For a participant to answer 80% of the survey, one hundred twenty-six items needed to be answered (or miss thirty-one items); to answer 85% of the survey, one hundred thirty-four items needed to be answered (or miss twenty-three items); to answer 90% of the survey, one hundred forty-two items needed to be answered (or miss fifteen items), and to answer 95% of the survey, one hundred fifty items needed to be answered (or miss seven items). All but one of the participants answered 85% or more of the survey (indicating that

99.6% of the sample completed at least 85% of the survey) and three participants (1.2% of the sample) answered 90% of the survey. However, 95.9% of the sample answered 95% or more of the survey.

Overall, six participants did not complete at least 80% of each instrument, and were therefore excluded from the study. An additional participant was excluded due to answering “no opinion” for each item on the BARRIERS Scale.

Bivariate correlations. The independent variables (IVs) in this study were power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization. All of the IVs were significantly correlated with each other (p value of $\leq .05$), and with the dependent variable (DV) attitude toward patient advocacy. Any correlation over .300 is considered to be a moderate correlation (Pallent, 2013). The strength of each correlation and its direction (positive or negative) as it relates to patient advocacy and other main study variables are shown in Table 8.

Table 8

Means, Standard Deviations, and Intercorrelations for Scores of Main Study Variables Using Pearson Product-moment Correlations (N = 248)

Measure	1	2	3
APAS	.39*	.16**	-.18*
1. PKPCT	1	.32**	-.23*
2. AIFM	.32*	1	-.22*
3. BARRIERS	-.23*	-.22*	1

* $p < .01$. ** $p < .05$.

Multiple regression.

Regression model findings. A multiple regression analysis was conducted to analyze the independent variables of power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a labor and delivery nurse's attitude toward patient advocacy. The linear combination of the independent variables was significantly related to attitude toward patient advocacy $F(3, 244) = 15.36, p \leq .001$. The sample correlation coefficient (R) was .40, and the R^2 was .16, indicating that approximately 16% of the variance of labor and delivery nurse's attitude toward patient advocacy in the sample could be accounted for by the linear combination of the three independent variables.

Although all independent variables were significant at the multivariate level with the dependent variable patient advocacy ($p \leq .05$), after controlling for the effects of

attitudes regarding intermittent fetal monitoring and perceived barriers to research utilization, only power as knowing participation in change remained significant ($p \leq .001$) in the final regression model. The variable *power as knowing participation in change* had the greatest influence on patient advocacy as evidenced by the standardized beta ($B = .356$), and showed a small to medium effect size (.19). A summary of the regression model is found in Table 9.

Table 9

Regression Analysis Summary for Attitude toward Patient Advocacy Using Main Study Variables (N = 248)

Variable	B	β	<i>t</i>	<i>p</i>
(Constant)	4.43 (SD = .29)		15.41	.000
Power	0.19	0.36	5.657	.0005
Attitudes regarding intermittent fetal monitoring	0.02	0.03	0.44	.66
Perceived barriers to research utilization	-0.08	-0.10	-1.55	.12
R^2	.16			
Adjusted R^2	.15			
<i>F</i> model (3, 244)	15.36			.000

Analysis of Research Question and Hypotheses

The SUHB was the theoretical model used to guide this study. Attitudes represent pattern manifestations of a labor and delivery nurse's decision to advocate for intermittent fetal monitoring. The overarching research question for this study was: What are the relationships between and among power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a labor and delivery nurse's attitude toward patient advocacy? Three hypotheses were formulated based on the empirical literature to answer this overarching question.

Hypothesis 1.

H₁: Power as knowing participation in change (IV) has a positive relationship with attitude toward patient advocacy (DV). The statistical test used to test this hypothesis was a bivariate correlation. Bivariate correlation is done when each variable being compared is a continuous variable (Bannon, 2013). A positive relationship indicates that as a participant's power profile score increases, the participant's attitude toward patient advocacy would also increase.

The Pearson product-moment correlation coefficient (r) ranges from -1 to + 1. Values closer to either -1 or + 1 indicate a stronger relationship. In this study, power was found to be positively correlated with patient advocacy ($r = .39, p = .000$). This represents a medium to large correlation (Green & Salkind, 2011) and indicates that Hypothesis 1 was supported.

Hypothesis 2.

H₂: Attitudes regarding intermittent fetal monitoring are related to attitude toward patient advocacy. The statistical test used to test this hypothesis was the bivariate correlation. Bivariate correlation is done when each variable being compared is a continuous variable (Bannon, 2013). A positive relationship was found ($r = .16, p = .011$). This represents a small but significant correlation (Green & Salkind, 2011) between attitudes regarding intermittent fetal monitoring and attitude toward patient advocacy, and indicates that Hypothesis 2 was supported. However, its relevance in explaining a labor and delivery nurse's attitude toward patient advocacy is low.

Hypothesis 3.

H₃: Barriers to research utilization have an inverse relationship with attitude toward patient advocacy. What this means is that as perceived barriers to research utilization (IV) increase, a participant's attitude toward patient advocacy (DV) would decrease (Green & Salkind, 2011). The statistical test used to examine this expected relationship was a bivariate correlation. A negative (inverse) relationship was found between these two variables ($r = -.18, p = .004$). However, although Hypothesis 3 was supported, the correlation was small (Green & Salkind, 2011) indicating its relevance in explaining a labor and delivery nurse's attitude toward patient advocacy is low.

Summary

All three of the hypotheses were supported, and therefore, the null hypothesis was rejected. In the final regression model, the three IVs collectively (R^2) were found to be statistically significant in explaining 16% of the variance of a labor and delivery nurse's attitude patient advocacy ($p < .0005$). However, the variable *power as knowing participation in change* had the greatest influence on patient advocacy as evidenced by the standardized beta ($B = .356$), and showed a small to medium effect size (.19).

Chapter V

DISCUSSION OF FINDINGS

Although the role of a nurse includes being a patient advocate (ANA, 2001; ICN, 2012), there is little guidance for nurses on how to apply this in clinical practice (Hewitt, 2002). A labor and delivery nurse's attitude toward patient advocacy may be influenced by multiple factors. Based upon a review of the empirical literature, this study examined the relationships between the identified variables of power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a labor and delivery nurse's attitude toward patient advocacy. This chapter analyzes the findings of this study in relationship to relevant empirical literature and the hypotheses proposed.

Hypothesis 1

H₁: Power as knowing participation in change has a positive relationship with attitude toward patient advocacy. Power is the human capacity to participate knowingly in change. To have power requires an awareness and knowledge of all choices, freedom to act with intent on those choices, and then consciously deciding to get involved to create change (Barrett, 1983, 2010). Being aware of potential choices was found when participants (96.7%) believed that they *should* be aware and knowledgeable of existing institutional policies, and that they carried some degree of responsibility for the potential impact of those policies on the welfare of patients.

Additionally, the APAS asked participants how they might handle a problem with an institutional policy should a problem be identified. The participants again

responded overwhelmingly in favor of statements that supported actively changing policies that interfered with meeting a patient's needs by going through the usual organizational procedures for policy change (96.4%), directly bringing the problem to the attention of upper management (96.4%), and agreeing that they personally *should* engage in interdisciplinary collaboration to change those policies (93.1%).

However, when the word *should* was changed to an actual potential action identified in the BARRIERS Scale, 74.9% of the participants responded that they did not feel that the nurse had enough authority to change patient care procedures. This finding is not unique to this sample of participants, and has consistently been found to be one of the top three barriers to research utilization reported in the literature (Carlson & Plonczynski, 2008; Kajermo et al., 2010). When this question was asked again, this time using the Attitudes regarding Intermittent Fetal Monitoring Instrument (AIFM), 51.2% of the participants did not feel that their input would affect hospital policy changes, with 21.4% expressing a neutral opinion.

These responses on the surface could suggest a feeling of powerlessness among some participants, an assessment found in previous literature (Grace, 2001; Hindley & Thomson, 2005; Kohnke, 1982). Yet, from the perspective of power as knowing participation in change, a person's awareness of all available choices includes choices that may not be desired. Making a conscious decision then is about choosing from among one's options, even if the decision at the time is not the preferred choice. Choosing such an option does not equate with diminished or lost power because the

decisions or choices that a person formulates are also open to change and are not static (Barrett, 2010).

Although Barrett's theory of power (1983, 2010) recognizes that causality exists in worldviews other than the Rogerian worldview, her theory makes a distinction between the two worldviews of power. One worldview of power is where power manifests as freedom (acausal), and the other is where power manifests as control (causal). In the acausal worldview of power, or power-as-freedom perspective, a human energy field cannot control or predict outcomes. This is not due to lack of power, but because each human energy field is in mutual process with an environment that includes other human energy fields, and everything else in the environment. However, each human energy field can choose to participate in a knowing manner to create change.

Barrett's theory of power lies in a human energy field's awareness, choices, freedom to act intentionally, and involvement in creating change without any expectation or attachment to an outcome. An example of power-as-freedom is when a nurse has no personal investment in what a patient chooses regarding a treatment plan or life decision (Barrett, 2010). An attitude of power-as-freedom was found in this study when 95.1% of the participants responded that they were willing to intermittently monitor essentially healthy women in labor, and again when 93.9% of the participants agreed that they should support a patient's decision even when that decision went against the nurse's judgment.

From a Rogerian view, all systems are open including systems perceived as closed (causal). What Barrett's theory of power champions is that in a system that is perceived as open, a nurse in mutual process with the environment is more likely to perceive a freedom to act with intent on choices and participate in creating change; whereas in a system that is perceived as closed, the same nurse may perceive his/her choices to be limited. A causal worldview is characterized by hierarchy, dominance, and control (Barrett, 2010). Although the participants in this study had high power profiles, working in a system that is perceived as closed by a participant in mutual process with the environment might explain the discrepancy between an attitude of *should* and a potential behavior of *could* when looking at a nurse's possible actions. However, this study examined a labor and delivery nurse's manifestations of pattern as represented by attitudes which are acausal and cannot predict behavior, and power profiles. The findings from this study showed that power as knowing participation in change is positively related to attitude toward patient advocacy ($r = .39, p < .01$).

Hypothesis 2

H₂: Attitudes regarding intermittent fetal monitoring are related to attitude toward patient advocacy. In a systematic review, Smith and colleagues (2012) found that nurses' attitudes now favor intermittent fetal monitoring (IFM) in low risk pregnancies, a view consistent with the finding from this study. Attitudinal change occurs because attitudes are not static and are based on available information and the person's direct experience (Glasman & Albarracin, 2006). This understanding of an attitude is congruent with the Science of Unitary Human Beings (SUHB) as attitudes

are viewed as manifestations of pattern that are continuously changing and emerge from the mutual human and environmental process (M. Rogers, 1992).

In this study, 74.7% of the participants responded favorably to the statement that IFM should be the standard of care for all essentially healthy women in labor. To confirm the consistency of this attitude, the question was reformatted and asked in a different way. Specifically, the participants were asked if continuous electronic fetal monitoring (CEFM) should be the standard of care for essentially healthy women in labor. When responding to this question, 77.6% of the nurses disagreed with the statement. These findings show that the participants in this study were generally consistent in their attitude regarding fetal monitoring when compared to Walker and colleagues (2001).

Knowledge of research and IFM. Research regarding continuous fetal monitoring (CEFM) in low risk pregnancies has consistently shown an increase in maternal and neonatal morbidity without an increase in benefits to women and infants (ACOG, 2009; Anderson, 1994; AWHONN, 2008; NICE, 2007; RANZCOG, 2009; USPSTF, 1996; WHO, 1996). Yet, in the only national survey in the US to elicit mothers' feedback on their childbirth experiences, 93% of the mothers ($N=1573$) reported receiving CEFM throughout their labor (Declercq et al., 2006). The prevalence of CEFM in labor is further supported by revised birth certificates no longer having a check off box for CEFM (Chen et al., 2011; US Department of Health and Human Services, 2004).

The majority of the participants (54.6%) in this study agreed with the evidence based research findings advising the use of IFM in low risk pregnancies, 18.6% had a neutral opinion, and 26.7% disagreed. When comparing these results to what Walker and colleagues (2001) found, the percent of participants supporting evidence based research regarding fetal monitoring increased from 23.1% to 54.6%. However, approximately the same percentage of participants in both studies disagreed with the evidence based research findings as it pertains to CEFM (29% versus 26.7%). This finding suggests that the participants may not have understood the question, were unaware of the evidence based research findings, and/or didn't believe the evidence based research findings. Irrespective of how they viewed evidence based research on fetal monitoring, 95.1% of the participants in this study responded in favor of being willing to use intermittent fetal monitoring in essentially healthy women in labor. These findings indicate that the participants in this study support a laboring woman's decision and right to make a choice as it pertains to fetal monitoring, a necessary component of patient advocacy.

Hypothesis 3

H₃: Perceived barriers to research utilization have an inverse relationship with attitude toward patient advocacy. In this study, 45.3% of the participants indicated that they perceived few barriers to implementing intermittent fetal monitoring in their work setting, 42.8% indicated that there were barriers to implementing intermittent fetal monitoring, and 11.9% responded with a neutral opinion. This item was found on the AIFM instrument, and was broad in scope as

there could have been many reasons why a participant believed there were or were not barriers to the use of IFM in their work setting. For purposes of this study, perceived barriers to research utilization were measured utilizing the BARRIERS Scale.

The BARRIERS Scale is comprised of four subscales: Characteristics of the adopter (nurse), characteristics of the organization (work setting), characteristics of the innovation (qualities of the research), and characteristics of the communication (presentation, communication and accessibility of the research) (Funk et al., 1991). The findings related to the specifics of barriers to research utilization will be discussed using this format.

Characteristics of the adopter (nurse).

Attitude toward research. A consistent finding found in the empirical literature indicates that nurses have a positive attitude toward research (Bryar et al., 2003; Fink et al., 2005; McCloskey, 2008; Parahoo & McCaughan, 2001; Thiel & Ghosh, 2008; Thompson et al, 2001; Veeramah, 2004). A similar finding was supported in this study as shown by 69.6% of the participants reporting valuing research from a moderate to great extent. However, while 72.9% of the participants felt that research was relevant to their practice, on a separate item, 63.8% did not feel capable of evaluating the quality of the research. Part of this may be due to almost half of the participants (49.6%) responding that from a moderate to great extent, they feel isolated from knowledgeable colleagues with whom to discuss the research.

