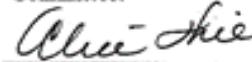


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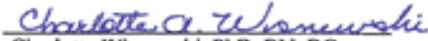
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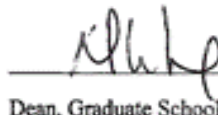
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**Critical Care Nurses' Intention to Allow Family Presence during  
Resuscitation**

**by**

**Glynda Cochran, MSN, RN, CCRN**

**Dissertation**

Presented to the Faculty of the Graduate School of  
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## **Dedication**

I would like to dedicate this dissertation to my family, friends, and colleagues who supported and encouraged me throughout this journey. Without their support and understanding this work would never have been finished.

## **Acknowledgements**

I would like to acknowledge all those individuals who have assisted and supported me over the past several years. To my parents and daughter, Lynda, Bill, and Melissa: thank you for your understanding of the missed phone calls and visits and for encouraging me to keep going. To my coworkers and peers: without your support, help, and guidance this process would have been much more difficult. To the nurses who participated in the study: I give you my heartfelt thanks.

Dr. Alice Hill has been my advisor since I entered the PhD program. She has also been my mentor and served as my dissertation chair. Dr. Hill: your guidance, patience, support, and understanding have made this journey possible. Your demand for excellence has earned my admiration. You were with me every step of the way, for which I have been lucky. To the members of my dissertation committee: I offer my sincerest thanks.

# **Critical Care Nurses' Intention to Allow Family Presence during Resuscitation**

Publication No. \_\_\_\_\_

Glynda Cochran, PhD

The University of Texas Medical Branch, 2015

Supervisor: Alice Hill

Traditionally, family members have been prohibited from being present during cardiopulmonary resuscitation. This exclusionary practice was questioned by a hospital in Michigan in which two families refused to leave the sides of their loved ones. This event marked the beginning of the family presence during resuscitation movement. The purpose of this study is to explore whether attitudes/behavioral beliefs about FPDR coupled with demographic variables predicted critical care nurses' intention to allow FPDR.

A descriptive correlational research design was used in this study. The Family Presence Risk-Benefit Scale (FPR-BS) was used to measure attitudes/behavioral beliefs towards FPDR. Intentions to allow FPDR were measured with a yes or no answer. Level of education and specialty certification were indicators of critical care nurses' intention to allow FPDR. A positive relationship existed between level of education and attitudes/behavioral beliefs toward FPDR. Specialty certification and attitudes/behavioral beliefs were the best predictors for critical care nurses' intention to allow FPDR.

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## **List of Abbreviations**

AACN	American Association of Critical Care Nurses
AAST	American Association for the Surgery of Trauma
ENA	Emergency Nurses Association
FP	Family Presence
FPDR	Family Presence during Resuscitation
FPR-BS	Family Presence Risk-Benefit Scale
HCP	Healthcare Providers
ICU	Intensive Care Unit
RQ	Research Question
TPB	Theory of Planned Behavior

## **Chapter 1: Introduction**

### **PROBLEM STATEMENT**

Traditionally, family members were prohibited from being present during cardiopulmonary resuscitation (CPR) on a family member. This exclusionary practice was called into question following two instances at Michigan's Foote Hospital in which family members demanded to be present during resuscitation of family members (Doyle et al., 1987). In response to this landmark challenge, researchers determined that family presence during resuscitation (FPDR) assisted family members to cope with untoward outcomes and provided families with an improved grieving process in the event of a loss. Although many institutions established the practice of FPDR over the subsequent two decades, some groups of nurses (e.g., critical care nurses) questioned the use of FPDR (MacLean, 2003; Meyers, 1998, 2000). Researchers have found that attitudes/behavioral beliefs of emergency room nurses influence their implementation of FPDR (MacLean et al., 2003; Meyers, 1998, 2000). In addition, individuals' attitudes and subjective norms about behaviors have been linked to their intent to perform such behaviors (Montano & Kasprzyk, 2008). FPDR is a nurse-driven practice, yet it remains unclear why FPDR is only practiced in some settings and whether nurses' intentions to implement FPDR vary by setting. While much documentation exists on nurses' attitudes/behavioral beliefs—especially emergency department nurses who participate in FPDR—less is known about the attitudes/behavioral beliefs of critical nurses and how these behaviors relate to their intentions to participate in FPDR.

## **SIGNIFICANCE AND BACKGROUND OF STUDY**

Despite professional organizations' and critical care experts' support; only 5% of critical care units have explicit policies that support FPDR (MacLean et al., 2003).

Because of this lack of policy support, nurses' response to family requests to be present during resuscitation varies widely. Nevertheless, evidence suggests that nurses have increasingly allowed family presence at the bedside during resuscitation (Maclean et al., 2003). Nurses have described FPDR as a powerful tool that can facilitate families' decisions on whether to continue resuscitation efforts. The FPDR experience allows family members to participate in the resuscitation team and witness the determination and extent of care provided to their loved ones (Ellison, 2003; Knott & Keel, 2005). Miller and Stiles (2009) reported positive experiences for nurses during FPDR through family bonding. It also has been observed that experiencing the art of nursing in conjunction with the science of nursing has aided in patient care (Miller & Stiles, 2009).

Understanding nurses' intention to allow FPDR and its relationship to critical care nurses' attitudes/behavioral beliefs may promote development of educational programs, support programs, and writing of policies, which may in turn provide systematic guidance to bedside nurses. This research project was aimed at improving the understanding of how nurses' attitudes/behavioral beliefs contribute to their intention to allow FPDR, regardless of their institutions' policy concerning FPDR. This study aspired to lay a foundation for improving institutional policies and facilitate development of institutionally appropriate interventions while meeting critical care nurses' psychological needs during FPDR. The research is intended to contribute to a broader understanding of reasons why critical care nurses may be unlikely to allow FPDR.

## **THEORETICAL FRAMEWORK**

The Theory of Planned Behavior attempts to explain in simple terms human behavior. Ajzen (n.d.) believed that behavior is guided by three guiding principles: beliefs about the consequence of the behavior (behavioral belief), beliefs about the expectations of others toward the behavior (normative beliefs norm), and beliefs about factors that support or impede the performance of the behavior (control). Behavioral beliefs produce a positive or negative attitude toward the behavior. Normative beliefs support subjective norms, which impact individuals' ability to carry out a given behavior. Control beliefs influence actual behavioral control. Individuals' attitudes toward behavior, actual behavioral control, and subjective norms impact individuals' intention to perform the behavior.

The study premise was that a direct relation exists between critical care nurses' attitudes to FPDR, nurses' actual behavioral control of the environment, and nurses' subjective norm on critical care nurses' intention to allow FPDR. The assumption was that as critical care nurses' attitudes become more favorable toward FPDR, actual behavioral control and a supportive work environment will increase the practice of FPDR.

## **DEFINITION OF TERMS**

For the purposes of this study, the following terms were operationally defined.

*Behavioral Belief:* Beliefs about the consequences of a behavior.

*Control:* Beliefs about factors that support or impede the performance of a behavior.

*Normative Beliefs:* Beliefs about the expectations of others toward behavior.

*Family:* Patients define family make-up, and family may be related or unrelated to the patient. Family members provide support and guidance by leveraging important patient relationships (Guzzetta et al., 2007).

*FPDR:* Indicates family members' presence in patient care areas during sequences of interventions intended to sustain patients' lives or prevent deterioration of patients' condition (Guzzetta et al., 2007).

*Intention:* The amount of effort an individual is willing to exert to attain a goal measured as readiness to perform the behavior. Intention is composed of three constructs: 1) attitudes toward a specific behavior; 2) subjective norms; and 3) perceived behavioral control (Ajzen, n.d.).

*Resuscitation:* A sequence of events that is initiated to sustain life or prevent further deterioration of a patient's condition. May be interchanged with the term "code" (Guzzetta, 2007).

## **PURPOSE STATEMENT**

The purpose of this study was to explore whether attitudes/behavioral beliefs about FPDR coupled with demographic variables predicted critical care nurses' intention to allow FPDR.

## **RESEARCH QUESTIONS**

The specific aims and related research questions (RQs) of this study were:

Specific aim 1: To explore characteristics of attitudes/behavioral beliefs (Family Presence Risk-Benefit Scale [FPR-BS]) and intention to allow FPDR across critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, Intensive Care Unit [ICU] employment).

RQ 1.1: What are the distribution characteristics of attitudes/behavioral beliefs and intention to allow FPDR across critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment)?

Specific aim 2: To explore relationships between attitudes/behavioral beliefs and intention to allow FPDR with critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment).

RQ 2.1: What is the relationship between attitudes/behavioral beliefs and intention to allow FPDR with critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment)?

RQ 2.2: What are the differences in attitudes/behavioral beliefs and critical care nurses' intention to allow FPDR across certain demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment)?

Specific aim 3: To determine the best set of predictors of critical care nurses' attitudes/behavioral beliefs and self-confidence to allow FPDR.

RQ 3.1: What is the best set of predictors (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment) of critical care nurses' attitudes/behavioral beliefs to allow FPDR?

## **OVERVIEW OF DESIGN**

A descriptive correlational research design was used in the study. Descriptive correlational research is the most basic research design: it answers fundamental questions about what is happening in a defined population or situation. Descriptive research is classified as a nonexperimental research design. Descriptive statistics are used to answer the research question, and they can also identify relationships between two or more variables or between subjects. Descriptive research is unable to identify causative factors of the relationship between variables (Gliner, 2009).

Descriptive research questions include common elements. The population of interest and phenomenon of interest are specified. If the research question is relational, both variables will be identified (Gliner, 2009). In this descriptive study, attitudes/behavioral beliefs, actual behavioral control, and nurses' intention to allow FPDR were described across demographics subgroups, and relationships between attitudes/behavioral beliefs and intention to allow FPDR were elucidated. In addition, a set of predictors for critical care nurses' intention to allow FPDR was determined.

## **CONTENTS OF THE DISSERTATION**

The dissertation is divided into five major chapters. Chapter one presents the problem statement, background and significance, theoretical framework, purpose and

research questions, operational definitions, and limitations. Chapter two presents a review of the literature. Chapter three will present an overview of the research design, methodology, sample selection, data collection, and data analysis. Chapter four presents the results of the data analysis. Chapter five presents the findings, conclusions, and recommendation for future research.

## **Chapter 2: Literature Review**

The purpose of chapter two is to present a review and critique of published works that form the basis of knowledge about FPDR and to establish the theoretical framework that guided the study. The presentation is organized according to the history of FPDR followed by patient, family, and healthcare providers' perspective of FPDR.

### **HISTORY OF FAMILY PRESENCE DURING RESUSCITATION**

The history of CPR dates back to biblical times and has progressed over many centuries. It was not until the late 20<sup>th</sup> century that modern methods of resuscitation emerged, combining ventilation, closed-chest cardiac compression, and electrical defibrillation of the heart (Kouwenhoven & Knickerbocker, 1960). Despite healthcare providers' best efforts, the majority of resuscitation events continue to result in death (American Heart Association, 2012). Statistics have indicated that survival rates for out-of-hospital cardiac arrest in adults are 9.5%. Survival after an in-hospital arrest has been reported at a 23.9% rate (American Heart Association, 2012).

In 1982, Michigan-based Foote Hospital changed the way in which family members were viewed during the resuscitative process. Their policy allowed family members to become participants of the resuscitative team by providing support to patients during controlled periods of time in the resuscitation room. This change resulted from two families that demanded to be present during resuscitative efforts of their loved ones. The positive feedback from these two instances led to a telephone survey of recently deceased patients' family members, who were queried whether they felt a need or desire

to be present during resuscitative efforts of their loved one. Of the 18 family members surveyed, 13 (72%) would have wanted to be present during their loved ones' resuscitation if given the option. As a result of this study, Foote Hospital instituted a policy allowing family members to be present during resuscitation efforts (Doyle, 1987).

A follow-up program evaluation study conducted nine years later at the same hospital found that 76% of family members felt that their adjustment to patients' death was made easier by having been allowed in the resuscitation room. Thirty respondents (64%) felt that their presence benefitted the patient. Staff members reported some increase in stress during resuscitation, yet 71% supported the practice of FPDR (Hanson & Strawser, 1992).

Despite progress in evidence-based resuscitation procedures, an area of practice not yet sanctioned by healthcare providers (HCP) has been the presence of family members during resuscitation. The Emergency Nurses Association (ENA) adopted a resolution in 1993 and developed formal guidelines to demonstrate their support of FPDR (ENA, 1993, 2007). In 2010 the American Association of Critical Care Nurses (AACN) issued a practice alert endorsing the practice of FPDR (AACN, 2010). Yet despite professional organizations' and critical care experts' support; only 5% of critical care units have explicit policies supporting FPDR (MacLean et al., 2003). Because of this lack of policy support, nurses' response to families' requests to be present during resuscitation has varied widely. Evidence suggests that nurses have been more tolerant of family presence at the bedside during resuscitation (MacLean et al., 2003). Nurses have described FPDR as a powerful tool that can facilitate families' decisions on whether to continue resuscitation efforts. The FPDR experience allows family members to

participate in the resuscitation team and witness the determination and extent of care provided to loved ones (Ellison, 2003; Knott & Keel, 2005). Miller and Stiles (2009) reported positive experiences for nurses during FPDR through bonding with families. It also has been observed that experiencing the art of nursing in conjunction with the science of nursing can aid in patient care (Miller & Stiles, 2009).

