DIFFERENCES IN NURSES' PERCEPTIONS OF SAFETY CULTURE, NURSE-PHYSICIAN COLLABORATION, AND LEVEL OF JOB SATISFACTION RELATED TO THE TYPE OF OBSTETRICAL PHYSICIAN SERVICE DELIVERY MODEL UTILIZED

by

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This dissertation was prepared under the direction of the candidate's dissertation advisor, Dr. Rose Sherman, the Christine E. Lynn College of Nursing, and has been approved by the members of her supervisory committee. It was submitted to the faculty of the the Christine E. Lynn College of Nursing and was accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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ABSTRACT

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Title: Differences in Nurses' Perceptions of Safety Culture, Nurse-Physician Collaboration, and Level of Job Satisfaction Related to the Type of Obstetrical Physician Service Delivery Model Utilized

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Creating a safety culture is the focus in the current healthcare environment. An in-house, around-the-clock laborist service delivery model has been associated with positive outcomes, but little is known about the laborist structure's contribution to the labor-and-delivery working environment. The purpose of this descriptive correlational study was to explore the effects of physician service delivery model on safety culture, nurse-physician collaboration, and nurses' job satisfaction. An additional purpose was to examine associations between nurses' perceptions of safety culture, nurse-physician collaboration, and job satisfaction. Ray's (1981, 1989) Theory of Bureaucratic Caring and Homan's (1974) Social Exchange Theory guided this study. A survey consisting of demographic questions, the Collaborative Practice Scale (Weiss & Davis, 1985), the Hospital Survey on Patient Safety Culture (Agency for Healthcare Research and Quality, 2015; HSOPSC), and the McCloskey and Mueller Satisfaction Scale (McCloskey & Mueller, 1990) was distributed to registered nurses (RNs) nationwide. The results indicated that

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nurses in facilities using the around-the-clock model had higher perceptions of nurse-physician collaboration, but not of safety culture or job satisfaction in relation to the physician service-delivery model. Significant moderate-to-strong correlations between nurses' perceptions of patient safety and job satisfaction, and a weak correlation between bedside nurses' perceptions of nurse-physician collaboration and job satisfaction were demonstrated. Additional significant correlations were found between the instrument subscales. Control/responsibility in the MMSS scale was positively associated with both management support for patient safety, supervisors' and managers' expectations and actions promoting patient safety, and overall perceptions of safety in the HSOPSC scale. Praise and recognition in the MMSS scale were positively associated with supervisor/manager expectations and actions promoting patient safety in the HSOPSC scale.

Further appraisal is needed to understand the mechanism by which the laborist model affects patient care and work environment. Recommendations for future research include replicating the study with a larger sample sizes in specific groups based on the role and scheduled shift, conducting the study in a single system or location to mitigate the effects of other variables; and exploring physicians' perspectives on the variables being studied.

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CHAPTER 1: INTRODUCTION

Phenomenon of Interest

This study's central phenomenon of interest is the physician service delivery model (laborist-physician-management model with around-the-clock in-house physician presence vs. a community-based obstetrician management model) in relation to patient safety culture in labor and delivery units as perceived by labor and delivery nurses. An *around-the-clock, in-house laborist service delivery model* is defined as an obstetrician/gynecologist who provides medical care to obstetric patients in labor and delivery, ER, or antepartum units in collaboration with the patient's primary Ob/Gyn practitioner (McCue et al., 2016). Even though midwives play a vital role in obstetric patient care, midwife-conducted births constitute only 7.6% of all births (Martin et al., 2012). Additionally, midwifes' scope of practice is limited in caring for high-risk obstetric patients and performing certain life-saving intervention such as expediting delivery via vacuum application or performing cesarean section. Thus, this study examined the physician service structures only.

Labor and delivery physician coverage structures vary among facilities based on factors such as patient population acuity, patient volume, and hospital affiliation with academic programs. There are different combinations of provider coverage in labor and delivery including midwives, obstetrical residents, and private community-based physicians. The scope of practice varies between nurses, midwives and physicians, while ultimately obstetrician-gynecological (Ob/Gyn) physicians provide back up for other

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providers and treat complicated cases. The requirement of an Ob/Gyn physician's physical presence on the unit and response time to be present on the unit vary based on organizational policies and regulatory requirements.

Nurses, on the other hand, spend most their time at laboring patients' bedside. Nurses are the first ones to respond to emergencies that occur and are responsible in notifying the physician. While the presence of an in-house physician allows them to respond to emergencies immediately, physicians who respond from the community may take a longer time to arrive, leaving nurses to manage the patient based on physician telephone orders. Nurses may experience emotional distress while waiting on a physician and not being able to deliver lifesaving intervention such as performing emergent cesarean section, and also, nurses may perceive patients' safety is compromised due to prolonged wait. In this study, the safety culture in relation to the type of physician-care delivery model is examined by measuring nurses' perception of the safety culture. Health and Safety Commission defined safety culture of an organization as "the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization's health and safety management" (as cited in Nieva & Sorra, 2003, p.18).

In labor and delivery units, nurses work closely with physicians in managing patient care and their relationships with physicians affect their work environment. Thus, in addition to exploring nurses' perceptions of safety culture, this study also examined nurse-physician collaboration and nurses' job satisfaction related to in-house around-the-clock laborist service delivery model. These variables have been associated with organizational safety culture and clinical outcomes (AbuAlRub, Gharaibeh, & Bashayreh,

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2012; Djukic, Kovner, Brewer, Fatehi, & Cline, 2013; Dougherty & Larson, 2005; Faller, Gates, Georges, & Connelly, 2011; Gotlib Conn, Kenaszchuk, Dainty, Zwarenstein, & Reeves, 2014; McHugh, Kutney-Lee, Cimiotti, Sloane, & Aiken, 2011; Van Bogaert, Kowalski, Weeks, & Clarke, 2013; Vifladt, Simonsen, Lydersen, & Farup, 2016). Nurse-physician collaboration and nurses' job satisfaction are examined in relation to the physician-care delivery model to determine whether or not practicing in hospitals that employ the laborist-physician management model with around-the-clock in-house physician presence makes a difference in nurses' perceptions of nurse-physician collaboration and job satisfaction compared to practicing in hospitals with a community-based obstetrician management model. Associations between labor and delivery nurses' perceptions of safety culture, nurse-physician collaboration, and job satisfaction are explored.

Problem Statement

In 1976, leaders at the March of Dimes (Committee on Perinatal Health) acknowledged that timely access to an appropriate obstetric level of care facility reduces perinatal and neonatal morbidity and mortality, but only in 2015 were acuity levels of maternal care defined. The American College of Obstetricians and Gynecologists (ACOG, 2015) defines five levels of maternal care services, starting with birth centers for patients with the lowest risk level and ranking services from I to IV, with IV being regional perinatal healthcare centers that can accommodate the most complex maternal and infant conditions. Each level of care has minimum criteria for services, including equipment and healthcare provider availability. The selection of the appropriate level of care for a patient should be guided by the patient's medical needs to ensure the optimal

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outcome for the mother and neonate. For example, midwifery practice is predominantly prevalent in birth centers and level I facilities but is also acceptable in level II facilities with remote physician backup, while level III and IV care service facilities require an on-site obstetrician present at all times (ACOG, 2015). Even though level I and II facilities do not require on-site obstetrician presence, many implement an on-site obstetrician model due to the operational benefits of labor and delivery units such as providing back up for obstetricians practicing in the community and patient benefits by providing a safety net for emerging complications (Jesus, Caldwell, & Srinivas, 2015; Messler & Witcomb, 2015). When a physician is not present at the patient's bedside, nurses manage patient care until the physician's arrival based on physician orders. Certain emergencies such as umbilical cord prolapse, placental abruption, and uterine rupture require prompt intervention to deliver a live infant. Patient safety may be compromised due to the response time for a community obstetrician to respond. Jesus et al. (2015) support the need for further examination of physician-care delivery models to understand which model is the optimal model in obstetric care.

Employing a laborist service model is beneficial in positively affecting patient outcomes by allowing organizations to enforce practice aligned with organizational goals and reflect organizational mission and vision (Weinstein, 2015). Because laborists have both a potential to affect patient care and practice according to organizational values, this study examines safety culture related to the physician service delivery structure (laborist vs. community-based Ob/Gyn).

In addition to safety culture perception, laborists have the potential to affect other aspects of work environment. Because nurses work closely and affected by interactions

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with physicians, nurse-physician collaboration and nurses' job satisfaction variables were chosen for this study. Nurse-physician collaboration may be related to physician delivery structure due to laborists' presence on the unit and possible increased face-to-face interaction with nursing staff. Nurses' job satisfaction may be related to physician delivery structure due to laborists' physical availability to provide quicker response to nurses' concerns or actions such as bedside patient evaluation. Nurses' job satisfaction may also be affected by possible alignment of laborists with organizational goals and nurses' job requirements as guided by those goals.

Background

Physician Service Delivery Structure in Labor and Delivery

In-house around-the-clock Ob/Gyn physician presence, which is required for advanced-level facilities, has been associated with decreased maternal morbidity and mortality (Stevens, Swaim, & Clark, 2015). As a result, there has been increased utilization of this model of physician service delivery in community level II facilities (Messler & Witcomb, 2015). Physicians who provide care to obstetric patients and stay on labor and delivery premises around-the-clock are frequently referred to as laborists (McCue, 2015). Establishing laborist programs allows hospitals to develop protocols supporting organizational goals aligned with current professional guidelines, compared to relying on community-based obstetricians whose autonomous decisions may not align with current practice recommendations (Weinstein, 2015). Messler and Witcomb (2015) predict that the laborist practice will lend great potential for Ob/Gyn hospitalists' involvement in organizational initiatives toward improving quality and safety of patient care through strengthening interprofessional collaboration and practice.

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Safety Culture

Safety culture within organization is characterized by the values of individual and group translated into attitudes, perceptions, competencies, and patterns of behavior that support organization's health and safety management (Health and Safety Commission, 1993). In the literature, the quality and safety of patient care are discussed as related concepts. Quality is a broader term that includes efficacy, patient-centered orientation, equitability, and safety (Committee on the Quality of Health Care in America, 2001). Safety is considered the foundation for all other aspects of care quality (Committee on the Quality of Health Care in America, 2001). Thus, patient safety is an inseparable feature of high-quality patient care (Aspden, et al., 2004).

Because safety culture promotes patient safety and improved patient outcomes, creating a safety culture requires urgent attention (Theodosios, 2012). Since 1999 the estimated number of preventable medical errors more than doubled. In 1999, the Institute of Medicine issued a report stating that up to 98,000 people die annually because of medical errors (Kohn, Corrigan, & Donaldson, 1999). A recent study presents significantly higher numbers, reporting that 210,000–440,000 people are impacted by preventable errors that contribute to their deaths (James, 2013).

In the United States, childbirth is the most common diagnosis resulting in hospitalization with more than 4 million births annually (Russo, Wier, & Steiner, 2009). Despite this, obstetrics and gynecology lag behind other specialties in the quality and safety improvement process and in measuring data for improving patient outcomes, primarily because adverse events are uncommon and unexpected (Gee & Winkler, 2013).

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Yet, adverse perinatal events occur in typically healthy patients who are expected to have positive outcomes (Funai, 2008).

Recognizing the need to monitor perinatal quality and safety, the Joint Commission now requires hospitals to report on perinatal quality measures, develop improvement plans to meet quality indicators, and improve the safety of maternal and neonatal patients. These indicators include eliminating non-medically indicated elective deliveries below 39 weeks, reducing cesarean section rates, ensuring administration of antenatal steroids for the targeted population, increasing exclusive breast-feeding rates, and providing adequate support to promote exclusive breastfeeding, considering the mother's choice (Joint Commission, 2015). To assist hospitals in meeting the Joint Commission benchmarks, the Centers for Disease Control and Prevention (CDC) partner with hospitals and healthcare providers at the state level through the establishment of a perinatal quality collaborative (PQC) and provide tools and guidance to achieve set goals in improving maternal and neonatal outcomes (CDC, 2017).

However, patient outcomes programs and initiatives for safety related improvement are lacking (Shekelle et al., 2011). The United States is a developed country that has experienced an increase in maternal mortality between 1990 and 2013 (Kassebaum, Lopez, Murray, & Lozano, 2014), and the country currently ranks 26th in infant mortality among Organization for Economic Co-operation and Development (OECD) member countries (MacDorman, Mathews, Mohangoo, & Zeitlin, 2014).

The complexity of the healthcare environment, hierarchal and political forces within healthcare organizations, and hesitancy to implement major changes in practice are major contributors to delays in the implementation of safety improvement tactics

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(Wagner et al., 2012). As a result, organizations focus on a single initiative within a single group of employees. To prevent these delays and promote safety culture, safety related values, behaviors, and overall commitment to safety should be aligned among all stakeholders within organization including nurses, physicians and administrators. Ultimately, this alignment should translate into decisions promoting safety culture such as implementation of in-house around the clock laborist service delivery model.

Nurse-Physician Collaboration

The presence of laborists on labor and delivery units around-the-clock has the potential to facilitate frequent face-to-face interactions providing a foundation for the development of collaboration. Baggs and Schmitt (1988) define nurse-physician collaboration as "nurses and physicians cooperatively working together, sharing responsibility for solving problems and making decisions to formulate and carry out plans for patient care" (p. 145). Effective collaborative relationships between nurses and physicians are fundamental to the provision of safe care and quality outcomes, while lack of collaboration is responsible for a great share of preventable errors (Baggs et al., 1999; Manojlovich, 2010) and is associated with suboptimal patient care (Weller, Barrow, & Gasquoine, 2011). Robinson, Gorman, Slimmer, and Yudkowsky (2010) reported that attributes of effective collaboration include "clarity and precision of message that relies on verification, collaborative problem solving, calm and supportive demeanor under stress, maintenance of mutual respect, and authentic understanding of the unique role" (p. 206).

Nurses with the capability to lead a multidisciplinary team are an asset to labor and delivery settings where collaboration among healthcare team members is essential for maternal and neonatal patient safety (Lyndon, Zlatnik, & Wachter, 2011). In community

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hospitals' perinatal units, these nurses often manage the labor process with limited interaction with physicians (Simpson, James, & Knox, 2006). The majority of nurse-physician conversations occur via telephone on an as-needed basis. Physicians are highly dependent on nurses' judgment throughout the labor management process. The paradox of this situation is that physicians often want to be in control but also prefer not to be *bothered* with non-urgent, ongoing updates, and thus, they keep interactions to a minimum (Simpson et al., 2006). While this minimalistic interaction pattern is perceived as normal during low-risk labor, it sets the groundwork for a potential failure to convey important aspects of patient care and interferes with the development of the nurse-physician collaboration (Simpson et al., 2006). Even though nurse-physician interactions occur throughout the patient care cycle regardless of the physician's presence on premises, face-to-face interaction strengthens interpersonal relationships and Interprofessional collaboration.

The quality of relationships developed with coworkers, administrators, and physicians and the approach to collaboration influence nurses' job satisfaction and ultimately, their employment decisions (Galletta, Portoghese, Battistelli, & Leiter, 2013). A nurse-physician collaboration is one of the strongest predictors of nurse job satisfaction, surpassing financial incentives and perceived job flexibility (Peltier, Schibrowsky, & Nill, 2013).

Nurses' Job Satisfaction

The nursing shortage is a global concern affecting numerous healthcare settings (Toh, Ang, & Devi, 2012). Nurses' job satisfaction has a significant influence on retention at the workplace, particularly in specialty areas like obstetrics. Unlike the

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previous shortage that primarily stemmed from the insufficient number of nurses, today's challenge is to recruit nurses with specific required skill sets such as specialty training and experience (American Association of Colleges of Nursing [AACN], n.d.). Kuthy, Ramon, Gonzalez, and Biddle (2013) emphasize the significance of soft or nontechnical skills such as personality, bedside manners, communication, and decision making during the hiring process as predictors of success in nursing jobs. Demand also has risen for high-level nursing skills, such as expert performance in specialty areas including labor and delivery (AACN, n.d.).

Reasons for nursing shortage include increase in demand in nursing profession, decrease in number of skilled specialty nurses due to aging in population of experienced nurses, and nurses leaving their profession due to their work environment factors influencing their job satisfaction (Cox, Willis, & Coustasse, 2014). Work environment factors including relationship with management, physician-nurse collaboration, safety culture, control/responsibility and autonomy over the practice influence nurses' job satisfaction and ultimately their decision to stay with the organization or to seek for alternate employment (Djukic et al., 2013; Faller et al., 2011; Hofmann & Mark, 2006; Sawatzky, Enns, & Legare, 2015; Van Bogaert et al., 2013).

Purpose

The purpose of this descriptive correlational study was to explore the effects of physician service delivery model on patient care through evaluation of safety culture and the effects on work environment factors including nurse-physician collaboration, and nurses' job satisfaction. An additional purpose was to examine associations between nurses' perceptions of safety culture, nurse-physician collaboration, and job satisfaction.

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The theoretical frameworks used in the research include Ray's (1989) Theory of Bureaucratic Caring and Social Exchange Theory (Homans, 1958). The theory of bureaucratic caring is utilized to explain how humanistic and bureaucratic values coexist in organizational culture of healthcare entities. This theory accounts for organizational values and provides a comprehensive structure to guide this study. More specifically, the political, economic, and legal caring aspects of the theory cast light on nurse-physician collaboration, care-delivery structures, and patient safety perceptions. Social exchange theory further explains behaviors within organizations on the basis of social transactions of tangible and intangible resources. Promoting patient safety by strengthening nurse-physician collaboration through physician presence has the tangible benefits of reducing legal costs and attracting more clients by demonstrating favorable, publicly reported data and earning higher hospital rating scores among reporting agencies such as CMS and Leapfrog (Austin et al., 2015). The intangible benefits may include a healthier work environment for staff, a better community reputation, and higher patient satisfaction.

Significance

The presence of laborists in perinatal units is associated with improved patient outcomes including decreases rates of cesarean section, decrease in induction of labor rates, decrease in preterm birth rates, and increase in the rates of vaginal deliveries after cesarean section (VBAC) (Feldman et al., 2014; Iriye et al., 2013; Tekle et al., 2015), and generates comparable patient satisfaction scores (Srinivas et al., 2013). The presence of laborist on the unit has the potential to influence additional patient outcomes not previously examined in the literature. Because there is an association between patient outcomes and safety culture (DiCuccio, 2015), this study focused on determining whether

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an in-house around the clock laborist service delivery model impacts safety culture as perceived by labor and delivery nurses. In addition, physical laborist presence on the unit has a potential to affect other factors in labor and delivery work environment. Because both labor and delivery nurses and obstetricians are involved in providing healthcare needs to labor and delivery patient population, nurse work environment variables including nurse-physician collaboration and job satisfaction related to laborist model were examined.

This study provides information on whether or not the laborist service delivery model makes a difference in nurses' perceptions of safety culture, nurse-physician collaboration, and nurses' job satisfaction. This study's results add to the body of knowledge on effects associated with the around-the-clock, in-house laborist service delivery model and assists healthcare administrators in deciding on an optimal physician model of care in their obstetrical suits.

Link to Caring Science

Caring is a complex process grounded in ethical, spiritual, and transcultural, meaning (Ray, 1981, 1989, 2010). Ray's (1981, 1989, 2010) Theory of Bureaucratic Caring is valuable in understanding nursing practice as caring for individuals in a context of organizational structure. Each organization possesses its own vision, mission, and values. The values are both humanistic such as promoting health and well-being bureaucratic such as economics and legal aspects vital for organizational operation and viability. Ray's (1981, 1989, 2010) theory helps to understand how laborist service affects organizational bureaucratic caring dimensions including financial impact associated with the cost of the program, legal implications associated with safety culture,

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and humanistic caring dimensions including social-cultural collaboration between nurse and physicians.

Research Questions

This inquiry is guided by the following questions:

Research Question 1

Is there a difference in labor and delivery nurses' perception of safety culture in their practice environment between facilities utilizing the around-the-clock, in-house laborist service delivery model and facilities that do not utilize the around-the-clock, in-house laborist service delivery model?

Working Hypothesis 1. The nurses' safety culture perception scores will be significantly higher among labor and delivery nurses who practice in the facilities that utilize the around-the-clock, in-house laborist service delivery model than the patient safety perception scores among labor and delivery nurses who practice in the facilities that do not utilize the around-the-clock, in-house laborist service delivery model.

Research Question 2

Is there a difference in labor and delivery nurses' perceptions of nurse-physician collaboration in their practice environment between facilities utilizing the around-the-clock, in-house laborist service delivery model and facilities that do not utilize the around-the-clock, in-house laborist service delivery model?

Working Hypothesis 2. The nurse-physician collaboration perceptions scores will be significantly higher among labor and delivery nurses who practice in the facilities that utilize the around-the-clock, in-house laborist service delivery model than the nurse-physician collaboration perception scores among labor and delivery nurses who practice

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in the facilities that do not utilize the around-the-clock, in-house laborist service delivery model.

Research Question 3

Is there a difference in labor and delivery nurses' job satisfaction in their practice environment between facilities utilizing the around-the-clock, in-house laborist service delivery model and facilities that do not utilize the around-the-clock, in-house laborist service delivery model?

Working Hypothesis 3. The nurses' job satisfaction scores will be significantly higher among labor and delivery nurses' who practice in the facilities that utilize the around-the-clock, in-house laborist service delivery model than the nurses' job satisfaction scores among labor and delivery nurses who practice in the facilities that do not utilize the around-the-clock, in-house laborist service delivery model.