Access to technology. To be a patient advocate, nurses themselves must have knowledge to share with the patient, skills to acquire the knowledge, and/or access to resources to obtain the knowledge (Kardong-Edgren, 2001; Kohnke, 1982). Among the participants, 70.6% reported that they had access to Internet databases such as CINAHL and Medline on their hospital unit; however, 13.5% were unsure.

Although the majority of nurses did have physical access to databases on their work unit, it is not known how capable they were in their ability to rapidly obtain needed information, as this requires a specific skill set. Ascertaining if the participant knew how to access databases, or felt comfortable with the technology to access databases, was not elicited in this study, but is an important consideration for further research.

Lack of research knowledge. While 93% of the participants agreed that they personally should use evidence from the literature to influence health policy change, 69.7% of the same participants perceived that from a moderate to great extent, nurses are unaware of the research findings. This response represents a high percentage of participants perceiving their fellow nurses as being unaware of research findings.

Participants (59.7%) also responded that for themselves, statistical analyses are not understandable, and this was despite the fact that 51.2% of the participants had a bachelor's degree, 31% had a master's degree, and 1.2% had a doctorate. This sense of not feeling competent to understand statistical analysis occurred even though nursing programs, starting at the bachelor's level, have research courses as part of their curriculum.

Unwillingness to change. For any change to take place there has to be an awareness and/or acceptance that change from the current way of providing care is needed. In this study, a majority of the participants (61.1%) felt that from a moderate to great extent there was a need to change practice. However, 52% of the participants felt that from a moderate to great extent the nurse was unwilling to change or try new ideas, demonstrating evidence of resistance to change. From an alternative perspective it can be said that 48% of participants believed that nurses are ready for change. Nevertheless, it is clear that resistance to change is a factor that is important to consider.

Characteristics of the organization (work setting).

Colleagues. When the AIFM instrument was used to examine perceptions of barriers to fetal monitoring, 53% of the participants thought that doctors and midwives would be willing to order intermittent fetal monitoring for essentially healthy women, and 33.6% did not agree. However, with this item, doctors and midwives were identified together, and not as two separate disciplines. When the BARRIERS Scale was used to examine perceived barriers to research utilization, the number one ranked barrier in the BARRIERS Scale was that from a moderate to great extent, physicians would not cooperate with the implementation of research utilization (75.7%). The participants in this study also perceived that other staff (68.9%) and administration (63.3%) were barriers to research utilization. Both of these items when ranked based on frequency reporting, were ranked as 5th and 6th on the twenty-eight item list of perceived barriers to research utilization.

Sleutel, Schultz, and Wyble (2007) have reported that nurses viewed other nurses, physicians, administrators, and patients as all contributing to a culture where the focus is on the technology, and the patient is forgotten. This is a problem as the work setting has been shown to influence a nurse's attitude of practice (Liva, et al., 2012; Payant et al., 2008; Penticuff & Walden, 2000). What this means is that when a nurse perceives barriers to research utilization coming from many different directions, an individual nurse's perception of choices in actively creating change for the betterment of the patient, may be perceived as limited. This finding supports the hypothesis of an inverse relationship being found between barriers to research utilization and patient advocacy. Specifically, as perceived barriers increase, patient advocacy decreases ($r = -.18, p < .01$).

Patients. When participants were asked about what laboring women expected, 57.5% of the nurses responded that women expect to receive CEFM. This finding was further supported when 67.2% of the participants reported that laboring women did not ask about intermittent fetal monitoring. However, when participants were asked if they thought laboring women *want* to be continuously monitored while in labor, 64.5% of the participants disagreed with the statement, and 23% did not know.

Few studies have explored laboring women and the type of fetal monitoring they would want while in labor (Hindley, Hinsliff, & Thomson, 2006b). However, O'Cathain, Thomas, Walters, Nicholl, and Kirkham (2002) found 31% ($n = 540$) of the women in their study perceived that they had given informed choice for fetal heart monitoring during labor, suggesting 69% had not had a choice, a similar finding of

Hindley and colleagues (2006b). Specifically in their study, 94% ($n = 59$) of the women did not perceive that they had been given a choice of options regarding fetal monitoring while they were in labor.

Time. The lack of time to either read research or implement new ideas while at work has consistently been ranked by nurses as one of the top two barriers to research utilization using the BARRIERS Scale (Carlson & Plonczynski, 2008; Kajermo et al., 2010). In this study, insufficient time while at work to implement new ideas (60.7% of participants reporting), and not having time to read research (56% of participants reporting) were ranked as seven and nine respectively out of twenty-eight items on the BARRIERS Scale. The lack of time was also elicited in the AIFM instrument when 57.9% of the participants believed the nurse to patient ratio is a problem in providing intermittent fetal monitoring. The perception of time, or lack thereof, may decrease a labor and delivery nurse's perception of choices and willingness to provide intermittent fetal monitoring to low risk laboring women.

Characteristics of the innovation. To be a patient advocate requires evidence based knowledge being incorporated into nursing practice (Kardong-Edgren, 2001). Slightly more than half the participants (51%) responded that they trusted the results of study findings, 44.1% were more uncertain, and 4.9% had no opinion. What is important from this result is that nurses need to have the necessary skills to interpret research findings, and it is unclear from this finding if they do.

Characteristics of the communication. Research was perceived as being relevant to a nurse's practice (72.9%). Although 70% of the participants reported

they had access to Internet databases such as CINAHL and Medline on their hospital unit, 54.1% of the participants did not perceive that they could find relevant literature in one place. The perception of not having a central place to find relevant literature was the main barrier identified in this subscale of the BARRIERS Scale.

In addition to databases, hospital policies also represent a vehicle for the dissemination of research findings. The AIFM instrument examined participants' perceptions regarding hospital policies where they worked. Among the participants, 62.4% agreed with the statement that their hospital provided clear guidelines on the use of IFM, and another 51% believed that their hospital's current approach to fetal monitoring was adequate.

Limitations of the Study

Convenience sample. A list of all labor and delivery nurses in the US was not attainable. As a result, a decision was made to recruit labor and delivery nurses who were also members of AWHONN. Using a convenience sample was deemed a way of reaching the population of labor and delivery nurses in the US to answer the research questions of the study (Wood & Ross-Kerr, 2011). However, this form of recruiting participants was a limitation as the sample of participants all came from a single professional nursing organization. In addition, when a non-probability sampling method is used, which occurs in much of the social sciences, samples are not randomly selected (Polit, 2010). The lack of randomization limits the generalizability of the findings to the larger population of labor and delivery nurses (Wood & Ross-Kerr, 2011).

Overall response rate. Of the AWHONN members who were sent the survey, 3.24% completed the survey. This is a low figure as online data collection is associated with a 5 to 20% participation rate (Dillman, Smyth, & Christian, 2009). However, there is no way of knowing with certainty if all AWHONN members received the email as there is a very real possibility that mass emails may end in people's spam or trash. This is occurring because 65% or more of email traffic is considered spam (Mishra & Thakur, 2013). In addition many people are now inundated with emails and may not even look at what is in their inbox and just delete. Lack of trust or not knowing who is conducting the research has also been reported as a problem with online data collection and could contribute to the low percentage of potential participants (Granello & Wheaton, 2004). These are some of the problems with online data collection, and may become more of a problem as the novelty of online data collection runs its course (Lefever, Dal, & Matthiasdottir, 2007).

Strengths of the Study

This study had a national distribution of participants with representation from each of the different regions of the US. The mean age of participants in this study was 47.8 years of age. This finding is similar to the HRSA (2010) report which lists the mean age of a registered nurse in the US as 44.6. Within the HRSA report (2010), the highest frequency of nurses is found in the age group 51-55 (15.1%) followed by the age group 46-50 (14.5%). Male nurses are underrepresented in labor and delivery units and account for less than 1% of all AWHONN members.

Unique study. What is unique about this study is that it was the first study conducted to examine what the relationship is between power as knowing participation in change and patient advocacy. Furthermore, only two studies were found to have examined US labor and delivery nurses' attitudes regarding intermittent fetal monitoring, the most recent study done over fourteen years ago. Since that time, the use of the Internet has revolutionized most American's access to information, including labor and delivery nurses' access. No study previous to this one exclusively examined labor and delivery nurses and their perception of barriers to research utilization.

Additionally, this is the first study examining the variables of power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization to better understand a labor and delivery nurse's attitude toward patient advocacy *a nursing value* using the framework of the SUHB.

Summary

The relationship of power, attitudes regarding patient advocacy, and perceived barriers to research utilization were shown to influence a labor and delivery nurse's attitude toward patient advocacy. As evidenced by the findings of this study, nurses have positive attitudes toward patient advocacy and the use of intermittent fetal monitoring in low risk pregnancies. An example of patient advocacy was shown when participants overwhelmingly (95.1%) responded to the view that laboring women should be able to choose the type of fetal monitoring they would want, even

when that decision may go against the nurse's best judgment. However, participants in this study perceived barriers to research utilization.

One of the barriers identified was the perception that nursing colleagues, physicians, and administration were unwilling to change. An area that could be changed deals with hospital policies regarding intermittent fetal monitoring. Specifically, 51% of the participants reported that their institution's current approach to fetal monitoring was adequate. This suggests that upwards of 49% of hospitals may not have adequate policies or practices in place regarding the use of intermittent fetal monitoring. This represents an area for nurses in collaboration with other colleagues, administrators, and patients to work and improve policies surrounding the use of intermittent fetal monitoring.

Although participants in this study valued research, almost two-thirds (63.8%) did not feel capable of evaluating the quality of the research, and 69.7% perceived that nurses in general were unaware of research findings. This was most evident when participants were asked a knowledge question regarding CEFM, and 26.7% did not agree with the research findings and another 18.6% had a neutral opinion. What is most interesting about this finding is that 83.4% of the participants had a bachelor's degree or higher indicating that they most likely had research courses in their nursing curriculum. Furthermore, almost half of the participants responded that they felt isolated from knowledgeable colleagues with whom to discuss research findings. This may suggest that collectively nurses do not share or discuss research findings among themselves and may indicate a need for a clinical nurse leader, or clinical

nurse specialist to be present in the work setting to support and facilitate the development of research skills among staff nurses.

Most noteworthy in this current study is the discrepancy between what participants believed they *should* do when problems arise in the work setting, and their perception of nurses not having enough authority to change patient care procedures. This appears on the surface to be at odds with power as knowing participation in change as the participants in this study had high power profiles, but it makes sense when looked at from the lens of power-as-control and not power-as-freedom in the context of a work setting. This discrepancy demonstrates that the nurse is not operating in isolation, but is indeed in mutual process with the work setting. Specifically, as a nurse perceives more choices and fewer barriers to research utilization, the nurse is also more likely to engage in creating change. As a result of this finding, the nursing framework of the SUHB is supported. In Chapter 6 recommendations for nursing practice and areas for future study will be discussed.

Chapter VI

**SUMMARY, IMPLICATIONS FOR NURSING PRACTICE, EDUCATION,
AND RESEARCH, AND CONCLUSION**

Supporting the perspectives and values of a patient is the role of a patient advocate as it includes safeguarding a patient's autonomy, acting on their behalf when they are unable, and championing social justice (Bu & Jezewski, 2007; Curtin, 1979; Gadow, 1980; Kohnke, 1982). The purpose of this descriptive correlational study was to examine the relationships between and among power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization with a nurse's attitude toward patient advocacy. The participants were AWHONN members who were actively employed as labor and delivery staff nurses ($N = 248$). All regions of the US, as defined by the US Census Bureau, were represented in this study. This chapter provides a summary of the findings and discusses the implications for nursing practice, education, and research in relation to current literature and policy.

Summary

The conceptual nursing framework of the SUHB (M. Rogers, 1992) guided this study. Within the SUHB is the concept *human-environmental manifestation of pattern*. A pattern is viewed as continuously changing and in constant motion (M. Rogers, 1992). For purposes of this study, the manifestations of pattern examined were participants' power profiles, attitudes regarding intermittent fetal monitoring, perceived barriers to research utilization, and attitudes toward patient advocacy.

The participants were viewed as human energy fields in relationship with other energy fields. Other energy fields include nurses, physicians, administrators, and patients in a labor and delivery setting. The interrelatedness of the participant's energy field with other energy fields is the *mutual human-environmental process*. It is from this mutual human-environmental process that manifestations of pattern emerge. For purposes of this study, the mutual human-environmental process evolves in the context of the participant's work setting, and was not limited by the four walls of an institution.

Study findings. Bivariate correlations were found between each study variable and a participant's attitude toward patient advocacy. A moderate positive relationship was found between power as knowing participation in change and patient advocacy ($r = .39, p < .01$) and power as knowing participation in change and attitudes regarding intermittent fetal monitoring ($r = .32, p < .01$). A smaller, yet statistically significant positive relationship was also found between attitudes regarding intermittent fetal monitoring and patient advocacy ($r = .16, p < .01$). Although this relationship is statistically significant, its relevance in explaining a labor and delivery nurse's attitude toward patient advocacy was low. Inverse relationships were found between the variable perceived barriers to research utilization and patient advocacy ($r = -.18, p < .05$), perceived barriers to research utilization and power ($r = -.23, p < .01$), and perceived barriers to research utilization and attitudes regarding intermittent fetal monitoring ($r = -.22, p < .01$). This indicates that although the variable perceived barriers to research utilization was found to be statistically significant with

patient advocacy, its relevance in explaining patient advocacy was low. Additionally, although statistical significance was found between the variables of power and perceived barriers to research utilization, and attitudes regarding intermittent fetal monitoring and perceived barriers to research utilization, their correlations were low and therefore, had little relevance to each other.