## **DEMOGRAPHICS RELATED TO FAMILY PRESENCE DURING RESUSCITATION**

Past studies have shown that nurses who support FPDR are usually female, possess a Bachelor's degree or higher, are aged 31-55 years, and work in the emergency room (Duran et al., 2007; Ellison, 2003; MacLean et al., 2003). Studies also have shown significant correlations between positive FPDR attitudes and higher educational preparation, specialty certification, professional organization membership, and U.S. geographical location (Ellison, 2003; McClenathan et al., 2002; Twibell et al., 2008). Reports have indicated that 59% of U.S. and international respondents (n=343) had been involved in FPDR (McClenathan et al., 2002). A three-part study identifying policies, preferences and practices of critical care and emergency nurses indicated that over 36% of respondents had taken family members to the bedside during a resuscitation attempt (Maclean et al, 2003).

## **FAMILY PRESENCE DURING RESUSCITATION**

### **Patient Perspective**

Patients individually define family make-up, and family may be related or unrelated to the patient. Family members provide support and guidance by leveraging

important patient relationships. FPDR involves family members' presence in patient care areas during sequences of interventions intended to sustain patients' lives or prevent deterioration of patients' conditions (Guzzetta et al., 2007).

Few studies have examined patients' attitudes toward FPDR. Benjamin et al. (2004) conducted a hypothetical research study in a Minnesota hospital emergency room waiting room. An FPDR description was provided to a sample of patients and their family members older than 17 years of age on six randomly selected shifts. The description was followed by a query whether the respondent would want family members to be present during their resuscitation. The respondent could select the following options: 1) "Yes"; 2) "I would want only certain relatives present"; 3) "No"; and 4) "I would not want to be resuscitated at all." Seventy-nine percent of respondents desired family presence in the event of a resuscitative effort.

As part of a larger study to determine attitudes, benefits, and problems associated with FPDR and invasive procedures, Eichhorn et al. (2001) studied the "voice of the patient." A purposive sample was utilized to examine FPDR from the patient's perspective. Data were collected over a 16-month period. Of the 43 study patients who had family members at the bedside during invasive procedure (IP) or CPR, 24 (56%) underwent IP and 19 (44%) had CPR. In the IP group 29% died (7 of 24) and in the CPR group 90% died (17 of 19); the overall mortality rate was 56%. Only nine patients who had family members present for IP were interviewed (eight patients who underwent IP in the ER and one patient who underwent CPR on the surgical intensive care unit), primarily because of the high mortality rate. Seven themes emerged from the data. The first three themes involved beneficial effects that patients believed resulted from family presence:

patients were comforted and received help while caregivers were reminded of patients' personhood. The fourth and fifth themes related to how family presence affected patient-family connectedness and to the belief that Family Presence (FP) is a right held by both patient and family. The sixth and seventh themes involved how patients perceived family presence to have affected their family members and the healthcare environment.

Robinson (1998) conducted a study to explore whether families wanted to be present during resuscitation and whether witnessing resuscitation adversely affected family members. In this study, relatives of patients undergoing resuscitation were either 1) given the option to remain with the patient during resuscitation or 2) given no option to stay and directed to the family waiting room. Study results revealed no adverse psychological effects among relatives who attended resuscitation efforts—all relatives were satisfied with their decision to remain with loved ones. Because the clinical team became convinced of the benefits of allowing families to witness resuscitation, the study was terminated early.

### **Family Perspective**

Patients' families are important within the social context, and caregivers must realize patients exist within an integrated system of interdependent relationships (Van Horan et al., 2002). Families remain on a life-long journey regardless of day-to-day operations of acute care hospitals. Kirchoff et al. (2002) studied family members' experiences with death in the ICU. Families felt responsible to protect and accompany their loved ones. Families expressed positivity about chances to say goodbye, and regrets lingered over missed opportunities. Patient families have certain needs during health

related crises including having honest, consistent, and thorough communication with HCPs; being physically and emotionally close to patients; feeling that HCPs care about patients; seeing patients frequently; and knowing which procedures patients have undergone (Leske, 1992).

Eichhorn et al. (1996) replicated Foote Hospital's survey using a telephone interview of 25 family members of 20 trauma patients who had died in the ED. The researchers found that 76% of the respondents (n=19) would have wanted to be in the resuscitation room with their loved ones. Sixty-one percent of respondents (n=15) believed their presence could have helped their loved ones. When asked, "Do you believe that families should be able to be with their loved one just before death, if they want to?" 96% of respondents (n=24) indicated yes.

Meyers et al. (1998) conducted a retrospective descriptive telephone survey in Dallas, Texas regarding desires, beliefs, and concerns of families whose loved ones had died because of traumatic injuries in an emergency room. Eighty percent of the families would have chosen to be in the room during CPR if given the opportunity (desires), 96% believed that families should be able to be present with their loved ones (beliefs), 68% believed that their presence might have helped their family members (beliefs), and 64% believed that their presence would have assisted coping with sorrow following the death of their family member.

Numerous studies have found that family members want the option to be present during CPR. Research has described the unique benefits of the experience to family members, including: 1) sustained patient-family connectedness and bonding (Meyers et al., 2000); 2) sense of closure on a life shared together (Meyers et al., 2000); 3)

facilitation of the grief process (Belanger & Reed, 1997; Doyle et al., 1987; Hanson & Strawser, 1992; Meyers et al., 1998; Robinson et al., 1998); 4) a spiritual experience (Meyers et al., 2000); 5) removal of doubt about that which is happening to the patient and knowledge that every possible life-saving procedure was performed (Doyle et al., 1987; Hanson & Strawser, 1992; Meyers et al., 2000; Robinson et al., 1998); 6) reduced anxiety and fear (Robinson et al., 1998); and 7) feelings of being supportive and helpful to the patient (Doyle et al., 1987; Hanson & Strawser, 1992; Meyers et al., 2000) .

Family members have identified nurses as the most approachable and accessible member of the healthcare team. Because of this, nurses are the first people that family members approach with requests to attend the bedside of their loved ones. Therefore, the issue of family presence during resuscitation is most often encountered by nursing staff (Oliver & Fruth, 2000).

### **Healthcare Provider Perspective**

Meyers et al. (2000) were the first to use the FP protocol developed by ENA to study the experiences of HCPs and patients' families. The purpose of the study was to explore the attitudes, benefits, and problems experienced by HCPs involved with FP. HCPs believed that FP helped meet the emotional and spiritual needs of patients' families, empowered family members, helped families understand patients' conditions, gave HCPs opportunities to educate families, allowed families to help both patients and the staff, and caused staff to be more considerate of patients' dignity, privacy, and need for pain management. HCPs had positive attitudes toward FP. Nurses had more positive attitudes toward FPDR than physicians. HCP viewed themselves as "advocates for

patients and families.” Families stated FP decreased worry, minimized the agony of waiting, helped them to face the situation’s reality, lessened helplessness, and facilitated grieving. Family members saw themselves as “helpers.” HCPs felt that FP was important and assisted families to meet their emotional and spiritual needs during times of crises. Most often, FPDR was a continuation of a pre-hospital event involving family members. FPDR empowered families in the care of family members during the resuscitation process. Patients’ personhood was restored in the resuscitation room with the presence of family members.

A comprehensive and targeted literature review revealed that critical care nurses supported the practice of FPDR in theory, but hesitated to bring family members to the bedside during resuscitation efforts (MacLean et al., 2003). Thirty-one percent of critical care nurses preferred to have a written FPDR policy available, while 39% did not want a policy (MacLean et al., 2003).

The literature indicated that the majority of families and patients want the option of FPDR to be available. When 208 nurses were asked if they would want family members to be present during their resuscitation, 87% of them replied “yes” (Ellison, 2003). In another study, doctors and nurses were asked if they would want family present during resuscitation and 71% said “yes”. Seventy-six percent of those studied responded they would want to be present during their family members’ resuscitation (Mangurten et al., 2005).

## **SETTING**

Carroll (2013) found that nurses and physicians working in Emergency Departments had a more positive attitude towards FPDR, with nurses voicing the

strongest support of the practice. Indeed, the majority of FPDR research has been conducted in emergency room environments. Yet few studies have been conducted within ICUs where resuscitation and invasive procedures are prevalent.

The purpose of Carroll's (2013) study was to measure the impact of the ICU environment on nurses' perception of self-confidence and perceived risk or benefit of FPDR. This was the first article to describe the effect of ICU environment on nurses' perceptions regarding FPDR, and the first to use only ICU as the setting. There were significant differences between type of unit for both self-confidence and perceptions of risk or benefit for FP. There were no differences in nurses personally wanting to have family members present based on the ICU environment. Forty-one percent of nurses wanted their family present during their resuscitation, while only 9% of nurses had actually experienced FPDR. Fifty-six percent of nurses surveyed wanted the FPDR decision to be a part of an advanced directive. There were significant differences found between ICU environments in the number of nurse invitations for FPDR.

Participation in FP may change perceptions of resuscitation due to first-hand experience of its feasibility and benefits to the family (Belanger & Reed, 1997). Nurses tend to be more supportive than physicians (Carroll, 2013; Helmer et al., 2000; Meyers et al., 2000), and experienced physicians favor FP more than physicians-in-training (Meyers et al., 2000).

Ellison (2003) studied the relationship between demographics and nurses' attitudes and beliefs regarding FPDR. The researcher used the family presence support staff assessment survey to query the attitudes of 208 nurses working in the ER or hospital. She found that respondents who held certification as emergency nurses or who

had a Bachelor's or Master's degree had more positive attitudes about FP. Only 4% of nurses reported attending formal education on FPDR. Nurses who worked in ER supported FP more than hospital nurses (Ellison, 2003).

Helmer et al. (2000) surveyed members of the American Association for the Surgery of Trauma (AAST) and Emergency Nurses Association (ENA) to determine their opinions on FP during trauma resuscitation. The majority of both AAST and ENA respondents believed that the presence of family members during all phases of resuscitation was inappropriate (AAST: 97.8%; ENA: 80.2%). Members of the ENA were significantly more likely to believe that family presence during resuscitation was a patient and family "right" when compared with the opinions of AAST members ( $p < 0.001$ ). Overall, ENA members were significantly more open to family presence than were AAST members. ENA members considered FP to be beneficial to patients and their families, and that patients had the right to have family present during resuscitation. More nurses than doctors had experience with FP, suggesting that nurses often drive FP decisions.

McClenathan et al. (2002) assessed whether critical care professionals supported the practice of FPDR. The survey was conducted at the International Meeting of the American College of Chest Physicians. Regardless of occupation, 78% of all HCPs surveyed opposed FPDR for adults. Further, 43% of nurses supported FPDR while only 20% of physicians were supportive of the practice. The researchers found significant differences in opinions based on HCP practice regional location. HCPs practicing in the northeastern U.S. were least likely to allow FPDR as compared to other areas of country. Midwestern HCPs were more likely to allow family member presence than those in the

rest of the nation. Concern of psychological trauma to the witnessing family members was a chief reason given for denial of FPDR. Other reasons included legal implications and performance anxiety affecting the resuscitation team. The most common fear was that family members would be a distraction to the resuscitation team. Forty-seven percent of nurses considered their experience with FPDR as negative.

Helmer et al. (2000) found that only 36% of ENA members considered their FPDR experience to be negative. Study response rate limitations were unavailable, which may have skewed study results. The survey was not rigorously controlled, which may have affected its reliability and validity.

Knott and Kee (2005) likened the acceptance of FPDR to the fight for fathers to be present in the delivery room during the late 1960s. In a qualitative study they were able to identify four FPDR themes: 1) the conditions under which FP is an option; 2) using FP to force family decision making; 3) the staff feelings of “being watched”; and 4) the impact of FP on a family. The diversity of the responses indicated the need for written policy.

MacLean et al. (2003) mailed a total of 3,000 surveys to AACN and ENA members to determine the preferences of critical care and emergency room nurses for having families present during CPR. CPR is defined as artificial breathing and cardiac chest compression initiated to sustain life. Thirty-six percent of respondents reported the families asking to be taken to the bedside during resuscitation of their loved ones. Only 5% of respondents reported written policies allowing the option of FP (n=51). A total of 31% preferred a written policy (n=365), while 39% preferred allowing FP without a written policy. No other studies were found to survey FP practices of critical care and

emergency nurses. Most nurses surveyed supported FPDR. The nurses who supported FP had prior experience with the practice. The implications of nurses' differences about whether a written policy is needed may reflect discomfort with family presence or resistance to changing long-standing practice. It should be noted that the instrument did not undergo reliability testing and construct validity has not been established.