Research Question 4

What is the relationship between nurses' perception of safety culture and nurses' perception of nurse-physician collaboration in labor and delivery units?

Working Hypothesis 4. The greater the score of nurse-physician collaboration, the greater the score of nurses' perception of safety culture.

Research Question 5

What is the relationship between nurses' perception of safety culture and nurses' job satisfaction in labor and delivery units?

Working Hypothesis 5. The greater the score of nurses' job satisfaction, the greater the score of nurses' perception of safety culture.

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Research Question 6

What is the relationship between nurses' perception of nurse-physician collaboration and nurses' job satisfaction in labor and delivery units?

Working Hypothesis 6. The greater the score of nurses' perception of nurse-physician collaboration, the greater the score of nurses' job satisfaction.

Theoretical Framework

The complexity of the healthcare environment led to the selection of the nursing theory, The Theory of Bureaucratic Caring which aids in understanding the challenges nurses and physicians face on a daily basis, and organizational theory, Social Exchange Theory, which explains the dynamics within organizations, added to the theoretical framework.

The Theory of Bureaucratic Caring

The Theory of Bureaucratic Caring originated from an ethnographic, phenomenological and grounded theory qualitative research study that aimed to explain the phenomenon of caring in an organizational healthcare culture (Ray, 1981, 1989, 2010). Data represented the paradox arising from the generation of the substantive theory of differential caring to the formal theory of bureaucratic caring, thus making use of Hegel's philosophy in its analysis of the interconnectedness between thesis, antithesis, and their transformation into synthesis. *Thesis* represents being and *antithesis* represents its opposite, or not being, which emerge into a new force of becoming or *synthesis*. In Ray's theory *thesis* represents humanistic values, and *antithesis* represents bureaucracy, which together transform into *synthesis* which represents caring. Safety culture and nurse job satisfaction can be viewed as thesis of providing foundation for patient safety and

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healthy work environment for nurses. The antithesis is the economic impact associated with programs promoting nurse job satisfaction, safety initiatives implementation including employing laborist delivery model, and legal costs gained from practicing in unsafe culture environment. Finding the balance between both supporting safety culture and responsibly distributing economic resources can be viewed as synthesis. Nurse-physician shared goals can be viewed as the thesis of ensuring patients' well-being in relation to the antithesis of professional disagreements. This transforms into a unified force for strengthening the outcome—the quality and safety of patient care. Ray's theory reflects the interconnectedness of spiritual-ethical caring within a whole (social-cultural organization) and its parts (dimensions of organizational bureaucracy - economic, political, legal and technological) (Ray, 1981). While *spiritual* involves creativity and attachment, *ethical* involves moral obligations to others. The major dimensions of the theory surrounding spiritual ethical-caring include physical, socio-cultural, legal, technological, economic, political, and educational factors. The theory offers evidence of caring in each facet of organizational culture, reinforcing the idea that spiritual-ethical caring maintains organizations as whole entities and strengthens the relationships between and within all organizational categories or dimensions. The theoretical dimensions defined as following:

Physical caring is care for a person's whole state of being, including (in spite of the name) both its physical and its mental aspects. Mental and physical being are interrelated and affect one another (Ray, 2006).

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Social-cultural aspects of caring are cultural features such as ethnicity and social structure. They include family dynamics, support systems, and interpersonal relationships (Ray, 2006).

Legal caring deals with the legal factors that affect the patients and professionals in an organization. Patients must deal with informed consent and with patient and family rights and responsibilities. Legal caring guides an organization's norms of behavior, policy, and professional accountability. The current norm of defensive medicine and nursing falls within legal caring (Ray, 2006).

Technological caring focuses on non-human resources, including the machinery for maintaining patients' wellbeing and documentation of medical records (Ray, 2006).

Economic caring involves of the influence of financial resources on caring practices, including allocation of human and non-human resources, limitations, and maintenance of the financial viability of an organization (Ray, 2006).

Political caring reflects the organizational power and hierarchical structures that affect communication patterns and influence the decision-making process and competition over resources. Political factors affect the way nursing is perceived within the organization and gender stratification (Ray, 2006).

Educational caring consists of formal and informal educational programs that use various teaching methods and learning modes to deliver information (Ray, 2006).

Major theoretical dimensions depict the elements of a complex healthcare organization, and the interconnectedness of these dimensions illustrates how healthcare providers as well as patients are being affected by this intricate structure. Patients and members of a healthcare team are all affected by each dimension from their own

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perspective. Therefore, despite sharing common goals in patient care, nurses and physicians use different judgments and have different priorities in patient care, resulting in professional conflict (Lyndon et al., 2011). Professional education instills culture and social structures that lead professionals to assume responsibilities that reflect the priorities of their own profession rather than shared care responsibilities (Beales, Walji, Papoushek, & Austin, 2011). To ensure a perinatal team has the necessary support in the form of initiatives to improve collaboration, it is imperative to understand professional differences and perspectives.

In the theory of bureaucratic caring, Ray (2006) demonstrates how organizational caring translates among different disciplines and how it interconnects with humanistic caring values. This study's variables include nurses' perceptions of patient safety, nurse-physician collaboration, nurses' job satisfaction, and physician service structure. Each variable may be viewed from at least one theoretical dimension of the theory. The nurse-physician collaboration within the organization is reflected within the areas of political and social-cultural caring. Political factors reflect the organizational power and hierarchical structures that affect communication patterns and influence the decision-making process including decisions on optimal care delivery model in obstetrics. Further, political factors affect the way nursing is perceived within the organization and the gender stratification within it (Coffman, 2014) which may impact nurse-physician collaboration. Social-cultural caring emphasizes the professional perspectives of both disciplines as well the organizational cultural perspective. Patient safety is primarily influenced by legal and economic values. Economics holds a controlling position in the healthcare system (Ray, 1987). Meanwhile, safety practices directly affect a hospital's

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financial well-being by lowering legal costs and increasing client volume (Etchells et al., 2012). However, promoting the safety culture within an organization also requires financial resources for education, equipment, and monitoring of safety outcomes. Nurses' job satisfaction may be examined from the standpoint of socio-cultural and economic caring. While nurses may experience dissatisfaction with their job due to unhealthy work environment evidenced by lack of safety culture and lack of nurse-physician collaboration, organizations may suffer from the financial implications of nursing turnover. Because job satisfaction is related to nurses' intention to leave the organization (Choi, Cheung, & Pang, 2013), increasing satisfaction results in decreased turnover and financial savings.

The choice of a physician services structure for a hospital and its effects on work environment is examined through several theoretical dimensions such as political, legal, economic and socio-cultural. However, despite the fact that each theoretical dimension may have a different value in relation to each variable, these dimensions are interconnected.

The Theory of Social Exchange

Social Exchange Theory (Homans, 1974) guides the understanding of relationships between human beings and social groups as negotiated exchanges. This theory was introduced by Homans (1958). He based the theory on Skinnerian operant psychology, which studies the effective application of social power in controlling behavior (Homans, 1974).

According to the social exchange theory, human relationships form based on subjective and objective cost-benefit analysis and the evaluation of alternatives. In this

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study, safety culture, nurse-physician collaboration, and nurses' job satisfaction were measured as a potential benefit of implementation of in-house around-the-clock laborist service delivery. Theoretical propositions explain the tangible and intangible benefits individuals gain from relationships and interactions with others. The theory of social exchange holds that human interaction consists of exchanges or transactions in which both parties evaluate their losses and benefits (Emerson, 1976). Transactions can be both formal and informal, and can account for both tangible and intangible benefits. Intangible benefits include smiles, social acceptance, positive feelings, and other forms of human interaction, while tangible benefits include financial rewards, public recognition, and opportunities for promotion.

Theoretical Propositions

The theory puts forth four essential propositions to explain behavior within organizations (Homans, 1974):

- The success proposition: "For all actions taken by persons, the more often a particular action of a person is rewarded, the more likely the person is to perform that action" (Homans, 1974, p. 16).
- The stimulus proposition:

  If in the past the occurrence of a particular stimulus or set of stimuli has been the occasion on which a person's action has been rewarded, then the more similar the present stimuli are to the past ones, the more likely the person is to perform the action, or some similar action, now. (Homans, 1974, pp. 22–23)

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- The deprivation/satiation proposition: “The more often in the recent past a person has received a particular reward, the less valuable a further unit of that reward becomes for him” (Homans, 1974, p. 23).
- The value/rationality proposition: “The more valuable to a person is the result of his action, the more likely he is to perform the action” (Homans, 1974, p. 25). That is, “In choosing between alternative actions, a person will choose that one for which, as perceived by him at the time, the value of the result, multiplied by probability of getting the result, is the greater” (Homans, 1974, p. 45).

Social exchange theory (Homans, 1974) explains individual and group interactions in concrete terms and maintains that every interaction is an exchange in which both parties evaluate losses and benefits. The assumption is that if nurse-physician interaction is a social exchange, and both the nurse and the physician may expect benefits, these benefits should involve strengthening collaboration and increase job satisfaction as a result of improved work environment. An additional organizational level assumption, is that implementing in-house around-the-clock laborist service delivery model is a social exchange between hospitals and service providers. The benefits of this exchange include strengthening safety culture, and increasing nurses’ job satisfaction. Even though these benefits appear to be intangible at first, they can be converted into tangible savings from decrease in adverse patient outcomes associated with improved safety culture and decrease in nurse turnover associated with increased nurses’ job satisfaction.

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Interrelationship Between Theories and Study Variables

In the theory of bureaucratic caring, Ray (1989) views complex organizational culture and interconnectedness of organizational dimensions through the lens of caring. Safety culture, nurse-physician collaboration and nurses' job satisfaction related to the physician service delivery model involves consideration of both humanistic and bureaucratic factors. Humanistic factors include potentially improved nurse-physician collaboration, and potentially increased nurses' job satisfaction. Bureaucratic values account for potential consolidation of safety culture resulting in legal, economic and political advantages. Yet, the social exchange theory (Homans, 1974) simplifies relationships within organizations using risk-benefit analysis that includes both tangible and intangible benefits. Through the lens of the social exchange theory safety culture, increased nurses' job satisfaction can be viewed as potential benefit generated from laborist service delivery model. Even though the theory of Bureaucratic Caring examines organizational dimensions in the context of caring, and the Social Exchange theory focuses on risk-benefit analysis between individuals and groups, both theories emphasize relationships within organization and demonstrate the difference in assigned values to each organizational dimension.

Definitions

The following conceptual definitions used in this study:

An *around-the-clock, in-house laborist service delivery model* is defined as an obstetrician/gynecologist who provides medical care to obstetric patients in labor and delivery, ER, or antepartum units in collaboration with the patient's primary Ob/Gyn practitioner. Laborists work defined shifts that provide around-the-clock coverage; their

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responsibilities include assisting primary Ob/Gyn physicians in surgeries, providing obstetric consultation to unassigned patients, responding to obstetric emergencies in the absence of the primary physician, and focusing on safety and quality measure improvements (McCue et al., 2016).

Safety culture of an organization is defined as,

> The product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization's health and safety management. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventive measures. (Health and Safety Commission, 1993)

Nurse-physician collaboration is defined as "the joint communicating and decision-making process with the expressed goal of satisfying the patient's wellness and illness needs while respecting the unique qualities and abilities of each professional" (Coluccio & Maguire, 1983, p. 63).

Nurses' Job Satisfaction is defined as "a related constellation of attitudes about various aspects or facets of the job" (Lu, While, & Barriball, 2005, p. 212).

Chapter Summary

In summary, an around-the-clock, in-house laborist service delivery model was examined in relation to safety culture in labor and delivery units as measured by nurses' perceptions of safety culture. Because a laborist service delivery model may have the potential to affect other aspects of nurses' work environment, additional nurses' perspectives such as perceptions of nurse-physician collaboration and nurses' job

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satisfaction were examined in this study. Also, associations between nurses' perception of safety culture, nurse-physician collaboration, and job satisfaction among labor and delivery nurses were explored.

Chapter 2 includes a literature review and discussion on a knowledge gap justifying the need for this study.

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CHAPTER 2: LITERATURE REVIEW

This literature review contains two sections. The first section reviews studies that previously utilized the following theoretical frameworks that guide the study: Ray's (1981, 1989, 2010) Theory of Bureaucratic Caring and Social Exchange Theory (Homans, 1958, 1974). The second section reviews literature related to study variables. These variables include the physician-care delivery model, safety culture, nurse-physician collaboration, and nurses' job satisfaction.

Theoretical Frameworks

The theoretical lenses guiding this study include Ray's (1981, 1989, 2010) theory of bureaucratic caring and social exchange theory (Homans, 1958, 1974). The lens of the Theory of Bureaucratic Caring aids in understanding the complexity of a healthcare organizational structure, and interconnectedness of humanistic and bureaucratic values within organization. Social exchange theory directs an understanding of relationships between individuals and groups within organization in terms of cost-benefit analysis and evaluation of alternatives.

Ray's (1981, 1989, 2010) Theory of Bureaucratic Caring originated from qualitative grounded theory research findings. The study aimed to elucidate the meaning of the phenomenon of caring within hospital organizations. The major dimensions of the theory include caring in relation to ethics, spirituality, physical, socio-cultural, legal, technological, economic, political, and educational. In this theory, Ray (2010) presents the interconnectedness of humanistic values such as caring, spirituality, and ethics with

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bureaucratic values such as politics, economics, technology, and legality. The theory generated from research on all units of a hospital and with diverse participants including nurses, physicians, administrators, and patients, also demonstrates how caring is exhibited within each theoretical dimension and offers evidence of caring in each dimension of an organization. The theory of bureaucratic caring assists in comprehending how caring practices are expressed and understood in alignment with an organizational bureaucracy. In light of the prevalent bureaucratic values such as politics, legal, and economics, nurses often experience moral and ethical conflict. For example, practicing essential nursing values such as caring can be challenging for them due to organizational constraints such as limited staffing, financial considerations, and political forces (Turkel, 2007). As a result, in terms of application of the theory, nurses should determine how the meaning of caring is an interface with their organizational culture and what impact the organizational culture has on caring (Ray, 2010). Not only nurses, but also other providers, including physicians, struggle with the paradox of needing to simultaneously serve corporate needs and the needs of human beings (Ray, 1989). Both nurses and physicians are subject to the influence of this constantly changing and intricate environment; however, the influence occurring in the caring dimensions outlined in the theory affects each group in a different manner. Ray's substantiate theory was discovered as differential caring (1981, 1989, 2010), followed by the formal theory of bureaucratic caring. For example, the political caring dimension includes policies, regulations, and power struggles within an organization that are being experienced by physicians and nurses from different perspectives. Given the foci of this current study, nurses, as employees, share the organizational vision, while private physicians may be primarily

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guided by values established by their own practice. While differences in priorities exist, the theory validates the presence of a paradox of conflicting, but also cooperating values, allowing for their coexistence in a complex organizational culture. The variables of the proposed study—which are the physician-service delivery model, nurses' perception of a culture of safety, nurse-physician collaboration, and nurses' job satisfaction—encompass both humanistic and bureaucratic aspects. Bureaucracy is reflected in organizational financial, political and legal considerations dictating the physician-service delivery model, factors influencing nurses' job satisfaction, and safety initiatives within the organization. Humanistic aspects are reflected in laborist delivery model affects on patient care, nurse-physician collaboration and job satisfaction.

Social exchange theory (Homans, 1974) proposes a sociological perspective of relationships to facilitate a loss and benefit analysis in guiding interactions between individuals and between groups within an organization. The central component of the theory is the basic form of interaction it presents, wherein two or more parties own something valuable and each decides whether to perform an exchange and for what price. The exchange process occurs based on a concept of self-interest that is a combination of intangible benefits such as psychological needs and tangible benefits including financial rewards. The advancement of self-interest of each party within a relationship is foundational to interpersonal relationships (Homans, 1974). Nurses and physicians interact and share patient care decisions which is, interestingly, a joint value. According to social exchange theory, as in any relationship, nurse-physician interaction is based on a loss-benefit analysis of economic and psychological values. Because nurses and physicians do not exchange items carrying monetary value in their professional

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relationship, economic factors do not directly affect them. However, psychological factors that account for emotions, feelings, and satisfaction are prevalent in nurse-physician relationships. Social exchange theory includes four propositions. Through the lens of theoretical propositions, the nurse-physician relationship is interpreted as follows: (a) success proposition—the more often a nurse participates in positive nurse-physician interaction, the more often he or she will be willing to interact exerting a positive effect on preventing delays in relaying vital information to physicians; (b) stimulus proposition—if a nurse was positively acknowledged by a physician on a unique aspect of her performance, there is a greater chance that the nurse will repeat this performance aspect; (c) deprivation/satiation proposition—the more often a nurse receives the same praise from a physician, the less valuable it becomes (the praise may be taken to a different level, such as public acknowledgment rather than simply stating, "You did a great job"; and (d) value/rationality proposition —the more a nurse values physicians' positive feedback, the more the nurse will be willing to perform actions generating this feedback. According to these theoretical propositions, the psychological benefits derived from relationships may serve as one of the factors determining nurses' job satisfaction.

Literature on the Theory of Bureaucratic Caring

Ray (2010) defines caring as

> A complex, transcultural, relational process, grounded in an ethical, spiritual context. As such, caring is the relationship between charity and right action, between love as compassion in response to suffering and need, and justice or fairness in terms of what ought to be done. Caring occurs within a culture or

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society, including personal culture, hospital organizational culture, or society and global culture. (p. 59).

This definition emphasizes the essence of how nurses' caring practices function within a bureaucratic structure, and the theory of bureaucratic caring (Ray, 1989, 2010) serves as a theoretical background for studies exploring complex and dynamic processes within healthcare organizations. Three studies were identified as utilizing these theoretical categories; two studies utilized the framework in nursing practice and one in nursing education.

Eggenberger (2011) conducted a qualitative descriptive exploratory study to examine the experience of charge nurses in acute care settings. The theoretical lenses for this study included Ray's (1989, 2006) theory of bureaucratic caring, Swanson's (1991) conceptions of caring attributes and leadership, and Boykin and Schoenhofer's (2001) theory of nursing as caring. The Theory of Bureaucratic Caring guided an understanding of the complexity of the multifaceted charge nurse role and the environment in which charge nurses practice. Semi-structured interviews were conducted among 20 nurses practicing in four different facilities. Qualitative analysis revealed eight themes: monitoring for quality, creating a safety net, completing the puzzle, showing the way, managing the flow, putting out fires, making a difference, and keeping patients happy. The need for better articulation of charge nurses' responsibilities was indicated in order to enhance their function.

Wade et al. (2008) investigated organizational characteristics and caring attributes displayed by managers and their influence on nurses' job satisfaction, as viewed through the lens of the Theory of Bureaucratic Caring (Ray, 1989). Variables within their study

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represented both humanistic and bureaucratic dimensions of the theory. While organizational values are reflected in bureaucratic concepts such as politics and economics, humanistic aspects are associated with caring behaviors demonstrated by managers. The researchers hypothesized that the balance between bureaucratic and humanistic values impacts job satisfaction among bedside nurses. Study design was predictive correlational. In their study, a convenience sample of 731 nurses was recruited from a single healthcare system located in the mid-Atlantic region of the United States. The questionnaire in this study comprised the Practice Environment Scale (Lake, 2002), Nyberg's Caring Assessment Scale (Nyberg, 1990), and the Job Enjoyment Subscale derived from the Nursing Job Satisfaction Scale (Atwood & Hinshaw, 1980). The study concluded that 30% ($p < .001$) of variance in satisfaction was attributable to the following study variables: quality of care metrics, managerial factors, support of nurses, nurse-physician relations, and resources. Additional factors may be explored utilizing qualitative inquiry methods (Wade et al., 2008).

Hebert (2014) utilized Ray's (1989) Theory of Bureaucratic Caring, complexity theory, and the Theory of Transformational Learning to understand the phenomenon of collaborative practice from organizational and educational perspectives. Hebert's (2014) study was intended to aid in understanding the process by which nurse educators prepare students for interprofessional practice. This research employed a case study approach. Sixteen interviewees participated in semi-structured interviews to examine nurse educators' perspectives on program curriculum, including collaborative practices. Additionally, data collection included six observations and 10 participants who completed the Carnegie Foundation Nursing Education Study Survey Instrument

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(Benner, Sutphen, Leonard, & Day, 2009), which is a survey used to provide background information on faculty experiences in teaching interprofessional collaboration in nursing. The findings indicated that nurse educators who participated in the study have always engaged in interprofessional education, utilizing classroom and clinical simulation strategies. The unique role of nursing within interdisciplinary teams and its role in promoting interprofessional collaboration initiatives was also emphasized.

In summary, the Theory of Bureaucratic Caring (Ray, 1989) guided research studies in understanding the complexity of organizational environment and its influence on nursing in both educational and practice settings. While the theory describes the paradox of the coexistence of bureaucratic and humanistic facets within organization, the research demonstrated the importance of their interrelationship and balance which influence nurses in different aspects of their profession including job satisfaction, fulfilling charge nurse duties, and undergoing interprofessional training.

Social Exchange Theory

Social Exchange Theory is utilized predominantly in studying two domains: (a) member-organization relationships (Biswas, Varma, & Ramaswami, 2013; Hofmann & Morgeson, 1999; Settoon, Bennett, & Liden, 1996; Trinchero, Brunetto, & Borgonovi, 2013), wherein it aids in understanding organizational factors influencing nurses' job satisfaction; and (b) hierarchical relationships (Galletta et al., 2013; Settoon et al., 1996), wherein the theory aids in understanding nurse-physician relationships.