The R^2 indicated that collectively the three independent variables in the population accounted for 16% of the variance of labor and delivery nurse's attitudes toward patient advocacy. However, power as knowing participation in change was found to have the most impact in explaining a labor and delivery nurse's attitude toward patient advocacy as evidenced by the standardized Beta (.36), and showed a small to medium effect size of .19. Additionally, only power as knowing participation in change remained significant ($p \leq .001$) in the final regression model. Although these findings are significant, 84% of the variance of a labor and delivery nurse's attitude toward patient advocacy was not explained by this study.

Implications for Nursing

This study has direct implications for nursing as change is occurring in the current US healthcare climate. Nurses in mutual process with the greater environment are not immune or shielded from this change. Barrett (1983, 2010) defined power as a human energy field choosing to participate in this change in a knowing manner.

M. Rogers (1992) believed that the concept of change is ever present, and as change accelerates, a pattern becomes more diverse. In the human-environmental energy field there is only one pattern with multiple pattern manifestations. While

some manifestations of pattern such as attitudes are not observable, other manifestations of pattern are. One example of an observable manifestation of pattern becoming more diverse is the publication by the American Academy of Nursing (AAN) (2014) of five practices that nurses should question. The first item on the AAN list recommends that nurses question the automatic initiating of continuous fetal monitoring (CEFM) for all laboring women. The AAN further endorsed intermittent fetal monitoring as the first option for laboring women without risk factors (2014).

Additional examples of observable manifestations of pattern include reports written by the Institute of Medicine (IOM, 2010) on the future of nursing, the nursing competencies developed by the Quality and Safety Education in Nursing Project (QSEN, 2014), and the Joint Commission's manual for hospitals on patient safety (2014). These reports, written and developed outside of a traditional understanding of a work setting, are part of the mutual human-environmental process of a labor and delivery nurse. As such, the findings from this study and its relationship to nursing clinical practice, nursing education, and future nursing research, will be discussed in relation to these identified reports.

Implications for Nursing Practice

Nurses are expected to practice to the fullest extent of their education and to work collaboratively as full partners with all health care professionals (IOM, 2010; QSEN, 2014). The participants in this study were educated, with 83.4% having a bachelor's degree or higher level of education. However, this study found a difference between an attitude of *should* and a potential behavior of *could* as it pertained to fulfilling the

role of patient advocate. Participants identified barriers in practice to include the following: colleagues and administrators not being supportive of research utilization, nurses not having the authority to change patient care procedures, and participants not perceiving their input would affect hospital policy changes. This is a problem as it suggests that participants did not feel like they were equal partners on a team or that their voices were heard. Holding these perceptions may interfere with the nurse's ability to fulfill the role of patient advocate and take the steps to offer intermittent fetal monitoring, rather than CEFM.

The Joint Commission (2014) approaches the goal of nurses practicing to their fullest potential by inspiring every institution to become a *learning organization*. This approach supports a safe environment where staff and others are expected to treat each other with mutual respect and compassion, and are encouraged to promote "collective mindfulness." A learning organization occurs in an environment of trust and teamwork (Joint Commission, 2014). Learning the skills of teamwork, and feeling like a valuable member of the team at a place of employment, are necessary for nurses to practice to their fullest potential.

Implications for Nursing Education

The majority of participants responded that they perceived the nurse as unaware of the research (69.7%), unable to evaluate the research (63.8%), and unable to understand statistical analysis (59.7%). This is a problem because nurses are delivering health care in a complex environment with many players in an

environment that is rapidly changing. The IOM report (2010) acknowledges this changing environment when it stresses the importance of all nursing students needing to learn *practice based knowledge*. Every nursing student, beginning at the entry level, needs to know how to access and manage knowledge when it is needed (IOM, 2010). Having both a spirit of inquiry and ability to access databases are necessary for a nurse to fulfill the role of patient advocate and to be a lifelong learner (QSEN, 2014).

A nursing curriculum needs to support a spirit of inquiry. Focusing on the memorization of facts, or posting articles and reading assignments online, is task oriented and does not foster a spirit of inquiry. What is required to promote and support a spirit and culture of inquiry, is for each student to learn to question why practices are done, and then develop the skills to quickly access information using databases. In addition, evidence based learning needs to occur within each course, as clinical practice is made more relevant when its relationship with research and theory is understood.

The IOM's report *Future of Nursing* (2010) identifies nurses as integral members in the delivery of health care in the US. As the largest professional group within health care, nurses need to be represented on boards and executive management teams (IOM, 2010). To make this goal possible, the report envisions nursing education as the place to begin to imbed leadership competencies throughout the curriculum. In addition, QSEN (2014) and the IOM report (2010) address the importance of teamwork, and interdisciplinary learning at all levels of nursing

education. The goal of interdisciplinary learning is to foster mutual respect, communication, and equality among all disciplines providing care to patients. Interdisciplinary learning for nursing students is not limited to interfaces with physicians or medical students, but is open to all providers of care, and needs to begin at the basic nursing education level (QSEN, 2014).

Implications for Nursing Research

Few studies have explored power as knowing participation in change with nurses, and limited studies have examined nurses and their views on patient advocacy. Prior to this study, no study had explored the relationship between power as knowing participation in change and patient advocacy with nurses. Additionally, the most recent study that examined a labor and delivery nurse's attitude regarding intermittent fetal monitoring in the US was conducted in 2001 (Walker et al., 2001). While perceived barriers to research utilization have been studied extensively with nurses, this variable has not been studied exclusively with labor and delivery nurses.

Prior to this study, only two studies had explored patient advocacy using the Attitude toward Patient Advocacy Scale (APAS) (Barrett-Sheridan, 2009; Hanks, 2010). The R^2 indicated that collectively power as knowing participation in change, attitudes regarding intermittent fetal monitoring, and perceived barriers to research utilization accounted for 16% of the variance of labor and delivery nurse's attitudes toward patient advocacy. However, power as knowing participation in change was found to have the most impact in explaining a labor and delivery nurse's attitude toward patient advocacy as evidenced by the standardized Beta (.36), and showed a

small to medium effect size of .19. This means that there are other factors not examined by this study that contribute toward a labor and delivery nurse's attitude toward patient advocacy. Further study is recommended to explore and examine additional factors that may add to the understanding of attitudes toward patient advocacy.

The Attitude toward Patient Advocacy Scale (APAS) and the Power as Knowing Participation in Change Tool (PKPCT) each had very high Cronbach's alphas with this sample of labor and delivery nurses (.95 and .97 respectfully). The APAS is comprised of sixty-four items, and the PKPCT has fifty-two items. While a high Cronbach's alpha generally indicates a high degree of internal consistency between the items, it could also indicate that there is some redundancy in the instrument itself (Tavakol & Dennick, 2011). Additionally, the length of the instrument is known to influence internal consistency (Tavakol & Dennick, 2011) and participant burden. Future research could include additional instrument analyses and comparisons to uncover redundancy of any specific items in the APAS or PKPCT instruments. This exploration could result in a reduction of the number of items (reduction of participant burden), while maintaining a reliable internal consistency of the instrument.

The APAS, PKPCT, and BARRIERS Scale were negatively skewed in this study and in previous studies using these instruments with nurses. Some of the negative skew in the APAS may be attributed to nurses having a positive attitude toward patient advocacy (Barrett-Sheridan, 2009; Boyle, 2005; Curia, 2008; Godkin, 2006;

Gosselin-Acomb et al., 2007; Hanks, 2008; Hanks, 2010; James et al., 2003; McSteen & Peden-McAlpine, 2006; Ware et al., 2011). The negative skew in the PKPCT has been postulated to be due to the higher education levels of participants (Barrett, 2010). However, few studies have been conducted using the APAS and PKPCT with nurses, and many of the samples were obtained from mail surveys. This may be creating a sample that is more homogeneous as participants who choose to participate in a particular study have a self-selected bias.

A convenience sample of AWHONN members was recruited for this study via a web based survey. While this method provided a national distribution of labor and delivery staff nurses, the findings could have been biased if the participant had a special interest in patient advocacy or intermittent fetal monitoring. Self-selected bias may have contributed to a group of participants choosing to complete a survey of almost two hundred items. A future study may need to consider examining nurses from different hospitals with a more diverse educational background.

The majority of participants (70.6%) in this study reported access to Internet databases such as CINAHL and Medline on their hospital unit. However, what is not known from this study is how many of the participants knew how to access these databases. Further research in this area may be important to nursing curriculum development, especially as the majority of participants (83.4%) had a bachelor's degree or higher level of education, indicating they most likely had a research course at some time during their nursing education.

Nurses are also encouraged to be lifelong learners (IOM, 2010; QSEN, 2014). From this study, 52.4% of the participants attended one or fewer conferences in 2013, and 44% attended one or fewer webinars. Among the participants, 51.6% did get paid time off from their employer to attend conferences, and 54.4% worked at institutions that contributed money toward conference fees. This indicates that almost half (48.4%) of the participants did not get time off from work to attend conferences, and 45.6% did not receive any remuneration toward conference fees. A secondary analysis of the data comparing the two groups can be done to assess if there are any statistically significant differences between them, as it pertains to a labor and delivery nurse's attitude toward patient advocacy.

Additionally on the AIFM instrument, 45.3% of the participants indicated that they perceived few barriers to implementing intermittent fetal monitoring in their work setting while 42.8% felt there were barriers, and 11.9% provided a neutral response. A secondary analysis can be done comparing the two groups. Specifically, one group could be comprised of the group perceiving fewer barriers to implementing intermittent fetal monitoring, and the other comprised of the group who felt there were barriers. Comparing each group to demographic variables and examining for any statistically significant differences between them may add additional knowledge to what is associated with a labor and delivery nurse's attitude toward patient advocacy.

Furthermore, other variables can be examined to account for the variance of patient advocacy not explained by this study. Empirical literature reports that a nurse

who has confidence in personally using intermittent fetal monitoring is more likely to practice confidently without continuous fetal monitoring (Dover & Gauge, 1995; Hindley et al., 2006a). To determine a nurse's confidence level, the variable *self-efficacy* could be examined along with the comfort level of a nurse's perceived skill set regarding intermittent fetal monitoring, and if refresher courses are available. In addition, it would be important to assess the actual presence of hand held Dopplers on the labor unit. The lack of hand held Dopplers has been reported as a reason for intermittent fetal monitoring not being implemented in practice even when physicians and administrators were supportive of its use (Graham et al., 2004).

Conclusion

Every labor and delivery nurse is working in an environment of transformational change. The difference among individual nurses is whether, or not, one chooses to participate in this change in a knowing manner. An environment that is continuously changing provides an opportunity for a nurse-environmental energy field to be involved in participating in change to improve the health care of patients (M. Rogers, 1992). This is what power is from a Rogerian worldview, and like the process of change, power is dynamic and not static.

However, the more open the nurse perceives a system, the more likely the nurse is to perceive greater choices, freedom to act with intent on those choices, and engage in change for the betterment of the patient. Perceptions by nurses of systems that appear closed will have the opposite effect. Although all systems are open from a Rogerian perspective, perceptions by nurses of closed systems do not foster the actualization of

the nurse to practice to the fullest extent of his or her education and/or potential as recommended by the Institute of Medicine's report on the *Future of Nursing*, or the Joint Commission's manual for hospital safety which promotes "collective mindfulness." Nurses need the skills to have the confidence to be team players, leaders, and advocates. To achieve this goal, nurse educators must critically evaluate their current curriculum, develop teaching-learning strategies so that nursing students learn the skills of patient advocacy, actively participate in developing ongoing partnerships in the community, and engage in interdisciplinary models of education with other disciplines.

In addition, this study found that while some of the participants are resistant to changing their practice of using CEFM, most of the participants are open to intermittent fetal monitoring, not based on the evidence or their attitude regarding intermittent fetal monitoring, but based on the nursing value of patient advocacy. This insight reinforces the importance of teaching ethics to nursing students, and at the same time, makes it necessary for nursing students and nurse innovators to be educated on the skills to be patient advocates. This new insight also offers a different way of promoting change. For instance, instead of primarily focusing on evidence (although evidence is important), nurse educators need to shift the paradigm from only looking at the evidence to uplifting what is the purpose of nursing. While evidence is important and necessary, it is limited as it does not take into account the needs and values of the patient, or recognize the importance of the affective domain of learning.

This study sought to better understand the relationships associated with the nursing role and value of patient advocacy from the perspective of labor and delivery nurses using the nursing practice of intermittent fetal monitoring. Using the Rogerian framework, attitudes and power profiles, and not behaviors, were used as examples of manifestations of pattern that emerge from the mutual human-environmental process. The findings from this study suggest that although perceived barriers to research utilization are present, the human-environment energy field of participants in this study is open to change, and actively engaging in change as it pertains to patient advocacy and the use of intermittent fetal monitoring.