Mian et al.'s (2007) study purpose was to design and implement an FP program in the ED and to evaluate attitudes and behaviors of nurses and physicians toward FP before and after implementation of the program. Results indicated that experiences with FP remained positive and staff fears were unrealized, which led to nurses initiating FP more routinely and FP becoming standard nursing practice over the next six months. Nurses displayed stronger support for patients' rights to have families present. Nurses also became more supportive of the rights for patients' families to be present. Nurses indicated less support in the belief that FP helps patients' families. But 39% of nurses reported more positive attitudes following an educational program, and more nurses felt more positive after initiation of the program. Overall, nurses indicated more positive attitudes towards FP than physicians.

Twibell et al. (2008) identified and addressed three gaps in the FP literature: 1) the development of instruments used to measure nurses' perceptions of family presence; 2) the exploration of demographic variables and nurses' perceptions of self-confidence, risks and benefits related to family presence in a broad sample of nurses from multiple hospital units; and 3) the examination of differences in perceptions of nurses who had and who had not invited patients' families to be present during resuscitation. The researchers found that nurses who perceived more benefits and fewer risks also perceived more self-

confidence in their ability to manage family presence. Slightly more than half of the respondents agreed that FP was a “right” of both patients and families. Nurses who held certification and were members of professional organizations perceived more benefits and fewer risks than did non-members and non-certified nurses. As nurses invited FPDR more frequently, their perceived benefits increased accordingly. Despite families’ desire to be present and support of family presence by professional organizations and consensus groups, nurses still did not agree on the risks and benefits involved.

In some cases, nurses have expressed a more favorable attitude toward FPDR than physicians. HCPs were viewed as advocates for the patients, families and resuscitation teams. Perceived benefits to providers included: 1) ability to meet the emotional and spiritual needs of family members; 2) enhanced family understanding of patient condition; 3) ability of HCPs to better educate families on patient prognosis; 4) increased family appreciation of care provided to their loved ones; 5) opportunity for family closure upon loved ones’ death; and 6) enhanced professional behavior of HCPs during resuscitation process (Meyers et al., 2000). Major problems associated with FPDR included: 1) lack of space for family members; 2) no dedicated support person to explain resuscitation process; 3) fear of litigation; and 4) performance anxiety for resuscitation team (Meyers et al., 2000).

Duran et al. (2007) researched the attitudes and beliefs about family presence in emergency room on HCPs. These researchers concluded that nurses had a positive attitude toward FPDR. Sixty-six percent of HCPs reported they had previously participated in family-witnessed resuscitation. HCPs had an overall positive attitude about family presence (M-FPAS 2.59, SD 0.48). Attitudes of HCPs who had participated

in FPDR (M-FPAS 2.7; SD 0.45) differed significantly from those who did not participate in FPDR (M-FPAS 2.38; SD 0.48;  $P < .0001$ ). Fifty-four percent of HCPs supported FPDR, with nurses favoring a written policy. In contrast, HCP voiced concerns about safety, emotional responses of family members, resuscitation teams' performance anxiety and the need for an individualized approach to family presence.

## **INTENTION**

Intentions are defined as the amount of effort an individual is willing to exert to attain a goal and are measured as readiness to perform the behavior (Ajzen, n.d.).

Intentions are composed of three constructs: attitudes toward the specific behavior, subjective norms and perceived behavioral control. Perceived behavioral control is defined as the confidence in one's ability to carry through a given behavior (Ajzen, n.d.).

An exhaustive literature search identified no studies that focused on nurses' intention to allow FPDR in the critical care unit. However, Ellison (2009) used Ajzen and Fishbein's theory of reasoned action to explore variables that influenced hospital nurses and ENA members' attitudes and beliefs about FPDR. Two studies were identified that incorporated nurses' intention in behavioral performance in hospital settings. Gutman and Tabak (2011) examined the intention of delivery room staff to encourage the presence of husbands or partners at Cesarean section. A significant difference was found between the occupational subgroups (gynecologist, anesthesiologists, midwives, and operating room nurses). The study indicated the chief predictor of perceived behavioral control and behavioral intention was staff behavioral attitudes (Gutman & Tabak, 2011). The second research study used the Theory of Planned Behavior to predict nurses' intention to

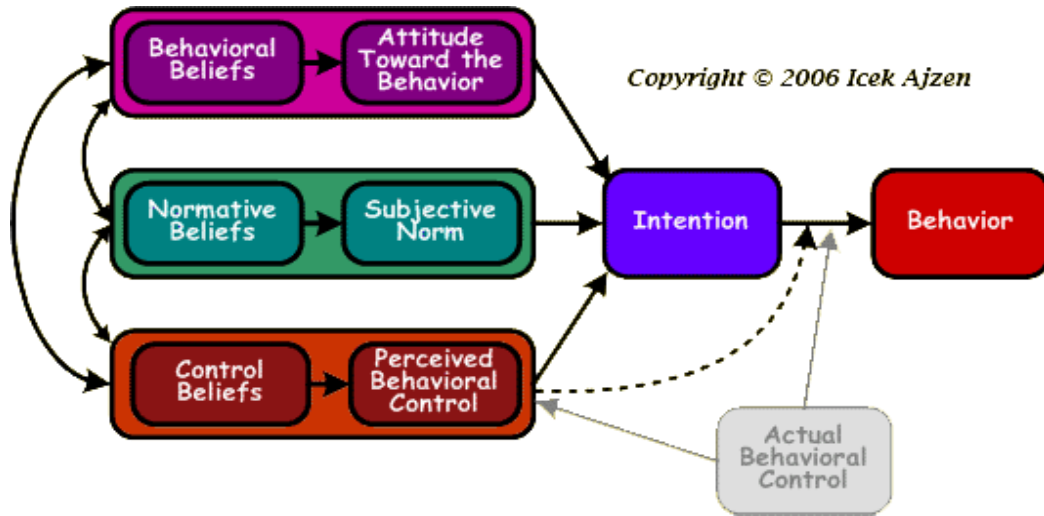
integrate research evidence into clinical decision-making. The results of the study showed that moral norm, perceived behavioral control, normative beliefs, and past behavior were predictive variables for nurses' intention to integrate research evidence into clinical decision-making (Cote et al., 2011).

## **THE THEORY OF PLANNED BEHAVIOR**

The Theory of Planned Behavior attempts to explain, understand and predict human behavior through concepts—intentions, attitude, beliefs, perceived norms, and perceived behavioral control. Behavioral beliefs are individuals' assumptions that a behavior will lead to certain results. Behavioral intention is defined as individuals' subjective probability of performing a specific behavior. Thus, the intention of individuals to perform (or avoid) a certain behavior determines their behavior. Intentions depend on three constructs: attitudes, subjective norms, and perceived behavioral control. These three constructs are influenced by behavioral, normative, and control beliefs.

The Theory of Planned Behavior (TPB) has been used to predict behavior in a number of settings (see Figure 2.1). Cote et al. (2012) used the TPB model to investigate factors that influenced nurses' incorporation of evidence into their clinical decision-making. Goldenberg and Laschinger (1991) used the TPB model to predict nursing students' intentions to care for AIDS patients. Study results showed that student nurses' attitudes and subjective norms were significant predictors of intention to care for patients with AIDS.

Figure 2.1 Theory of Planned Behavior



The study premise was that a direct relation exists between critical care nurses' attitudes to FPDR, nurses' actual behavioral control of the environment and nurses' subjective norm on the critical care nurses' intention to allow FPDR. It was believed that as critical care nurses' attitudes become more favorable toward FPDR, actual behavioral control and a supportive work environment will increase the practice of FPDR.

## **Chapter 3: Methods**

The purpose of this chapter is to present the methodology utilized in this research study. The chapter is organized by research design, sample and setting, sample size determination, and data collection procedures. The chapter concludes with the research aims, questions, and types of analysis utilized.

### **METHODOLOGY**

#### **Research Design**

Prior to study commencement, approval was obtained from the Institutional Review Board at the University of Texas Medical Branch at Galveston. A nonexperimental descriptive exploratory research design was used in the study. Descriptive exploratory research is the most basic research design—it answers fundamental questions about what is happening in a defined population or situation. Moreover, descriptive exploratory research is a systematic investigation of the relationship of two or more variables. Researchers utilize this research design to predict the effect of one variable on another. The exploration of their relationships allows potential predicative factors to be identified (Portney & Watkins, 2009). Descriptive correlational statistics were used to answer the research questions, which can also identify relationships between two or more variables or between subjects (Gliner, 2009).

The descriptive research question included common elements. The population of interest and phenomenon of interest were specified. The research question was relational, with both variables being identified (Gliner, 2009). In this descriptive study, attitudes/behavioral beliefs and nurses' intention to allow FPDR were described across

demographics subgroups. Relationships between attitudes/behavioral beliefs and intention to allow FPDR were elucidated. In addition, a set of predictors of critical care nurses' intention to allow FPDR was determined.

### **Sample and Setting**

A convenience sampling design was used for the study. A convenience sample consists of a small group of participants selected from a larger, accessible population used in the study (Gliner, 2009). The sample was recruited from members of the AACN. The AACN represented critical care nurses throughout the United States. The 2012 organizational demographic survey identified 77% of critical care nurses as white, 12% as Asian, 5% as African-American, 4% as Hispanic, and 1% as Pacific Islander (AACN, 2012). Female critical care nurses comprised 88% of the survey respondents (AACN, 2012). The referenced study consisted of critical care nurses who chose to participant, and thus may not have represented the demographics of the organization. In 2012, a total of 503,124 practicing critical care nurses worked in a variety of U.S. settings. Thirty-seven percent of critical care nurses were employed in hospital intensive care units (AACN, 2012).

### **Subject Recruitment**

The sample was recruited using two different methods available through the AACN office. The first method included renting mailing addresses from AACN. Prior to renting the list, specific search criteria used for identifying the study subjects were established. These criteria included working on a critical care unit and being a registered nurse. The second method included distributing the survey's URL via AACN's eNewsletter and social media accounts (Facebook and Twitter). This second option was

available on a first-come, first-serve basis and the request was placed into a queue at the time when materials were approved through the AACN office. Subjects who chose to participate using the electronic method were directed to a URL associated with SurveyMonkey. The criteria were the same for participating in the study using either method.

### **Sample Size Determination**

An *a priori* power analysis was conducted to prevent the probability of a Type II error and to estimate how many participants were needed to detect a significant difference for an expected effect size (Portney & Watkins, 2009). The sample size was calculated with a power analysis calculator (Raosoft, 2013) using a confidence level of 95%, confidence interval of .05, and a population of 100,000 critical care nurses who were members of AACN to determine a recommended sample size of 383 participants.

### **Inclusion and Exclusion Criteria**

The inclusion criteria for study participants included being a registered nurse in the United States, the ability to read English, access to a computer, and skills to complete a Web-based survey, or being every fourth name on AACN purchased rental list. Every fourth name on the list received a paper and pencil survey and was required to possess skills to complete the survey. Exclusion criteria for this study were: potential participants not being members of AACN, an inability to read English, and an inability to complete and submit a Web-based survey or paper and pencil survey.

## **Instruments**

Two instruments were used in this study: 1) a demographic form including age, gender, ethnicity, religion, years of practice, certification, practice region, type of hospital, and ICU employment (Appendix B), and 2) the FPR-BS (Appendix C).

The FPR-BS was used to measure nurses' attitudes/behavioral beliefs towards FPDR. Behavioral beliefs produce a positive or negative attitude toward the behavior (Ajzen, n.d.). Twibell et al. (2008) developed the FPR-BS to measure nurses' perceptions of the risks (negative attitudes) and benefits (positive attitudes) of family presence to patients, families, and HCPs. Two items addressed the right of family members to be present during resuscitation. The possible range of scores for FPR-BS was 26 – 130. FPR-BS consisted of items 1 – 26. A mean total score was calculated to determine participants' perceptions of the risks and benefits of FPDR. Factor analysis of FPR-BS revealed a single interpretable factor. Four items were deleted due to low item-total correlations and inconsistent loading on the single factor. The scale was bipolar: high scores signified perceptions of more benefits and fewer risks while low scores indicated perceptions of more risks and fewer benefits. Factor loadings ranged from -0.498 to 0.890. Cronbach alpha reliability of the 26-item scale was .96 (Twibell et al., 2008).