Trinchero et al. (2013) utilized the social exchange theory to examine the effects of perceived organizational support, satisfaction with training and development, and perception of discretionary power on 827 Italian registered nurses' work engagement.

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Discretionary power refers to employees' perception of rules, values, and tasks pertaining to their job (Trinchero et al., 2013). The results indicated that training and development were responsible for 26.8% of perceived nurses' engagement, process-oriented supervision accounted for 6.9% of perceived nurses' engagement, and discretionary power was associated with 2.1% of perceived nurses' engagement.

Biswas et al. (2013) applied the social exchange theory to predict employees' degree of perceived organizational support (POS) based on perceived distributive justice and procedural justice within their organization. Both distributive and procedural justice were viewed in terms of the theoretical assumption of loss-benefit analysis translated into POS. The researchers conducted a cross-sectional study in randomly selected organizations in India. Data were collected from 238 managers and executives of 12 organizations (five manufacturing, seven service). POS was measured utilizing the Survey of Perceived Organizational Support (SPOS; Rhoades, Eisenberger, & Armeli, 2001), and organizational justice was measured utilizing Niehoff and Moorman's (1993) Distributive and Procedural Justice scale. The results demonstrated a significant positive relationship between distributive justice and POS ($r^2 = .32$; $p < .01$), and between procedural justice and POS ($r^2 = .51$; $p < .01$). The study limitation was that it employed a single cultural perspective that may not be generalizable to other cultures. Additionally, the SPOS scale had a reliability of $\alpha = .77$, which is low for an established measure, and validity was not reported (Biswas et al., 2013).

Settoon et al. (1996) examined relationships between organizational support and organizational commitment, perceived organizational support and in-role behaviors, and leader-member exchange and in-role behaviors. Researchers studied these relationships

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through the lens of social exchange theory, which explained the intentions responsible for behaviors and attitudes. One hundred and two nonsupervisory employees and 26 randomly selected employees from a single hospital in a metropolitan area participated in the study. Nonsupervisory employees responded to the Perceived Organizational Support Scale (Eisenberger, Huntington, Hutchison, & Sowa, 1986), and supervisors responded to the Multidimensional Measure of Leader-Member Exchange (Liden & Maslyn, 1993), which includes four subscales: loyalty, respect, contribution, and affect. Correlational analysis results demonstrated a statistically significant relationship (r^2 = .08; p < .01) between leader-member exchange and in-role behavior, but no statistically significant (r^2 = .08; p > .05*)* association between POS and in-role behavior (Settoon et al., 1996). Limitations of the study included the fact that limited exchange behaviors were examined and that single-site data collection may affect generalizability (Settoon et al., 1996).

Hofmann and Morgeson (1999) utilized social exchange theory to study leader-subordinate exchange as a predictor for the establishment of safety communication and a decrease in accidents. Forty-nine employees and 64 leaders from single manufacturing facility responded to a 9-item POS (Eisenberger et al., 1986) and a leader-member exchange (LMX) scale (Graen & Uhl-Bien, 1995). Descriptive correlational analysis showed significant statistical relationships between safety communication and POS (r = .54; p < .01) and between safety communication and LMX (r = .47*;* p < .01). Study limitations included its use of one-time data collection, the fact that only reported accidents were considered, and the small sample size.

Galletta et al. (2013) analyzed relationships between variables associated with nurses' intention to leave their unit. Nurses' individual-level and group-level predictors

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were examined. An individual-level predictor included a nurse's affective commitment, while group-level predictors included leader-member exchange and nurse-physician collaboration. The researchers used a cross-sectional design and distributed a questionnaire to which 832 Italian nurses responded. Individual-level results indicated that nurses' affective commitment toward their unit was negatively associated with less desire to leave their job (r^2 = -.32; p < .01) and was also negatively associated with nurse-physician collaboration (r^2 = .3; p < .01). Group-level results indicated that leader-member exchange was negatively associated with turnover intention (r^2 = –.23; p < .01), and that nurse-physician collaboration was negatively associated with turnover intention (r^2 = –.16; p < .01). The authors concluded that the quality of relationships between nurses and supervisors, and nurses and physicians, had a significant influence on nurses' intention to leave their unit.

In summary, the social exchange theory guides research studies in understanding exchange relationships between organizations and employees as well as between individuals within organization. These factors included communication, employee engagement, and the quality of relationships in an organization. In terms of social exchange theory, these factors are the benefits of the exchange in a loss-benefit analysis. Galletta et al. (2013) identified relationships between nurses and physician as a significant factor in individual-level exchanges affecting nurses.

Study Variables

The variables of the current study include perception of safety culture, nurse-physician collaboration, nurses' job satisfaction, and the physician-care delivery model. The purpose of this study was to examine the interrelationships among the variables.

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Hospitalist/Laborist Model

A hospitalist is a physician who cares for hospitalized patients (Wachter, 1999). Over the last decade, the utilization of hospitalists has increased from several hundred to over 30,000, who are practicing in both adult and children's inpatient units (Srinivas & Lorch, 2012). The practice of obstetrics, which has been managed historically by community physicians, has also undergone changes with the introduction of the Ob/Gyn hospitalist or laborist model (Srinivas et al., 2013). Community obstetricians see their patients in the office and are also responsible for responding to their patients' deliveries around-the-clock. As a result, physicians' work-life balance is significantly compromised, affecting their longevity in their practice as well as their level of job satisfaction (Srinivas et al., 2013). However, the laborist model offers a safety net for both patients and physicians, as laborists are available on-site to address life-threatening conditions requiring prompt interventions and treatments (Srinivas & Lorch, 2012). Srinivas and Lorch (2012) surveyed hospitals holding membership in the National Perinatal Information Center/Quality Analytic Services. The laborist model utilization was reported by 37.7% of hospitals. With the increase in utilization of the general hospitalist and laborist models, the volume of research studying this model has increased as well (Srinivas, Shocksnider, Caldwell, & Lorch, 2012). Studies examining hospitalist and laborist models focus on associations between employing hospitalist and laborist models and patient clinical outcomes (Feldman et al., 2014; Iriye et al., 2013; Tekle et al., 2015) and on associations between employing hospitalist and laborist models and patient and provider satisfaction (Chen, Birkmeyer, Saint, & Jha, 2013; Funk, Anderson, Schulkin, & Weinstein, 2011; Srinivas et al., 2013).

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Hospitalist/Laborist Model and Patient Outcomes

Several studies in obstetrics examining laborist effect on patient outcomes include comparisons of cesarean section rates, vaginal birth after cesarean (VBAC) rates, and maternal morbidity. Iriye et al. (2013) compared cesarean section rates among three timeframes, with each period associated with a different service delivery model: no laborists (traditional model), in-house Ob/Gyn presence provided by on-call schedule of community physicians (community laborist model), and full-time dedicated laborists with a continuous in-house presence. Implementation of the dedicated laborist model of care demonstrated lower cesarean section rates of 33.2% compared to the community laborist model at 38.7% (OR, 0.77; 95% CI, 0.67–0.87; $P < .001$) and compared to the traditional practice model at 39.2% (OR, 0.73; 95% CI 0.64–0.83; $P < .0001$). Iriye et al. (2013) asserted that the presence of dedicated laborists is associated with lower cesarean section rates, but no significant difference in cesarean section rates were identified between traditional and community laborist model (OR, 0.96; 95% CI, 0.83-1.10, P = not significant).

Feldman et al. (2014) conducted a cross-sectional study to compare cesarean section rates and VBAC rates, as well as maternal morbidity in California community hospitals with and without a laborist structure. Structured interviews were conducted with nurse managers and internally monitored data on patient outcomes were obtained. Of the 52 qualifying hospitals, VBAC rates were highest at the teaching hospitals versus the non-teaching hospitals (15.3% vs. 5.6%) ($p < .01$), and non-teaching hospitals that employed laborists had higher VBAC rates compared to non-laborist facilities (6.8% vs. 3.7%) ($p < .01$). In both teaching and non-teaching facilities with laborists, greater VBAC

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rates were associated with lower delivery volumes. Facilities who performed a lower number of deliveries demonstrated higher percentage of VBAC cases.

Feldman et al. (2015) studied how the laborist model affects cesarean section rates, VBAC rates, and prevalence of maternal morbidity in California community hospitals. Two hundred and thirty-nine childbirth hospitals provided data on 221,247 deliveries. Hospitals with laborists (n = 43) provided care for a higher-risk patient population. The trial of labor after cesarean (TOLAC) rate was twice as high in hospitals with laborists, which reduced repeat cesarean section rates (90.9% vs. 95.9%; $p < .0001$). No difference was found in laborist versus non-laborist primary cesarean section rates (11.3% vs. 11.7%; $p = .382$), but maternal composite morbidity incidents were higher for the laborist group (14.4% vs. 12.0%; $p < .0006$) (Feldman et al., 2015). After adjusting for patient conditions and hospital characteristics, no difference in maternal morbidity was noticed. The authors' analysis determined that community hospitals' practices are extremely heterogenic, making it challenging to control variables associated with laborist practices (Feldman et al., 2015). The percentage of patients under laborists' care and the range of laborists' responsibilities varied widely among community hospitals. Thus, when attempting to compare the utilization of the laborist model versus non-laborist practice to measure the effects of hospitalist models on patient outcomes, it is important to remember that additional variables may affect these outcomes (Feldman et al., 2015). Differences in practices, such as considering gestational age for scheduling elective deliveries, may pose a significant challenge in defining these additional variables.

Srinivas et al. (2016) used specific maternal and neonatal outcome measures to examine the effectiveness of the laborist model compared to the traditional obstetric care

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model. The researchers utilized data from National Perinatal Information Center (NPIC)/Quality Analytic Services (QAS). The sample size included 550,000 women from 24 hospitals from 1998 through 2011. The laborist versus non-laborist facilities' ratio was 1:2. The outcome measures included induction of labor, cesarean delivery, preterm birth, prolonged length of stay, chorioamnionitis, Apgar at 5 minutes of 7 or less, and neonatal death. Statistically significant results (p <.05) were demonstrated among only two variables: a 15% decrease in the odds of inductions of labor (95% confidence interval [CI], 0.71-0.99) and a 17% decrease in the odds of preterm births (95% CI, 0.72-0.96) among facilities which employed laborists.

Additional studies conducted in fields other than obstetrics showed improved patient outcomes with the utilization of hospitalists. Tekle et al. (2015) compared outcomes for patients who experienced ischemic stroke between hospitalists, internists, family practice physicians, and specialists in a private Gold Plus Target Stroke Honor Roll primary stroke center. Over a period of 4 years, 1,584 acute ischemic stroke cases were reviewed. The patient outcomes criteria included length of stay, discharge outcome, and adherence to the inpatient stroke performance measures and guidelines, including venous thromboembolism prophylaxis, statin on discharge, an anti-thrombotic administered by the end of Day 2, antithrombotic medication administered on discharge, and atrial fibrillation discharged on an anticoagulant. The results showed no statistical difference in length of stay, but there was a significant difference in the adherence to guidelines ($p < .03$), indicating the lowest rate (5%; $p < .03$) of deficiencies among hospitalists and the highest rate among internists (16%; $p < .001$) (Tekle et al., 2015).

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Tadros et al. (2015) compared outcomes of vascular surgical patients prior to and after hospitalist co-management program implementation. In this population, postsurgical care is complicated by comorbidities. The study took place in the Mount Sinai Medical Center in collaboration with the Icahn School of Medicine in New York and included 1,059 participants. In this study, daily hospitalist rounds were implemented on patients with chronic conditions such as diabetes and cardiac disorders. To ensure continuity of care, ongoing communication between hospitalists and primary care providers occurred. Medical and surgical conditions were co-managed by surgeons and hospitalists. The effectiveness of the program was evaluated based on patients' in-hospital mortality as well as AHRQ quality and safety indicators. Even though the results of AHRQ quality indicators were similar before and after co-management program implementation, hospital mortality was lower in patients whose care was co-managed (0.17% vs. 1.75%) (p = .016).

In summary, a majority of the studies that explored laborist and general hospitalist structures focused on several variables reflecting patient outcomes and demonstrated positive associations between laborist/hospitalist model of care and patient clinical outcomes such as decrease in cesarean section rates, decrease in preterm birth rates, decrease in induction of labor rates and increase in VBAC rates (Feldman et al., 2014; Feldman, et al., 2015; Iriye et al., 2013; Tadros et al., 2015; Tekle et al., 2015). The results of several studies examining cesarean section rate were not consistent (Feldman, et al., 2015; Iriye et al., 2013; Srinivas et al., 2016). One study demonstrated a decrease in cesarean section rates (Iriye et al., 2013), while two other studies (Feldman, et al., 2015; Srinivas et al., 2016) did not identify a difference in cesarean section rates between

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laborist and non-laborist service delivery structures. No studies indicated laborist/hospitalist structure negatively affecting patient outcomes.

Hospitalist/Laborist and Patient and Provider Satisfaction

Several studies examine the effects of utilizing the hospitalist model on patient and provider satisfaction in obstetrics and other specialties. In obstetrics, Srinivas et al. (2013) surveyed patients at a Pennsylvania teaching hospital both before and after implementation of a laborist program to determine whether or not there laborist structure will negatively affect patient satisfaction scores. The Press-Ganey survey, which was administered immediately after hospitalization, inquired about patients' satisfaction with staff's courtesy, assistance, support, and education. The results demonstrated similar satisfaction rates among patients both before and after the laborist program implementation: A 91.3% satisfaction rate was found for the pre-laborist period, and a 93.3% satisfaction rate was found for the post-laborist period (p = .08). Therefore, hospitalist program implementation did not decrease patient satisfaction in labor and delivery suits. Over 90% of patients rated their experience as "good," "very good," or "excellent."

Several studies compared general patient population satisfaction scores with hospitalist care. Chen et al. (2013) examined the impact of hospitalist care on patient satisfaction scores. The researchers sorted 2,843 acute care hospitals into three categories: hospitalist care model facilities, mixed hospitalist and primary care provider model facilities, and primary care provider model facilities. The data were collected utilizing the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. The survey measures eight domains: communication with nurses,

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communication with physicians, responsiveness of staff, pain control, communication about medications, adequacy of discharge planning, cleanliness of the room, and quietness of the room. The results indicated that hospitals solely utilizing the hospitalist care model had higher global patient satisfaction scores compared to facilities utilizing other care delivery models; hospitalists' overall satisfaction was 65.6%, while a mixed hospitalist and non-hospitalist structure had a rate of 63.9% ($p < .001$) and a non-hospitalist structure had a rate of 63.9% ($p < .001$). The most profound difference in scores occurred in the discharge information component, with facilities with a hospitalist structure at 80.3%, facilities with a mixed hospitalist and non-hospitalist structure at 79.1%, and facilities with a non-hospitalist structure at 78.1% ($p < .001$). Hospitalist care was not associated with cleanliness of the room and communication with physicians' domains of HCAHPS survey (Chen et al., 2013).

Png et al. (2016) studied the effects of implementation of hospitalist co-management service on satisfaction with pain management among inpatient vascular surgery patients at the Mount Sinai Medical Center. The study was performed in collaboration with the Icahn School of Medicine at Mount Sinai. A retrospective review was conducted in 2,110 consecutive cases: 717 (May 2011 to December 2012) prior to program implementation and 1,393 (January 2013 to December 2014) that were comanaged by hospitalists. The visual analog pain (VAP) scores and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) pain scores were analyzed. Results demonstrated the comanaged group of patients had higher rates of no pain reports (82.97% vs. 71.97%; $p < .001$) and lower rates of moderate pain reports (7.68% vs

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13.11%; p<.001). Severe pain scores were similar between two groups (1.93% vs. 2.37%, p=0.51).

In addition to patient satisfaction, the hospitalist model affects provider satisfaction rates. Obstetrics and gynecology is one of the specialty areas with low job satisfaction rates among physicians (Anderson, Hale, Salsberg, & Schulkin, 2008; Leigh, Kravitz, Schembri, Samuels, & Mobley, 2002). There is a growing concern that medical students are not choosing an obstetrics career due to the nature of the private practice model and its negative impact on work-life balance (Funk et al., 2011).

Funk et al. (2011) surveyed 1,020 physicians practicing as laborists and were members of the ACOG. The survey, administered in 2009, indicated a 76% satisfaction rate ($p < .001$). This is significant in comparison to another survey, conducted in 2006, which found that only 7.6% ($p < .001$) of private-practice obstetricians under age 50 were satisfied with their work-life balance (Anderson et al., 2008). Because obstetrics is not a popular choice among medical students, this is important information for the future development of obstetric services and for ensuring enough physicians are available to meet the needs of obstetric patients.

In summary, the literature review suggests overall, hospitalist programs improve patient outcomes. In obstetrics, the use of laborists is advocated because of their presence on-premises and faster response times will promote patient safety in acute obstetric events such as umbilical-cord prolapse and placental abruption. However, only a few studies have examined the laborist-practice model in the context of patient safety and quality outcomes, predominantly focusing on cesarean-section rates. In addition, laborists' presence in labor and delivery units may have other effects that important for

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ensuring patient safety and optimal patient outcomes. These variables might include the collaboration among caregivers, their attitudes, and their commitment to patient safety. Thus, this study examined safety culture in labor and delivery units in relation to the in-house around-the-clock laborist service-delivery model, as perceived by labor and delivery nurses.

In addition to affecting safety culture, laborists' presence can affect intrapersonal dynamics in a unit. Because of nurses' essential role in executing physicians' orders and caring for patients, they are affected the most by interprofessional interactions. Therefore, this study examined additional nursing perspectives related to the physician care delivery model. These perspectives included nurses' perceptions of nurse-physician collaboration and nurses' job satisfaction. These variables were selected because they were related to the work environment and have the potential to influence nurse retention, which could have a financial impact on an organization.

No studies were identified examining the relationship between the hospitalist/laborist model and perception of safety culture, nurse-physician collaboration, or nurses' job satisfaction, which leaves a gap in our knowledge of how the laborist model is associated with these nursing perspectives.

Patient Safety Culture

In healthcare, nurses compose the largest part of the workforce and play a pivotal role in preventing medical errors; however, the environment in which nurses practice impacts their ability to fulfill their safety net duties (Rothschild et al., 2006). Thus, it is imperative to understand nurses' environmental factors including the care delivery model that impact the safety culture.

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One study was found that examined safety attitudes related to safety initiatives that included implementation of the 24-hour obstetrical physician coverage (Pettker et al., 2011). Other studies examined differences in safety culture perceptions among healthcare staff (El-Jardali, Dimassi, Jamal, Jaafar, & Hemadeh, 2011; Nordin, Theander, Wilde-Larsson, & Nordström, 2013; Scherer & Fitzpatrick, 2008), and additional study focused on perceptions of safety related to work environment and job satisfaction (Rangaraj, Abrahamson, & Anderson, 2008).

Pettker et al. (2011) studied the impact of safety program initiatives on safety culture in the obstetric unit at the Yale-New Haven Hospital in New-Haven, Connecticut. Safety initiatives included employing a safety nurse whose role was to focus solely on risk issues in obstetrics, standardized protocol development, an anonymous reporting system for adverse events, implementation of an obstetric hospitalist care model, establishment of an obstetric patient safety committee, and staff resource management training. The obstetric hospitalist model was implemented in 2004 and was supported by maternal-fetal medicine. Obstetricians and residents provided coverage 24 hours a day, 7 days a week. The Safety Attitude Questionnaire (Sexton et al., 2006) was administered to 183-192 participants at a time at four different times during a 5-year period. The questionnaire results indicated significant improvements in favorable perceptions of teamwork culture (from 39% in 2004 to 63% in 2009; $p < .0001$), safety culture (from 33% to 63%; $p < .0001$), job satisfaction (from 39% to 53%; $p = .009$), and leadership (from 10% to 37%; $p < .0001$). In this study, researchers implemented multiple initiatives that showed improvement in safety perception scores over a period of 5 years. However,

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the individual contribution of each intervention is unknown and should be investigated further.

Several studies indicated perceptions of safety culture differ among healthcare staff based on their role within organization (El-Jardali et al., 2011; Nordin et al., 2013; Scherer & Fitzpatrick, 2008). Nordin et al. (2013) compared patient safety culture perceptions between managerial and non-managerial healthcare staff. The 51-item Swedish Hospital Survey on Patient Safety Culture was answered by 1,023 healthcare team members. The questionnaire focused on unit-specific characteristics, hospital characteristics, and patient outcomes. The results demonstrated that managers' perception of safety culture was stronger than the perception of non-managers on all 14 dimensions of the survey (t values ranging from 1.733 to 6.643; *p* values ranging from .000 to .006). Three dimensions' results (overall perception of safety, manager promoting safety, and handoff communication) were not statistically significant. Further, the results showed that physicians and nurses have different views about safety culture. Nurses, for example, scored higher on items questioning in-hospital transfers, while physicians had higher scores on questions regarding patient and family education. The authors recommended focusing on common goals in patient safety for administrators, nurses, and physicians in order to enhance the efficacy in establishing safety culture.

Modak, Sexton, Lux, Helmreich, and Thomas (2007) studied safety culture in the ambulatory settings. The Safety Attitude Questionnaire was administered to 409 participants. The results indicated statistically significant difference between managers' and physicians' perceptions of the management role in safety (72.5 vs. 50.4 respectively, $p < 0.05$). El-Jardali et al. (2011) examined associations between patient safety culture

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predictors and outcomes in ICU settings and discovered that nurses' overall perception of safety (nurses' mean = 3.78 SD 0.92; physician mean = 3.69 SD 0.75) and number of reported events (nurses mean = 3.89 SD 1.00; physician mean = 3.80 SD 0.66) was higher than physicians' perception.