References

- Alfirevic, Z., Devane, D., & Gyte, G. M. (2006). Continuous cardiotocography (CTG) as a form of electronic fetal monitoring (EFM) for fetal assessment during labor. *The Cochrane Database of Systematic Reviews, Issue 3, Article Number CD006066*. doi:10.1002/1465185.CD006066
- Alligood, M.R., & Tomey, A.M. (2010). *Nursing theorists and their work* (7th ed.). Missouri: Mosby Elsevier.
- Altaf, S., Oppenheimer, C., Shaw, R., Waugh, J., & Dixon-Woods, M. (2006). Practices and views on fetal heart monitoring: A structured observation and interview study. *British Journal of Obstetrics and Gynecology, 113*(4), 409-418. doi: 10.1111/j.14710528.2006.00884.x
- American Academy of Nursing. (2014). *Choosing wisely: Five things nurses and patients should question*. Retrieved from <http://www.aannet.org/electronic-fetal-heart-rate-monitoring>
- American Association of Colleges of Nursing. (2008). *The Essentials of Baccalaureate Education for Professional Nursing Practice*. Retrieved from <http://www.aacn.nche.edu/education-resources/baccessentials08.pdf>
- American Congress of Obstetricians and Gynecologists (ACOG). (2009). ACOG Practice Bulletin No. 106. Intrapartum fetal heart monitoring: Nomenclature interpretation, and general management principles. *Obstetrics and Gynecology, 114* (1), 192-202. doi: 10.1097/AOG.0b013e3181aef106
- American Nurses Association. (2001). *Code of ethics for nurses*. Retrieved from <http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses/Code-of-ethics.pdf>
- American Nurses Credentialing Center (ANCC). (2014). ANCC Magnet Recognition Program. Retrieved from <http://www.nursecredentialing.org/magnet.aspx>
- Anderson, G. (1994). Intrapartum electronic fetal monitoring. *Canadian Task Force on the Predictors of Fetal Distress*. Retrieved from <http://www.phacaspc.gc.ca/publicat/clinicclinique/pdf/s1c15e.pdf>
- Arrindell, W.A., & van der Ende, J. (1985). An empirical test of the utility of the observations to-variables ratio in factor and components analysis. *Applied Psychological Measurement, 9*(2), 165-178. doi: 10.1177/014662168500900205

- Association of Women's Health and Obstetric and Neonatal Nurses [AWHONN]. (2008). *Fetal heart monitoring*. Washington, D.C.: Author.
- Ballou, K.A. (2000). A historical-philosophical analysis of the professional nurse obligation to participate in sociopolitical activities. *Policy, Politics, & Nursing Practice*, 1(3), 172-184. doi: 10.1177/152715440000100303
- Bannon, W.M. (2013). *The 7 steps of data analysis*. New York: StatsWhisperer Press.
- Bannon, W. M. (2014, February). *Why most published research findings are false: Issues surrounding missing data*. Web based lecture.
- Banta, H. D., & Thacker, S. (1979). Policies toward medical technology: The case of electronic fetal monitoring. *American Journal of Public Health*, 69(9), 931-935.
- Barfield, W. D. (2012). Levels of neonatal care. *Pediatrics*, 130(3), 587-597. doi: 10.1542/peds.2012-1999
- Barrett, E.A. (1983). *An empirical investigation of Martha E. Rogers's principle of helicy: The relationship of human field motion and power*. (Unpublished doctoral dissertation). New York University.
- Barrett, E. A. (1990). A measure of power as knowing participation in change. In O.L.Strickland & C.A. Waltz (Eds.), *Measurement of Nursing Outcomes: Measuring Client Self Care and Coping Skills* (Vol. 4, pp. 159-175). New York: Springer Publishing Company.
- Barrett, E.A. (2010). Power as knowing participation in change: What's new and what's next. *Nursing Science Quarterly*, 23(47), 47-58. doi: 10.1177/0894318409353797
- Barrett, E.A., & Caroselli, C. (1998). Methodological ponderings related to the power as knowing participation in change tool. *Nursing Science Quarterly*, 11(1), 17-22.
- Barrett-Sheridan, S.E. (2009). *A quantitative correlational study of political behavior and attitudes of nurses toward macrosocial patient advocacy*. [Doctoral dissertation]. University of Phoenix.
- Birch, L., & Thompson, B. (1997). Survey into fetal monitoring practices and attitudes. *British Journal of Midwifery*, 5(12), 732-736.

- Bostrom, A.M., Kajermo, K.N., Nordstrom, G., & Wallin, L. (2008). Barriers to research utilization and research use among registered nurses working in the care of older people: Does the BARRIERS Scale discriminate between research users and non-research users on perceptions of barriers? *Implementation Science*, 3(24), 10 p. doi: 10.1186/1748-5908-3-24
- Boyle, H.J. (2005). Patient advocacy in the perioperative setting. *Association of Operating Room Nurses Journal*, 82(2), 250-262. doi: 10.1016/S0001-2092(06)60317-7
- Brown, C.E., Wickline, M.A., Ecoff, L., & Glaser, D. (2008). Nursing practice, knowledge, attitudes and perceived barriers to evidence-based practice at an academic medical center. *Journal of Advanced Nursing*, 65(2), 371-381. doi: 10.1111/j.1365-2702.2009.03184.x
- Brown, C.E., Ecoff, L., Kim, S.C., Wickline, M.A., Rose, B., Klimpel, K., & Glaser, D. (2010). Multi-institutional study of barriers to research utilization and evidence-based practice among hospital nurses. *Journal of Clinical Nursing*, 19, 1944-1951. doi: 10.1111/j.13652648.2008.04878.x
- Bryar, R.M., Closs, S.J., Baum, G., Cooke, J., Griffiths, J., Hostick, T.,...Thompson, D.R. (2003). The Yorkshire BARRIERS project: Diagnostic analysis of barriers to research utilization. *International Journal of Nursing Studies*, 40, 73-84. doi: 10.1016/S0020-7489(02)00039-1
- Bu, X. (2005). *Development and psychometric evaluation of an instrument: Attitudes toward patient advocacy*. (Unpublished doctoral dissertation). The State University of New York at Buffalo.
- Bu, X., & Jezewski, M.A. (2007). Developing a mid-range theory of patient advocacy through concept analysis. *Journal of Advanced Nursing*, 57(1), 101-110. doi: 10.1111/j.1365-2648.2006.04096.x
- Bu, X., & Wu, Y.B. (2008). Development and psychometric evaluation of the instrument: Attitude toward patient advocacy. *Research in Nursing & Health*, 31, 63-75. doi: 10.1002/nur.20233
- Budd, K.W., Warino, L.S., & Patton, M.E. (2004). Traditional and non-traditional collective bargaining: Strategies to improve the patient care environment. *Online Journal of Issues in Nursing*, 9(1). Retrieved from www.nursingworld.org
- Bull, R., & Fitzgerald, M. (2004). Nurses' advocacy in an Australian operating department. *Association of Operating Room Nurses Journal*, 79(6), 1265-1274. doi: [http://dx.doi.org/10.1016/S0001-209\(06\)60881-8](http://dx.doi.org/10.1016/S0001-209(06)60881-8)

- Bulmer, M.G. (1979). *Principles of statistics*. New York: Dover Publications.
- Burns, N., & Grove, S.K. (2009). *The practice of nursing research: Appraisal, synthesis, and generation of evidence*. St. Louis, Missouri: Saunders Elsevier.
- Cantrell, M.A., & Lupinacci, P. (2007). Methodological issues in online data collection. *Journal of Advanced Nursing*, 60(5), 544-549. doi: 10.1111/j.1365-2648.2007.04448.x
- Carlson, C.L., & Plonczynski, D.J. (2008). Has the Barriers Scale changed nursing practice? An integrative review. *Journal of Advanced Nursing*, 63(4), 322-333. doi: 10.1111/j.1365-2648.2008.04705.x
- Carnwell, R.J. (2009). The nurse-patient relationship in the post-anaesthetic care unit. *Nursing Standard*, 24(15-17), 40-46.
- Center for Healthcare Quality & Payment Reform. (2013). *How to save \$5 billion in healthcare spending for employers and taxpayers*. Retrieved from <http://chqpr.org>
- Chambliss, D.F. (1996). *Beyond caring: Hospitals, nurses, and the social organizations of ethics*. Chicago: University of Chicago Press.
- Champion, V.L., & Leach, A. (1989). Variables related to research utilization in nursing: An empirical investigation. *Journal of Advanced Nursing*, 14, 705-710. doi: 10.1111/j.13652648.1989.tb01634.x
- Chen, H. Y., Chauhan, S. P., Ananth, C. V., Vintzileos, A. M., & Abuhamad, A. Z. (June 2011). Electronic fetal heart rate monitoring and its relationship to neonatal and infant mortality in the United States. [Journal]. *American Journal of Obstetrics & Gynecology*, 204, 491.e491e.410. doi: 10.1016/j.ajog.2011.04.024
- Ciarcia, P.M. (1998). Nurses' reactions to change. *Nursing Management*, 29(6), 48P-48R.
- Ciliska, D. (2006). Evidence-based nursing: How far have we come? What's next? *Evidence Based Nursing*, 9, 38-40. doi: 10.1136/ebn.9.2.38
- Cranston, C.S. (1980). Obstetrical nurses' attitudes toward fetal monitoring. *Journal of Obstetrical, Gynecological, and Neonatal Nursing*, 9(6), 344-347. doi: 10.1111/j.1552-6909.1980.tb01342.x
- Curia, M. (2008). *Nursing advocacy: Perceptions of and recollections of acquisition of the role by practicing nurses*. (Unpublished doctoral dissertation). Capella University.

- Curtin, L. L. (1979). The nurse as advocate: A philosophical foundation for nursing. *Advances in Nursing Science, 1*(3), 1-10.
- Davis, A.J., Konishi, E., & Tashiro, M. (2003). A pilot study of selected Japanese nurses' ideas on patient advocacy. *Nursing Ethics, 10*(4), 404-413. doi: 10.1191/0969733003ne621oa
- Declercq, E.R., Sakala, C., Corry, M.P., & Applebaum, S. (2006). *Listening to Mothers II: Report of the second national U.S. survey of women's childbearing experiences*. New York: Childbirth Connection. Retrieved from www.childbirthconnection.org/listeningtomothers/
- Dierckx de Casterle, B., Izumi, S., Godfrey, N.S., & Denhaerynck, K. (2008). Nurses' responses to ethical dilemmas in nursing practice: Meta-analysis. *Journal of Advanced Nursing, 63*(6), 540-549. doi: 10.1111/j.1365-2648.2008.04702.x
- Dillman, D.A. (2000). *Mail and Internet surveys: The tailored design method*. New York: Wiley & Sons.
- Dillman, D.A., Smyth, J.D., & Christian, L.M. (2009). *Internet, mail, and mixed mode survey: The tailored Design*. Hoboken, NJ: John Wiley & Sons, Inc.
- Dixon, A. (1981). The electronic fetal monitor: Should every mother have one? *Canadian Family Physician, 27*, 1023-1028.
- Dover, S.L., & Gauge, S.M. (1995). Fetal monitoring—midwifery attitudes. *Midwifery, 11*(1), 18-27. doi: 10.1016/0266-6138(95)90053-5
- Downey, R.G., & King, C.V. (1998). Missing data in Likert ratings: A comparison of replacement methods. *The Journal of General Psychology, 125*(2), 175-191.
- Eklund, A.J., Petzall, K., Sandin-Bojo, K., & Wilde-Larsson, B. (2013). Cross cultural validation and psychometric testing of the Swedish version of the micro social section of the Attitudes toward Patient Advocacy Scale. *The International Journal of Person-Centered Medicine, 2*(3), 473-481. doi: 10.1111/j.1365-2834.2012.01453.x
- Estabrooks, C.A., Floyd, J.A., Scott-Findlay, S., O'Leary, K.A., & Gushta, M. (2003). Individual determinants of research utilization: A systematic review. *Journal of Advanced Nursing, 43*(5), 506-520. doi: 10.1046/j.1365-2648.2003.02748.x

- Estabrooks, C.A., Midodzi, W.K., Cummings, G.G., & Wallin, L. (2007). Predicting research use in nursing organizations: A multilevel analysis. *Nursing Research*, 56(4), S7-S23.
- Estabrooks, C.A., O'Leary, K.A., Ricker, K.L., & Humphrey, C.K. (2003). The Internet and access to evidence: How are nurses positioned? *Journal of Advanced Nursing*, 42(1), 73-81. doi: 10.1046/j.1365-2648.2003.02581.x
- Estabrooks, C.A., Squires, J.E., Strandberg, E., Nilsson-Kajermo, K., Scott, S.D., Profetto, McGrath, J.,...Wallin, L. (2011). Towards better measures of research utilization: A collaborative study in Canada and Sweden. *Journal of Advanced Nursing*, 67(8), 1705-1718. doi: 10.1111/jan.2011.67.issue-8/issuetoc
- Fawcett, J. (2005). *Contemporary nursing knowledge: Analysis and evaluation of Nursing models and theories* (2nd ed.). Philadelphia: F.A. Davis Company.
- Fineout-Overholt, E., Melnyk, B., & Schultz, A. (2005). Transforming health care from the inside out: Advancing evidence-based practice in the 21st century. *Journal of Professional Nursing*, 21(6), 335-344. doi: 10.1016/j.profnurs.2005.10.005
- Fink, R., Thompson, C.J., & Bonnes, D. (2005). Overcoming barriers and promoting the use of research in practice. *Journal of Nursing Administration*, 35(3), 121-129.
- Fowler, M.D. (1989). Ethical issues in critical care. *Heart and Lung*, 18(1), 97-99.
- Funk, S.G. (2001). The BARRIERS to Research Utilization Scale: An overview. Retrieved from <http://www.unc.edu/depts/rsc/funk/barriers.html>
- Funk, S.G., Champagne, M.T., Wiese, R.A., & Tornquist, E.M. (1991). BARRIERS: The barriers to research utilization scale. *Applied Nursing Research*, 4(1), 39-45. doi: 10.1016/S0897-1897(05)80052-7
- Gadow, S. (1980). Existential advocacy: Philosophical foundations of nursing. In S. Spicker, & S. Gadow (Eds.), *Nursing images & ideals*, (pp. 79-101). New York: Springer Publishing.
- Gerrish, K., & Clayton, J. (2004). Promoting evidence-based practice: An organizational approach. *Journal of Nursing Management*, 12, 114-123. doi: 10.1111/j.1365-2834.2004.00454.x