## **Data Collection Procedures**

Pilot testing was conducted to test the survey for ease of use and accessibility using SurveyMonkey. Once the procedure was determined to be accessible, understandable, and easy to use, a call to action was posted to the AACN eNewsletter and social media (Facebook and Twitter) to recruit potential participants. The call to action

contained a link to SurveyMonkey. The posting was made at no cost to the Principal Investigator (PI). The URL invitation explained the study to participants and asked for their participation. Paper surveys were sent via the United States Postal Service utilizing names from the AACN randomized rented mailing list of 1,500 names and addresses. It was explained that survey completion indicated consent to participate in the study. Participants completed surveys in their desired environments. Completion of all materials was estimated to require 20 – 30 minutes of participants' time. Data were collected in SurveyMonkey for electronic submission and exported to SPSS 22.0 for statistical analysis. Upon receipt of paper surveys, the PI entered those data into SPSS 22.0. The data collection occurred over a 4-week timeframe. The first page of the paper and electronic web-based survey consisted of a complete description of the study (Appendix D). Participation in the survey was completely voluntary; therefore, consent was provided upon participants' study completion (see study description provided to participants [Appendix C]). Confidentiality was maintained by storing critical care nurses names, mailing addresses, SurveyMonkey data, and SPSS (22.0) files in a password-protected computer file. Upon study completion, the rented mailing list was destroyed.

### **Data Analysis**

The Statistical Social Sciences (SPSS, Version 22.0, Chicago, IL) software was used for all data analyses. Data were reviewed for outliers and missing data. After cleaning the data, descriptive statistics were conducted on demographic variables to identify the characteristics of the sample and identify issues with heterogeneity, misdistribution, or other potential compromise to the analysis. The significance level for this study was set at alpha .05 for all research questions. The alpha level refers to the risk

of a type I error or finding significance when none exists. Cronbach's alpha was calculated on FPS-BS to assure reliability with this sample of critical care nurses.

Statistical analysis was conducted for each of the identified research questions.

Specific Aim 1: To explore characteristics of attitudes/behavioral beliefs (FPR-BS) and intentions across critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment).

RQ 1.1: What are the distribution characteristics of attitudes/behavioral beliefs and intentions across critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment)?

Analysis RQ 1.1: Descriptive statistics (percentages, means, and ranges) across certain demographic subgroups were calculated (e.g., gender, age groups, ethnicity, religious affiliations, educational levels) to describe the population under study. The age group was determined using a median split. The 2012 Demographic Survey stated that the majority of members were Caucasians (77%). Therefore, the ethnicity was divided into Caucasian and non-Caucasian.

Specific Aim 2: To explore relationships between attitudes/behavioral beliefs and intention to allow FPDR with critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment).

RQ 2.1: What is the relationship between attitudes/behavioral beliefs and intention to allow FPDR with critical care nurses' demographic subgroups (e.g., gender,

age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment)?

Analysis RQ 2.1: The Pearson's Point-biserial and Chi square was used to provide an index of strength between the two study variables (Gliner, 2009). The correlation was calculated between attitudes/behavioral beliefs and intention to allow FPDR (independent variable) and certain demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held).

RQ 2.2: What are the differences in attitudes/behavioral beliefs and critical care nurses' intention to allow FPDR across certain demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment)?

Analysis RQ 2.2: Tests of differences were performed (t-tests and Chi-square of Independence) between critical care nurses' attitudes/behavioral beliefs and intentions to allow FPDR across demographic subgroups (e.g., gender, age groups, certification versus no certification, type of ICU unit, type of hospital, type of religion) to determine if the two groups were statistically different from one another (Gliner, 2009).

Specific aim 3: To determine the best set of predictors of critical care nurses' attitudes/behavioral beliefs and self-confidence to allow FPDR.

RQ 3.1: What is the best set of predictors (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment) of critical care nurses' self-confidence to allow FPDR?

Analysis RQ 3.1: Logistic regression was performed between critical care nurses' attitudes/behavioral beliefs and nurses' intention to allow FPDR and age groups,

ethnicity, religion, and educational level. Logistic regression identified the independent variable that best predicted group membership (Gliner, 2000).

### **Human Subject Protection**

Permission for the proposed study was obtained from the University of Texas Medical Branch Institutional Review Board (IRB). Instructions for the survey were given to participants at the beginning of the survey. Participants were informed that no identifying information would be included in the survey and that data were to be used for the PI's dissertation research. The study purpose was stated and participants' voluntary participation was indicated by their explicit consent and continuation of the survey questions. Participants could leave the survey at any point.

No benefit or harm to participants was anticipated. No reimbursement or incentives were offered. Participants were thanked for their participation in the study.

## **Chapter 4: Results**

The purpose of this study was to explore the relationship between attitudes/behavioral beliefs of critical care nurses' intention to allow FPDR. The Statistical Package for the Social Sciences (SPSS version 22) was used to analyze the data. Chapter four presents the sample, psychometric properties of the instrument utilized, and analysis of the data.

### **SAMPLE DESCRIPTION**

A total of 491 participants responded to the electronic and paper survey. Twenty-one of the participants were not included due to missing data. The data were cleaned, which yielded a total sample size of 470. Descriptive statistics across certain demographic subgroups were calculated (e.g., gender, age groups, ethnicity, religious affiliations, educational levels) to describe the study sample. Age group was determined by use of a median split. The median split was used in this study to make a dichotomous of the variable age for use during data analysis of the research questions. The 2012 Demographic Survey stated that the majority of members of the Critical Care Nurses Association were Caucasians (77%). Thus, ethnicity was divided into Caucasian and Non-Caucasian.

The median split age of the critical care nurses was 45 years. Eighty-eight percent of participants were female and 12% were male. Ninety-seven percent of participants were Caucasian. Fifty.4 percent of respondents worked in community hospitals and 46% worked in an academic or teaching environment. Respondents worked in a variety of settings that were collapsed into two units: medical ICU (32.8%) and surgical ICU

(67.2%). Years of experience of ranged from less than six months to 55 years. Seventy-one percent of respondents reported holding specialty certification. Individuals reported numerous religious affiliations, which were categorized into Protestant (26.4%) and Non-Protestant (73.6%). Table 4.1 displays the sample characteristics for the study sample.

The demographics of the sample were consistent with the demographics of the AACN membership reported during the annual membership survey. This similarity indicated an accurate representation of the population. Table 4.2 shows the comparison of sample data with the AACN membership data (AACN, 2013).

### **PSYCHOMETRIC PROPERTIES**

The FPR-BS was developed to measure the “perceptions of the risks and benefits of family presence to the family, patient and resuscitation team” (Twibell et al., 2008, p. 103). The Cronbach alpha of the 26-item test was .96. Cronbach alpha is a measure of the internal consistency of an instrument. For this study sample Cronbach’s alpha coefficient was  $\alpha = .661$ . Although the alpha level is less than that of Twibell et al. (2008), it reaches the threshold of .70 for what is considered a respectable alpha coefficient (Portney & Watkins, 2009). Data for intentions were collected using a yes/no format, which was not appropriate to assess for psychometric properties

### **ANALYSIS OF DATA**

The three aims and the five associated research questions were addressed. The research questions were analyzed using both parametric and non-parametric statistics... The planned analyses for all research questions were not used because it was not possible to collect interval data for the variable intention as proposed.

Table 4.1: Selected Demographic Characteristics

Variable	N	Percentage (%)
Gender		
Female	413	87.9
Male	52	11.1
Degree		
Undergraduate	354	76.6
Graduate	108	23.4
Ethnicity		
Caucasian	408	86.8
Non-Caucasian	11	2.6
Religion		
Protestant	124	26.4
Non-Protestant	346	71.6
Type of Hospital		
Academic	233	46.9
Community	237	50.4
Unit		
Medical	153	32.8
Surgical	314	67.3
Certification		
Yes	332	70.9
No	136	29.1

Table 4.2: Demographics of Sample Compared to AACN Membership

Demographic Variable	% for AACN Members (n=100,000)	% for Sample (n=470)
Gender		
Male	12	11
Female	88	89
Ethnicity		
Caucasian	77	89
Non-Caucasian	23	11
Education		
Diploma	3	NR
Undergraduate	78	77
Graduate	19	23

NR = Not reported

Specific aim 1: To explore characteristics of attitudes/behavioral beliefs (FPR-BS) and intention to allow FPDR across critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment).

RQ 1.1: What are the distribution characteristics of attitudes/behavioral beliefs and intention to allow FPDR across critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, type of unit, certification)?

The demographic findings related to the FPR-BS showed that male and female mean scores were similar on this questionnaire. Also, age groups and religion were similar on the FPR-BS mean scores. Table 4.3 demonstrates the mean and standard deviation for FPR-BS in relation to the other selected demographic variables.

Table 4.3: Mean and SD for FPR-BS for Critical Care Nurses on Selected Demographic Variables

Variable	Scores on FPR-BS	
	Mean	SD
Gender		
Female	90.24	10.24
Male	91.82	10.29
Age*		
Less than 45	90.34	10.15
Greater than 45	90.40	10.43
Ethnicity		
Caucasian	90.24	10.89
Non-Caucasian	85.91	14.05
Religion		
Protestant	90.94	11.06
Non-Protestant	90.78	20.04
Education		
Undergraduate	89.60	10.30
Graduate	92.58	10.00

\*The median split age was used in this study to make a dichotomous variable for use later in data analysis

The demographic findings for critical care nurses who intended to allow FPDR indicated that 89% of females supported the intention of FPDR. The two age groups showed similar support in regards to intention to allow FPDR. Seventy-three percent of non-Protestant critical care nurses supported the intention to allow FPDR. Table 4.4 shows the percentages of critical care nurses who intended to allow FPDR on the other selected demographic variables.

Table 4.4: Percentages of Critical Care Nurses Who Intended to Allow FPDR on Selected Demographic Variables

Variable	Intention to Allow FPDR	
	N	%
Gender		
Female	413	88.8
Male	52	11.2
Age*		
Less than 45	263	57.9
Greater than 45	191	42.1
Ethnicity		
Caucasian	408	97.4
Non-Caucasian	11	2.6
Religion		
Protestant	124	26.9
Non-Protestant	337	73.1
Education		
Undergraduate	354	76.6
Graduate	108	23.4
Type of Unit		
Medical	153	32.0
Surgical	314	66.8
Certification		
Yes	332	70.6
No	136	28.9

Specific aim 2: To explore relationships between attitudes/behavioral beliefs and intention to allow FPDR with critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment).

RQ 2.1: What is the relationship between attitudes/behavioral beliefs and intention to allow FPDR among critical care nurses' demographic subgroups (e.g.,

gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment)?

### **Relationship between Attitudes/Behavioral Beliefs and Demographic Subgroups**

Pearson's point-biserial statistics were used to examine the relationship between the interval level variable (FPS-BS scale) and the subgroups of demographic variables. Pearson's point-biserial correlation is utilized when one set of variables is an interval and the other set of variables is categorical. As the scores of one set of variables increase or decrease, the effect of the other variable is expected to increase or decrease correspondingly. Point-biserial correlation was performed on the independent variables of gender, age groups, ethnicity, religious affiliations, educational levels, and certifications paired with the dependent variable of attitudes/behavioral beliefs. The Pearson correlation performed within the point-biserial analysis, indicating there was a significant positive relationship between attitudes/behavioral beliefs toward FPDR and the level of education. This finding suggested that higher levels of nurses' education corresponded with more favorable attitudes/behavioral beliefs toward FPDR. There were no other relationships between the attitudes/behavioral beliefs scores and selected demographic variables. These results are presented in Table 4.5. Graphic representations of these findings for each of the dichotomous demographic independent variables with the scores on the attitudes/behavioral belief scale are presented in Figures 4.1-4.6.