Additional study (Rangaraj et al., 2008) examined relationship between safety culture and nurses' work environment. Rangaraj et al. (2008) examined the relationship between nurses' perceptions of job demands in their work environment and nurses' perceptions of safety. Structural equation modeling was used to analyze the data collected from survey of 430 registered nurses at two community hospitals in the United States. The results demonstrated nurses' perception of safety decreased as the job demands increased. The significant relationship ($p < .05$) between job demands and safety culture confirms that nurses make a connection between their working conditions and the ability to deliver safe care.

In summary, safety culture perceptions vary among nurses, physicians, and managers; managers rate the culture of safety higher than bedside staff, and nurses rate the culture of safety higher than physicians. Safety initiatives positively affected perceptions of safety culture. One study focused on safety initiatives in obstetrics (Pettker et al., 2011). One of the interventions was implementation of an in-house, around-the-clock laborist presence. Even though post interventions' safety perception scores were higher, the contribution of each intervention to the increase in the scores was not explored. Other studies concentrated on differences in safety culture perceptions among healthcare team members based on their role. One study focused on association between job demands and nurses' safety culture perceptions. The current study adds to the body of

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knowledge on safety perceptions in labor and delivery settings and also whether physician service delivery model impacts those perceptions.

Nurse-Physician Collaboration

The word *collaborate* essentially means *working together*. The word originates from two Latin words: *col*, translated as with or together, and *laborare*, translated as to work (Barnhart, 1988). In healthcare, collaboration has been defined as "the joint communicating and decision-making process with the expressed goal of satisfying the patient's wellness and illness needs while respecting the unique qualities and abilities of each professional" (Coluccio & Maguire, 1983, p. 63). The American Nurses' Association defines collaboration as "a true partnership, in which the power on both sides is valued by both, with recognition and acceptance of separate and combined practice spheres of activity and responsibility, mutual safeguarding of the legitimate interests of each party, and a commonality of goals that is recognized by each party" (American Nurses' Association, 1980 in Dougherty & Larson, 2005, p. 244). Effective nurse-physician collaboration is linked to patient safety, quality of care, and satisfaction among providers (Baggs et al., 1999; Boyle, 2004; Dougherty & Larson, 2005; Higgins, 1999). However, perceptions of collaboration differ between nurses and physicians (Gotlib Conn et al., 2014; Hughes & Fitzpatrick, 2010; Nair, Fitzpatrick, McNulty, Click, & Glembocki, 2012).

Gotlib Conn et al. (2014) conducted a mixed method study to examine perceptions of three dimensions of collaboration: communication, accommodation and isolation. They administered the Outcome Measurement Scale which measured aspects of nurse– physician relationships in inpatient care settings including communication,

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accommodation by each group to the other's optimal work practices, and isolation from detachment between nurses and physicians. This scale was adapted from the Nurses' Opinion Questionnaire (Adams, Bond, & Arber, 1995) sent to 49 physicians and 183 nurses. Concurrently, they conducted interviews to understand participants' experience with collaboration. The quantitative results demonstrated no significant difference in the mean score of perception of communication between nurses and physicians (12.8 vs. 12.8; $p < .79$). However, nurses perceived physicians as less accommodating than physicians perceived nurses (12.9 vs. 13.9*;* $p < .01$), and there was a significant difference in isolation mean scores (7.3 vs. 8.6, $p < .001$), indicating that nurses feel more isolated from physicians than physicians do from nurses (Gotlib Conn et al., 2014). Qualitative analysis revealed themes valued in each facet of collaboration. In communication, both nurses and physicians indicated that they value timing, discussion of patient care, and skill. The most important attribute regarding accommodation is consideration of everybody's schedule, rather than just physicians', when planning activities and meetings. The degree of isolation nurses experience was shown to be affected by leadership support, physician authority, and changing perceptions. The perception of isolation for nurses was greatly impacted by the traditional hierarchical structure that enhances physicians' authority. Leadership support was perceived as playing an important role in enabling this structure or shifting perceptions toward equality among healthcare professionals. Possible limitation of the above study is unequal sample groups which may affect homogeneity of the sample.

Hughes and Fitzpatrick (2010) evaluated attitudes toward collaboration among physicians and nurses, accounting for the influence of gender, ethnicity, education, and

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experience. A comparative descriptive design was used. The setting was a 100-bed hospital located in the northeastern United States, and the sample included 118 nurses and 53 physicians. The Jefferson Scale of Attitudes toward Physician-Nurse Collaboration (JSAPNC), consisting of 15 items, was utilized. The forced-choice, 4-point Likert scale ranged from *strongly agree* to *strongly disagree*. A *t* test was used to compare the means of nurses' and physicians' perception scores. The results demonstrated significant differences in attitude scores toward collaboration, with higher scores in nursing group (54.14 vs. 51.94), with a maximal score of 60 ($t = 2.2$; $p = .003$). Hughes and Fitzpatrick (2010) noted that nursing staff was exposed to a greater number of initiatives related to collaboration than physicians were, which may explain why nurses place greater value on collaborative practice, resulting in higher scores among the nursing group. Possible limitations are the single setting of the study and the failure to associate collaboration with additional variables such as age and years of experience in healthcare.

Nair et al. (2012) conducted a descriptive study in a nonprofit acute care 290-bed hospital to delineate the nurses' and physicians' perceptions of how frequently collaborative behaviors were used. The study involved two groups: nurses and physicians, and the sample included 114 nurses and 33 physicians. The measure utilized was a Nurse-Physician Collaboration Scale (NPCS) consisting of 27 items divided into three subscales: sharing patient information, decision-making process regarding care/cure, and relationship between the nurse and physician. The findings revealed significant differences between the two groups, with the physician group perceiving nurse-physician relationships as more collaborative compared to nurses' perception of

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these relationships. This perception was demonstrated in each subscale: sharing of patient information mean scores were 2.74 for nurses and 2.27 for physicians, with ($t = 3.93$; $p < 0.001$), decision-making process on care/cure was 3.15 for nurses and 2.39 for physicians ($t = 3.74$; $p < 0.001$), and relationship between nurses and physicians was 2.95 for nurses and 2.13 for physicians ($t = 5.81$; $p < 0.001$). A significant difference was also demonstrated between nurses and physicians on the mean item score for the entire scale for nurses and physicians, at 2.95 and 2.34 respectively ($t = 5.11$; $p < 0.001$). The researchers concluded that nurses and physicians differ in their perceptions of collaborative behaviors. They also recommended striving to remove social and structural barriers toward best practices and optimal patient outcomes. Three possible limitations of the study were reported: its small convenience sample, impeding the ability to generalize this study to a larger population; the possibility that respondents chose to participate because they value collaboration; and the possibility that results might not be applicable to other facilities (Nair et al., 2012). Additionally, the researchers did not report any correction made to account for the noticeably unequal group size, which can affect homogeneity.

Bowles et al. (2016) conducted descriptive cross-sectional study to evaluate the difference in perception of interprofessional collaboration between nurses and physician. A convenience sample of 29 residents, 17 house staff physicians, and 47 nurses was recruited from Commonwealth University Medical Center, Richmond, Virginia. Collaboration was measured with Kenaszchuk's 14-item Interprofessional Collaboration Scale. Research findings demonstrated statistically significant differences ($p < .001$) in perceptions. The nurses' score was significantly lower ($M = 42.8$; $SD – 8.68$) than either

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the house staff physicians (M = 53.8; SD – 7.1) or hospitalist physicians (M = 51.7; SD – 8.2).

Several studies (Baggs, et al., 1999; Boyle, 2004) examined nurse-physician collaboration related to patient outcomes. Baggs et al. (1999) investigated the relationship between nurse-physician collaboration and patient outcomes in three ICU units located in upstate New York. The study sample was composed of 97 physicians, 63 residents, 162 nurses, and 1,432 patients, whose charts were reviewed and illness severity scores assigned. Collaboration was measured utilizing the Collaboration and Satisfaction about Care Decisions (CSACD) instrument (Baggs, 1994). Patient outcomes were measured utilizing the APACHE III severity of illness scale, on which higher scores have been associated with increased hospital mortality. Points were given based on age, laboratory values, severity of illness, and Glasgow Coma Scale scores. Regression statistical analysis was performed, and the results indicated that collaboration was associated with a lower risk of negative patient outcomes (b = -.04; p < .05); for each point increase in the collaboration score, negative patient outcomes decreased by 4% (Baggs et al., 1999).

Boyle (2004) explored how organizational factors, including nurses' perception of autonomy and collaboration with physicians, corresponded to nurse-related adverse events such as urinary tract infections (UTIs), pressure ulcers, and failure to rescue. The data were obtained from patient medical records and from utilizing the Nursing Work Index from 944 teaching hospital ICU and medical surgical units located in the northeast United States. The sample consisted of 390 nurses. Research results indicated that a perception of greater collaboration and autonomy is associated with a lower UTI rate (r = –.29) and lower failure to rescue rate (r = –.53), but a higher incidence of pressure ulcers

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(r = .47). This increase in pressure ulcers was explained by the notion that collaboration leads to early detection and documentation of these incidents. Boyle (2004) indicates that the associations of collaboration and pressure ulcers were statistically significant, but the p values were not reported.

Higgins (1999) examined nurses' perceptions of collaborative nurse-physician decisions regarding patient transfers as a predictor of patient outcomes. One hundred and seventy-five transfer decisions were reviewed and evaluated based on the APACHE III severity of illness scale in an intensive care unit located in a metropolitan hospital in Pennsylvania. The results demonstrated that nurses' perception of collaboration did not predict patient outcomes (x^2 = .22; p = .643); however, it was associated with nurses' satisfaction with the decision-making process (r = .28; p < .0001).

Several studies have focused on determining the impacts of interventions and trainings enhancing collaborative nurse-physician relationships (De Meester, Verspuy, Monsieurs, & Van Bogaert, 2013; McCaffrey et al., 2012). De Meester et al. (2013) conducted a study to determine the effects of communication-related training on patient outcomes after serious adverse events (SAE), as well as the effects of communication training on perceptions of communications. SAEs were defined as unexpected deaths, admission to the ICU, and cardiac arrest team calls. The training included implementation of a standardized nursing observation tool and a 2-day educational session focusing on discussing communication challenges and learning to utilize the SBAR communication framework. The research took place at Antwerp University Hospital, Belgium. Vazirani et al. (2005) Communication, Collaboration, and Critical Thinking Quality Patient Outcomes Survey Tool (CCCT), measuring perceptions of communication, was

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administered before and after intervention. Additional data collection involved review and analysis of patient records. Of 210,074 patient days and 37,239 admissions, 207 SAE cases were identified as occurring prior to intervention and 126 were identified as occurring post-intervention. The CCCT tool was completed by 245 nurses prior to intervention, and 180 nurses completed it post-intervention. Study results indicated a decrease in the number of unplanned ICU admissions, a decrease in unexpected deaths, and an increase in communication perception scores following an intervention. The number of cardiac arrest team calls remained unchanged.

McCaffrey et al. (2012) conducted a study using a quasi-experimental design. The study's aim was to determine the effects of interprofessional education on nurse-resident collaboration. A convenience sample was recruited from a single facility located in South Florida and included 47 residents and 68 nurses. The scales utilized in measuring attitude toward collaboration were the Jefferson Scale of Attitudes toward Physician-Nurse Collaboration and the Communication, Collaboration and Critical Thinking for Quality Patient Outcomes Survey. The results showed that formal education about communication improved attitudes toward communication among nurses and residents on both the Jefferson's survey (residents $t = 4{\cdot}68$, $P = 0{\cdot}001$, nurses $t = 4{\cdot}37$, $P = 0{\cdot}001$) and the communication survey (residents $t = 4{\cdot}23$, $P = 0{\cdot}001$, nurses $t = 4{\cdot}13$, $P = 0{\cdot}001$) scales (McCaffrey et al., 2012). Study limitations were the relatively small sample size and the single facility setting. Additionally, individuals who responded to the survey may value collaboration and education more than the rest of the population, thereby affecting representation (McCaffrey et al., 2012).

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The effects of nurse-physician collaboration on moral distress and work environment are not only studied in the United States. European nursing scholars also recognize the significance of these professional collaborations. In a correlational design, Karanikola et al. (2014) explored the association between moral distress among nurses and nurse-physician collaboration. Self-reported questionnaires were distributed to Italian critical care nurses who attended the Aniarti conference. The response rate of 90.2% resulted in a sample size of 575 Italian ICU nurses. The participants completed the Corley Moral Distress Scale (Corley, Elswick, Gorman, & Clor, 2001), Autonomy Scale (Varjus, Suominen, & Leino-Kilpi, 2003), and Bagg's Collaboration and Satisfaction About Care Decisions scale (Baggs, Ryan, Phelps, Richeson, & Johnson, 1992). Collaboration scores were weakly but negatively associated ($r = -0.215$, $p < 0.001$) with the severity of physicians' demeanor, indicating that the greater the severity of physicians' demeanor variable, the less collaboration occurs. Karanikola et al. (2014) reported a limitation of utilizing a convenience sample that may include a greater number of nurse managers, causing underestimation of physician-related dimensions and overestimating autonomy.

Papathanassoglou et al. (2012) conducted a descriptive correlational study to investigate relationships between nursing autonomy, moral distress among nurses, and nurse-physician collaboration. The data were collected from 12 European countries. Subject recruitment occurred using a convenience sampling technique. Autonomy was measured utilizing a scale developed by Varjus et al. (2003), moral distress was measured using the Corley Moral Distress Scale (Corley et al., 2001), and nurses' perceptions of collaboration in sharing responsibility for problem solving and decision making were

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measured using the Collaboration and Satisfaction about Care Decisions scale (Baggs et al., 1992). Using correlational computations, this international study not only confirmed the negative relationship between nurses' moral distress and collaboration score, but also showed a stronger relationship (r = –.337; p = <.001) compared to the study conducted solely in Italy.

In summary, nurse-physician collaboration is multifaceted and perceived differently by nurses and physicians. It positively affects patient outcomes, for example by decreasing the incidence of UTI and pressure ulcers (Boyle, 2004). It is also positively associated with nurses' satisfaction with decision making in patient care and negatively associated with their moral distress (Karanilola et al., 2014). Because of its positive effects on both patients and nurses, this study examined whether an in-house around-the-clock laborist delivery model impacts safety culture and aspects of nurses work environment such as physician collaboration. No studies explored nurse-physician collaboration in labor and delivery settings.

Nurses' Job Satisfaction

Job satisfaction relates to feelings that individuals experience about their jobs and is guided by their affective orientation toward their jobs (Lu et al., 2005). Job satisfaction can be viewed either as a global attitude or as attitudes related to specific aspects of a job. Exploring nurses' level of job satisfaction became a focus of numerous studies due to its linkage to nursing turnover (Baernholdt & Mark, 2009; Coomber & Barriball, 2007; Lu, Lin, Wu, Hsieh, & Chang, 2002), nursing retention (Cowin, 2002; Mrayyan, 2005; Shields & Ward, 2001), and clinical outcomes (Laschinger & Leiter, 2006; Laschinger, Shamian, & Thompson, 2001; Tzeng, Ketefian, & Redman, 2002). Spector (1997) stated

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that job satisfaction depends on the following factors: appreciation and recognition, communication with coworkers, fringe benefits and pay, job conditions and nature of the work itself, nature of the organization and its policies and procedures, personal growth and promotion opportunities, job security, and relationships with supervisory staff.

Job satisfaction among nurses varies based on the specialty. Kalisch, Lee, and Rochman (2010) studied the influence of teamwork, unit and staff characteristics, on job satisfaction with current position. The results demonstrated a higher level of satisfaction among pediatric or maternity units' staff than medical surgical unit staff ($p < 0.05$). The ANM Healthcare survey results obtained from 3,413 nurses nationwide (ANM Healthcare, 2013) reported 90 % of nurses agreed with the statement "overall, I am satisfied with my choice of nursing as a career." The highest percentage of nurses who agreed with the statement work in school nursing (96%), nursing education (95%), and oncology (95%). The lowest percentage of nurses who agreed with the statement work in neonatal intensive care, (82%), psychiatry (82%), and telemetry (86%). Ninety-one percent of nurses employed in women's health including labor and delivery agreed with the statement. Labor and delivery nurses' career satisfaction is not reported separately. A confidence interval of 95 was reported, but no *p* values were mentioned. This study focuses on nurses' job satisfaction as it relates to other variables, including nurse-physician collaboration, nurses' perception of patient safety, and the laborist care delivery model.

Job Satisfaction and Nurse-Physician Collaboration

Four studies were identified as focusing on the association of nurses' job satisfaction with nurse-physician collaboration (Chang, Ma, Chiu, Lin, & Lee, 2009;

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Galletta, Portoghese, Carta, D'aloja, & Campagna, 2016; Ouzouni & Nakakis, 2009; Peltier et al., 2013).

Galletta et al. (2016) examined relationships between job satisfaction and intention to leave the unit, job satisfaction and team affective commitment, nurse-physician collaboration and affective commitment, nurse-physician collaboration intention to leave the unit, and nurse-physician collaboration as a moderator between job satisfaction and team affective commitment. This cross-sectional study was conducted in three urban Italian hospitals. A total of 1,024 nurses completed the Organizational Satisfaction Questionnaire (Cortese, 2001), Organizational Commitment Questionnaire (Allen & Meyer, 1990), and Nursing Work Index-Revised (Aiken & Patrician, 2000) instruments. Results demonstrated statistically significant associations between job satisfaction and team affective commitment ($r = .514$; $p<.01$), job satisfaction and turnover intention ($r= -. 272$; $P<.01$), job satisfaction and nurse-physician collaboration ($r = .448$; $p<.01$), turnover intention and team affective commitment ($r = -. 303$; $p<.01$), team affective commitment and nurse-physician collaboration ($r = .321$; $p<.01$), and turnover intention and nurse-physician collaboration ($r = -.182$; $p<.01$).

Peltier et al. (2013) investigated how social, structural, and financial aspects of work influence job satisfaction among 242 nurses in not-for-profit U.S. hospitals and clinics. They utilized an internal marketing construct to determine how hospitals can foster loyalty in nursing staff to meet patient needs. The authors examined the interrelations of the following variables: nurses' perceptions of their financial package; nurses' perception of job support; nurses' perceptions of their relationships with fellow nurses; nurses' perceptions of their relationships with physicians; nurses' perceptions of

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control over care; and nurse' perceptions of job flexibility, job satisfaction, and loyalty. Their findings suggest that nurses' perceptions of relationships with physicians and caregivers (ES = 324 and ES = 0.157) have greater effect on job satisfaction then financial package (ES = 0.105) (Peltier et al., 2013).

Chang et al. (2009) conducted a cross sectional study in four Taiwan hospitals to determine the factors associated with job satisfaction for physicians, nurses and other healthcare professionals. A total of 1,019 nurses, physicians, and other caregivers responded to 10 question job satisfaction instrument developed and tested by the authors (Chang et al., 2009). Results indicated perception of quality of patient care ($b = 0.75$; $p < 0.5$) and collaborative relationships ($b = 0.14$; $p < 0.5$) best predicted the job satisfaction among physicians as well as among nurses ($b = 0.53$; $b = 0.11$; $p < 0.5$).

Ouzouni and Nakakis (2009) examined associations between inter-professional working, leadership, stress and job satisfaction among 85 Greek registered mental health nurses and assistant nurses. A cross-sectional, correlational was utilized. The questionnaire, was comprised of six instruments: the Mental Health Occupational Stress Scale (MHPSS) (Cushway, Tyler, & Nolan, 1996); two working relationships scales measuring nurse-physician and nurse-nurse relationships (Adams & Bond, 1995); the Ward Leadership Scale (Adams & Bond, 1995); the Job Satisfaction Scale (Adams & Bond, 1995), and a demographic questions section. Study results demonstrated that overall, nurses experienced a moderate level of stress (mean 69.30; SD=19.28) and were satisfied with their job (mean 34.2; SD = 3.4). Nurse-physician collaboration was not found to be associated with either nurses' stress level ($r = -0.081$; NS), or job satisfaction ($r = 0.069$; NS).

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Job Satisfaction and Safety Culture

Even though safety in the literature, the safety and the quality of patient care are discussed interchangeably, safety and quality in patient care are different but related concepts. While quality includes efficacy, patient-centered orientation, equitability, and safety, safety is the foundation of quality care (Committee on the Quality of Health Care in America, 2001). No studies examining the relationship between nursing job satisfaction and safety culture were found. However, several studies were identified examining association between nurses' job satisfaction and safety climate (Hofmann & Mark, 2006), and nurses' job satisfaction and quality of patient care (Djukic et al., 2013; Faller et al., 2011; Van Bogaert et al., 2013).

Hofmann and Mark (2006) conducted a cross sectional study examining associations between nurse outcomes, patient outcomes, and safety climate. Nurse outcomes included nurses' job satisfaction, exposure to needle sticks, and nurse back injuries. Patient outcomes included urinary tract infections, medication errors, patients' perception of care. Participating hospitals were randomly selected across the nation. The final sample comprised 1,127 nurses working at 81 medical/surgical units from 42 hospitals. Nurse job satisfaction was measured by Organizational Job Satisfaction scale (Hinshaw & Atwood, 1984). Safety climate was measured using Zohar's (1980) Measure of Safety Climate. Patient satisfaction was measured by a tool created by the authors. Variables such as needle sticks, back injuries, and medication errors were measured as reported by internal reporting systems. Results demonstrated positive association between nurses' job satisfaction and safety climate ($r = .45$; $p<0.01$). Other significant associations included negative associations between safety climate scores and nurse back injuries ($r =$

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-.38; p<0.01), safety climate and medication errors (r = -.22; p<0.05), and positive association between safety climate and patient satisfaction (r = .33; p<0.01).