- Gerrish, K., Ashworth, P., Lacey, A., & Bailey, J. (2008). Developing evidence based practice: Experiences of senior and junior clinical nurses. *Journal of Advanced Nursing*, 62(1), 62-73. doi: 10.1111/j.1365-2648.2007.04579.x.
- Glasman, L., & Albarracin, D. (2006). Forming attitudes that predict future behavior: A meta-analysis of the attitude-behavior relation. *Psychological Bulletin*, 132(5), 778-822. doi: 10.1037/0033-2909.132.5.778
- Godkin, J.L. (2006). *Making a difference: A study of patient advocacy among expert dialysis nurses*. (Unpublished doctoral dissertation). University of Texas.
- Gosling, A.S., Westbrook, J.I., & Spencer, R. (2004). Nurses' use of online clinical evidence. *Journal of Advanced Nursing*, 47(2), 201-211. doi: 10.1111/j.1365-2648.2004.03079.x
- Gosselin-Acomb, T.K., Schneider, S.M., Clouch, R.W., & Venstra, B.A. (2007). Nursing advocacy in North Carolina. *Oncology Nursing Forum*, 34(5), 1070-1074. doi: 10.1188/07.ONF.1070-1074
- Grace, P.J. (2001). Professional advocacy: Widening the scope of accountability. *Nursing Philosophy*, 2(2), 151-162. doi: 10.1046/j.1466-769X.2001.00048.x
- Graham, I. D., Logan, J., Davies, B., & Nimrod, C. (2004). Changing the use of electronic fetal monitoring and labor support: A case study of barriers and facilitators. *Birth*, 31(4), 293-301. doi: 10.1111/j.0730-7659.2004.00322.x
- Granello, D.H., & Wheaton, J.E. (2004). Online data collection: Strategies for research. *Journal of Counseling and Development*, 82(4), 387-394.
- Green, J. (2000). The role of theory in evidence-based health promotion practice. *Health Education Research*, 15(2), 125-129.
- Green, S.B., & Salkind, N.J. (2011). *Using SPSS for Windows and Macintosh: Analyzing and understanding data*. (6th ed.). Upper Saddle River: Pearson Education, Inc.
- Grol, R. (1997). Personal paper: Beliefs and evidence in changing clinical practice. *British Medical Journal*, 315, 418. doi.org/10.1136/bmj.315.7105.418
- Hamilton, B.E., Martin, J.A., Osterman, M.K., & Curtin, S.C. (2014). Births: Preliminary data for 2013. *National Vital Statistics Reports*, 63(2). Hyattsville, MD: Natinal Center for Health Statistics. Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_02.pdf

- Hanks, R.G. (2008). The lived experience of nursing advocacy. *Nursing Ethics*, 15(4), 468-477. doi: 10.1177/0969733008090518
- Hanks, R.G. (2010). The medical surgical nurse perspective of advocate role. *Nursing Forum*, 45(2), 97-107. doi: 10.1111/j.1744-6198.2010.00170.x
- Hannes, K., Vandermissen, J., DeBlaeser, L., Peeters, G., Goedhuys, J., & Aertgerrts, B. (2007). Barriers to evidence-based nursing: A focus group study. *Journal of Advanced Nursing*, 60(2), 162-171. doi: 10.1111/j.13652648.2007.04389.x
- Haverkamp, A., Thompson, H., McFee, J., & Certulo, C. (1976). The evaluation of Continuous fetal heart rate monitoring in high risk pregnancy. *American Journal of Obstetrics & Gynecology*, 125(3), 310-320.
- Health Care Cost Institute. (2013). 2012 Health care cost and utilization report. Retrieved from www.healthcostinstitute.org
- Health and Human Resources (HRSA). (2010). The registered nurse population: Findings from the 2008 national sample survey of registered nurses. Retrieved from <http://bhpr.hrsa.gov/healthworkforce/rnsurveys/rnsurveyfinal.pdf>
- Health and Human Resources (HRSA). (2013). The U.S. nursing workforce: Trends in supply and education. Retrieved from <http://bhpr.hrsa.gov/healthworkforce/nursingworkforcefullreport.pdf>
- Hewitt, J. (2002). A critical review of the arguments debating the role of the nurse advocate. *Journal of Advanced Nursing*, 37(5), 439-445. doi: 10.1046/j.13652648.2002.02110.x
- Hindley, C., & Thomson, A. M. (2005). The rhetoric of informed choice: Perspectives from midwives on intrapartum fetal heart rate monitoring. *Health Expectations*, 8, 306-314. doi: 10.1111/j.1369-7625.2005.00355.x
- Hindley, C., Hinsliff, S.W., & Thomson, A.M. (2006a). English midwives' views and experiences of intrapartum fetal heart rate monitoring in women at low obstetric risk: Conflicts and compromises. *Journal of Midwifery & Women's Health*, 51(5), 354-360. doi: 10.1016/j.jmwh.2006.02.008
- Hindley, C., Hinsliff, S.W., & Thomson, A.M. (2006b). Pregnant womens' views about choice of intrapartum monitoring of the fetal heart rate: A questionnaire survey. *International Journal of Nursing Studies*, 45, 224-231. doi: 10.1016/j.ijnurstu.2006.08.019

- Hon, E., & Lee, S. (1963). The fetal electrocardiogram: Measuring technics. *Obstetrics and Gynecology*, 24(1), 6-11.
- Institute of Medicine (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, D.C.: The National Academies Press. Retrieved from <http://www.iom.edu/Reports/2001/Crossing-the-Quality-Chasm-A-New-Health-System-for-the-21st-Century>.
- Institute of Medicine. (2010). The future of nursing: Leading change, advancing health. Retrieved from <http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx>
- International Council of Nurses (2012). *The ICN Code of Ethics for Nurses*. Retrieved from www.icn.ch
- James, D.C., Simpson, K.R., & Knox, G.E. (2003). How do expert nurses view their role? *Journal of Obstetrics, Gynecology, & Neonatal Nursing*, 32(6), 814-823. doi: 10.1177/0884217503258548
- Jeffs, L., Beswick, S., Lo, J., Campbell, H., Ferris, E., & Sidani, S. (2013). Defining What evidence is, linking to patient outcomes, and making it relevant to practice: Insight from clinical nurses. *Applied Nursing Research*, 26, 105-109. doi: 10.1016/j.apnr.2013.03.002
- Joint Commission. (2014). *2015 Comprehensive Accreditation Manual for Hospitals: The Patient Safety Systems Chapter*. Retrieved from http://www.jointcommission.org/assets/1/6/PSC_for_Web.pdf
- Jones, R. (2001). *The relations of dyadic trust, sensation seeking, and sexual imposition with sexual risk behavior in young, urban women with primary and non-primary male partners*. (Unpublished doctoral dissertation). New York University.
- Kajermo, K.N., Bostrom, A.M., Thompson, D.S., Hutchinson, A.M., Estabrooks, C.A., & Wallin, L. (2010). The BARRIERS scale---the barriers to research utilization scale: A systematic review. *Implementation Science*, 5(32), 22p. Retrieved from <http://www.implementationscience.com/content/5/1/32>
- Kardong-Edgren, S. (2001). Using evidence-based practice to improve intrapartum care. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 30(4), 371-375. doi: 10.1111/j.15526909.2001.tb01555.x

- Kennedy, H.P., & Lyndon, A. (2008). Tensions and teamwork in nursing and midwifery relationships. *Journal of Obstetrics, Gynecology, & Neonatal Nursing*, 37, 426-435. doi: 10.1111/j.1552-6909.2008.00256.x
- Kim, T.S. (2009). The Theory of Power as knowing participation in change: A Literature review. *Visions: The Journal for Rogerian Nursing Science*, 16(1), 19-27.
- Klein, M.C. (2006). Does epidural anesthesia increase the rate of cesarean section? *Canadian Family Physician*, 52(4), 419-421.
- Koehn, M.C., & Lehman, K. (2008). Nurses' perceptions of evidence-based nursing practice. *Journal of Advanced Nursing*, 62(2), 209-215. doi: 10.1111/j.1365-2648.2007.04589.x
- Kohnke, M.F. (1982). Advocacy—What is it? *Nursing and Health Care*, 3(6), 314-318.
- Lefever, S., Dal, M., & Matthiasodittir, A. (2007). Online data collection in academic research: Advantages and limitations. *British Journal of Educational Technology*, 38(4), 574-582. doi: 10.1111/j.1467-8535.2006.00638x
- Licht, M.H. (2012). Multiple regression and correlation. In L.G. Grimm & P.R. Yarnold (Eds.), *Reading and understanding multivariate statistics* (pp. 19-64). Washington, D.C.: American Psychological Association.
- Liva, S.J., Hall, W.A., Klein, M.C., & Wong, S.T. (2012). Factors associated with differences in Canadian perinatal nurses' attitudes toward birth practices. *Journal of Obstetrics, Gynecology, & Neonatal Nursing*, 41(6), 761-773. doi: 10.1111/j.1552-6909.2012.01412.x
- Lyndon, A. (2008). Social and environmental conditions creating fluctuating agency for safety in two urban academic birth centers. *Journal of Obstetrics, Gynecology, & Neonatal Nursing*, 37, 13-23. doi: 10.1111/j.1552-6909.2007.00204.x
- MacDonald, H. (2006). Relational ethics and advocacy in nursing: Literature review. *Journal of Advanced Nursing*, 57(2), 119-126. doi: 10.1111/j.1365-2648.2006.04063.x
- Mahlin, M. (2010). Individual patient advocacy, collective responsibility and activism within professional nursing associations. *Nursing Ethics*, 17(2), 247-254. doi: 10.1177/0969733009351949

- Makic, M.F., Martin, S.A., Burns, S., Philbrick, D., & Raven, C. (2013). Putting evidence into nursing practice: Four traditional practices not supported by the evidence. *Critical Care Nurse*, 33(2), 29-43. doi: 10.4037/ccn2013787
- Mallik, M. (1997). Advocacy in nursing: A review of the literature. *Journal of Advanced Nursing*, 25(1), 130-138. doi: 10.1046/j.1362648.1997.1997.025130.x
- Martin, J.A., Hamilton, B.E., Osterman, M.J., Curtin, S.C., & Matthews, J.J. (2013). Birth: Final data for 2012. *National Vital Statistics Reports*, 62(9). Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_09.pdf
- McCleary, L., & Brown, G.T. (2002). Research utilization among pediatric health professionals. *Nursing and Health Sciences*, 4, 163-171. doi: 10.1046/j.1442-2018.2002.00124.x
- McCleary, L., & Brown, G.T. (2003). Barriers to paediatric nurses' research utilization. *Journal of Advanced Nursing*, 42(4), 364-372. doi: 10.1046/j.1365-2648.2003.02628.x
- McCloskey, D.J. (2008). Nurses' perceptions of research utilization in a corporate health care system. *Journal of Nursing Scholarship*, 40(1), 39-45. doi: 10.1111/j.15475069.2007.00204.x
- McCormack, B., Kitson, A., Harvey, G., Rycroft-Malone, J., Titchen, A., & Seers, K. (2002). Getting evidence into practice: The meaning of "context." *Journal of Advanced Nursing*, 38(1), 94-104. doi: 10.1046/j.1365-2648.2002.02150.x
- McGarvey, B.S. (2002). *Predictors of occupational health nurses' likely ethical action regarding confidentiality of employee health records*. (Unpublished Dissertation). University of Alabama.
- McGowan, J., Grad, R., Pluye, P., Hannes, K., Deane, K., Labrecque, M., ... Tugwell, P. (2010). Electronic retrieval of health information by healthcare providers to improve practice and patient care. *Cochrane Database of Systematic Reviews* 2009, Issue 3, No: CD004749. doi: 10.1002/14651858.CD004749.pub2.
- McGrath, P., Holewa, H., & McGrath, Z. (2006). Nursing advocacy in an Australian multidisciplinary context: Findings on medico-centrism. *Scandinavian Journal of Caring Sciences*, 20(4), 394-402. doi: 10.1111/j.1471-6712.2006.00419x
- McKevitt, S., Gillen, P., & Sinclair, M. (2011). Midwives' and doctors' attitudes towards the use of the cardiotocograph machine. *Midwifery*, 27(6), e279-e285. doi: 10.1016/j.midw.2010.11.003

- McSteen, K., & Peden-McAlpine, C. (2006). The role of the nurse as advocate in Ethically difficult care situations with dying patients. *Journal of Hospice and Palliative Nursing*, 8(5), 259-269.
- Melnyk, B. M., & Fineout-Overholt, E. (2011). *Evidence-based practice in nursing and healthcare: A guide to best practice*. (2nd ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Millette, B.E. (1993). Client advocacy and the moral orientation of nurses. *Western Journal of Nursing Research*, 15, 607-618. doi: 10.1177/019394599301500507
- Mills, J., Field, J., & Cant, R. (2009). The place of knowledge and evidence in the context of Australian general practice nursing. *Worldviews on Evidence-Based Nursing*, 6(4), 219-228. doi: 10.1111/wvn.2009.6.issue-4/issuetoc
- Mishra, R., & Thakur, R.S. (2013). A review of spam filtering and measures of antispan. *Journal of Information Engineering and Application*, 3(6), 11-13.
- Morris-Docker, S.B., Tod, A., Harrison, J.M., Wolstenholme, D., & Black, R. (2004). Nurses' use of the Internet in clinical ward settings. *Journal of Advanced Nursing*, 48(2), 157-166. doi: 10.1111/j.1365-2648.2004.03183.x
- Muraskas, J., & Parsi, K. (2008). The cost of saving the tiniest lives: NICU versus prevention. *AMA Journal of Ethics*, 10(10), 655-658.
- Murphy, C. (1979). Models of the nurse-patient relationship. In C. Murphy, & H. Hunter (Eds.) *Ethical Problems in the Nurse-Patient Relationship*, (pp. 8-24) Newton, MA: Allyn & Bacon.
- Nahigian, E. (2003). *Factors associated with the advocacy decisions of registered professional nurses employed as staff nurses in inpatient adult care hospitals*. (Unpublished doctoral dissertation). State University of New York, Buffalo.
- National Institute of Clinical Excellence [NICE]. (2007). *Care of healthy women and their babies during childbirth*. Retrieved from <http://guidance.nice.org.uk/CG55>
- National League of Nursing. (2011). *NLN education competencies*. Retrieved from <http://www.nln.org/facultydevelopment/facultyresources/aces/teachingstrategies.ht>
- Nunnally, J.C., & Bernstein, I.H. (1994). Psychometric theory. *Journal of Psychoeducational Assessment*, 17, 275-280. Retrieved from <http://psychology.concordia.ca/fac/kline/library/k99.pdf>