Table 4.5: Correlation for FPR-BS for Critical Care Nurses on Selected Demographic Variables

Variable	N	R	p
Gender	446	.062	.193
Level of Education	443	.098	.040*
Specialty Certification	448	.035	.466
Ethnicity	403	-.052	.297
Religion	441	-.021	.662
Age	449	-.041	.387

\*p < .05

Figure 4.1: Degree Versus Attitude/Behavioral Belief Point-Biserial Correlation

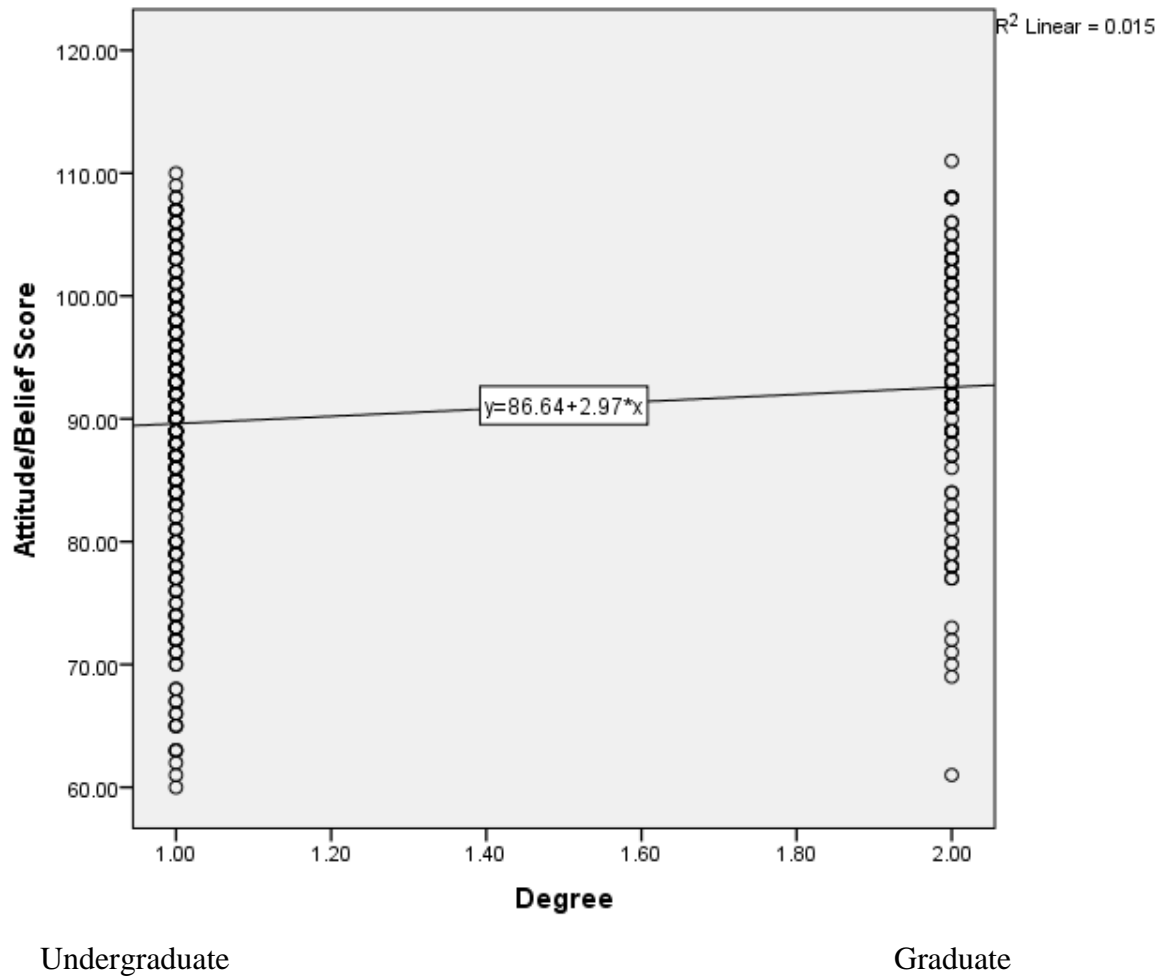


Figure 4.2: Specialty Certification Versus Attitude/Behavioral Belief Point-Biserial Correlation

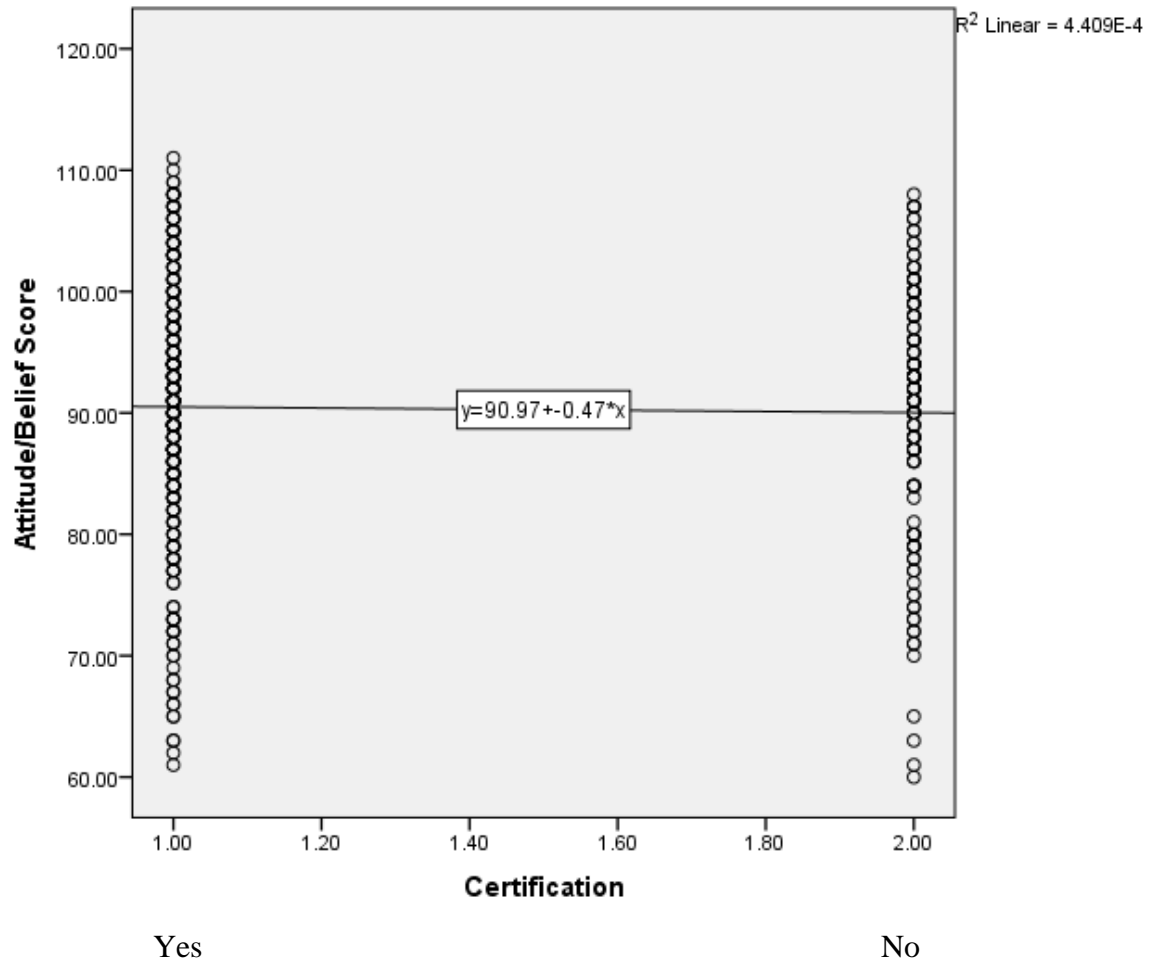


Figure 4.3: Ethnicity Versus Attitude/Behavioral Belief Point-Biserial Correlation

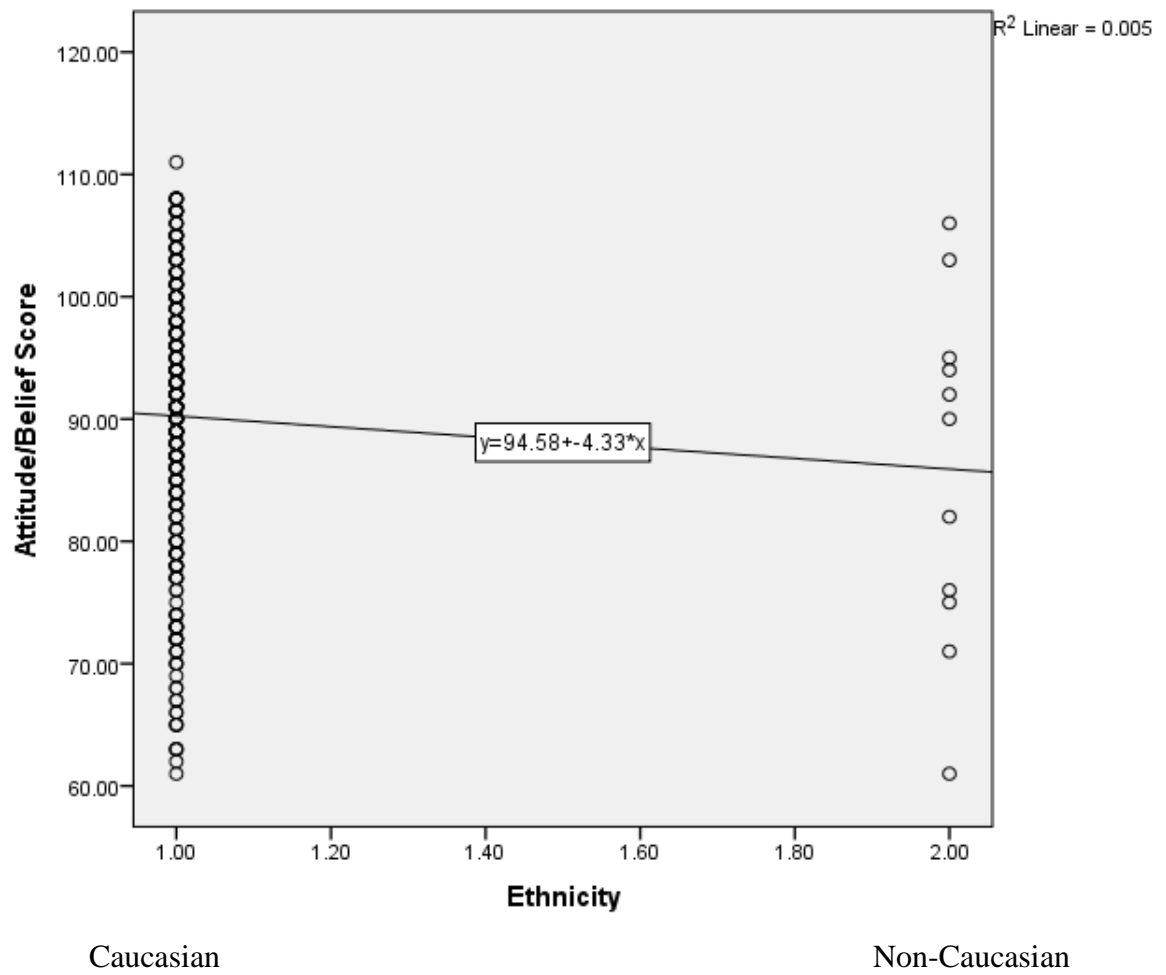


Figure 4.4: Gender Versus Attitude/Behavioral Belief Point-Biserial Correlation

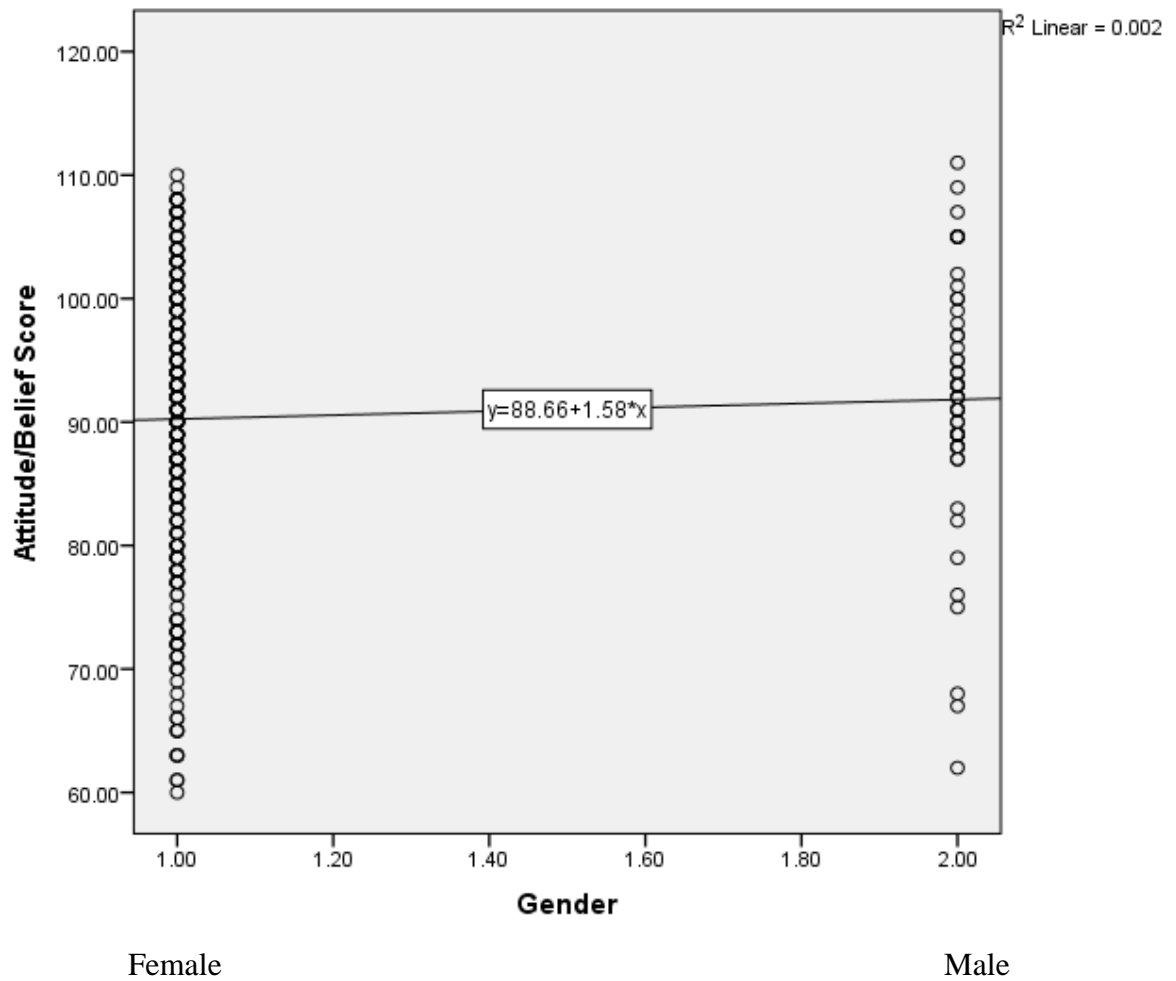


Figure 4.5: Religion Versus Attitude/Behavioral Belief Point-Biserial Correlation