Work Environment and Nurses' Job Satisfaction

Four studies examined association between nurses' job satisfaction and their work environment (Djukic et al., 2013; Faller et al., 2011; McHugh et al., 2011; Van Bogaert et al., 2013).

Faller et al. (2011) studied nurses' work-related burnout, job satisfaction, perceived quality of care, and intent to leave among travel nurses from a single large staffing company. The survey included the 19-item Copenhagen Burnout Inventory (CBI), which was used to measure burnout, and additional items questioned overall satisfaction and perceived care quality. Job satisfaction was measured by the response to the statement: "Overall, I am satisfied with my current job." Nurses practicing in Magnet-status facilities reported a higher level of satisfaction (B = .22; p<.01) and higher quality of care (B = .13; p<.01) compared to their peers working in Non-Magnet-status facilities. Magnet status awarded to hospital by American Nurses Credentialing Center (ANCC, n.d.) for achieving criteria measuring quality of nursing care which lead to the highest levels in safety and patient satisfaction (ANCC, n.d.). Linkage between job satisfaction and perceived quality of care was not examined.

Van Bogaert et al. (2013) explored how aspects of nurses' work environments influence their job outcomes and quality of care at six Belgian hospitals. A cross-sectional survey was administered to 1,201 nurses practicing at acute care facilities. The work environment dimensions included the nurse-physician relationship, nurse management, hospital management, decision-making latitude, workload, social capital,

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emotional exhaustion, depersonalization, personal accomplishment, nurse-assessed quality of care, and job outcomes. The results demonstrated a positive association between perceived quality and safety of care and nurses' job satisfaction (r = .29; p <.01).

Djukic et al. (2013) utilized a cross-sectional correlational design to examine the relationship between nurses' ratings of patient care quality and work environment factors. They conducted a nationwide survey in the United States, with 1,439 nurses responding. Regression analysis demonstrated that physical work environment (r = 4.99; p < .01), cohesion within the workgroup (r = 1.69; p < .01), nurse-physician collaboration (r = 1.40; p < .05), procedural justice (r = 1.34; p < .05), and job satisfaction (r = 1.26; p < .01) are predictive of nurses' perception of quality of care. Additionally, the researchers found a positive association between nurses' job satisfaction and employment at Magnet-status facilities.

McHugh et al. (2011) compared nurses' job satisfaction between different settings (clinical and non-clinical), examined whether job satisfaction is influenced by environmental factors, and explored whether nurses' job satisfaction is associated with patient satisfaction scores. Data collection included a multistate nursing care and patient safety survey administered to over 95,000 nurses nationwide as well as publicly reported patient satisfaction scores. Additional facility characteristics were obtained through the American Hospital Association Annual Survey of Hospitals. The authors analyzed data using descriptive statistics and compared nurses' responses in percentages. McHugh et al. (2011) reported that nurses employed in clinical settings were more likely to be dissatisfied with their jobs compared to nurses in non-clinical settings (27% vs. 13%). Bedside nurses' answers also demonstrated that their excessive workload causes them to

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miss important changes in patient conditions more frequently than nurses working in other settings (36% vs. 21%). Furthermore, researchers discovered that environmental factors such as leadership support and relationship with physicians were strongly related not only to burnout but also to satisfaction with employment benefits. Thirty-three percent of nurses who classified their environment as "poor" reported dissatisfaction with their employment, compared to 17% of nurses who reported having a better working environment.

In summary, job satisfaction among maternal-child and women's health nurses is higher than among nurses practicing in other specialties. However, maternal-child nursing consists of several units including mother/baby, postpartum, nursery, and labor and delivery and job satisfaction differences may apply based on the unit. Job satisfaction literature was explored related to nurses-physician collaboration related to safety culture. Three out of four studies indicated nurse-physician collaboration as a predictor in nurses' job satisfaction. Additional studies show no significant relationship between nurses' job satisfaction and nurse-physician collaboration.

No studies examining relationship between nurses' job satisfaction and perceptions of safety culture were found. However, additional studies' results demonstrated positive associations between nurses' job satisfaction and perception of safety climate, perceptions of care quality. One study also demonstrated positive association between nurses' job satisfaction and patient satisfaction scores. Four studies demonstrated association between nurses' work environment and nurses' job satisfaction, indicating nurses employed in facilities with stronger emphasis on quality and safety such as Magnet status hospitals reported higher satisfaction scores. No studies on nurses' job

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satisfaction conducted specifically in labor and delivery setting were found. This study will add to the body of knowledge in examining relationship between nurses' job satisfaction and perceptions of safety culture among labor and delivery nurses.

Chapter Summary

Chapter 2 provided a literature review on studies utilizing theoretical frameworks of theory of bureaucratic caring (Ray, 1989) and social exchange theory (Homans, 1974), and a review of study variables that led to the identification of the gap in literature. Nurses' perspectives such as perceptions of safety culture, nurse-physician collaboration, and nurses' job satisfaction as they related to physician-care delivery model were not previously examined in the literature. Moreover, these perspectives were not previously studied within the population of labor and delivery nurses.

Chapter 3 describes this study's methodology, which includes research design, research questions, measures, ethical considerations, sample, recruitment and setting, data collection protocol, data analysis, strengths and limitations of the research plan, and the timeline.

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CHAPTER 3: METHODOLOGY

The purpose of this descriptive correlational study was to explore the effects of physician service delivery model on patient care through evaluation of safety culture and the effects on work environment factors including nurse-physician collaboration, and nurses' job satisfaction in labor and delivery units. An additional purpose was to examine associations between labor and delivery nurses' perceptions of safety culture, nurse-physician collaboration, and job satisfaction. In this chapter the research design, research questions, measures, ethical considerations, sample, recruitment and setting, data collection protocol, data analysis, strengths and limitations of the research plan are discussed.

Research Design

This was a cross-sectional, correlational descriptive study. The first three research questions were designed to evaluate whether or not there were differences in nurses' perceptions of safety culture, nurses' perceptions of nurse-physician collaboration, and nurses' job satisfaction between units who have laborists in-house, around-the-clock and units who do not provide around-the-clock coverage by laborists. Research Questions 4 through 6 examined the relationships between nurses' perceptions of safety culture, nurses' perceptions of nurse-physician collaboration, and nurses' job satisfaction. Because this study's focus was to explore differences between types of units and relationships between variables, the descriptive correlational design was selected as the research methodology.

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Research Questions

The research questions that guided this inquiry were as follows:

1. Is there a difference in labor and delivery nurses' perception of safety culture in their practice environment between units utilizing the around-the-clock, in-house laborist service delivery model and units that do not utilize an around-the-clock, in-house laborist service delivery model?

2. Is there a difference in labor and delivery nurses' perceptions of nurse-physician collaboration in their practice environment between units utilizing the laborist service delivery model and units that do not utilize an around-the-clock, in-house laborist service delivery model?

3. Is there a difference in labor and delivery nurses' job satisfaction in their practice environment between units utilizing the laborist service delivery model and units that do not utilize an around-the-clock, in-house laborist service delivery model?

4. What is the relationship between nurses' perception of safety culture and nurses' perception of nurse-physician collaboration in labor and delivery units?

5. What is the relationship between nurses' perception of safety culture and nurses' job satisfaction in labor and delivery units?

6. What is the relationship between nurses' perception of nurse-physician collaboration and nurses' job satisfaction in labor and delivery units?

Sample, Recruitment, and Setting

The study's participants included nurses who were practicing in labor and delivery units in a position requiring a registered nurse license such as bedside nurse, charge nurse, nurse manager, nurse clinician, and director of nursing. The sample

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inclusion criteria for the study were as follows: currently working in labor and delivery unit, at least 6 months of employment in a current setting, and practicing in the United States. Other criteria were that the participants were aged between 21 and 70, and able to read and write in English. The exclusion criteria included candidates who were not currently working in labor and delivery or those employed in their current labor and delivery unit for fewer than 6 months. Study participant recruitment was facilitated by the Association of Women's Health and Neonatal Nurses (AWHONN). The AWHONN has over 24,000 current members, about 7,500 of whom practice in the obstetric arena (C. Duggen, personal communication, December 2, 2016). The AWHONN marketing department distributed an email to 3,000 members whose primary work setting is labor and delivery. A reminder email notification at 2-week timeframe from the initial email was sent. The email notification included the study flyer with an invitation to participate in this study (Appendix A). The participants were asked to complete an online questionnaire consisting of four sections including demographic data, Collaborative Practice Nursing Scale (CPS) (Weiss & Davis, 1985), Hospital Survey on Patient Safety Culture (HSOPSC; Agency for Healthcare Research and Quality [AHRQ], 2015) and McCloskey and Mueller's Satisfaction Scale (Mueller & McCloskey, 1990). The email also included a link to the SurveyMonkey webpage. The link opened with the consent paragraph (Appendix B), which indicated that participation in the study was voluntary and participants could choose to withdraw at any time. The following statement appeared below the consent paragraph: "By completing and submitting the attached survey, you give consent to participate in this study." Participants who agreed to participate, were

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required click the "Next" button which brought them to the data collection documents (Appendix C). Two weeks after initial email notification, a reminder email was sent.

G*Power software was used to perform a power analysis for sample size. It was determined that a sample size of at least 67 was needed for the study. To determine effect size (ES), several studies were identified (AbuAlRub et al., 2012; Boyle, 2004; Djukic et al., 2013; Gotlib Conn et al., 2014) utilizing the medium effect size (ES = 0.3). For this study's Research Questions 4-6 the medium effect size of ES= 0.3 was chosen requiring 67 participants. The survey was distributed to 3,000 potential participants requiring a minimum of 2.23% return rate of usable surveys. While general online survey response rate is 10-15% (SurveyGizmo, 2015), this survey yield 308 responses constituting a 10.3% response rate.

Ethical Considerations

Institutional Review Board (IRB) approval was obtained from Florida Atlantic University (FAU). Since AWHONN's marketing department did not require internal IRB approval, FAU IRB approval was accepted by AWHONN as sufficient to allow survey distribution. An explanation of the purpose of the study and the informed consent paragraph were presented to participants who logged onto the online survey. Participation in the study was voluntary, and participants could choose to withdraw at any time without risk or penalty. No specific risks were anticipated other than those that would be experienced in regular activities when engaging in a discussion with colleagues about professional viewpoints. No concerns with the survey completion were reported by the study participants.

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The benefits of this study included the potential use of its results to serve as background for developing guidelines for best practices concerning safety culture, nurse-physician collaboration, and nurses' job satisfaction. The study focused on the differences in labor and delivery nurses' perception of nurse-physician collaboration, safety culture, and level of job satisfaction between physician-care delivery models (around-the-clock, in-house, laborist service delivery model and no around-the-clock, in-house laborist service delivery model). Potential benefits for participants include the satisfaction of knowing that they have contributed to a better understanding of how the physician care delivery structure relates to nursing perspectives of patient and nurse outcomes. A $10 Starbucks gift card was awarded for completion of the survey. This award was consistent with approved FAU sponsored research gift protocols.

Measures

The questionnaire comprised four sections. Section 1 contained 15 items that were used to collect information on demographic and hospital characteristics (see Appendix C). The demographic characteristics include gender, age, tenure in nursing/hospital/current unit, nursing education, certifications, roles in the nursing profession, direct patient care, and shifts worked. The hospital characteristics include the physician service delivery structure used, the annual delivery rate, and the nursery/NICU acuity level at the hospital. Section 2 included the nursing portion of the CPS developed by Weiss and Davis (1985) to measure nurses perception of nurse-physician collaboration. Section 3 included the HSOPSC (AHRQ, 2015) to measure nurses' perceptions of safety culture using the. Section 4 contained the McCloskey and Mueller

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Satisfaction Scale (Mueller & McCloskey, 1990) which was used to measure nurses' job satisfaction.

Nurse-Physician Collaboration

Collaborative Practice Scales (CPS) contain two scales nursing and physician. The 10-item physician scale was not used in this study. Nurse-physician collaboration was measured on the CPS nursing scale (Weiss & Davis, 1985). The CPS nursing scale contains two subscales: included nursing conduct of professional expertise subscale containing 5 items and clarification of nurses' versus physicians' practice scope subscale containing 4 items. Nursing conduct of professional expertise subscale measures the degree to which nurses communicate to physician professional opinions regarding patient care. Clarification of nurses' versus physicians' practice scope subscale measures the degree to which a nurses clarify mutual expectations and responsibilities in patient care (Weiss & Davis, 1985). All items are measured on a 6-point Likert scale from never (1) to always (6).

To test psychometric properties of the tool, Weiss and Davis (1985) administered the tool to 95 nurses and 94 physicians from major health science centers in a western metropolitan area. Weiss and Davis (1985) reported that construct validity for each scale was established by conducting confirmatory factor analysis that resulted in two factors/subscales on each scale: assertiveness (conduct of professional expertise subscale) and cooperativeness (clarification of nurses' versus physicians' practice scope). The nursing scale contained four items in the assertiveness factor and five in the cooperativeness factor. Concurrent validity was established by comparing the scale to other instruments: the Health Role Expectation Index (HREI; Weiss & Davis, 1983) and

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the Management of Differences Exercise (MODE; Kilmann & Thomas, 1977). A statistically significant correlation n ($r = .25; p < .01$) was identified only between the CPS nursing scale and HREI and between the CPS physician scale and HREI ($r = .33; p < .01$).

Weiss and Davis (1985) established reliability by administering the tool twice to participants, in a test and retest format. The nursing score results showed a Cronbach's Alpha coefficient of .80 in the pretest, and a coefficient of .83 in a posttest. Internal consistency was evaluated by using Spearman correlations to assess the factor's relationship to the overall score; the factors were correlated at $r = .41$ ($p < .001$). The correlations of the total scale scores included nursing scale correlations of r = .73 for assertiveness and r = .93 for cooperativeness. Each scale has its own validity and reliability; thus they can be used separately. Because this inquiry focused on nurses' perceptions of collaboration with physicians, only the nursing scale was used.

The CPS has been extensively utilized in research in both medical/surgical ward (Nelson, King, & Brodine, 2008) and critical care settings (Baggs, & Schmitt, 1995). Several studies utilized CPS to determine effectiveness of implementation of collaborative initiatives such as a program promoting effective multidisciplinary audit (Cheater, Hearnshaw, Baker, & Keane, 2005) and nurse physician rounding (Pritts, & Hiller, 2014). The scale was also used to measure collaborative patient care decision making (Baggs, & Schmitt, 1995; Schraeder, Britt, & Shelton, 2000). In addition to measuring perception of collaborative practice among nurses and physicians, two studies were identified where researchers adopted the scale to measure collaborative practice perception among nurse practitioners (Maylone, Ranieri, Griffin, McNulty, & Fitzpatrick,

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(2011). Larrabee et al. (2004) used the scale to measure nurse-physician collaboration as a predictor to patient satisfaction with nursing care. One dissertation study was found utilizing CPS in understanding interprofessional collaboration between midwives and physicians on the maternity unit within a military health system facility (Smith, 2015).

Nurses' Perception of Safety Culture

Nurses' perceptions of safety culture were measured with the HSOPSC scale (AHRQ, 2015). The 42-item survey was developed by Westat Marketing Consultants for AHRQ (Sorra & Nieva, 2004). A pilot survey was done with the participation of 1,437 employees in 21 hospitals across the United States. The items were scored on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Exploratory factor analysis demonstrated that the tool contained 12 domains comprising 42 items in total (Sorra & Nieva, 2004). Confirmatory factor analysis demonstrated consistency with the item category. Internal consistency reliability was established for the each of the 12 domains:

1. Overall perception of safety (α = .74);
2. Frequency of event reporting (α =.84);
3. Supervisor/manager expectations and actions promoting patient safety (α =.75);
4. Organizational learning/continuous improvement (α =.76);
5. Teamwork within units (α =.83);
6. Communication openness (α =.72);
7. Feedback and communication about error (α =.78);
8. Non-punitive response to error (α =.79);

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9. Staffing (α =.63);
10. Hospital management support for patient safety (α =.83);
11. Teamwork across hospital units (α =.80); and
12. Hospital handoffs and transitions (α =.80).

Validity was established by correlating scores obtained by calculating the mean of the results from each dimension. The correlation results ranged from r = .23 to r = .60, eliminating the possibility that the same construct was being measured by multiple dimensions (Sorra & Nieva, 2004). Additional Blegen, Gearhrt, O'Brien, Sehgal, and Alldredge (2009) conducted confirmatory factor analysis that partially supported the validity of the HSOPSC tool. Furthermore, psychometric testing was conducted by Hedsköld, et al. (2013), who reported acceptable internal consistency of Cronbach's α values above 0.7. Internal consistency reliability was above .7 in 7 out of 12 dimensions: teamwork within units, supervisor manager expectations promoting safety, error feedback and communication, nonpunitive response to error, teamwork across units, hospital handoffs and transitions, and frequency of event reporting.

This tool was utilized to measure the culture of safety in various geographical locations including Taiwan (Chen & Li, 2010), Sweden (Hedsköld, et al., 2013), and Turkey (Bodur & Filiz, 2009). No studies were found utilizing the HSOPSC scale in labor and delivery settings.

Nurses' Job Satisfaction

Nurses' job satisfaction was measured with the MMSS (Mueller & McCloskey & 1990) scale. This scale was developed to determine what rewards will cause nurses to remain at a job. The original scale was developed by McCloskey (1974). The items on

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the scale were developed based on Maslow's (1954) hierarchy of needs theory and Burns's (1969) theory of motivation.

To test psychometric properties of the scale, Mueller and McCloskey (1990) administered the scale to 150 nurses in a single large Midwestern hospital. Confirmatory factor analysis (CFA) was performed to test existing dimensions such as safety rewards, social rewards, and psychological rewards. The analysis indicated the existence of additional dimensions. As a result, an exploratory factor analysis (EFA) was carried out. This resulted in the extraction of nine factors, which were translated into eight meaningful dimensions. The final version of the scale contained 31 items reflecting the following dimensions of job satisfaction: (a) extrinsic rewards, (b) scheduling satisfaction, (c) family-work balance, (d) co-workers, (e) interaction opportunities, (f) professional opportunities, (g) praise/recognition, and (h) control/responsibility. The items are measured on a 5-point Likert scale ranging from very satisfied (5) to very dissatisfied (1).

Mueller and McCloskey (1990) reported that criterion-related validity was established by comparing sub-categories with other job satisfaction scales: the General Job Satisfaction Scale (Brayfield-Rothe, 1951) and the Job Diagnostic Survey (Hackman & Oldham, 1975). This showed the following positive correlations with satisfaction dimensions measured by the MMSS: JDS social correlated with MMSS interaction (r = .57) and MMSS co-workers (r =.53); JDS pay with MMSS extrinsic rewards (r =.70); JDS growth with MMSS control/responsibility (r =.57); and JDS supervisory with MMSS praise/recognition (r =.75). The construct validity of the subscales was examined by testing their correlations with items from the Job Characteristics Inventory (JCI; Sims,

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Szilagyi, & Keller, 1976). The following correlations were observed between MMSS and JCI subscales: JCI autonomy and MMSS control and responsibility .31, JCI friendship and MMSS interaction .55, JCI friendship with MMSS Co-worker .31, JCI feedback and MMSS prase and recognition .68, JCI task identity and MMSS control/responsibility .32, JCI variety and MMSS control/responsibility .37.

Mueller and McCloskey (1990) performed a test-retest procedure at 6 and 12 months to determine reliability. They reported a global scale reliability of Cronbach's alpha .89, with subscale reliabilities of .70 or higher. The internal consistency reliabilities of the subscales included the following: extrinsic rewards .52, scheduling satisfaction .84, family-work balance .57, co-workers .54, interaction .72, professional opportunities .64, praise/recognition .80, and control/responsibility .80.

The scale has been widely utilized to measure nurses' job satisfaction in various clinical and geographical settings and professional groups. Clinical settings include public health (Campbell, Fowles, & Weber, 2004; Cumbey, & Alexander, 1998), acute care (Price, 2002), and long-term care (Robertson, Higgins, Rozmus, & Robinson, 1999). Even though the scale was developed in United States, it was utilized in other countries such as England (Price, 2002), Jordan (AbuAlRub, Omari, & Al-Zaru, 2009), Kuwait (Al-Enezi, Chowdhury, Shah, & Al-Otabi, 2009), and Lebanon (El-Jardali, Dimassi, Dumit, Jamal, & Mouro, 2009). Also, the scale was utilized to measure job satisfaction among specific nursing groups such as new baccalaureate nurses (Roberts, Jones, & Lynn, 2004), new graduate nurses (Altier, & Krsek, 2006), charge nurses (Krugman & Smith, 2003), and nurse managers (Acorn, Ratner, & Crawford, 1997). No studies were

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identified using the MMSS scale to measure the level of nurses' job satisfaction exclusively in obstetrics.

Data Collection Protocol

The following permissions were obtained for conducting this study: permission to utilize the Mueller and McCloskey job satisfaction scale was obtained from University of Iowa (Appendix D) and permission to use CPS was obtained from the author, Dr. Sandra Weiss, University of California San Francisco (Appendix E). A letter of cooperation was received from AWHONN to distribute the link where participants could access the research instruments (Appendix F). The final approval for conducting this study was obtained from the IRB of Florida Atlantic University.