- O’Cathain, A., Thomas, K., Walters, S.J., Nicholl, J., & Kirkham, M. (2002). Women’s perceptions of informed choice in maternity care. *Midwifery*, *18*(2), 136-144. doi: <http://dx.doi.org/10.1054/midw.2002.0301>
- Olade, R.A. (2003). Attitudes and factors affecting research utilization. *Nursing Forum*, *38*(4), 5-15. doi: 10.1111/j.0029-6473.2003.00005.x
- Pallant, J. (2013). *SPSS survival manual* (5th ed.). London: McGraw Hill.
- Parahoo, K. (2000). Barriers to, and facilitators of, research utilization among nurses in Northern Ireland. *Journal of Advanced Nursing*, *31*(1), 89-98. doi: 10.1046/j.1365-2648.2000.01256.x
- Parahoo, K., & McCaughan, E.M. (2001). Research utilization among medical and surgical nurses: A comparison of their self-reports and perceptions of barriers and facilitators. *Journal of Nursing Management*, *9*, 21-30. doi: 10.1111/j.1365-2834.2001.00237.x
- Payant, L., Davies, B., Graham, I.D., Peterson, W.E., & Clinch, J. (2008). Nurses’ intentions to provide continuous labor support to women. *Journal of Obstetrics, Gynecology, & Neonatal Nursing*, *37*, 405-414. doi: 10.1111/j.1552-6909.2008.00257.x
- Penticuff, J.H. (2011). *Codes of ethics and care at the bedside: The nurse’s dilemma*. Retrieved from http://www4.samford.edu/heal/2010_Penticuff_presentation.pdf
- Penticuff, J.H., & Walden, M. (2000). Influence of practice environment and nurse characteristics on perinatal nurses’ responses to ethical dilemmas. *Nursing Research*, *49*(2), 64-72.
- Phillips, J.R. (2010). The universality of Rogers’ Science of Unitary Human Beings. *Nursing Science Quarterly*, *23*(55), 55-59. doi: 10.1177/0894318409353795
- Pipe, T.B. (2007). Optimizing nursing care by integrating theory-driven evidence based practice. *Journal of Nursing Care Quality*, *22*(3), 234-238.
- Polit, D.F. (2010). *Statistics and data analysis for nursing research* (2nd ed.). Upper Saddle River, NJ: Pearson
- Polit, D.F., & Beck, C.T. (2012). *Nursing research: Generating and assessing evidence for nursing practice*. (9th ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

- Porter-O'Grady, T. (2004). Overview: Shared governance: Is it a model for nurses to gain over their practice? *Online Journal of Issues in Nursing*, 9(1). Retrieved from www.nursingworld.org
- Pravikoff, D.S., Tanner, A.B., & Pierce, S.T. (2005). Readiness of U.S. nurses for evidence-based practice: Many don't understand or value research and have had little or no training to help them find evidence on which to base their practice. *American Journal of Nursing*, 105(9), 40-51.
- QSEN Institute. (2014). Pre-licensure KSAS. Retrieved from <http://qsen.org/competencies/pre-licensure-ksas/>
- Robert Wood Johnson Foundation. (2012). Reducing waste in health care. *Health Policy Brief*. Retrieved from www.healthaffairs.org
- Rogers, E.M. (2003). *Diffusion of innovations*. (5th ed.). New York: Free Press.
- Rogers, M.E. (1986). Science of unitary human beings. In V.M. Malinski (Ed.), *Explorations on Martha Rogers' Science of Unitary Human Beings* (pp. 3-9). East Norwalk, CT: Appleton-Century-Crofts.
- Rogers, M.E. (1990). Nursing: Science of unitary, irreducible, human beings: Update 1990. In E.A. Barrett (Ed.), *Visions of Rogers' science based nursing* (pp. 5-11). New York: National League of Nursing.
- Rogers, M.E. (1992). Nursing science and the space age. *Nursing Science Quarterly*, 5(27), 27-34. doi: 10.1177/089431849200500108
- Russo, C., Wier, L., & Steiner, C. (2009). *Hospitalizations related to childbirth, 2006*. Agency for Healthcare Research and Quality, Rockville: MD. Retrieved from <http://www.hcupus.ahrq.gov/reports/statbriefs/sb71.jsp>
- Sandelowski, M. (2000). Retrofitting technology to nursing: The case of electronic fetal monitoring. *Journal of Obstetrics, Gynecology, and Neonatal Nursing*, 29(3), 316-324. doi: 10.1111/j.1552-6909.2000.tb02053.x
- Seal, M. (2007). Patient advocacy and advance care planning in the acute hospital setting. *Australian Journal of Advanced Nursing*, 24(4), 29-36. Doi:
- Siebens, K., Dierckx de Casterle, B., Abraham, I., Dierckx, K., Braes, T., ... & Milisen, K. (2006). The professional self-image of nurses in Belgian hospitals: A cross-sectional questionnaire survey. *International Journal of Nursing Studies*, 43, 71-83. doi: 10.1016/j.ijnurstu.2005.04.004

- Sinclair, M. (2001). Midwives' attitudes to the use of the cardiotocograph machine. *Journal of Advanced Nursing*, 35(4), 599-606. doi.org/10.1046/j.1365-2648.2001.01876.x
- Sleutel, M., Schultz, S., & Wyble, K. (2007). Nurses' views of factors that help and hinder their intrapartum care. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 36(3), 203-211. doi: 10.1111/j.1552-6909.2007.00146x
- Smith, V., Begley, C.M., Clarke, M., & Devane, D. (2012). Professional views of fetal monitoring during labor: A systematic review and thematic analysis. *BMC Pregnancy and Childbirth*, 12, 166. doi: 10.1186/1471-2393-12-166
- Smith, J.R., & Hogg, M. A. (2008). Social identity and attitudes. In W.D. Crano & R. Prislin (Eds.), *Attitudes and attitude changes*(pp. 337-361). New York: Psychology Press.
- Sorlie, V., Jansson, L., & Norberg, A. (2003). The meaning of being in ethically difficult care situations in paediatric care as narrated by female registered nurses. *Scandinavian Journal of Caring Science*, 17, 285-292. doi: 10.1046/j.14716712.2003.00229.x
- Tabachnick, B.G., & Fidell, L.S. (2013). *Using multivariate statistics*. Upper Saddle River, NJ: Pearson Education Inc.
- Talley, B. (1998). *Excellence and success in small rural hospitals: The interrelationships of power, participation in decision making, and organizational commitment in rural nurses*. (Unpublished doctoral dissertation). Medical College of Georgia.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55. doi: 10.5116/ijme.4dfb.8dfd
- The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. (2009). *Intrapartum fetal surveillance clinical guidelines*. Retrieved from www.ranzcog.edu/au
- Thiel, L., & Ghosh, Y. (2008). Determining registered nurses' readiness for evidence-based practice. *Worldviews on Evidence Based Nursing*, 5(4), 182-192. doi: 10.1111/j.1741-6787.2008.00137.x
- Thompson, C., McCaughan, D., Cullum, N., Sheldon, T.A., Mulhall, A., & Thompson, D. (2001). The accessibility of research based knowledge for nurses in the U.K. acute care setting. *Journal of Advanced Nursing*, 36, 11-22. doi: 10.1046/j.1365-2648.2001.01938.x

- Trangenstein, P.A. (1988). *Relationships of power and job diversity to job satisfaction and job involvement: An empirical investigation of Rogers' principle of integrality*. (Unpublished doctoral dissertation). New York University.
- US Census Bureau. (2014). Census regions and divisions of the United States. Retrieved from https://www.census.gov/geo/.../us_regdiv.pdf
- US Preventive Services Task Force, Agency for Healthcare Research and Quality. (1996). *Screening for intrapartum electronic fetal monitoring*. Retrieved from <http://www.uspreventiveservicestaskforce.org/uspstf/uspstf.htm>
- US Department of Health and Human Services. (2004). Public use data file documentation: 2004 Period linked birth/infant death data set. *National Vital Statistics Reports*. Hyattsville, MD: National Center for Health Statistics. Retrieved from <http://www.nber.org/lbid/docs/LinkCO04Guide.pdf>
- Varcoe, C., Doane, G., Pauly, B., Rodney, P., Storch, J.L., Mahoney, K.,...Starzomski, R. (2004). Ethical practice in nursing: Working the in between. *Journal of Advanced Nursing*, 45(3), 316-325. doi: 10.1046/j.1365-2648.2003.02892.x
- Vaartio, H., Leino-Kilpi, H., Salanterä, S., & Suominen, T. (2006). Nursing advocacy: How it is defined by patients and nurses, what does it involve, and how is it experienced? *Scandinavian Journal of Caring*, 20(3), 282-292. doi: 10.1111/j.1471-6712.2006.00406.x
- Veeramah, V. (2004). Utilization of research findings by graduate nurses and midwives. *Journal of Advanced Nursing*, 47(2), 183-191. doi: 10.1111/j.1365-2648.2004.03077.x
- Walker, D.S., Shunkwiler, S., Supanich, J., Williamsen, J., & Yensch, A. (2001). Labor and delivery nurses' attitudes toward intermittent fetal monitoring. *Journal of Midwifery & Women's Health*, 46(6), 374-380. doi: 10.1016/S1526-9523(01)00195-7
- Ware, L.J., Bruckenthal, P., Davis, G.C., & O'Conner-Von, S.K. (2011). Factors that influence patient advocacy by pain management nurses: Results of the American Society for Pain Management Nursing survey. *Pain Management Nursing*, 12(1), 25-32. doi: 10.1016/j.pmn.2009.12.001
- Weigold, A., Weigold, I.K., & Russell, E.J. (2013). Examination of the equivalence of self-report survey based paper and pencil and Internet data collection methods. *Psychological Methods*, 18(1), 53-70. doi: 10.1037/a0031607

- Williams, R., & Hawes, W. (1979). Cesarean section, fetal monitoring, and perinatal Mortality in California. *American Journal of Public Health*, 69(9), 864-870.
- Witte, R.S., & Witte, J.S. (2010). *Statistics*. (9th ed.). Hoboken, NJ: John Wiley & Sons, Inc.
- Wood, M. J., & Ross-Kerr, J.C. (2011). *Basic steps in planning nursing research: From question to proposal*. Sudbury, MA: Jones and Bartlett Publishers.
- World Health Organization [WHO]. (1996). *Safe motherhood. Care in normal birth: A practical guide*. Geneva, Switzerland: Author. Retrieved from http://whqlibdoc.who.int/hq/1996/WHO_FRH_MSM_96.24.pdf
- World Health Organization. (2009). Baby-friendly hospital initiatives: Revised, updated, and expanded for integrative care. Retrieved from http://www.who.int/nutrition/publications/infantfeeding/bfhi_trainingcourse/en/
- Yeo, M., & Moorehouse, A. (1996). *Concepts and cases in nursing ethics*. Ontario, Canada: Broadview Press.

Appendix A
Seton Hall University IRB Approval Letter



May 28, 2014

Lisa Heelan
P.O. Box 124
Henryville, PA 18332

Dear Ms. Heelan,

The Seton Hall University Institutional Review Board has reviewed your research proposal entitled "Exploring the Relationships of Power, Attitudes Regarding Intermittent Fetal Monitoring and Perceived Barriers to Research Utilization with a Labor and Delivery Nurse's Attitude Toward Patient Advocacy" and has categorized it as exempt.

Enclosed for your records is the signed Request for Approval form.

Please note that, where applicable, subjects must sign and must be given a copy of the Seton Hall University current stamped Letter of Solicitation or Consent Form before the subjects' participation. All data, as well as the investigator's copies of the signed Consent Forms, must be retained by the principal investigator for a period of at least three years following the termination of the project.

Should you wish to make changes to the IRB approved procedures, the following materials must be submitted for IRB review and be approved by the IRB prior to being instituted:

- Description of proposed revisions;
- *If applicable*, any new or revised materials, such as recruitment fliers, letters to subjects, or consent documents; and
- *If applicable*, updated letters of approval from cooperating institutions and IRBs.

At the present time, there is no need for further action on your part with the IRB.

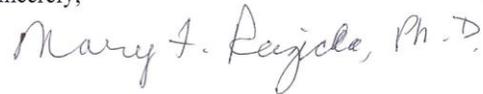
Office of Institutional Review Board

Presidents Hall · 400 South Orange Avenue · South Orange, New Jersey 07079 · Tel: 973.313.6314 · Fax: 973.275.2361 · www.shu.edu

A HOME FOR THE MIND, THE HEART AND THE SPIRIT

In harmony with federal regulations, none of the investigators or research staff involved in the study took part in the final decision.

Sincerely,



Mary F. Ruzicka, Ph.D.
Professor
Director, Institutional Review Board

cc: Dr. Bonnie Strum
Dr. Phyllis Hansell

Please review Seton Hall University IRB's Policies and Procedures on website (<http://www.provost.shu.edu/IRB>) for more information. Please note the following requirements:

Adverse Reactions: If any untoward incidents or adverse reactions should develop as a result of this study, you are required to immediately notify in writing the Seton Hall University IRB Director, your sponsor and any federal regulatory institutions which may oversee this research, such as the OHRP or the FDA. If the problem is serious, approval may be withdrawn pending further review by the IRB.

Amendments: If you wish to change any aspect of this study, please communicate your request in writing (with revised copies of the protocol and/or informed consent where applicable and the Amendment Form) to the IRB Director. The new procedures cannot be initiated until you receive IRB approval.

Completion of Study: Please notify Seton Hall University's IRB Director in writing as soon as the research has been completed, along with any results obtained.

Non-Compliance: Any issue of non-compliance to regulations will be reported to Seton Hall University's IRB Director, your sponsor and any federal regulatory institutions which may oversee this research, such as the OHRP or the FDA. If the problem is serious, approval may be withdrawn pending further review by the IRB.

Renewal: It is the principal investigator's responsibility to maintain IRB approval. A Continuing Review Form will be mailed to you prior to your initial approval anniversary date. **Note:** No research may be conducted (except to prevent immediate hazards to subjects), no data collected, nor any subjects enrolled after the expiration date.

Appendix B
AWHONN Approval Letter to Conduct Study

Association of Women's Health, Obstetric and Neonatal Nurses



May 1, 2014

AWHONN
2000 L Street NW
Suite 740
Washington, DC 20036

To whom it may concern:

I am writing to let you know that I have been working with Lisa Heelan, MSN, FNP-BC, ANP-BC on preparing her research survey to go out to a select part of our AWHONN membership. As a part of the research survey program we must receive IRB approval from Lisa's faculty advisor. Once we receive the IRB approval and accompanying paperwork we will be able to move forward with the research survey.