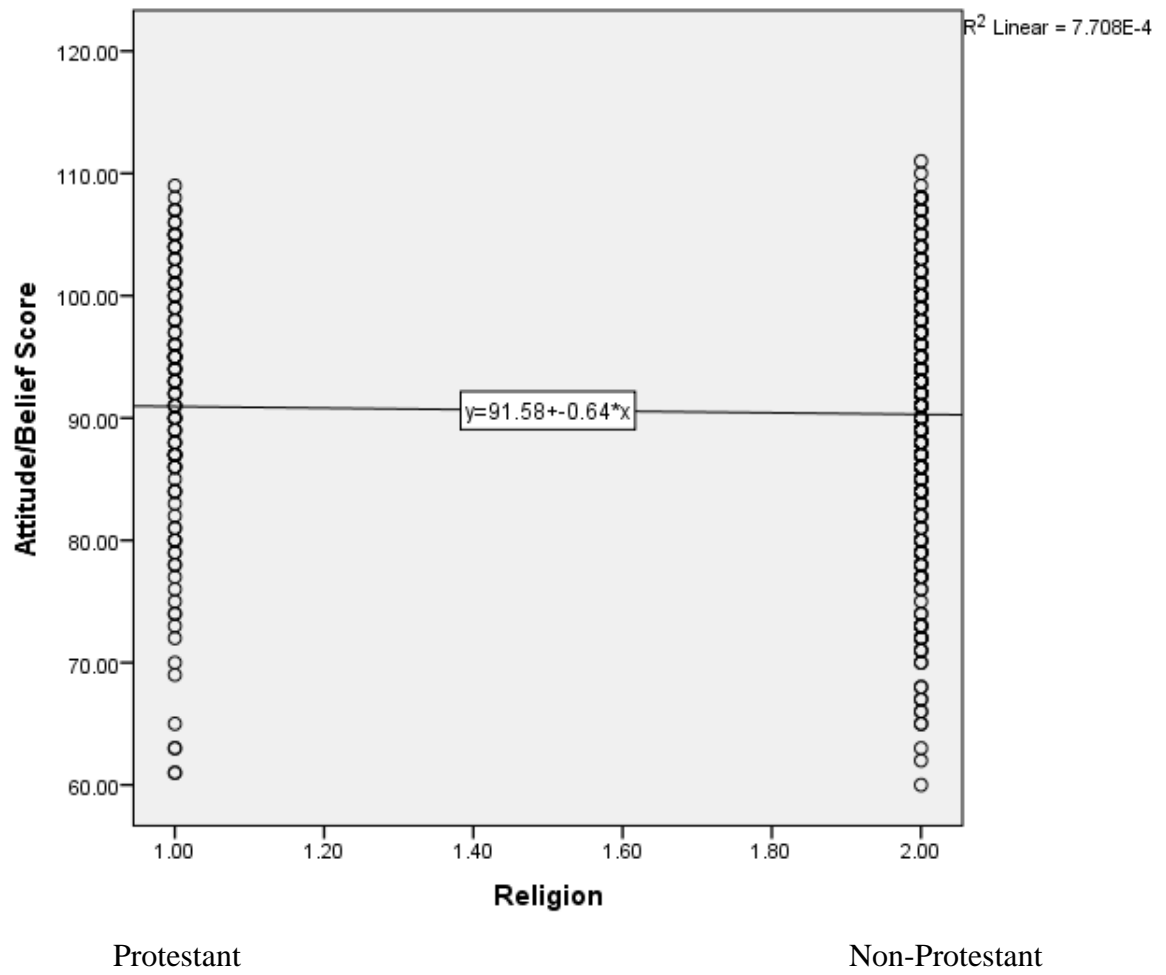
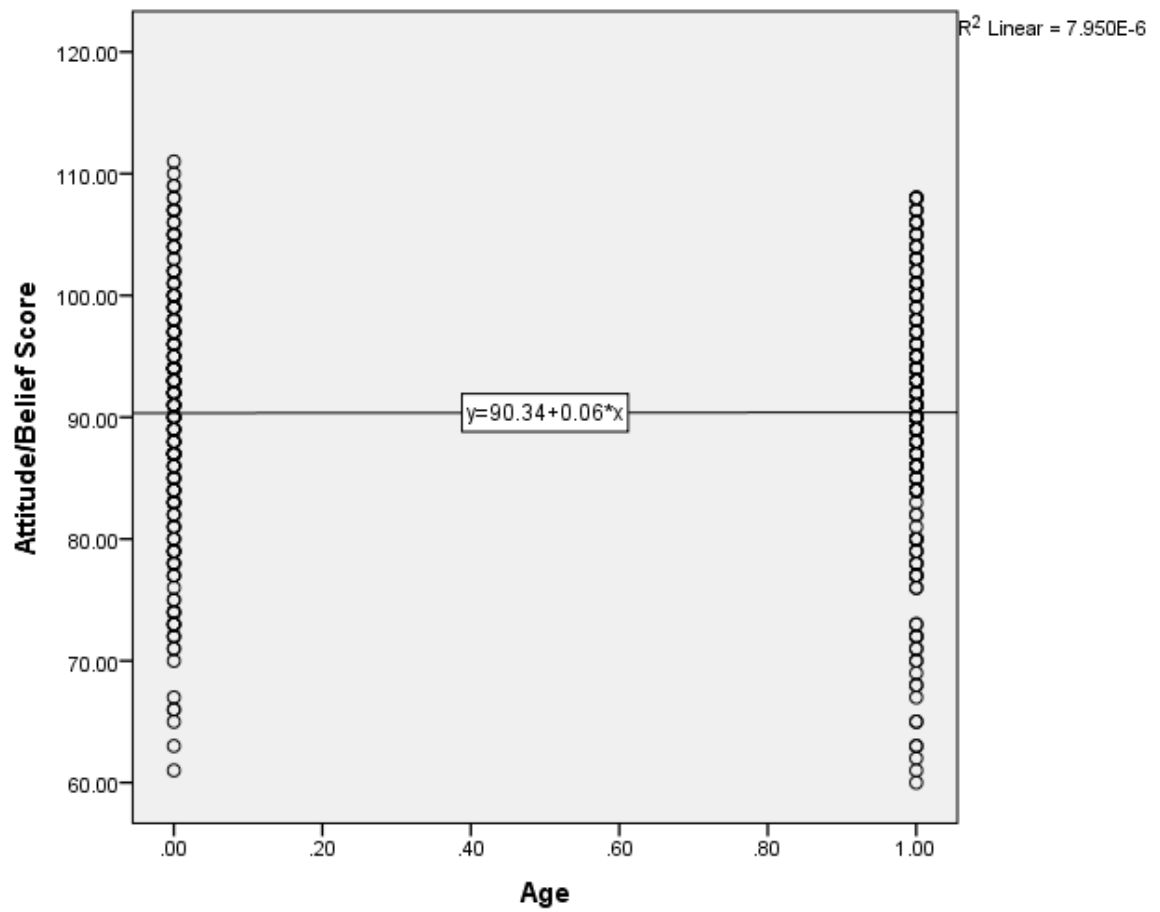


Figure 4.6: Age Versus Attitude/Behavioral Belief Point-Biserial Correlation



Less than 45 years of age

Greater than 45 years of age

### **Relationship between Intention to Allow FPDR and Demographic Subgroup**

A chi-square test was conducted to determine if there were relationships between the intention to allow FPDR and demographic variables of religion, type of hospital, gender, ethnicity, educational level, specialty certification held, and unit type. There was no significant relationship between FPDR and religion ( $\chi^2$  (2, =98.41, n=447, p=.095)), type of unit worked on ( $\chi^2$  (2, =3.782, n=467, p=.151)), and age ( $\chi^2$  (1, =.077, n=470, p=.077)). Religion, type of unit worked on, and age appeared to be independent events and did not support critical care nurses' intention to allow FPDR. There was a relationship between FPDR and gender ( $\chi^2$  (1, =280.26, n=465, p=.000), type of hospital ( $\chi^2$  (2, =206.58, n=463, p=.000)), ethnicity ( $\chi^2$  (1, =376.15, n=419, p=.000)), educational level ( $\chi^2$  (1, =130.99, n=462, p=.000)), and specialty certification held ( $\chi^2$  (1, =82.09, n=468, p=.000)). These findings suggested that females, community hospital nurses, Caucasians, undergraduate level nurses, and nurses with specialty certifications were present in higher percentages, suggesting that they had a more favorable intention toward FPDR than males, non-Caucasians, nurses in Academic Health Centers, graduate level nurses, and nurses without specialty certification (Table 4.6).

RQ 2.2: What are the differences in attitudes/behavioral beliefs and critical care nurses' intention to allow FPDR across certain demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment)?

Table 4.6 Percentage of Demographic Variables Related to Chi-Square Intention

Variable	N	Percentage (%)
Gender		
Female	227	91
Male	34	9
Ethnicity		
Caucasian	230	96.5
Non-Caucasian	5	3.5
Type of hospital		
Community	139	53.7
Academic Health Center	116	44.8
Educational Level (degree)		
Undergraduate	195	76.2
Graduate	63	24.4
Specialty Certification		
Yes	196	74.8
No	134	64.4

### **Difference in Demographic Subgroup on Attitudes/Behavioral Beliefs**

A t-test was used to examine the differences in attitudes/behavioral beliefs across gender, age group, ethnicity (white vs. non-white), religious affiliations (protestant vs. non-protestant), education levels (undergraduate vs. graduate), certification (yes vs. no), hospital (academic vs. community), and intensive care unit (yes vs. no). The Levene's test for equal variance showed homogeneity of variance within each group except for religion (Table 4.7). Therefore, the information for significance was obtained from the second line of the t-test table, which is referred to as "equal variances not assumed."

Table 4.7: Levene's Test for Equality of Variances

Variable	p	t	df
Age	.835	-.60	446
Gender	.207	1.199	448
Ethnicity	.172	-.066	404
Level of Education	.305	.482	445
Specialty Certification	.701	.443	445
Type of Hospital	.524	-.746	432
Type of Unit	.380	-1.492	308
Religion	.013	-1.101	445

A significant difference was found in the attitudes/behavioral beliefs scores of nurses who had graduate levels of education compared to those who possessed undergraduate levels of education (see Table 4.8). No other significant differences were found between any of the other groups.

#### **Difference in Demographic Subgroup on Intention to Allow FPDR**

An independent sample t-test was not utilized as planned because the dependent variable of intention to allow FPDR was collected as a nominal level variable. Therefore, a chi-square test for independence was utilized between intention and selected demographic variables to describe the differences in the proportions between the variables.

Table 4.8: Independent Samples t-test Between Attitudes/Behavioral Beliefs Scores of Critical Care Nurses and Selected Demographic Variables

Variable	N	M	SD	t	p
Gender					
Male	395	90.24	10.23	-1.527	.310
Female	50	91.82	10.29		
Age					
<45 years	228	90.34	10.15	-.060	.835
>45 years	220	90.40	10.43		
Education					
Undergraduate	337	89.60	10.30	-2.97	.010*
Graduate	105	92.58	10.00		
Certification					
Yes	316	90.50	10.23	.473	.661
No	131	90.01	10.45		
Ethnicity					
Caucasian	395	1.62	.80	-.066	.172
Non-Caucasian	11	1.63	.67		
Type of Hospital					
Academic	224	90.688	10.19	.272	.603
Community	204	89.99	10.38		
Type of Unit					
Medical	301	90.54	10.27	.622	.511
Surgical	147	90.02	.85		
Religion					
Protestant	330	90.16	.54	.268	.483
Non-Protestant	118	90.94	1.01		

\*p < .05

The proportion of nurses who were certified and intended to allow FPDR was 57.8%, whereas the proportion of nurses who were not certified and intended to allow FPDR was only 42.2%. This finding was significant and suggested that critical care nurses who held specialty certification were more likely to allow FPDR. The only other significant proportional difference was with nurses who worked in academic hospitals. That is, the proportion of nurses who worked in academic hospitals and intended to allow FPDR was 57.9%, whereas the proportion of nurses who worked in community hospitals and intended to allow FPDR was 42.1%. This finding suggested that critical care nurses who were employed in academic hospitals were more likely to allow FPDR. There were no other significant differences (Table 4.9).