The principal investigator provided the AWHONN's marketing department with IRB approval. Then, the AWHONN marketing department provided the service of distribution of the survey link through an email message. The associated cost of this service was $555 for 3,000 members with specification of labor and delivery specialty. The AWHONN marketing department representative sent an email notification which included the study flyer with an invitation to participate in this study and the link to the SurveyMonkey survey to 3,000 members followed by a reminder notification at 2-week timeframe from initial email. The study's purpose, time frame, population, and informed consent policies were outlined in the introductory page of SurveyMonkey. No identifying information was collected. Utilizing approved FAU-sponsored research gift protocols, a $10 Starbucks gift card was awarded to nurses who completed the surveys.

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Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) Graduate Pack 24.0 for Windows (2016). The responses were exported into an Excel spreadsheet from SurveyMonkey and later transferred to an SPSS spreadsheet for statistical computations.

Descriptive statistical analysis was conducted initially to determine frequency distributions and standard deviations for the nominal and categorical variables representing demographic data. Participants were placed in two groups including those who reported being employed in hospitals with laborists and those who reported that were employed in hospitals without. Percentages were reported for variables such as gender and education. Descriptive statistics including percentage, frequencies, mean scores and standard deviations were used to help describe study participants' characteristics, including sub-groups such as role variations and differences in experience.

The aim of each research question was analyzed as following:

1. Difference in labor and delivery nurses' perceptions of safety culture between units utilizing the laborist service delivery model and units that do not utilize an around-the-clock, in-house laborist service delivery model was analyzed using independent *t* test. The difference between subscales was analyzed utilizing multivariate analysis of variance (MANOVA).

2. Differences in labor and delivery nurses' perceptions of nurse-physician collaboration between units utilizing the laborist service delivery model and units that do not utilize an around-the-clock, in-house laborist service delivery model was analyzed

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using independent *t* test. The difference between subscales was analyzed utilizing multivariate analysis of variance (MANOVA).

3. Differences in labor and delivery nurses' job satisfaction between units utilizing the laborist service delivery model and units that do not utilize an around-the-clock, in-house laborist service delivery model was analyzed using independent *t* test. The difference between subscales was analyzed utilizing multivariate analysis of variance (MANOVA).

4. The relationship between nurses' perceptions of patient safety and nurses' perception of nurse-physician collaboration in labor and delivery units was analyzed using Pearson's *r*.

5. The relationship between nurses' perceptions of patient safety and nurses' job satisfaction in labor and delivery units was analyzed using Pearson's *r*.

6. The relationship between nurses' perception of nurse-physician collaboration and nurses' job satisfaction in labor and delivery units was analyzed using Pearson's *r*.

Independent *T* Test

The independent *t* test is an inferential statistical test that used in situations where there are two experimental conditions and different participants represent each group. The independent t-test compares to different group' means and determines whether there is a statistically significant difference between the means in two different groups. Most often, the difference is tested at the 0.05 level of significance (Field, 2013).

Multivariate Analysis of Variance

ANOVA, a univariate technique, and its multivariate extension, MANOVA, are used to test whether or not differences between groups are statistically significant. MANOVA uses several dependent variables simultaneously, and it does this by using a

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matrix that contains information about the variance accounted for by each dependent variable. In MANOVA, the test statistic is derived by comparing the ratio of systematic to unsystematic variance for several dependent variables (Field, 2013). The main effects of the independent variables and their interactions are interpreted with everything else held constant. The effects from each of independent variables are tested individually. Multiple interactions are also tested separately.

In an ANOVA, the null hypothesis tested is the equality of a single dependent variable means across those groups; however, with a MANOVA, the null hypothesis tested is the equality of vectors of means on multiple dependent variables across groups. In MANOVA, the researcher uses two variates, one for the dependent variables and another for the independent variables. "The unique aspect of MANOVA is that the variate optimally combines the multiple dependent measures into a single value that maximizes the differences across groups" (Hair, Black, Babin, & Anderson, 2010, p. 350).

Unlike an ANOVA, in addition to analyzing multiple dependent variables, MANOVA also has the advantages of,

> Controlling the error rate, when some degree of intercorrelation among dependent variables is present; providing more statistical power than ANOVA when the number of dependent variables is five or fewer; nonmetric independent variables create groups between which the dependent variables are compared; many times the groups represent experimental variables or 'treatment effects;' and, researchers should include only dependent variables that have strong theoretical support. (Hair et al., p. 358)

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In theory, MANOVA has greater power than ANOVA to detect effects because it takes into account the correlations between dependent variables (Huberty & Morris, 1989).

MANOVA has similar assumptions to all other univariate models, but these assumptions are extended to the multivariate model. One assumption is that the residuals should be statistically independent. The data should be randomly sampled from the population. In an ANOVA, the assumption is that the residuals are to be normally distributed; however, for the MANOVA, the residuals should have multivariate normality. The assumption of homogeneity of covariance matrices is assumed for each dependent variable, and the correlation between any two dependent variables is the same in all groups. "This assumption is examined by testing whether the population variance–covariance matrices of the different groups in the analysis are equal" (Field, 2013, p. 642). Hotelling's T^2 is robust in the two-group situation when sample sizes are equal (Hakstian, Roed, & Lind, 1979). Hotelling's T^2 is used when the independent variable forms two groups and represents the most significant linear combination of the dependent variables. When there are unequal group sizes, Pillai's trace is preferred. The homogeneity of covariance matrices are examined to determine whether they seem homogeneous and if the assumption of multivariate normality holds.

Correlation Analysis

O'Donoghue (2012) states that correlation statistics offer a numerical value to the strength and direction of a relation between variables. Pearson's *r* correlation is used to measure the direction and strength of relation between two interval or ratio scale variables (Sullivan, 2017). In this study, these bivariate correlations are tested at the 0.05 level of significance.

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Limitations of the Research Plan

Obtaining survey participants from AWHONN members had some potential limitations. Many AWHONN members hold leadership positions, including directors, managers, and clinical specialists. Nurse leaders may view study variables from perspectives differing from those of bedside nurses. Membership in AWHONN also exposes nurses to current research in obstetrics and provides practice updates. Being an AWHONN member could make participants different from the population at large.

The study also focused on the physician services delivery structure and its relationships with other variables, but staffing structures not captured in the study can vary significantly between hospitals. These variations include employing mid-level practitioners, such as physician assistants and midwives, differences in nurse staffing; and availability of other related professionals such as neonatologists and anesthesia providers within an organization. Moreover, different employers offer benefit packages unique to their organizations, which can affect the nurse job satisfaction variable.

Chapter Summary

The purpose of this descriptive correlational quantitative study was to explore the effects of physician service delivery model on patient care through evaluation of safety culture and the effects on work environment factors including nurse-physician collaboration, and nurses' job satisfaction in labor and delivery units. The survey was sent to labor and delivery nurses nationwide. The data were collected in February and March of 2017 using a SurveyMonkey online questionnaire tool. An email message with a link to the survey was distributed to potential participants. The data analysis plan was discussed for each variable. The study required and received IRB approval from Florida

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Atlantic University. The results of the detailed statistical analyses are presented in Chapter 4, and the discussion of the results is presented in Chapter 5.

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CHAPTER 4: RESULTS

The purpose of this descriptive correlational study was to explore the effects of physician service delivery model on patient care through evaluation of safety culture and the effects on work environment factors including nurse-physician collaboration, and nurses' job satisfaction in labor and delivery units, and examine associations between nurses' perceptions of safety culture, nurse-physician collaboration and job satisfaction among labor and delivery nurses. The literature review revealed that perceptions of work environment aspects including safety culture and nurse-physician collaboration may differ based on the participants' roles within department (El-Jardali et al., 2011; Nordin et al., 2013; Scherer & Fitzpatrick, 2008), differences in perceptions based on a role (staff nurses vs. nurse managers/directors) were examined. Nurse clinicians and charge nurses within labor and delivery units have various degrees of interaction with physicians and various degree of involvement in patient care, so they were included only in the analysis of a total sample.

This chapter includes the data preparation, cleaning, and results of the analyzing procedures. The data were analyzed using the Statistical Package for the Social Sciences (SPSS) Graduate Pack 24.0 for Windows (IBM, 2016).

Data Processing

A total of 332 potential participants responded. Twelve participants were disqualified based on the inclusion and exclusion criteria. Eighteen additional questionnaires were incomplete and were deleted from the database. The final sample

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included 308 participants. The data were examined visually for responses containing the same answer across the survey; no same-response questionnaires were found.

Description of the Sample

The sample consisted of 308 nurses currently employed in various capacities in labor and delivery units in U.S. hospitals. The majority (99.03%; n = 305) were female. The majority of those participants (83.44%; n = 257) were white Caucasian. The participants' ages were reported by groups using a 9-year majority interval. The two largest age groups were 35 to 44 (25.97%; n = 80) and 45 to 54 (25.97%; n = 80). These were followed by 55 to 64 (23.05%; n = 71) and 25 to 34 (21.75%; n = 67). The majority of participants had bachelor's degrees (53.25%; n = 164), and were nationally certified as registered nurses certified (RNC) (55.52%; n = 171). Staff RNs were the largest group of participants (50.32%; n = 155) followed by charge nurses (12.66%; n=39) and Nurse Manager/Directors (12.01%; n=37); the other roles were charge nurses, assistant nurse managers, nurse managers, directors, and nurse clinicians, and others. Complete demographic information is listed in Table 1.

The majority (57.47%; n = 177) of the participants reported being employed in facilities that used an in-house, around-the-clock laborist model. The remainder (42.53%; n = 131) reported no in-house, around-the-clock laborist. The complete facility information is listed in Table 2.

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Table 1

Demographics of the Sample

Characteristic		In-house physician/ laborist around-the clock		No in-house physician/ laborist around-the clock	
		n	%	n	%
Gender					
	Female	175	98.87	130	99.24
	Male	2	1.13	1	0.76
Ethnicity					
	White/Caucasian	151	85.31	106	80.92
	Black or African American	13	7.34	9	6.87
	Hispanic or Latino	6	3.39	12	9.16
	Asian or Pacific Islander	6	3.39	3	2.29
	Prefer not to answer	2	1.13	2	1.53
	Other	1	0.56	1	0.76
Age					
	21-24	4	2.26	3	2.29
	25-34	35	19.77	32	24.43
	35-44	46	25.99	34	25.95
	45-54	46	25.99	34	25.95
	55-64	43	24.29	21	28
	65-70	3	1.69	0	0
Highest Education Level Completed					
	Diploma in nursing	3	1.69	2	1.53
	Associate's degree	25	14.12	24	18.32
	Bachelor's degree	91	51.91	73	55.73
	Master's degree	51	28.81	30	22.9
	Doctoral degree	7	3.95	2	1.53

(table continues)

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Table 1 *(continued)*

Characteristic	In-house physician/ laborist around-the clock		No in-house physician/ laborist around-the clock	
	n	%	n	%
Certifications				
None	40	22.6	52	39.69
CNM	3	1.69	2	1.53
RNC	112	63.28	59	45.04
C-EFM	52	29.38	28	21.37
CNS	5	2.82	1	0.76
FNP	3	1.69	0	0
IBCLC	6	3.39	3	2.29
Other	23	12.99	22	16.79
Role within a department				
Staff RN	93	52.54	62	47.33
Charge Nurse	21	11.86	18	13.74
Assistant Nurse Manager	8	4.52	4	3.05
Nurse Manager	10	5.65	11	8.4
Director	5	2.82	11	8.4
Clinical Specialist	16	9.04	5	3.82
Other	24	13.56	20	15.27

Table 2

Hospital Characteristics

Characteristic	n	%
Physician services delivery model		
In-house physician/laborist around-the-clock	177	75.47
No in-house physician/laborist around-the-clock	131	42.53

(table continues)

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Table 2 *(continued)*

Characteristic	n	%
Delivery volume		
<500	41	13.31
500–1,000	41	13.31
1,000–2,000	78	25.32
2,000–3,000	46	14.94
3,000–4,000	50	16.23
>4,000	46	14.94
Don't know	6	1.95
Level of neonatal care		
Level III or higher	143	46.43
Level II	103	33.44
Level I	55	17.86
Other	7	2.27

Analyses of the Research Questions

Research Questions 1 to 3 were designed to determine whether or not there was a difference in labor and delivery nurses' perceptions of safety culture, of nurse-physician collaboration, and job satisfaction levels, between facilities that did and did not use the in-house, around-the-clock laborist service delivery model. These questions were analyzed using independent *t* tests. The HSOPSC, the MMSS, and CPS scales consist of two of more subscales. Because each scale consists of two or more subscales, differences in perceptions on a subscale level were examined by conducting multivariate analysis of variance (MANOVA).

Research Questions 4 to 6 were designed to determine whether or not there were correlations between labor and delivery nurses' perceptions of safety culture, perceptions of nurse-physician collaboration, and job satisfaction. These questions were analyzed

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using Pearson's *r*. Because the literature review demonstrated differences in perceptions based on a role within organization (El-Jardali et al., 2011; Nordin et al., 2013; Scherer & Fitzpatrick, 2008), an additional statistical analysis was carried out on the basis of participants' roles. Sample size, variable mean values (M), and standard deviations (SD) are presented in Table 3.

Table 3

Means and Standard Deviations of Study Variables

Nursing Perspective		*n*	*M*	*SD*
Nurses' perception of safety culture (HSOPSC score)				
	Total sample	308	150.8	22.09
	Staff RNs	155	147.5	21.15
	Directors/nurse managers	37	161.7	20.14
Nurses' perception of nurse-physician collaboration (CPS score)				
	Total sample	308	36.69	7.46
	Staff RNs	155	36.15	7.59
	Directors/nurse managers	37	38.41	7.87
Job satisfaction (MMSS score)				
	Total sample	308	113.38	16.5
	Staff RNs	155	111.52	15.8
	Directors/nurse managers	37	114.65	16.58

Research Question 1

Is there a difference in labor and delivery nurses' perceptions of safety culture in their practice environment between facilities utilizing the laborist service delivery model and facilities that do not utilize around-the-clock, in-house laborist service delivery model?

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The independent *t* test was computed in SPSS to answer this question. The testing variable was the total score of HSOPSC, and the group variable was the physician service delivery model. The analysis demonstrated no statistically significant differences (t = 1.33; p=.185) in nurses' perception of safety culture in the two kinds of facilities in the total sample (Table 4), among staff RNs (n = 155) (Table 5) (t = .972; p=.33), and among nurse managers/directors (n = 37) (Table 6) (t = .468; p=.644). The HSOPSC measure included 12 subscales:

1. Overall perception of safety;
2. Frequency of event reporting;
3. Supervisor/manager expectations and actions promoting patient safety;
4. Organizational learning/continuous improvement;
5. Teamwork within units;
6. Communication openness;
7. Feedback and communication about error;
8. Non-punitive response to error;
9. Staffing;
10. Hospital management support for patient safety;
11. Teamwork across hospital units; and
12. Hospital handoffs and transitions.

MANOVA analysis was performed to examine whether or not differences between subscales were significant (Table 8). The primary table of results for the MANOVA with HSOPSC subscales as dependent variables and physician service as the independent variable are shown in Table 8. The multivariate statistics were statistically significant

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only in overall perception of safety subscale [F(12, 295) = 4,055, p=0.045]. From Table 7, the mean score on overall perception of safety HSOPSC subscale was significantly greater for nurses employed in the facilities not utilizing the around-the-clock laborist model.

Table 4

Independent t *Test Statistics With Physician Service Delivery Structure Independent and HSOPSC Scores as Dependent: Total Sample (N = 308)*

	In-house laborist around-the-clock		No in-house laborist around-the-clock					
Nursing Perspective	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Perception of safety culture (HSOPSC)	149.37	22.16	152.74	21.93	281.84	1.33	0.185	0.16

Table 5

Independent t *Test Statistics With Physician Service Delivery Structure Independent and HSOPSC Scores as Dependent: Staff RN (N = 155)*

	In-house laborist around-the-clock		No in-house laborist around-the-clock					
Nursing Perspectives	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Perception of safety culture (HSOPSC)	146.20	22.61	149.45	18.45	145.77	.972	0.33	0.15

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Table 6

Independent t *Test Statistics With Physician Service Delivery Structure Independent and HSOPSC Scores as Dependent: Directors/Nurse Managers (N = 37)*

	In-house laborist around-the-clock		No in-house laborist around-the-clock					
Nursing Perspectives	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Perception of safety culture (HSOPSC)	159.73	22.66	163.05	18.66	26.21	.468	0.644	0.18

Table 7

Descriptive Statistics for MANOVA With Physician Service Delivery Structure as Independent and HSOPSC Subscales as Dependent

Subscale	Physician Service	Mean	Std. Deviation	*N*
Teamwork within units	No in-house OB	17.01	2.214	131
	Around-the-clock OB	16.67	2.499	177
	Total	16.81	2.384	308
Supervisor/manager expectations and actions promoting patient safety	No in-house OB	15.61	3.154	131
	Around-the-clock OB	15.06	3.552	177
	Total	15.3	3.394	308
Organizational learning/continuous improvement	No in-house OB	11.82	1.821	131
	Around-the-clock OB	11.77	1.991	177
	Total	11.79	1.917	308
Hospital management support for patient safety	No in-house OB	10.9	2.663	131
	Around-the-clock OB	10.81	2.74	177
	Total	10.85	2.703	308
Overall perception of safety	No in-house OB	13.92	3.218	131
	Around-the-clock OB	13.16	3.258	177
	Total	13.48	3.257	308
Feedback and communication about error	No in-house OB	11.08	2.578	131
	Around-the-clock OB	10.61	2.578	177
	Total	10.81	2.585	308

(table continues)

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Table 7 *(continued)*

Subscale	Physician Service	Mean	Std. Deviation	*N*
Communication openness	No in-house OB	11.31	1.993	131
	Around-the-clock OB	11.06	1.968	177
	Total	11.17	1.979	308
Frequency of event reporting	No in-house OB	10.72	2.845	131
	Around-the-clock OB	10.5	2.382	177
	Total	10.59	2.587	308
Teamwork across hospital units	No in-house OB	13.59	3.155	131
	Around-the-clock OB	13.8	3.267	177
	Total	13.71	3.216	308
Staffing	No in-house OB	13.34	2.385	131
	Around-the-clock OB	12.99	2.382	177
	Total	13.14	2.385	308
Hospital handoffs and transitions	No in-house OB	13.28	3.247	131
	Around-the-clock OB	13.24	2.994	177
	Total	13.26	3.099	308
Non-punitive response to error	No in-house OB	10.16	2.89	131
	Around-the-clock OB	9.69	2.707	177
	Total	9.89	2.791	308
HSOPSC Total	No in-house OB	152.74	21.931	131
	Around-the-clock OB	149.37	22.161	177
	Total	150.8	22.091	308

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Table 8

Tests of Between-Subjects Effects for MANOVA With Physician Service Delivery Structure Independent and HSOPSC Subscales as Dependent

Subscales	Type III sum of squares	*df*	Mean square	*F*	Sig.	Partial eta squared	Noncent. parameter	Observed power[n]
Teamwork within units	8.752[a]	1	8.752	1.542	0.215	0.005	1.542	0.236
Supervisor/manager expectations and actions promoting patient safety	22.652[b]	1	22.652	1.973	0.161	0.006	1.973	0.288
Organizational learning/continuous improvement	.237[c]	1	0.237	0.064	0.8	0	0.064	0.057
Hospital management support for patient safety	.649[d]	1	0.649	0.089	0.766	0	0.089	0.06
Overall perception of safety	42.594[e]	1	42.594	4.055	0.045	0.013	4.055	0.519
Feedback and communication about error	16.900[f]	1	16.9	2.542	0.112	0.008	2.542	0.356
Communication openness	4.952[g]	1	4.952	1.265	0.262	0.004	1.265	0.202
Frequency of event reporting	3.471[h]	1	3.471	0.518	0.472	0.002	0.518	0.111
Teamwork across hospital units	3.463[i]	1	3.463	0.334	0.564	0.001	0.334	0.089
Staffing	8.781[j]	1	8.781	1.546	0.215	0.005	1.546	0.236
Hospital handoffs and transitions	.153[k]	1	0.153	0.016	0.9	0	0.016	0.052
Non-punitive response to error	16.305[l]	1	16.305	2.101	0.148	0.007	2.101	0.304
HSOPC	856.613[m]	1	856.613	1.76	0.186	0.006	1.76	0.262

Research Question 2

Is there a difference in labor and delivery nurses' perceptions of nurse-physician collaboration in their practice environment between facilities utilizing the laborist service delivery model and facilities that do not utilize an around-the-clock, in house laborist service delivery model?

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The independent *t* test was computed in SPSS to answer this question. The testing variable was the total score of CPS, and the group variable was the physician service delivery model. The analysis demonstrated statistically significant differences (t (–2.73); p = .007) in nurses' perceptions between the two kinds of facilities in the total sample (Table 9), and significant differences (t (–2,627); p = .01) among staff RNs (Table 10), but no statistically significant differences (p = .174) among nurse managers/directors (n = 37; t = -1.39 p = .174; Table 11). A MANOVA analysis was performed to examine whether differences between subscales were significant (Table 13). The results for the MANOVA with CPS subscales as dependent variables and physician care delivery structure the independent variable are shown in Table 13. The group effects indicate whether the physician service as around-the-clock laborist or no around-the-clock laborist influenced nurses' perceptions of nursing conduct of professional expertise and clarification of nurses' responsibilities, In Table 13, the multivariate statistics showed statistical significance [F (2, 305) = 6,623, p=0.011] on nursing conduct of professional expertise and statistically significant [F (2, 305) = 5,622, p=0.018] for clarification of nurses' responsibilities. Using Hotelling's trace statistic, there was a significant effect of the in-house, around-the-clock laborist model on overall nurses' perceptions of nurse physician collaboration as measured by CPS [T^2= .026, F (2, 305) = 3,929, p=0.021]. From this result, it can be concluded that the physician-care delivery model had a statistically significant effect on CPS subscales. From Table 12, the mean score on these CPS subscales was significantly greater for nurses employed in the facilities utilizing around-the-clock laborist model.