Please feel free to contact me with any questions.

Best Regards,

Tim Heine
theinle@awhonn.org
202.261.2418

Heelan: Seton Hall University IRB approval letter

Timothy Heinle <THEinle@awhonn.org>

Tue 7/1/2014 8:46 AM

To:

Lisa M Heelan;

Flag for follow up. Start by Tuesday, July 01, 2014. Due by Tuesday, July 01, 2014.

You replied on 7/1/2014 3:53 PM.

Hi Lisa,

Great news! The research has been approved. The next steps will be setting up the email, testing it and scheduling it.

I want to confirm the survey link we will use. Can you send over a live link when it is available?

As far as scheduling is concerned it looks like Monday the 7th will be the first available date we can get the initial survey email solicitation out.

Let me know if that sounds ok to you.

Thanks,

Tim

BARRETT PKPCT, Version II

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY AWARENESS IS

profound	___	___	___	___	___	___	___	superficial
avoiding	___	___	___	___	___	___	___	seeking
valuable	___	___	___	___	___	___	___	worthless
unintentional	___	___	___	___	___	___	___	intentional
timid	___	___	___	___	___	___	___	assertive
leading	___	___	___	___	___	___	___	following
chaotic	___	___	___	___	___	___	___	orderly
expanding	___	___	___	___	___	___	___	shrinking
pleasant	___	___	___	___	___	___	___	unpleasant
uninformed	___	___	___	___	___	___	___	informed
free	___	___	___	___	___	___	___	constrained
unimportant	___	___	___	___	___	___	___	important
unpleasant	___	___	___	___	___	___	___	pleasant

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY CHOICES ARE

shrinking	___	___	___	___	___	___	___	expanding
seeking	___	___	___	___	___	___	___	avoiding
assertive	___	___	___	___	___	___	___	timid
important	___	___	___	___	___	___	___	unimportant
orderly	___	___	___	___	___	___	___	chaotic
intentional	___	___	___	___	___	___	___	unintentional
unpleasant	___	___	___	___	___	___	___	pleasant
constrained	___	___	___	___	___	___	___	free
worthless	___	___	___	___	___	___	___	valuable
following	___	___	___	___	___	___	___	leading
superficial	___	___	___	___	___	___	___	profound
informed	___	___	___	___	___	___	___	uninformed
timid	___	___	___	___	___	___	___	assertive

(Please go to NEXT PAGE and continue)

BARRETT PKPCT, Version II, PART 2

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY FREEDOM TO ACT INTENTIONALLY IS

timid	<input type="checkbox"/>	assertive						
uninformed	<input type="checkbox"/>	informed						
leading	<input type="checkbox"/>	following						
profound	<input type="checkbox"/>	superficial						
expanding	<input type="checkbox"/>	shrinking						
unimportant	<input type="checkbox"/>	important						
valuable	<input type="checkbox"/>	worthless						
chaotic	<input type="checkbox"/>	orderly						
avoiding	<input type="checkbox"/>	seeking						
free	<input type="checkbox"/>	constrained						
unintentional	<input type="checkbox"/>	intentional						
pleasant	<input type="checkbox"/>	unpleasant						
orderly	<input type="checkbox"/>	chaotic						

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY INVOLVEMENT IN CREATING CHANGE IS

unintentional	<input type="checkbox"/>	intentional						
expanding	<input type="checkbox"/>	shrinking						
profound	<input type="checkbox"/>	superficial						
chaotic	<input type="checkbox"/>	orderly						
free	<input type="checkbox"/>	constrained						
valuable	<input type="checkbox"/>	worthless						
uninformed	<input type="checkbox"/>	informed						
avoiding	<input type="checkbox"/>	seeking						
leading	<input type="checkbox"/>	following						
unimportant	<input type="checkbox"/>	important						
timid	<input type="checkbox"/>	assertive						
pleasant	<input type="checkbox"/>	unpleasant						
superficial	<input type="checkbox"/>	profound						

THANK YOU

© 1984, 1987, 1988, 2007, 2013 by E.A.M. Barrett. All rights reserved. No duplication without written permission of author. Inquiries: Dr. E. A. M. Barrett, 415 East 85th Street, New York, NY 10028

Appendix D
Attitudes regarding Intermittent Fetal Monitoring (AIFM) Instrument
Walker, 2001

For each item, click on the response that best represents your view. Thank you for sharing your views.

		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1.	Most of the women I care for in labor ask me about using intermittent fetal monitoring.					
2.	Continuous electronic fetal monitoring should be the standard of care for the labor of essentially healthy women.					
3.	As a nurse, I am willing to intermittently monitor essentially healthy women in labor.					
4.	Women want to be continuously monitored in labor.					
5.	The hospital I work at provides clear guidelines for the use of intermittent fetal monitoring.					
6.	Essentially healthy women have the right to choose the method of fetal monitoring used in their labor.					
7.	My hospital's current approach to fetal monitoring is adequate.					

8.	Research on continuous fetal monitoring in low risk pregnancies demonstrates an increase in maternal and neonatal morbidity without an increase in benefits to women and infants.					
9.	Women expect to be continuously monitored in labor.					
10.	The labor nurse has sufficient time available to provide intermittent fetal monitoring at my hospital.					
11.	Nurse to patient ratio is a problem in providing intermittent fetal monitoring at my hospital.					
12.	I feel my input affects my hospital unit policy changes.					
13.	Our doctor/nurse-midwives are willing to order intermittent fetal monitoring for essentially healthy women in labor.					
14.	There are few barriers to implementation of intermittent fetal monitoring at my hospital.					
15.	Intermittent fetal monitoring would impact the nursing care I give to essentially healthy women in labor.					
16.	At my hospital, it would be easy to implement intermittent fetal monitoring for essentially healthy women in labor.					

17.	Intermittent fetal monitoring should be the standard of care for all essentially healthy women in labor.					
-----	--	--	--	--	--	--

Items 1-17: Copyright 2001 by Deborah Walker. Adapted with permission from author. All rights reserved.

Appendix E
Barriers to Research Utilization Scale (BARRIERS Scale)
(Funk et al., 1991)

Articles in nursing journals indicate that nurses in practice do not use the results of research to help guide their practice. There are a number of reasons why this might be. We would like to know the extent to which *you* think each of the following situations is a barrier to nurses' use of research to alter/enhance their practice. For each item, click on the response that best represents your view. Thank you for sharing your views.

	To no extent	To a little extent	To a moderate extent	To a great extent	No opinion
1. Research reports/articles are not readily available	1	2	3	4	5
2. Implications for practice are not made clear	1	2	3	4	5
3. Statistical analyses are not understandable	1	2	3	4	5
4. The research is not relevant to the nurse's practice	1	2	3	4	5
5. The nurse is unaware of the research	1	2	3	4	5
6. The facilities are inadequate for implementation	1	2	3	4	5
7. The nurse does not have time to read research	1	2	3	4	5
8. The research has not been replicated	1	2	3	4	5
9. The nurse feels the benefits of changing practice will be minimal	1	2	3	4	5
10. The nurse is uncertain whether to believe the results of the research	1	2	3	4	5
11. The research has methodological inadequacies	1	2	3	4	5
12. The relevant literature is not compiled in one place	1	2	3	4	5
13. The nurse does not feel she/he has enough authority to change patient care procedures	1	2	3	4	5
14. The nurse feels results are not generalizable to own setting	1	2	3	4	5
15. The nurse is isolated from knowledgeable colleagues with whom to discuss the research	1	2	3	4	5
16. The nurse sees little benefit for self	1	2	3	4	5
17. Research reports/articles are not published fast enough	1	2	3	4	5
18. Physicians will not cooperate with implementation	1	2	3	4	5
19. Administration will not allow implementation	1	2	3	4	5
20. The nurse does not see the value of research for practice	1	2	3	4	5
21. There is not a documented need to change practice	1	2	3	4	5

THIS IS A BARRIER

	To no extent	To a little extent	To a moderate extent	To a great extent	No opinion
22. The conclusions drawn from the research are not justified	1	2	3	4	5
23. The literature reports conflicting results	1	2	3	4	5
24. The research is not reported clearly and readably	1	2	3	4	5
25. Other staff are not supportive of implementation	1	2	3	4	5
26. The nurse is unwilling to change/try new ideas	1	2	3	4	5
27. The amount of research information is overwhelming	1	2	3	4	5
28. The nurse does not feel capable of evaluating the quality of the research	1	2	3	4	5
29. There is insufficient time on the job to implement new ideas	1	2	3	4	5
Are there other things you think are barriers to research utilization? If so, please list and rate each on the scale:					
30. _____	1	2	3	4	5
31. _____	1	2	3	4	5
32. _____	1	2	3	4	5
33. _____	1	2	3	4	5

34. Which of the above items do you feel are the *three greatest barriers* to nurses' use of research?

Greatest Barrier Item #: _____
 Second Greatest Barrier Item #: _____
 Third Greatest Barrier Item #: _____

35. What are the things you think *facilitate* research utilization?

This questionnaire was adapted from:
 Crane, J., Pelz, D., and Horsley, J.A. *CURN Project Research Utilization Questionnaire*. Ann Arbor, Michigan: Conduct and Utilization of Research in Nursing Project, School of Nursing. The University of Michigan, 1977.

Thank you for sharing your views!

Appendix F
Attitude toward Patient Advocacy Scale (APAS)
(Bu, 2005)

Permission to use APAS in this study given (see Appendix K and L).

Permission not secured to publish the APAS in this dissertation.

Appendix G
Demographic Questionnaire

This questionnaire describes you and your work setting. Thank you very much for participating in this study.

1. How long have you been working as a labor and delivery nurse?

2. What is your present employment status?

- a. Full time
- b. Part time
- c. Per Diem
- d. Agency

3. What is your gender?

- a. Male
- b. Female
- c. Other

4. How long have you been licensed to practice as a registered nurse?

5. What was your initial education in nursing?

- a. Diploma
- b. Associate Degree
- c. Bachelors in nursing
- d. Bachelors, not in nursing
- e. Master's degree in nursing
- f. Other_____

6. What is your highest education degree?

- a. Diploma
- b. Associates Degree
- c. Bachelors in Science of Nursing (BSN)
- d. Bachelor's degree, but not in nursing
- e. Master's degree, but not in nursing
- f. Doctor of Nursing Practice (DNP)
- g. PhD in nursing
- h. PhD in field other than nursing
- i. Other_____

7. Have you personally experienced birth (either vaginal or cesarean)?

- a. Yes
- b. No
- c. Difficult to answer

8. Have you personally experienced continuous fetal monitoring throughout most of your labor for an expected vaginal birth with a term pregnancy?

- a. Yes
- b. No
- c. Difficult to answer
- d. Not applicable as I have never personally given birth
- e. Not applicable as my birth experiences were by elective cesarean

9. What type of setting do you work in?

- a. Community hospital
- b. Tertiary hospital
- c. Birth Center
- d. Home births only
- e. Not sure
- f. Other _____

10. What shift do you generally work?

- a. 8 hour day
- b. 8 hour evening
- c. 8 hour nights
- d. 12 hour days
- e. 12 hour nights
- f. Weekends only
- g. Other _____

11. Please identify the state where your work setting is located.

12. How many nursing or work related conferences did you attend in 2013?

13. How many webinars did you attend in 2013?

14. Does your employer give you paid time off to attend nursing conferences, or conferences related to maternity?

- a. Yes
- b. No
- c. I don't know

15. Does your employer contribute money toward conference fees?

- a. Yes
- b. No
- c. I don't know

16. Are there midwives practicing where you work?

- a. Yes
- b. No
- c. I don't know

17. Are there family physicians practicing where you work?
 - a. Yes
 - b. No
 - c. I don't know

18. Are there medical residents or Obstetric fellows working in labor and delivery where you work?
 - a. Yes
 - b. No
 - c. I don't know

19. Approximately how many babies were born where you work in 2013?
 - a. Less than 100
 - b. 101 to 200
 - c. 201 to 300
 - d. 301 to 500
 - e. 501 to 1000
 - f. 1001 to 2,500
 - g. 2,501 to 5,000
 - h. Over 5000

20. Is there a Neonatal Intensive Care Unit (NICU) where you work?
 - a. Yes
 - b. No
 - c. I don't know

21. If there is a NICU where you work, what is the level of the NICU?
 - a. Level 1
 - b. Level 2
 - c. Level 3
 - d. Level 4
 - e. I don't know
 - f. There is no NICU where I work

22. If you work in a hospital setting, is your hospital designated "Baby Friendly?"
 - a. Yes
 - b. No
 - c. I don't know
 - d. I don't work in a hospital setting

23. Do you have Internet access to databases (such as CINAHL, Medline) on your hospital unit?
 - a. Yes
 - b. No
 - c. I don't know

24. Are the nurses at your place of employment unionized?
 - a. Yes
 - b. No
 - c. I don't know

25. Is your place of employment a Magnet ® designated hospital?
 - a. Yes
 - b. No
 - c. I don't know

26. What is your age?

27. How long have you worked at your current institution?

28. Have you ever worked as a charge nurse?

- a. Yes
- b. No
- c. Not sure

Thank you very much for taking the time to answer these questions, and for completing this survey. Your **viewpoint is** valued and very much appreciated. **Please click the “submit” button to confirm that you have voluntarily consented to participate in this study.** Thank you.

Appendix H
Permission to Use the PKPCT

Permission to use the PKPCT

Dr. Elizabeth Barrett [eambarrett@nyc.rr.com]

You replied on 2/27/2014 6:24 PM.

Sent: Tuesday, February 25, 2014 7:14 PM

To: Lisa M Heelan

Lisa M. Heelan has my permission to use the Power as Knowing Participation in Change Tool (PKPCT) in her dissertation research. She may use the pdf version online, but the tool cannot be changed in any way.

Elizabeth Ann Manhart Barrett, PhD, RN, FAAN

Appendix I
Permission to Use the AIFM

Re: Interest in "Nurses' Attitudes toward Fetal Monitoring" instrument
Deborah S. Walker [dswalker@wayne.edu]
You replied on 3/23/2014 11:12 AM.
Sent: Sunday, March 23, 2014 8:45 AM
To: [Lisa M Heelan](#)

Best of luck on your project!