RQ 3.1 What is the best set of predictors (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment) of critical care nurses' attitudes/behavioral beliefs to allow FPDR?

Table 4.9: Chi-Square of Independence between Intention and Selected Demographic Variables

Variable	DF	N	$\chi^2$	p
Gender	1	450	1.78	.183
Age	1	454	.256	.613
Ethnicity	1	406	.716	.397
Religious Affiliations	1	447	1.21	.270
Level of Education	1	447	.022	.882
Specialty Certification	1	453	5.78	.017*
Type of Unit	1	448	1.42	.492
Type of Hospital	1	18.75	18.74	.000*

\*p < .05

Binary logistic regression was conducted to predict the probability that subjects intended to allow FPDR. The predictor variables in the equation were age, ethnicity, religion, hospital type, type of unit, degree, certification, and attitudes/behavioral beliefs score. A test of the full model versus the model with constant or intercept only was statistically significant ( $\chi^2$  (8, = 4.20, p = .000, n = 375)). The set of predictors were more accurate in predicting those who intended to allow FPDR (82.1% sensitivity) than those who did not intend to allow FPDR (45.6% specificity).

Table 4.10 shows the logistic regression coefficient, Wald test, and odds ratio [Exp(B)] for each of the predictors. Using p=.05 criterion as statistical significance, only certification and attitude/behavioral belief scores were significant predictors for critical care nurses' intention to allow FPDR. The odds ratio for certification indicated that when holding all other variables constant, certified subjects were 70% more likely to intend to allow FPDR than those subjects without certification. Similarly, each point increase in the attitudes/behavioral beliefs score represented a 9.2% increase in the likelihood to allow FPDR.

Table 4.10: Binary Logistic Regression Predicting Intending to Allow FPDR

Predictor	B	Wald $\chi^2$	P	Exp(B)	95% CI	
					Lower	Upper
Ethnicity	.145	.042	.834	1.16	.283	4.55
Degree	.375	1.74	.185	1.45	.823	2.42
Type of Hospital	-.122	.258	.812	.887	.529	1.33
Type of Unit	-.371	2.30	.130	.690	.446	1.51
Attitude/Behavioral Belief Score	.088	46.32	.000	1.09	1.06	1.12
Certification	.522	4.21	.040	1.69	1.03	1.01
Religion	.205	.590	.442	1.29	.701	1.96
Age	.006	.487	.485	1.00	.70	1.76

Backward binary logistic regression was conducted to test for the probability of predicting certain variables to occur with intention to allow FPDR. The model was able to classify 82.9% of those who intended to allow FPDR (sensitivity) and 46.8% of those who did not intend to allow FPDR (specificity). The backward logistic regression predictor variables were the same as the forward regression for attitude/behavioral belief scores and certification. Table 4.11 shows the backward logistic regression coefficient, Wald test, and odds ratio [Exp(B)] with confidence interval for the significant predictor variable. The odds ratio for certification indicated that when holding all other variables constant, respondents who held specialty certification were 63% more likely to allow FPDR. Similarly, each point increase in the attitude/behavioral belief score represented an 8% increase in the likelihood to allow FPDR.

Table 4.11: Backward Logistic Regression Demographic Variables

Predictor	B	Wald $\chi^2$	P	Exp(B)	95% CI	
					Lower	Upper
Ethnicity	.080	.012	.914	1.08	.256	4.58
Degree	.360	1.61	.204	1.43	.822	2.5
Type of Hospital	-0.94	.158	.691	.01-	.573	1.44
Type of Unit	-.428	3.103	.078	.642	.405	1.078
Attitude/Behavioral Belief Score	-.84	43.955	.000	1.088	1.006	1.116
Certification	2.83	.248	.047	1.635	1.006	2.656
Religion	.195	.539	.463	1.215	1.215	.722
Age	.088	.742	.389	1.008	.990	1.026

#### SUMMARY OF RESULTS

Study results indicated that level of education and specialty certification were indicators of critical care nurses' intention to allow FPDR. Positive relationships existed between level of education and attitudes/behavioral beliefs towards FPDR. The best predictors of critical care nurses' intention to allow FPDR were attainment of specialty certification and attitudes/behavioral beliefs score. These findings are discussed further in chapter five.

## **Chapter 5: Discussion and Summary**

This chapter provides the study purpose and a discussion of the results as they relate to the five research questions and extant literature. In addition, this chapter describes the study limitations, implications for nursing practice, and recommendation for future research in nursing studies.

### **PURPOSE OF THE STUDY**

The purpose of this study was to explore whether attitudes/behavioral beliefs about FPDR coupled with demographic variables predicted critical care nurses' intention to allow FPDR.

### **DISCUSSION OF RESEARCH FINDINGS**

#### **Distribution of Characteristics of Attitudes/Behavioral Beliefs within the Context of Demographic Subgroups**

Specific aim 1: To explore characteristics of attitudes/behavioral beliefs (FPR-BS) and intention to allow FPDR across critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment).

The demographic findings for critical care nurses to allow FPDR showed that 89% of females supported the intention to allow FPDR. Further, 97% of Caucasian critical care nurses supported the intention to allow FPDR. Age groups had similar support for intention to allow FPDR. Seventy-three percent of non-Protestant critical care nurses supported the intention to allow FPDR and 77% of undergraduate nurses supported intentions to practice FPDR. Fifty-three percent of critical care nurses

employed in community hospitals supported the intention to allow the practice of FPDR. Thirty-two percent of critical care nurses employed in medical intensive care units and 67% of critical care nurses employed in surgical intensive care units supported the intention to practice of FPDR. Personnel from medical intensive care units scored higher on perceived benefits and generated higher benefits and fewer risks on the FPS-BS (Carroll, 2013). An exhaustive search of the literature yielded no studies that included religious affiliations and type of hospital.

Past studies have shown that nurses who support FPDR are usually female, Caucasian, possess a Bachelor's degree or higher, and work in emergency rooms (Duran et al., 2007; Ellison, 2003; MacLean et al., 2003). Studies also have shown a significant correlation between positive FPDR attitudes and higher educational preparation, specialty certification, professional organization membership, and U.S. geographical location (Twibell et al., 2008).

The results of this study share the same characteristics as those of other studies with similar scopes. The only outlier of this study was level of education, which indicated that a higher percentage of undergraduate level nurses were more likely to intend to allow family presence during resuscitation than graduate nurses. This unexpected finding may be related to other studies' exclusion of level of education as a study variable (Basol et al., 2009; Carroll, 2013; Curan et al., 2007; Mangurten, et al., 2007; McClenthan et al., 2002; Meyers et al., 1998; Mian et al., 2007; Ohman et al., 2010). Attitudes/behavioral beliefs about FPDR were measured utilizing the FPR-BS scale. The demographic findings related to the FPR-BS indicated that male and female scores were similar on this questionnaire. This finding is similar to that of Twibell et al. (2008), indicating that both

male and female nurses had similar percentages of individuals who had attitudes/behavioral beliefs that were supportive of family presence during resuscitation.

### **The Relationship between Attitudes/Behavioral Beliefs and Selected Demographic Subgroups**

Specific aim 2: To explore relationships between attitudes/behavioral beliefs and intention to allow FPDR with critical care nurses' demographic subgroups (e.g., gender, age groups, ethnicity, religious affiliations, educational levels, certifications held, type of hospital, ICU employment).

A strong positive correlation was found between level of education and attitudes/behavioral beliefs toward FPDR, indicating a significant linear relationship between the two variables. Twibell (2008) found that level of education and years of experience did not have an impact on the critical care nurses' perception of FPDR. Meyers (2000) found that nurses had more positive attitudes toward FPDR than did physicians. Nurses viewed themselves as “advocates for patients and families.”

The results of this study were positive for level of education and specialty certification, which differed from the results of Twibell et al. (2008). Although it was not a question in this study, this finding could be explained by nurses' employers' requirements for higher levels of education to maintain Magnet status for their healthcare institutions—i.e., to attain higher levels of education, nurses may have enrolled in courses that exposed them to the concept of FPDR. Specialty certification requires critical care nurses to be current in their area of expertise. This validation is accomplished by attaining continuing education credits through educational courses. Through these

educational courses, critical care nurses may be exposed to the concept of FPDR and may choose to utilize the practice.

Ethnicity, religious affiliation, type of hospital, and ICU employment did not have a positive or negative relationship in this study. An exhaustive search of the literature found no studies that utilized these variables in their research (Carroll, 2013; Duran et al., 2007; Mangurten et al., 2005; McCleathan et al., 2002).

### **Difference between Selected Demographic Variables on Intention to Allow FPDR**

Critical care nurses with specialty certifications and employment in academic hospitals were more likely to intend to allow FPDR. Past studies have shown a significant correlation between positive FPDR attitudes and higher educational preparation, specialty certification, professional organization membership, and U.S. geographical location (Ellison, 2003; McClenathan et al., 2002; Twibell et al., 2008). The current study is in agreement with these past findings. As indicated above, exposure of critical care nurses to the concept of FPDR during continuing education for specialty certification could account, in part, for this significant finding.

### **Probability that Nurses Intended to Allow FPDR**

Specific aim 3: To determine the best set of predictors of critical care nurses' attitudes/behavioral beliefs and self-confidence to allow FPDR.

The best predictors for intention to allow FPDR were attitudes/behavioral beliefs score and specialty certification held. Gutman and Tabak (2011) used the Theory of Planned Behavior to examine intentions of delivery room staff in encouraging the presence of husbands or partners at Cesarean section. The investigators found a

significant difference between occupational subgroups (e.g., gynecologists, anesthetists, midwives, operating room nurses). The study indicated that the chief predictor or perceived behavioral control and behavioral intention were staff members' behavioral attitudes. The findings of the current study supported, in part, the findings of Gutman and Tabak (2011), i.e., attitudes/behavioral beliefs of critical care nurses predicted their intention to allow FPDR. Specialty certification has not been identified in the literature as a predictor to allow FPDR. Future studies are required to explore the influence of certification on FPDR.

#### **DISCUSSION OF FINDINGS WITHIN THE CONTEXT OF THE CONCEPTUAL FRAMEWORK**

Behavioral intention has been defined as individuals' subjective probability of performing a specific behavior. Thus, the intention of individuals to perform (or avoid) a certain behavior determines their behavior. Intentions depend on three constructs: attitudes, subjective norms, and perceived behavioral control. These three constructs are influenced by behavioral, normative, and control beliefs (Ajzen, n.d.).

FPDR is a specific behavior that is performed by critical care nurses. The intention to perform FPDR is dependent on the constructs of attitudes, subjective norms, and perceived behavioral control toward FPDR. This study examined only the construct of attitudes. The results indicated that attitude/behavioral beliefs toward FPDR were a significant predictor of critical care nurses' intention to practice FPDR. Therefore these findings further supported the theory that intention depends, in part, on attitude of the individual.

## **LIMITATIONS OF THE STUDY**

A major limitation of the study was its generalizability. The study was limited to only those nurses who answered the questionnaire, which may not have reflected the opinions of all nurses.

## **IMPLICATIONS FOR PRACTICE AND EDUCATION**

Family members usually prefer to be in close proximity to loved ones during crises. The practice of FPDR offers family members the opportunity to be present during such unstable times, and critical care nurses are “gatekeepers” to patients’ bedsides. Therefore, it may be important to know nurses’ attitudes/behavioral beliefs toward FPDR as well as their intention to allow family member presence during resuscitation should such circumstances arise. Institutions that value FPDR may wish to determine their critical care nurses’ attitudes/behavioral beliefs and intention in advance. The ability to identify critical care nurses who intend to allow the practice of FPDR may allow for the selection of critical care nurses who are willing to work with families and other healthcare providers to provide a FPDR experience.

## **Recommendation for Future Studies**

The study should be replicated using a sample from a different database to allow generalization of results. The replication of the study with the same questionnaires would increase the generalizability of the study.

Future studies should also include a qualitative portion to the questionnaire. Open-ended questions would enable researchers to elicit information on the impact of critical care nurses' intention to practice FPDR. In addition to the aforementioned recommendations, inclusion of an interval level measure of intention to allow FPDR would allow for different statistical testing to be performed.

## **SUMMARY AND CONCLUSION**

Numerous studies have found that family members want the option to be present during CPR. Research has described benefits of the experience for family members, including patient-family bonding, a sense of closure of a life shared, facilitation of the grief process, a spiritual experience, removal of doubt regarding procedures administered to patients, and knowledge that every possible life-saving procedure was performed.

The demographic profile of critical care nurses who supported FPDR of this study was female, Caucasian, and Protestant. Male and females scored similar on the FPR-BS scale, indicating they perceived the benefits of FPDR. A strong positive correlation was found to exist between level of education and attitudes/behavioral beliefs towards FPDR.