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Table 9

Independent t *Test Statistics With Physician Service Delivery Structure Independent and CPS Scores as Dependent: Total Sample (N = 308)*

	In-house laborist around-the-clock		No in-house laborist around-the-clock					
Nursing Perspective	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Perception of nurse-physician collaboration (CPS)	37.70	6.80	35.31	8.11	250.30	–2.73	0.007	0.35

Table 10

Independent t *Test statistics With Physician Service Delivery Structure Independent and CPS Scores as Dependent: Staff RN (n = 155)*

	In-house laborist around-the-clock		No in-house laborist around-the-clock					
Nursing Perspectives	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Perception of nurse-physician collaboration (CPS)	37.46	7.06	34.18	7.98	119.68	–2.63	0.010	0.48

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Table 11

Independent t *Test Statistics With Physician Service Delivery Structure Independent and CPS Scores as Dependent: Directors/Nurse Managers (N = 37)*

	In-house laborist around-the-clock		No in-house laborist around-the-clock					
Nursing Perspectives	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Perception of nurse-physician collaboration (CPS)	40.53	7.50	36.95	7.94	31.38	–1.39	0.174	0.25

Table 12

Descriptive Statistics for MANOVA With Physician Service Delivery Structure Independent and CPS Subscales as Dependent

Subscales	OB coverage	Mean	Std. deviation	N
Nursing conduct of professional expertise	No in-house OB	17.89	5.373	131
	Around-the-clock OB	19.37	4.685	177
	Total	18.74	5.034	308
Clarification of nurses' responsibilities	No in-house OB	17.42	3.541	131
	Around-the-clock OB	18.33	3.151	177
	Total	17.94	3.347	308
CPS Total	No in-house OB	35.31	8.108	131
	Around-the-clock OB	37.7	6.795	177
	Total	36.69	7.463	308

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Table 13

Tests of Between-Subjects' Effects for MANOVA With Physician Service Delivery Structure Independent and CPS Subscales as Dependents

Subscales	Type III sum of squares	df	Mean square	F	Sig.	Partial eta squared	Noncent. parameter	Observed power[d]
Nursing conduct of professional expertise	164.843[a]	1	164.843	6.623	0.011	0.021	6.623	0.728
Clarification of nurses' responsibilities	62.045[b]	1	62.045	5.622	0.018	0.018	5.622	0.657
CPS Total	429.153[c]	1	429.153	7.877	0.005	0.025	7.877	0.799

Research Question 3

Is there a difference in labor and delivery nurses' job satisfaction in their practice environment between facilities utilizing the laborist service delivery model and facilities that do not utilize the around-the-clock, in-house laborist service delivery model?

The independent *t* test was computed in SPSS to answer this question. The testing variable was the total score of MMSS, and the group variable was the physician-service delivery model. The analysis demonstrated no statistically significant differences (t = .147; p = .983) in job satisfaction between the two kinds of facilities in the total sample (Table 4), among staff RNs (t = -.249; p = .804; n = 155; Table 5), and among nurse managers/directors (t = .509; p = .614; n = 37; Table 6). MMSS measures included eight subscales: (a) extrinsic rewards, (b) scheduling satisfaction, (c) family-work balance, (d) co-workers, (e) interaction opportunities, (f) professional opportunities, (g) praise/recognition, and (H) control/responsibility. MANOVA analysis was performed to examine whether or not differences between subscales were significant. The primary results for the MANOVA with MMSS subscales as dependent variables and physician

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service as the independent variable are shown in Table 18. In Table 18, the multivariate statistics were not statistically significant (p>0.05). Using Hotelling's trace statistic, there was no significant effect of the in-house, around-the-clock laborist model on the overall nurses' job satisfaction as measured by MMSS (T^2= .026, F[8, 299] = 1,1114, p=0.334). From this result, it can be concluded that physician-care delivery model did not have a statistically significant effect on any of MMSS subscales.

Table 14

Independent t *Test statistics With Physician Service Delivery Structure Independent and MMSS Scores as Dependent: Total Sample (N = 308)*

	In-house laborist around-the-clock		No in-house laborist around-the-clock					
Nursing Perspectives	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Job satisfaction (MMSS)	113.26	16.20	113.54	16.96	272.93	0.147	0.983	0.017

Table 15

Independent t *Test Statistics With Physician Service Delivery Structure Independent and MMSS Scores as Dependent: Staff RN (N = 155)*

Nursing Perspectives	In-house laborist around-the-clock		No in-house laborist around-the-clock					
	M	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Job satisfaction (MMSS)	111.78	16.19	111.15	16.19	135.90	–.249	0.804	0.042

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Table 16

Independent t *Test Statistics With Physician Service Delivery Structure Independent and MMSS Scores as Dependent: Directors/Nurse Managers (N = 37)*

Nursing Perspectives	In-house laborist around-the-clock		No in-house laborist around-the-clock					
	M	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Job satisfaction (MMSS)	112.93	17.24	115.82	16.41	29.21	0.509	0.614	0.19

Table 17

Descriptive Statistics for MANOVA With Physician Service Delivery Structure Independent and MMSS Subscales as Dependent

Subscales	Physician Service	Mean	Std. deviation	N
Extrinsic rewards	No in-house OB	10.82	2.753	131
	Around-the-clock OB	11.3	2.411	177
	Total	11.09	2.569	308
Satisfaction with schedule	No in-house OB	23.4	4.649	131
	Around-the-clock OB	23.23	4.701	177
	Total	23.3	4.672	308
Balance of family and work	No in-house OB	9.37	1.942	131
	Around-the-clock OB	9.39	2.127	177
	Total	9.38	2.047	308
Satisfaction with co-workers	No in-house OB	8.42	1.215	131
	Around-the-clock OB	8.38	1.31	177
	Total	8.4	1.268	308
Interaction opportunities	No in-house OB	15.84	2.683	131
	Around-the-clock OB	15.66	2.609	177
	Total	15.73	2.638	308
Professional Opportunities	No in-house OB	13.05	2.641	131
	Around-the-clock OB	13.32	2.929	177
	Total	13.2	2.809	308
Praise	No in-house OB	15.01	3.516	131
	Around-the-clock OB	14.65	3.603	177
	Total	14.8	3.565	308

(table continues)

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Table 17 *(continued)*

Subscales	Physician Service	Mean	Std. deviation	N
Control/responsibility	No in-house OB	17.63	4.241	131
	Around-the-clock OB	17.34	4.172	177
	Total	17.46	4.197	308
MMSS Total	No in-house OB	113.54	16.962	131
	Around-the-clock OB	113.56	16.203	177
	Total	113.38	16.503	308

Table 18

Tests of Between-Subjects Effects for MANOVA With Physician Service Delivery Structure Independent and MMSS Subscales as Dependent

Subscales	Type III sum of squares	df	Mean square	F	Sig.	Partial eta squared	Noncent. parameter	Observed power[j]
Extrinsic rewards	17.536[a]	1	17.536	2.671	0.103	0.009	2.671	0.371
Satisfaction with schedule	2.401[b]	1	2.401	0.11	0.741	0	0.11	0.063
Balance of family and work	.041[c]	1	0.041	0.01	0.921	0	0.01	0.051
Satisfaction with co-workers	.096[d]	1	0.096	0.059	0.808	0	0.059	0.057
Interaction opportunities	2.558[e]	1	2.558	0.367	0.545	0.001	0.367	0.093
Professional Opportunities	5.205[f]	1	5.205	0.659	0.418	0.002	0.659	0.128
Praise	9.644[g]	1	9.644	0.758	0.385	0.002	0.758	0.14
Control/responsibility	6.534[h]	1	6.534	0.37	0.543	0.001	0.37	0.093
MMSS Total	5.991[i]	1	5.991	0.022	0.882	0	0.022	0.052

Research Question 4

What is the relationship between nurses' perception of safety culture and nurses' perception of nurse-physician collaboration in labor and delivery units?

Pearson's *r* was computed in SPSS to answer this question. The variables included nurse' perceptions of safety culture score, as measured by HSOPSC, and nurses' perceptions of nurse-physician collaboration, as measured by CPS. The analysis demonstrated no statistically significant relationship between the two variables in the

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total sample (r = -.026; p=.651; Table 19), among staff RNs (r = .051; p = .529; n = 155; Table 20), and among nurse managers/directors (r = .025; p = .885); (n = 37; Table 21).

Correlation matrices for Pearson's *r* correlations were calculated for subscales between the CPS and HSOPC. No statistically significant subscale correlations were found between subscales in the CPS and subscales in the HSOPC (see Table 22).

Research Question 5

What is the relationship between nurses' perception of safety culture and nurses' job satisfaction in labor and delivery units?

Pearson's *r* was computed in SPSS to answer this question. The variables included nurses' perceptions of safety culture, as measured by HSOPSC, and nurses' job satisfaction, as measured by MMSS. The analysis demonstrated a statistically significant, moderate to strong positive correlation (r = .665; p = .000) between the two variables in the total sample (Table 19), a moderate to strong positive correlation among staff RNs (n = 155; r = .660; p =.000; Table 20), and a moderate positive correlation among nurse managers/directors (n = 37; r = .445; p = .006; Table 21).

Correlation matrices for Pearson's *r* correlations were calculated for subscales between MMSS and HSOPCS scales (Table 23). There were no statistically significant relationships that were very strong. There were four moderate to strong relationships that were statistically significant (p <0.01). These were found between control/responsibility in the MMSS scale with management support for patient safety (r = 0.602), supervisor/manager expectations and actions promoting patient safety (r = 0.543), and overall perceptions of safety (r = 0.526) in the HSOPC scale, and between praise and

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recognition (MMSS scale) and supervisor/manager expectations and actions promoting patient safety in the HSOPC scale (r = 0.574).

Research Question 6

What is the relationship between nurses' perception of nurse-physician collaboration and nurses' job satisfaction in labor and delivery units?

Pearson's *r* was computed in SPSS to answer this question. The variables included nurse' perceptions of nurse-physician collaboration, as measured by CPS, and nurses' job satisfaction, as measured by MMSS. The analysis demonstrated no statistically significant relationship (r = .08; p = .161) between the two variables in the total sample (Table 19) or among nurse managers/directors (r = .172; p =.310; Table 20). However, a weak but statistically significant positive correlation was identified among staff RNs (n = 155; r = .163; p = .043; Table 21).

Correlation matrices for Pearson's *r* correlations were calculated for subscales between CPS and MMSS (Table 24). There were only three statistically significant relationships, but very weak positive correlations (r <0.16), between subscales in the CPS and the MMSS scales. These were found between interaction opportunities in the MMSS scale with nursing conduct of professional expertise (r = 0.120) and clarification of nurses' responsibilities (r = 0.152).

Table 19

Relationships Between Nurses' Perspectives: Total Sample (N = 308)

	Nursing Perspectives	1	2	3
1	Nurse-physician collaboration	-	-	-
2	Perception of safety culture	–0.026	-	-
3	Job satisfaction	0.08	0.665***	-

Note. * p < .05, **p < .01, ***p < .001.

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Table 20

Relationships Between Nurses' Perspectives: Staff RN (N = 155)

	Nursing Perspectives	1	2	3
1	Nurse-physician collaboration	-	-	-
2	Perception of safety culture	0.051	-	-
3	Job satisfaction	0.163*	0.660***	-

Note. * p < .05, **p < .01, ***p < .001.

Table 21

Relationships Between Nurses' Perspectives: Directors/Nurse Managers (n = 37)

	Nursing Perspectives	1	2	3
1	Nurse-physician collaboration			
2	Perception of safety culture	0.025		
3	Job satisfaction	0.172	0.445**	

Note. * p <. 05, **p < .01, ***p < .001.

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Table 22

Intercorrelations Between MMSS and HSOPSC Subscales

Correlation	Teamwork within units	Supervisor/manager expectations and actions promoting patient safety	Organizational learning/continuous improvement	Hospital management support for patient safety	Overall perception of safety	Feedback and communication about error	Communication openness	Frequency of event reporting	Teamwork across hospital units	Staffing	Hospital handoffs and transitions	Non-punitive response to error
Pearson correlation	.140*	.211**	.214**	.277**	.225**	.098	.214**	.043	.189**	.214**	.118*	.154**
Sig. 2-tailed	.014	.000	.000	.000	.000	.086	.000	.452	.001	.000	.039	.007
N	308	308	308	308	308	308	308	308	308	308	308	308
Pearson Correlation	.131*	.292**	.231**	.322**	.299**	.283**	.195**	.094	.310**	.220**	.281**	.307**
Sig. (2-tailed)	.021	.000	.000	.000	.000	.000	.001	.099	.000	.000	.000	.000
N	308	308	308	308	308	308	308	308	308	308	308	308
Pearson Correlation	.041	.159**	.094	.104	.079	.082	.090	.009	.142*	.052	.128*	.156**
Sig. (2-tailed)	.469	.005	.100	.070	.165	.152	.116	.876	.012	.365	.025	.006
N	308	308	308	308	308	308	308	308	308	308	308	308
Pearson Correlation	.466**	.263**	.320**	.390**	.413**	.346**	.355**	.204**	.358**	.318**	.343**	.328**
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
N	308	308	308	308	308	308	308	308	308	308	308	308

(table continues)

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Table 22 *(continued)*

Correlation	Teamwork within units	Supervisor/manager expectations and actions promoting patient safety	Organizational learning/continuous improvement	Hospital management support for patient safety	Overall perception of safety	Feedback and communication about error	Communication openness	Frequency of event reporting	Teamwork across hospital units	Staffing	Hospital handoffs and transitions	Non-punitive response to error
Pearson Correlation	.423**	.330**	.469**	.415**	.446**	.425**	.368**	.228**	.398**	.407**	.419**	.333**
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
N	308	308	308	308	308	308	308	308	308	308	308	308
Pearson Correlation	.159**	.377**	.449**	.388**	.281**	.404**	.351**	.194**	.301**	.211**	.284**	.289**
Sig. (2-tailed)	.005	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000
N	308	308	308	308	308	308	308	308	308	308	308	308
Pearson Correlation	.392**	.574**	.454**	.453**	.456**	.439**	.369**	.218*	.402*	.297**	.310**	.425**
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
N	308	308	308	308	308	308	308	308	308	308	308	308
Pearson Correlation	.325**	.543**	.499**	.602**	.526**	.468**	.482**	.225**	.482**	.443**	.372**	.483**
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
N	308	308	308	308	308	308	308	308	308	308	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

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Table 23

Intercorrelations Between CPS and HSOPSC Subscales

Correlation	Teamwork within units	Supervisor/ manager expectations and actions promoting patient safety	Organizational learning/ continuous improvement	Hospital management support for patient safety	Overall perception of safety	Feedback and communication about error	Communication openness	Frequency of event reporting	Teamwork across hospital units	Staffing	Hospital handoffs and transitions	Non-punitive response to error
Pearson Correlation	-0.027	-0.084	0.052	-0.027	-0.033	0.043	0.003	0.027	0	0.008	-.124*	-0.018
Sig. (2-tailed)	0.642	0.142	0.362	0.639	0.562	0.454	0.963	0.634	1	0.883	0.029	0.757
N	308	308	308	308	308	308	308	308	308	308	308	308
Pearson Correlation	0.008	-0.006	0.062	-0.015	-0.024	-0.026	0.084	0.049	-0.037	-0.006	-0.084	-0.044
Sig. (2-tailed)	0.889	0.913	0.278	0.798	0.675	0.653	0.141	0.39	0.514	0.923	0.143	0.446
N	308	308	308	308	308	308	308	308	308	308	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

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Table 24

Intercorrelations Between CPS and MMSS Subscales

Correlation	Extrinsic rewards	Satisfaction with schedule	Balance of family and work	Satisfaction with co-workers	Interaction opportunities	Professional opportunities	Praise	Control
Pearson correlation	0.043	0.009	0.073	0.043	.120*	0.1	0.008	0.043
Sig. (2-tailed)	0.453	0.873	0.203	0.456	0.035	0.079	0.893	0.456
N	308	308	308	308	308	308	308	308
Pearson correlation	.118*	0.005	0.041	0.043	.152**	0.046	0.018	0.033
Sig. (2-tailed)	0.038	0.932	0.47	0.451	0.007	0.421	0.751	0.564
N	308	308	308	308	308	308	308	308

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

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Reliability of Measures

Cronbach's α was calculated to determine internal consistency reliability of the HSOPSC, CPS, and MMSS global scales and subscales. The reliabilities were as following:

HSOPSC global reliability α = .94.

1. Overall perception of safety (α = .78);
2. Frequency of event reporting (α =.86);
3. Supervisor/manager expectations and actions promoting patient safety (α =.83);
4. Organizational learning/continuous improvement (α =.65);
5. Teamwork within units (α =.83);
6. Communication openness (α =.70);
7. Feedback and communication about error (α =.82);
8. Non-punitive response to error (α =.81);
9. Staffing (α =.21);
10. Hospital management support for patient safety (α =.82);
11. Teamwork across hospital units (α =.86); and
12. Hospital handoffs and transitions (α =.82).

CPS global reliability α = .84. The subscale reliabilities were as following: nursing conduct of professional expertise subscale (α = .77) and clarification of nurses' versus physicians' practice scope subscale (α = .69).

MMSS global reliability α = .91. The subscale reliabilities were as following: (a) extrinsic rewards (α = .67), (b) scheduling satisfaction (α = .75), (c) family-work

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balance (α = .37), (d) co-workers (α = .57), (e) interaction opportunities (α = .76), (f) professional opportunities (α = .73), (g) praise/recognition (α = .80), and (h) control/responsibility (α = .85).

Chapter Summary

An independent *t* test was conducted to determine if there was a difference in nurses' perspectives related to the physician-care delivery model. The results demonstrated statistically significant differences in nurses' perceptions of nurse-physician collaboration related to the physician-care delivery model. Nurses who are employed in the facilities that utilize around-the-clock, in-house laborists scored higher on nurse-physician collaboration perceptions. No differences were found in nurses' perception of safety culture or job satisfaction between facilities that utilize around-the-clock in-house laborists and those that do not. Additional MANOVA analysis was performed to examine differences between the subscales of each measure. MANOVA results were consistent with *t* test results. No statistically significant differences were found in MMSS or HSOPSC subscales between two models of physician-care delivery structure. A MANOVA analysis of the CPS scale indicated statistically significant differences in both nursing conduct of professional expertise and clarification of nurses' responsibilities scales with higher scores attributed to nurses employed in facilities utilizing around-the-clock laborists.

Correlation analysis demonstrated statistically significant moderate to strong correlations between nurse' perception of patient safety and job satisfaction in the total sample, among staff RNs and directors/nurse managers, and weak correlation between nurses' perception of nurse-physician collaboration and nurses' job satisfaction.

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Correlation matrices for Pearson's *r* correlations were calculated for subscales. There were four statistically significant moderate to strong relationships between control/responsibility in the MMSS scale with management support for patient safety, supervisor/manager expectations and actions promoting patient safety, and overall perceptions of safety in the HSOPSC scale, and between praise and recognition (MMSS scale) and supervisor/manager expectations and actions promoting patient safety in the HSOPSC scale. There were very weak positive correlations between subscales in the CPS and the MMSS scales. These were found between interaction opportunities in the MMSS scale with nursing conduct of professional expertise and clarification of nurses' responsibilities.

Chapter 5 contains a discussion of these research findings in relation to the literature, implications for the nursing discipline, and recommendations for future research.

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CHAPTER 5: DISCUSSION

This descriptive correlational study examined the difference in nurses' perception of safety culture, nurse-physician communication, and nurses' job satisfaction between labor and delivery units with and without in-house, around-the-clock laborists and examine associations between nurses' perceptions of safety culture, nurse-physician collaboration and job satisfaction among labor and delivery nurses. This final chapter includes discussion of the results. The chapter concludes with implications of the study for nursing and recommendations for future research.

Discussion of the Results

This study was unique in that it examined nurses' perceptions of safety culture, nurse-physician collaboration and job satisfaction related to the in-house laborist services delivery model. This study used a nationwide sample of labor and delivery nurses. No other studies examining nurses' perspectives on utilization of in-house laborists around-the-clock were found. The sample size included 308 registered nurses employed in different capacities such as staff nurses, charge nurses, nurse managers, directors, nurse clinicians and others. Because staff member perceptions may be different based on a role (El-Jardali et al., 2011; Nordin et al., 2013; Scherer & Fitzpatrick, 2008), the analysis was conducted on a total sample, staff RNs, nurse managers, and directors. These groups were chosen because staff nurses are primarily responsible for bedside patient care and nurse managers/directors focus on administrative duties. Nurses fulfilling other roles such as charge nurses and nurse clinicians represent nursing staff population in labor and delivery

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settings, but their opportunity to interact with physicians and to participate in patient care varies significantly between facilities thus, these groups are not analyzed separately but included in the analysis of a total sample. The discussion of each hypothesis is presented below.

Discussion: Hypothesis 1

The patient safety perception scores will be significantly higher among labor and delivery nurses' who practice in the facilities that utilize the around-the-clock, in-house laborist service delivery model than the patient safety perception scores among labor and delivery nurses who practice in the facilities that do not utilize around-the-clock, in-house laborist service delivery model.