Deborah S. Walker, DNSc, CNM, WHNP-BC, FACNM, FAAN
Associate Professor
Graduate Director, Nurse-Midwife Concentration

Wayne State University
5557 Cass Ave., Rm. 248
Detroit, MI 48202
313-577-5926 (office)
313-577-4188 (fax)
734-657-7306 (mobile)
dswalker@wayne.edu

On Mar 21, 2014, at 12:33 PM, Lisa M Heelan <lisa.heelan@student.shu.edu> wrote:
Hello Dr. Walker,

I hope this email finds you well! Thank you for giving me permission to use your instrument, "Attitudes toward Intermittent Fetal Monitoring."

Thank you again! Have a wonderful weekend,
Lisa

Lisa Heelan, MSN, FNP-BC, ANP-BC
Robert Wood Johnson NJ Nurse Scholar
PhD Nursing Student, Seton Hall University

Appendix J
Permission to Use the BARRIERS Scale

FROM: Sandra G. Funk, PhD.
Professor and Associate Dean for Research
School of Nursing
University of North Carolina at Chapel Hill
sfunk@email.unc.edu

RE: Use of the BARRIERS Scale

You are free to download and use the BARRIERS Research Utilization Scale for your research. The instrument is copyrighted (c. 1987, Funk, Champagne, Tornquist & Weise) and may not be duplicated or copied without first submitting a signed copy of this permission form to Dr. Funk. Requests for any changes or alterations to the instrument should be made in writing to Dr. Funk. As with all revisions, the copyright will be retained by Funk, Champagne, Weise and Tornquist and must appear on the printed copies of the instrument.

By filling in your name, address, phone number, and e-mail address and signing the agreement use below and mailing it to Dr. Funk, you are hereby given permission to use the BARRIERS Scale for your research. The permission is valid only for the study named below.

Dr. Funk requests that you send back the following information:

- your raw BARRIERS data in ASCII format for our reliability and validity bank
- copies of any changes or translations of the scale
- copies of any publications citing the use of the scale

When using the BARRIERS Scale you need to use the following reference:

Funk, S. G., Champagne, M.T., Wiese, R.A., & Tornquist, E.M. (1991). BARRIERS: The barriers to research utilization scale. Applied Nursing Research, 4(1), 39-45.

AGREEMENT TO USE THE BARRIERS SCALE

I agree to the above conditions for using the BARRIERS Scale

Name: Lisa Heelan

Title: MSN, FNP-BC, ANP-BC

E-mail: lisa.heelan@student.shu.edu

Address:

Academic/business affiliation: Seton Hall University, South Orange, NJ

Phone Number:

Study Title: The Relationship among Power, Perceived Barriers to Research Utilization, and Attitudes regarding Intermittent Fetal Monitoring with Nurses' Attitudes toward Patient Advocacy

Brief Description of Study:

I am currently writing my dissertation proposal, but plan on surveying L & D nurses.

Signature: Lisa Heelan

Date: 2/11/2014

Please keep a copy of this form in your files. For students, signing this form and mailing it to me should serve as permission to use this scale for your research report, thesis or dissertation.

Mail to:

Sandra G. Funk, PhD
School of Nursing
Carrington Hall, CB# 7460
University of North Carolina – Chapel Hill
Chapel Hill, NC 27599-7460

ADDENDUM PERMISSION TO USE BARRIERS SCALE ONLINE

RE: Follow-up regarding BARRIERS Scale Funk, Sandra G [sfunk@email.unc.edu]
You replied on 5/7/2014 3:25 PM.
Sent: Wednesday, May 7, 2014 3:13 PM To:
Lisa M Heelan

Dear Lisa -

What you describe sounds great to me. Best of luck with your study!

Sandy

Sandra G. Funk, PhD, FAAN

Professor Emerita
University of North Carolina at Chapel Hill
email: sfunk@unc.edu

-----Original Message-----

From: Lisa M Heelan [mailto:lisa.heelan@student.shu.edu]
Sent: Wednesday, May 07, 2014 12:41 PM
To: Funk, Sandra G
Subject: Follow-up regarding BARRIERS Scale

Hello Dr. Funk,

I am following up with you because since my last email to you (a little over a week ago), there have been some updates to what I had originally written regarding the formatting of the BARRIERS Scale. Specifically over the last week, I have found an online template that I can use to format the BARRIERS Scale to look like the one in print. I have already tested the template with the BARRIERS Scale, and it looks like the original format. This makes me very happy as I would really like to use your instrument in my study.

Over the last week, I have also come across nursing research literature that used the BARRIERS Scale in an online format (Brown, Wickline, Ecoff, & Glaser, 2008). The published findings did not find any difference between the print or online version. This seems to support the literature that suggests that paper & pencil surveys and online surveys have been found to be comparable (Weigold, Weigold, & Russell, 2013).

Although my study will be an online study, every instrument in my study will acknowledge the name of the instrument at the top of the instrument, and the author/copyright at the end of the instrument. This means that for the BARRIERS Scale, the name "BARRIERS Scale" will be at the top of the instrument, and the authors and copyright owners, Funk, Champagne, Tornquist, & Wiese (1987) will be at the end of the BARRIERS Scale. To do otherwise and not include this information would be unethical to you as the rightful owner and to the labor and delivery nurses completing the survey.

Since I initially sent you a request to use your instrument (a few months ago now), my study title has slightly changed, as did how it was deemed best to collect the data. My study title is now "Exploring the Relationships of Power, Attitudes regarding Intermittent Fetal Monitoring, and Perceived Barriers to Research Utilization with a Labor and Delivery Nurse's Attitude toward Patient Advocacy." After I collect my data and defend my dissertation, I will be very happy to share my results with you.

Should you have any questions or concerns about my use of the BARRIERS Scale the way I have outlined it above, or if you want to talk on the phone, please let me know. If I have fulfilled the spirit in which the BARRIERS Scale was developed, I thank you.

Sincerely,
Lisa Heelan

Lisa Heelan, MSN, FNP-BC, ANP-BC
Robert Wood Johnson NJ Nurse Scholar
PhD Nursing Student, Seton Hall University

Appendix K
Permission to Use the APAS

Re: Seton Hall University doctoral student

Jezewski [jezewski@buffalo.edu]

You replied on 4/24/2014 5:40 PM.

Sent: Thursday, April 24, 2014 5:07 PM

To: Lisa M Heelan

Lisa

You have my permission to use the APAS in Dr. Barrett-Sheridan's dissertation as she has acknowledged that it is Dr. Bu's. Please continue to acknowledge Dr. Bu as the author.

Unfortunately I think that Dr Bu returned to China and all attempts to locate her have failed. This is the reason that U B has given me the ability to grant copyright permission (really fair use).

MAJ

Mary Ann Jezewski RN, PhD, FAAN

Professor Emeritus

UB School of Nursing

Sent from my iPhone

> On Apr 24, 2014, at 8:26 AM, Lisa M Heelan <lisa.heelan@student.shu.edu> wrote:

>

> Hello Dr. Jezewski,

>

> Thank you very much for granting me permission to use the Attitude toward Patient Advocacy Scale (APAS!)

>

> I do have a question. Specifically within Dr. Bu's dissertation, there is no instrument, only the abbreviated items that make up the instrument. Dr. Bu did give the actual instrument to Dr. Barrett-Sheridan (2009) to use in her doctoral work (along with Dr. Eklund in Sweden who modified the APAS). Dr. Barrett-Sheridan has given me permission to use the APAS instrument found in her dissertation. Do I have your permission to use the APAS as it is in Dr. Barrett-Sheridan's dissertation? I am sending you a copy of Barrett-Sheridan's dissertation as the APAS is in her appendices (unless you have a different copy.) The APAS in Dr. Barrett-Sheridan's dissertation is copyrighted by Bu (2005).

>

> I thank you again!

>

> Sincerely,

> Lisa Heelan

>

>

> Lisa Heelan, MSN, FNP-BC, ANP-BC

> Robert Wood Johnson NJ Nurse Scholar

> PhD Nursing Student, Seton Hall University

Appendix L
Permission to Use the Revised APAS

Shirley Barrett-Sheridan, DHA, RN
Chief Operating Officer
Monterey Bay Urgent Care
245 Washington Street
Monterey, CA 93940

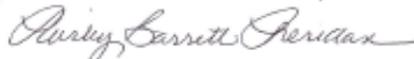
September 25, 2013

Lisa Heelan, MSN, FNP-BC, ANP-BC
135 Cranberry Creek Road
Paradise Valley, PA 18326

Dear Ms. Heelan,

I am delighted you are interested in patient advocacy. With this letter, I am giving you my permission to use in your dissertation study, Dr. Bu's advocacy scale that I modified and tested. I wish you all the best in your doctoral journey.

Warm Regards,



Shirley Barrett-Sheridan, DHA, RN
sbs@mymbuc.com

Re: Letter of permission
Shirley Barrett-Sheridan [SBS@mymbuc.com]
You replied on 3/24/2014 1:46 PM.
Sent: Monday, March 24, 2014 11:55 AM
To: Lisa M Heelan
Good morning Lisa.

I was fortunate to have reached Bu when I did my dissertation. The survey "ATTITUDE TOWARD PATIENT ADVOCACY SURVEY" or APAS was sent to me by Bu. The political behavior was my addition.

I only changed a couple of words like "that or this" to make the items flow better in the APAS. It should be good to go for you.

Hope this helps.

Shirley.

Ps. I was never ever able to reach Bu when I completed my study.

Regards – Sent from the iPhone of Shirley Barrett-Sheridan.

Appendix M
Initial Email to AWHONN Members

July 7, 2014

Dear Nursing Colleague,

If you are currently practicing as a labor and delivery staff or charge nurse, and have a minimum of 6 months experience in labor and delivery, you are being asked to participate in the study, "Exploring the Relationships of Power, Attitudes regarding Intermittent Fetal Monitoring, and Perceived Barriers to Research Utilization with a Labor and Delivery Nurse's Attitude toward Patient Advocacy." The purpose of the survey is to see what factors facilitate patient advocacy in a labor and delivery setting from a nurse's perspective.

This survey takes approximately 25 to 30 minutes to complete and can be completed at a place of your own choosing using a laptop, iPad, or iTablet. Should you choose to complete this survey in more than one sitting, you can do so by clicking on the highlighted box at the top of each survey page. Once you click on the highlighted box and provide your email address, Survey Gizmo will then email you a new encrypted survey link. This feature allows you to return to your survey when you are ready, and at the exact place you left off.

While your participation is important, it is voluntary. All information is strictly confidential.

If you are interested in learning more and possibly participating in this study, please access the survey by clicking on the secure encrypted link below:

Secure Link to Survey and Letter of Solicitation
http://www.surveygizmo.com/s3/1625255/Patient-Advocacy-The-Role-of-Power-Attitudes-regarding-Intermittent-Fetal-Monitoring-and- Barriers-to-Research-Utilization

I appreciate your willingness to consider participation in this important research study. Should you have any questions about the survey, please contact me at lisa.heelan@student.shu.edu
Thank you.

Sincerely,
Lisa Heelan

Appendix N
Follow-up Email #1 to AWHONN Members

July 21, 2014

Dear Nursing Colleague,

I am contacting you because there is still time to participate in the study, *Exploring the Relationships of Power, Attitudes regarding Intermittent Fetal Monitoring, and Perceived Barriers to Research Utilization with a Labor and Delivery Nurses' Attitude toward Patient Advocacy*. For those who have participated and submitted their survey, thank you! **If you started the survey but haven't finished it, please consider completing the survey so that your viewpoints can be included in the study findings.**

Your participation is voluntary. The survey takes approximately 25 to 30 minutes to complete, and can be done at home or a place of your choosing---all you need is a laptop, computer, or iPad. Should you choose to complete this survey in more than one sitting, you can do so by clicking on the highlighted box at the top of each survey page. Once you click on the highlighted box and provide your email address (which is not collected or recorded), Survey Gizmo will then email you a new encrypted survey link. This feature allows you to return to your survey when you are ready, and at the exact place you left off.

All information you provide is strictly confidential. However, as a reminder to participate in this study, you must be a labor and delivery staff or charge nurse with at least 6 months of current experience. If you are interested in learning more about the study, please access the secure and encrypted link below.

Secure Link to Survey and Letter
of Solicitation

I thank you again for your willingness to consider participating in this important research, and for giving of your time.

Should you have any questions, please contact me at lisa.heelan@student.shu.edu

Sincerely,
Lisa Heelan

Lisa Heelan, MSN, FNP-BC, ANP-BC
PhD nursing student
Seton Hall University
South Orange, NJ
(973)313-6040

Appendix O
Final Email Reminder to AWHONN Members

July 28, 2014

Dear Nursing Colleague,

If you have already participated in the study, "Exploring the Relationships of Power, Attitudes regarding Intermittent Fetal Monitoring, and Perceived Barriers to Research Utilization with Labor and Delivery Nurses' Attitudes toward Patient Advocacy," I thank you! **But, if you haven't participated and would like to participate, it isn't too late!**

The survey will remain available for one more week before it closes. Please consider spending 25 to 30 minutes of your time to complete the survey. You can complete the survey at home on your own laptop or iPad. **Should you choose to complete this survey in more than one sitting, you can do so by clicking on the highlighted box at the top of each survey page.** Once you click on the highlighted box and provide your email address (which is not collected or recorded), Survey Gizmo will then email you a new encrypted survey link. This feature allows you to return to your survey when you are ready, and at the exact place you left off.

The findings from this study will lead us all to learn more about the factors that enhance and impede our patient advocacy role in labor and delivery.

Again, all participation is voluntary and the data are strictly confidential. If you are interested in learning more and possibly participating in this study, please click on the secure encrypted link below.



I thank you again for your willingness to consider participation. Should you have any questions, please contact me at lisa.heelan@student.shu.edu

Sincerely,
Lisa Heelan

Lisa Heelan, MSN, FNP-BC, ANP-BC
PhD nursing student
Seton Hall University
South Orange, NJ
(973)313-604