Level of education and specialty certification were the best predictors of intention of critical care nurses to allow FPDR. A positive relationship existed between level of education and attitudes/behavioral beliefs towards FPDR.

## **Appendix A: Human Subjects**

Human Subjects. Permission for the proposed study was obtained from the University of Texas Medical Branch Institutional Review Board (IRB). No consent was needed for this anonymous survey; however, instructions were provided on the first page of the study. Participants were informed that no identifying information was included in the survey and that all data collected would use for the investigator's dissertation research. The purpose of the study was stated and the participants' voluntary participation in the survey will indicated consent.

No benefit or harm to participant was anticipated.

## Appendix B: Demographic Data

1. Gender

☐ Male  
☐ Female

2. What type of unit do you work on most often?

☐ Emergency Department  
☐ Medical Intensive Care Unit  
☐ Surgical Intensive Care Unit  
☐ Trauma Intensive Care Unit  
☐ Transplant Intensive Care Unit  
☐ Neurological Intensive Care Unit  
☐ Cardiovascular Intensive Care Unit  
☐ Non-Critical Care Inpatient Unit  
☐ Outpatient Unit  
☐ Other \_\_\_\_\_

3. Highest nursing degree completed

☐ Licensed Practical Nurse Program  
☐ Associate Degree in Nursing  
☐ Baccalaureate Degree in Nursing  
☐ Master's Degree in Nursing  
☐ Doctoral Degree in Nursing

**Please select the option that best describes YOUR:  
(Recall that you may omit any item that you wish)**

4. Years of experience in nursing

☐ Less than 1 year  
☐ 1 – 5 years  
☐ 6 – 10 years  
☐ 11 – 20 years  
☐ More than 20 years

5. Age

☐ 18-24 years  
☐ 25-39 years  
☐ 40-55 years  
☐ Over 56 years

6. Do you hold a specialty nursing certification?

- \_\_\_\_ Yes (please list \_\_\_\_\_)  
\_\_\_\_ No
7. Do you hold membership in a professional nursing organization?
- \_\_\_\_ Yes  
\_\_\_\_ No
8. Ethnicity
- \_\_\_\_ African-American  
\_\_\_\_ Asian  
\_\_\_\_ Caucasian  
\_\_\_\_ Hispanic  
\_\_\_\_ Native American – Eskimo  
\_\_\_\_ Pacific-Islander  
\_\_\_\_ Other
9. How many times have your invited family members to the bedside during resuscitation efforts?
- \_\_\_\_ Never  
\_\_\_\_ Less than 5 times  
\_\_\_\_ More than 5 times
10. How many times have you participated in Cardiopulmonary Resuscitation (CPR)?
- \_\_\_\_ Never  
\_\_\_\_ Less than 5 times  
\_\_\_\_ More than 5 times
11. Religion
- \_\_\_\_ Protestant  
\_\_\_\_ Non-Protestant  
\_\_\_\_ Buddhism  
\_\_\_\_ Islam  
\_\_\_\_ Judaism
12. Region in which practice is located:

\_\_\_\_\_West (Alaska, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington or Wyoming)

\_\_\_\_\_Southwest (Arizona, New Mexico, Oklahoma, or Texas)

\_\_\_\_\_Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota or Wisconsin)

\_\_\_\_\_Northeast (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, or Vermont)

\_\_\_\_\_Southeast (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia or West Virginia)

## Appendix C: Nurses' Perceptions of Family-Witnessed Resuscitation

Across the nation, health care professionals, patients and families are debating the issue of having family members present when a loved one is being resuscitated. Completing this questionnaire is **voluntary**. **Please do not put your name on the survey.**

Definition: Family-witnessed resuscitation means one or more family members are present in the room while a loved one is being resuscitated in an effort to sustain life.

Please circle the number that best represents your opinion.		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	Family members should be given the option to be present when a loved one is being resuscitated.	1	2	3	4	5
2.	Family members will panic if they witness a resuscitation effort.	1	2	3	4	5
3.	Family members will have difficulty adjusting to the long term emotional impact of watching a resuscitation effort.	1	2	3	4	5
4.	The resuscitation team may develop a close relationship with family members who witness the efforts, as compared to family members who do not witness the efforts.	1	2	3	4	5
5.	I would be more anxious about doing things right if family members were present during a resuscitation effort. (deleted)	1	2	3	4	5
6.	If my loved one were being resuscitated, I would want to be present in the room.	1	2	3	4	5
7.	Patients do not want family members present during a resuscitation attempt.	1	2	3	4	5
8.	The resuscitation team will try more extensive interventions if family members are present. (deleted)	1	2	3	4	5
9.	Family members who witness unsuccessful resuscitation efforts will have a better grieving process.	1	2	3	4	5
10.	If my loved one were being resuscitated, I should be allowed to be present because I am a nurse. (deleted)	1	2	3	4	5

11.	Family members will become disruptive if they witness resuscitation efforts.	1	2	3	4	5
12.	Family members who witness a resuscitation effort are more likely to sue.	1	2	3	4	5
13.	The resuscitation team will not function as well if family members are present in the room.	1	2	3	4	5
14.	Nurses with whom I work are not supportive of family presence during resuscitation efforts.	1	2	3	4	5
15.	Family members on the unit where I work prefer to be present in the room during resuscitation efforts.	1	2	3	4	5
16.	The presence of family members during resuscitation efforts is beneficial to patients.	1	2	3	4	5
<b>Please circle the number that best represents the extent to which you agree or disagree with the following statements:</b> <b>The presence of family members during resuscitation efforts _____</b>		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
17.	is beneficial to families.	1	2	3	4	5
18.	is beneficial to nurses.	1	2	3	4	5
19.	is beneficial to physicians.	1	2	3	4	5
20.	should be a component of family-centered care.	1	2	3	4	5
21.	will have a positive effect on patient ratings of satisfaction with hospital care.	1	2	3	4	5
22.	will have a positive effect on family ratings of satisfaction with hospital care.	1	2	3	4	5
23.	will have a positive effect on nurse ratings of satisfaction in providing optimal patient and family care.	1	2	3	4	5
24.	will have a positive effect on physician ratings of satisfaction in providing optimal patient and family care.	1	2	3	4	5
25.	is a right that all patients should have.	1	2	3	4	5
26.	is a right that all family members should have.	1	2	3	4	5

	<b>Please read each numbered item below and circle the number to indicate how confident you are that you could perform the listed behavior during a resuscitation effort with family members present.</b>	Not at all Confident	Not Very Confident	Some what Confident	Quite Confident	Very Confident
27.	I could communicate about the resuscitation effort to family members who are present.	1	2	3	4	5
28.	I could administer drug therapies during resuscitation efforts with family members present.	1	2	3	4	5
29.	I could perform electrical therapies during resuscitation efforts with family members present.	1	2	3	4	5
30.	I could deliver chest compressions during resuscitation efforts with family members present.	1	2	3	4	5
31.	I could communicate effectively with other health team members during resuscitation efforts with family members present.	1	2	3	4	5
32.	I could maintain dignity of the patient during resuscitation efforts with family members present.	1	2	3	4	5
33.	I could identify family members who display appropriate coping behaviors to be present during resuscitation efforts.	1	2	3	4	5
34.	I could prepare family members to enter the area of resuscitation of their family member.	1	2	3	4	5
	<b>Please read each numbered item below and circle the number that indicates how confident you are that you could perform the listed behavior during a resuscitation effort with family members present.</b>	Not at all Confident	Not Very Confident	Some what Confident	Quite Confident	Very Confident
35.	I could enlist support from attending physicians for family presence during resuscitation efforts.	1	2	3	4	5
36.	I could escort family members into the room during resuscitation of their family member.	1	2	3	4	5

37.	I could announce family member's presence to resuscitation team during resuscitation efforts of their family member.	1	2	3	4	5
38.	I could provide comfort measures to family members witnessing resuscitation efforts of their family member.	1	2	3	4	5
39.	I could identify spiritual and emotional needs of family members witnessing resuscitation efforts of their family member.	1	2	3	4	5
40.	I could encourage family members to talk to their family member during resuscitation efforts.	1	2	3	4	5
41.	I could delegate tasks to other nurses in order to support family members during resuscitation efforts of their family member.	1	2	3	4	5
42.	I could debrief family after resuscitation of their family member.	1	2	3	4	5
43.	I could coordinate bereavement follow-up with family members after resuscitation efforts of their family member, if required.	1	2	3	4	5

Questions #5, 8, and 10 will be omitted.

**Please select the answer that is true of you.**

44. If you were a patient who was being resuscitated, would you want your family members to be present in the room?

☐ Yes

☐ No

45. Have you ever been present in the room during the resuscitation of one of your family members?

☐ Yes

☐ No

46. How many times have you invited a family member to be present during a resuscitation attempt at your healthcare institution?

☐ Never

☐ Less than five times

☐ More than five times

47. On what unit were you working the last time that you invited a family member to be present during a resuscitation attempt?

☐ Emergency Department  
☐ Critical Care Unit  
☐ Non-Critical Care Inpatient Unit  
☐ Other \_\_\_\_\_  
☐ Not Applicable

48. Who should make the decision about family presence during resuscitation efforts? Choose all that apply.

Patient (beforehand)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Nurse	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Physician	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Family	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other	_____	

49. Who is the BEST one to make the decision about family presence during resuscitation efforts? Choose one.

☐ Patient (beforehand)  
☐ Family  
☐ Nurse  
☐ Physician

50. Should the decision about family presence be a part of an advanced directive authorized by the patient?

☐ Yes  
☐ No

## Appendix D

### Timeline:

To accomplish the goals of the project, the following activities will be conducted. The specific dates are outlined in the Gantt chart below.

	2015	2015	2015	2015
	Jan	Feb	Mar	April
Admitted to candidacy	→			
IRB approval	→			
Data Collection		→		
Writing Chapter 1		→		
Chapter 2		→		
Data analysis			→	
Chapter 3		→		
Chapter 4			→	
Request for Defense Date			→	
Chapter 5			→	
Submit to committee members			→	
Dissertation defense				→

Following approval of my proposal by my proposed dissertation committee, I will submit my proposal and other appropriate paperwork to Graduate School for admission to candidacy (January). During the time I wait for candidacy approval, I have submitted my proposal and Institutional Review Forms (IRB) to the IRB for Expedited Review. Upon receipt of approval of my project for human subject research, I will start data collection. Data collection will consist of obtaining subjects through the American Association of Critical Care Nurses, and uploading my IRB approved consent form and data collection

instruments to the approved website (February 2015). While waiting for IRB approval I will start writing Chapter 1 and Chapter 2. Data analysis will be conducted (March 2015). Chapters 3, 4, and 5 will be written during the months of March 2015. Submission of dissertation to committee members will occur (hopefully March 2015) and the defense scheduled during the month of April 2015.

## **AppendixE: Participant Study Description Letter**

Dear Critical Care Nurse,

My name is Glynda Cochran. I am a doctoral candidate at the University of Texas Medical Branch (UTMB) and a Certified Critical Care Nurse (CCRN). I am conducting a research project as part of the requirements for a PhD in Nursing from UTMB and would like to invite you to participate in this study.

The study is being done to identify the attitudes and beliefs of critical care nurses who allow family members to participate in family presence during resuscitation. If you decide to participate in the research, you will be asked to complete an online survey using SurveyMonkey, Inc. that is anticipated to take 20 minutes or less to complete.

Although you will not benefit directly from participation in the study, I hope that the information gathered will affect the practice of family presence during resuscitation.

Participation is confidential—you will not be asked any identifying information on the survey and no link will be made with your email address. Your participation in the survey implies that you wish to be a part of this research project. Taking part in the study is your decision. You will be contacted in 1 week with a reminder email and after that point; no further communication will be received.

I am happy to answer any questions you may have about the study. You may contact me at glcochra@utmb.edu or 409-670-0262. If you have any concerns about your rights as a participant in the research, you may contact my project advisor, Dr. Alice Hill at ahill@utmb.edu.

Thank you for your consideration of this project. If you would like to participate, please click on the link below or copy-and-paste the link into your browser. You will be directed to the survey.

Link to survey: \*\*\*\*\*

Sincerely,

Glynda Cochran, RN, MSN, CCRN

## References

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## **Vita**

Glynda Cochran was born February 6 in Toule-Rosarie-en-Haye, France to Bill and Lynda Cochran. After high school graduation she joined the United States Air Force and was assigned as a medic for the four years she was enrolled. After discharge from the Air Force she attended Lamar University and graduated in 1988 with a Bachelor of Science in Nursing. Upon graduation she went to work at St. Elizabeth Hospital in their Cardiovascular Intensive Care Unit. She worked there for twelve year until she transferred to the Cardiovascular Catheterization Laboratory. While employed in the Cardiovascular Catheterization Laboratory she obtained her Master's degree in Nursing Education in 2009. In 2009 she left the

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