The group variable that was examined was the presence or the absence of the laborist around-the-clock coverage and the testing variable was nurses' perceptions of safety culture as measured by HSOPSC scale. The results of the analysis of nurses' perception of safety culture in their practice environment demonstrated that there were no statistically significant differences ($p > .05$) between facilities utilizing the laborist service delivery model and facilities that do not. Within the total sample of staff RNs and nurse managers/directors, the null hypothesis was not rejected. The HSOPSC tool that was utilized contains 12 domains that are overall perception of safety, frequency of event reporting, supervisor/manager expectations and actions promoting patient safety, organizational learning/continuous improvement, teamwork within units, communication openness, feedback and communication about error, non-punitive response to error, staffing, hospital management support for patient safety, teamwork across hospital, and hospital handoffs and transitions. Subsequent analysis of differences between subscales

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demonstrated statistically significant difference in overall perception of safety subscale {F(1,306) = 4,055, p=0.045}. Unexpectedly, the mean score of overall perception of safety subscale was significantly greater for nurses employed in the facilities not utilizing the around-the-clock laborist model.

No studies exploring nurses' perception of safety culture related to laborist structure were identified. Only one study comparing safety attitudes in labor and delivery unit before and after safety initiatives implementation was found (Pettker, et al., 2011). Even though, one of the initiatives was implementation of around the clock laborist service, the contribution of laborist service to increase in safety attitude scores is unknown. Safety culture is associated with improved patient outcomes (DiCuccio, 2015). Previous research on laborist models focused on patients' outcomes (Feldman et al., 2014; Iriye et al., 2013; Srinivas et al., 2016). Two studies indicated that the presence of the laborist-care model on labor and delivery units is consistent with lower cesarean section rates (Feldman et al., 2014; Iriye et al., 2013), and one study demonstrated fewer incidents of preterm deliveries and induction rates in facilities employing around-the-clock laborists (Srinivas et al., 2016). The result of overall perception of safety subscale score being higher among hospitals with no around-the-clock hospitalists may be impacted by the acuity of the patient population. Facilities that are required to employ around-the-clock laborists are advanced maternal acuity level facilities and tertiary hospitals (Stevens et al., 2015) dealing with morbid patient populations, which may affect nurses' perceptions of overall perceptions of care. The subscale that may be applicable to perception of safety culture related to relationship with physicians is the category examining teamwork within the unit; however, differences in the mean score were not

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statistically significant (p >.05), perhaps because the teamwork subscale examined teamwork in general, and was not specifically related to interdisciplinary teamwork that included physicians.

Additionally, because other care provider staffing structures were not examined in this study, it is preliminary to state that an around-the-clock physician presence and their availability to respond to life threatening emergencies do not impact perceptions of safety culture. Other staffing structures may include in-house physician presence during certain hours and various combinations of employing mid-level providers such as midwives, nurse practitioners, and physician assistants. Other factors may also impact the perception of patients' safety such as organizational structure, support, and direct leadership. The current study did not explore patients' outcomes; however, examining the perception of safety culture in labor and delivery units in relation to specific patients' outcomes may be considered in future research.

Discussion: Hypothesis 2

The nurse-physician collaboration perceptions scores will be significantly higher among labor and delivery nurses' who practice in the facilities that utilize the around-the-clock, in-house laborist service delivery model than the nurse-physician collaboration perceptions scores among labor and delivery nurses who practice in the facilities that do not utilize the around-the-clock, in-house laborist service delivery model.

The group variable that was examined was the presence or the absence of the laborist around-the-clock coverage and the testing variable was nurses' perception of nurse-physician collaboration measured by scores on CPS scale. The results of the analysis of nurses' perception of nurse-physician collaboration in their practice

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environment demonstrated that there were statistically significant differences ($p < .05$) in nurses' perceptions between facilities utilizing the laborist service delivery model and facilities that do not among total sample of staff RNs and nurse managers/directors. The null hypothesis was rejected. The nurse-physician collaboration perceptions scores were significantly higher among labor and delivery nurses' who practice in the facilities that utilized the around-the-clock, in-house laborist service delivery model. The CPS tool that was utilized contains two subscales: nursing conduct of professional expertise and clarification of nurses' responsibilities. Subsequent analysis of differences between subscales demonstrated statistically significant differences in both subscales.

No studies examining laborist model of care utilization in association with nurse-physician collaboration perceptions were found. No studies were found examining nurse-physician collaboration related to other around-the-clock hospitalist structures outside the labor and delivery arena. The statistically significant difference in nurses' perceptions of collaboration scores found in this study is important evidence that laborist physical presence on the unit positively impacts nurses' work environment. Also, this finding adds to the body of knowledge on utilizing the around-the-clock, laborist-care model. This knowledge may influence hospital administrative decisions regarding physician-care delivery model implementation in obstetrics and other specialties.

Discussion: Hypothesis 3

The nurses' job satisfaction scores will be significantly higher among labor and delivery nurses who practice in the facilities that utilize the around-the-clock, in-house laborist service delivery model than the nurses' job satisfaction scores among labor and delivery nurses' who practice in the facilities that do not utilize the around-the-clock, in-

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house laborist service delivery model.

The group variable that was examined was the presence or the absence of the laborist around-the-clock coverage and the testing variable was nurses' job satisfaction scores measured by MMSS scale. The results of the analysis of nurses' job satisfaction in their practice environment demonstrated that there were no statistically significant differences ($p > .05$) between facilities utilizing the laborist service delivery model and facilities that do not among total sample of staff RNs and nurse managers/directors. The null hypothesis was not rejected. Subsequent analysis of differences between subscales demonstrated no statistically significant differences between subscales as well. The subscale that may be applicable to job satisfaction related to relationship with physicians are satisfaction with coworkers and satisfaction with interaction opportunities. The satisfaction with co-workers subscale includes item "the physician you work with" and satisfaction with interactions opportunity includes item "opportunities to interact professionally with other disciplines." Both items' means were slightly, but not statistically significant higher among nurses working in facilities utilizing the in-house, around-the-clock laborist model ($M = 4.03$ vs. $M = 4.06$; $M = 3.63$ vs. $M = 3.67$).

No studies examining laborist model of care utilization in association with nurses' job satisfaction were found. However, previous research studies indicated positive association in community physician satisfaction with practice and utilization of an around-the-clock in-house laborist model (Funk et al., 2011) and positive association in patient satisfaction scores with practice and utilization of an around-the-clock, in-house laborist model (Chen et al., 2013; Srinivas et al., 2013). Even though the current study results did not yield statistically significant differences, the MMSS scale contained only a

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single item addressing working with physicians, further exploration possibly utilizing other job satisfaction scales reflecting labor and delivery work environment is warranted.

Discussion: Hypothesis 4

The greater the score of nurse-physician collaboration, the greater the score of nurses' perception of safety culture.

The relationship between nurses' perception of safety culture as measured by HSOPSC scale and nurses' perception of nurse-physician collaboration as measured by CPS scale was examined. The results of the analysis demonstrated no statistically significant relationship ($p > .05$) between the two variables among total sample of staff RNs and nurse managers/directors, thus the null hypothesis was not rejected. Additional analysis to determine relationships between CPS and HSOPC subscales was conducted. No statistically significant subscale relationships were found between subscales in the CPS and subscales in the HSOPC.

No other studies were found examining the relationship between the nurses' perception of safety culture and nurses' perception of nurse-physician collaboration. However, there were two studies demonstrating positive relationships between safety outcomes scores and nurse-physician collaboration (Baggs et al., 1999; Boyle, 2004) and one study (Higgins, 1999) demonstrated no relationship between patient outcomes and nurse-physician collaboration. The current study results warrant further exploration. Possible utilization of a perception of safety culture tool specific to labor and delivery reflecting the unique practice environment of labor and delivery nurses may generate different results. The only tool measuring safety in obstetrics that was found was High Reliability Perinatal Safety Assessment measure (Riley, Meredith, & Parrotta, 2014), but

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a request for this tool utilization was declined. The subscale that may be applicable to perception of safety culture related to nurse-physician collaboration subscales is a category examining teamwork within the unit; however, these associations were not statistically significant ($p > .05$), possibly because the teamwork subscale examined teamwork in general, and was not specifically related to interdisciplinary teamwork that includes physicians.

Discussion: Hypothesis 5

The greater the score of nurses' job satisfaction, the greater the score of nurses' perception of safety culture.

The relationship between nurses' perception of safety culture as measured by HSOPSC scale and nurses' job satisfaction as measured by MMSS scale was examined. The results of the analysis demonstrated statistically significant relationships ($p < .05$), moderate to strong positive correlation ($r = .665$; $p = .000$) between the two variables in the total sample, a moderate to strong positive correlation among staff RNs ($n = 155$; $r = .660$; $p = .000$), and a moderate positive correlation among nurse managers/directors ($n = 37$; $r = .445$; $p = .006$), thus the null hypothesis was rejected. Additional analysis to determine relationships between MMSS and HSOPSC subscales was conducted. There were four moderate to strong relationships that were statistically significant ($p < 0.01$). These were found between control/responsibility in the MMSS scale with management support for patient safety ($r = 0.602$), supervisor/manager expectations and actions promoting patient safety ($r = 0.543$), and overall perceptions of safety ($r = 0.526$) in the HSOPSC scale, and between praise and recognition (MMSS scale) and supervisor/manager expectations and actions promoting patient safety in the HSOPSC

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scale (r = 0.574).

No studies examining an association between nurses' perception of safety culture and nurses' job satisfaction were found. The job satisfaction variable research literature review showed positive association between nurses' job satisfaction and patient care quality and safety outcomes (Djukic et al., 2013; Faller et al., 2011; Van Bogaert et al., 2013). The results of the current study add to the body of knowledge regarding association between nurses' job satisfaction and perceptions of safety culture, specifically in the population of labor and delivery nurses. The associations between subscales indicated that safety perceptions related to job satisfaction depend on managerial functions such as demonstrating support of patient safety culture, providing praise to employees, and strengthening nurses' control and responsibility over their practice.

Discussion: Hypothesis 6

The greater the score of nurses' perception of nurse-physician collaboration, the greater the score of nurses' job satisfaction.

The relationship between nurses' perception nurse-physician collaboration as measured by CPS scale and nurses' job satisfaction as measured by MMSS scale was examined. The analysis demonstrated no statistically significant relationship (r = .08; p = .161) between the two variables in the total sample, thus the null hypothesis was not rejected. Further analysis demonstrated a weak but statistically significant positive correlation was identified among staff RNs (n = 155; r = .163; p = .043). Additional analysis to determine relationships between MMSS and CPS subscales was conducted. These were found between interaction opportunities in the MMSS scale with nursing conduct of professional expertise (r = 0.120) and clarification of nurses' responsibilities

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(r = 0.152), and between extrinsic rewards and clarification of nurses' responsibilities (r = 0.152).

A review of the research indicated weak positive association between nurse-physician collaboration and staff RN nurses' job satisfaction (Chang et al., 2009; Galletta et al., 2016; Ouzouni & Nakakis, 2009; Peltier et al., 2013). The current study showed only weak associations consistent with previous research studies. The fact that labor and delivery nurses' job satisfaction is higher compared to other specialties (ANM Healthcare, 2013; Kalisch et al., 2010) may affect the job satisfaction variable and affect study results.

Study Results Discussion Based on Theoretical Framework

The theory of bureaucratic caring (Ray, 1981; 1989) and the social exchange theory (Homans, 1974) guided this study. The theory of bureaucratic caring helps us to understand the interconnectedness of bureaucratic values, such as legal, technological, economic, political, and educational values, and humanistic values such as physical and socio-cultural values, in an organization. It illustrates how healthcare providers and patients are affected by complex organizational structures. The decision to implement in-house around-the-clock laborist service delivery model depends on economic, legal, political, and social-cultural organizational dimensions. The laborist model is a significant financial investment. However, leaders should evaluate the economic impact of the program against potential economic and legal gains such as reduced cost in law suits due to physician availability during emergencies. Laborists presence on the unit also impacts political dimension by altering unit dynamics and workflow with private community physicians. While some physicians may benefit from laborist providing

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backup for emergent situations, others may feel threatened by potential competition over patient care from business perspective. Safety culture is impacted by several theoretical dimensions including legal, economic, and social-cultural. Social -cultural dimension of an organizational includes safety culture and its reflection in organizational mission, vision, values, and behaviors. Safety culture is also greatly affected by legal and economic dimensions. For example, establishing safety culture has a potential in reducing patient harm and in decreasing the number of associated law suits, ultimately impacting the economic bottom line. Nurse-physician collaboration affects social-cultural and political dimension. Political factors include hierarchical relations and powers between nurses and physicians within labor and delivery ultimately establishing social-cultural structure within a unit. Nurses' job satisfaction is influenced by social-cultural and economic dimensions. While positive work environment reflected in social-cultural dimension has a potential to positively affect job satisfaction, higher job satisfaction has a potential to positively influence nurse retention and reduce costs associated with nurse turnover.

The study results showed that social aspects of labor and delivery work environment, such as nurse-physician collaboration, were positively affected by the presence of a laborist service model, but perceptions of safety culture and nurses' job satisfaction scores were not affected. According to the theory, based on study results the decision to implement laborist model should be considered in attempt to improve nurses' work environment or social-cultural dimension of an organization. However, additional dimensions, such as the financial impact of laborist service implementation and the potential return on investment, should be evaluated before the final decision is made. The

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results also demonstrated the statistical significance in the interconnectedness of safety culture and nurses' job satisfaction and the interconnectedness between nurse-physician collaboration and bedside nurses' job satisfaction among labor and delivery nurses. This result shows the need for administrators to continue improving the aspects of nursing work environment such as consolidating safety culture, strengthening nurse-physician collaboration and improving job satisfaction which will ultimately lead to the increase in nurse retention rates.

Social exchange theory guides the understanding of relationships between people and social groups as negotiated through exchanges, cost-benefit analyses of tangible and intangible assets, and the evaluation of alternatives. The results of the study demonstrated higher perception of nurse-physician collaboration in the presence of laborist service but no difference in safety culture perceptions or nurses' job satisfaction in relation to the physician care model. According to social exchange theory, this increase in collaboration is a non-tangible benefit affecting nurses. Because the results did not show a difference in safety culture perception or job satisfaction, further analysis is needed to understand how the intangible benefits of nurse-physician collaboration such as satisfaction from professional interaction affect the labor and delivery environment and how this effect can be translated into tangible benefits. The analysis may involve examining how higher perceptions of nurse-physician collaboration affects the costs are associated with patient outcomes that depend on interprofessional collaboration and how it affects the retention of nursing staff as a result of a more positive work environment.

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Implications of Findings

This study results provide implication on nursing practice, nursing education, and nursing research.

Nursing Practice

Even though the results of the current study suggest that the around-the-clock laborist model of care does not influence overall nurses' perception of safety culture, there was statistically significant moderate correlation between perception of safety culture and nurses' job satisfaction. Moderate statistically significant correlations were identified between nurses' satisfaction with control and responsibility over their practice MMSS subscale and supervisor/manager expectations and actions promoting patient safety and hospital management support for patient safety HSOPSC subscales. These findings suggest administrative and management support may have greater value to labor and delivery nurses' job satisfaction than physician service delivery structure.

This study's results also demonstrated significant differences between nurses' perception of nurse-physician collaboration in a total sample and among bedside nurses, indicating greater collaboration scores among nurses who work with around-the-clock laborists. The current study demonstrated a weak positive association between nurse-physician collaboration and the bedside nurses' job satisfaction. The current study also demonstrated a weak but statistically significant association between nurse-physician collaboration and nurses' job satisfaction interaction subscale. Further research is needed to understand the mechanism by which the laborists' model impacts nurses' practice and specifically, nurses' work environment.

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Nursing Education

Nurse-physician collaboration perception scores were statistically significantly higher among nurses who work with around-the-clock laborists. Nurse-physician collaboration is associated with improved patient outcomes and improved nurses' work environment (Baggs et al., 1999; Boyle, 2004; Dougherty & Larson, 2005; Higgins, 1999). Considering the importance of nurse-physician collaboration for patient care outcomes, hospitals need to focus on integrating interprofessional education and overcome obstacles such as disrespect or unclear role delineation.

Nursing Research

The study results added to the body of knowledge on laborist service delivery model effects on aspects of nurse' work environment such as nurse-physician collaboration. No other studies examining nursing perspectives related to physician service delivery were found. The investment in implementing a laborist model may be under consideration in attempt to improve patient outcomes and, ultimately, nurses' perception of safety culture. Different vendors offering a variety of laborist services exist, and it is the leaders' obligation to choose the right structure that supports the specific patients', nurses', and organizational interests, applicable to their facility.

Previous research demonstrated improved patient outcomes such as reduction in cesarean section rates and a decrease in preterm births associated with an around-the-clock, laborist presence in labor and delivery units (Feldman et al., 2014; Iriye et al., 2013; Srinivas et al., 2016). Yet, implementing an in-house, around-the-clock laborist model carries a great financial impact making the decision to adapt this model of care difficult. The financial benefits from improved patient outcomes are not always

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quantifiable or deemed significant enough to justify implementation of the laborist model from a financial stand point.

Unfortunately, study results did not show significant difference in nurses' job satisfaction making it difficult to financially justify the laborist model implementation. Because the cost of nurse turnover may reach upward to $88,000 dollars per nurse (Li & Jones, 2013), additional nurse work environment aspects related to physician service model that may affect nurse turnover such as intent to leave should be explored and quantified.

Research Limitations

There were several limitations to this research study. First, research participants were members of professional nursing organization, and may not represent the general population of labor and delivery nurses. Belonging to a professional organization exposes nurses to new and updated practice recommendations. Majority of participants held Bachelor's or higher degree and were certified. Additionally, many AWHONN members hold leadership positions which also could affect sample demographics. Second, even though data such as delivery volume, level of neonatal care, other organizational demographics were not collected. These may include geographical location (urban vs. rural), Magnet status (Magnet vs. non-Magnet hospitals), for profit vs non- for-profit organizations, and academic vs non-academic centers. These demographic variables influence organizational structure and goals and may impact participant responses. Third, the sample size of each group (staff RN, nurse manager/director, scheduled shift, etc.) was not large enough to statistically evaluate the contribution of those variables on study results. Finally, only a single tool was utilized for each variable that may not be sufficient

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in measuring all domains of the concept or reflect specific practice of labor and delivery nurses.

Recommendations for Future Research

There are several recommendations for future research based on the findings. It is recommended to replicate the study utilizing a larger sample size to identify findings that were reflected in a small effect size. Because variations in results were demonstrated among nurses employed in different roles, increases in sample sizes are also recommended among specific groups such as staff RNs and directors/nurse managers. These increases will also enable examining differences in perceptions among nurses employed in different roles. Exploring nurses' perceptions based on the shift worked may bring to light perceptions of night shift nurses who work with fewer resources and may have different perceptions than those who work during the day.

Multiple factors other than utilization of in-house laborists, such as employee benefits and organizational support, may affect nurses' perceptions of safety culture, nurse-physician collaboration, and job satisfaction (McFadden, Stock, & Gowen, 2015; Pettker et al., 2011). Additional inclusion/exclusion criteria, such as recruiting participants from a single healthcare system or similar geographical location, may mediate the effects of these factors. Finally, exploring physicians' perceptions of the nurse-physician collaboration and perceptions of safety culture based on physician service model may provide additional information.

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Conclusion

An in-house around-the-clock laborist service delivery model is a new approach to obstetric care that emerged in the last decade. It is now used in more than a third of hospitals providing obstetrical care. The model is frequently implemented to improve patient outcomes. This study examined nurses' perspectives on work environments associated with this laborist care-delivery model. The results indicated that the model is associated with higher scores in labor and delivery nurses' perceptions of nurse-physician collaboration but does not affect their perceptions of safety culture or job satisfaction. By focusing on nurses' perspectives, this study adds to the body of knowledge on laborist service-delivery models and lays grounds for future research into improving work environments in labor and delivery.

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APPENDICES

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Appendix A

Participate in a study on nurses' perspectives related to physician service delivery model

Labor and delivery registered nurses (a position requiring registered nurse license such as bedside nurse, charge nurse, nurse manager, nurse clinician, and director of nursing) are invited to participate in a research study on nurses' perception of safety culture, nurse-physician collaboration, and nurses' job satisfaction related to physician service structure.

To complete the study survey the participants must be:

- Employed in labor and delivery
- Currently practice in the United States
- Employed greater than 6 months in their current setting
- Age between 21-70
- Able to read and write in English

The online survey takes about 15-20 minutes to complete. To receive a $10 Starbucks gift card, you will need to provide valid email address and complete each section of the survey. For any questions please contact Olga Abiri, MSN, RNC-OB, C-EFM, PhD student at (954) 773 3027, email:oabiri1@fau.edu and/or Rosaleen Sherman EdD, RN, NEA-BC, FAAN at (561) 297 0055. To participate in the survey, please follow the link below:

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Appendix B

INFORMED CONSENT PARAGRAPH FOR LOW RISK ANONYMOUS RESEARCH

TITLE: Differences in Nurses' Perception on Safety Culture, Nurse-Physician Collaboration, and Level of Job Satisfaction Related to the Type of Obstetrical Physician Care Delivery Model.

Investigators: Rose O. Sherman, EdD, RN, FAAN, Olga Abiri, MSN, RNC-MNN, C-EFM

Thank you for your interest in participating in our research study. The purpose of this study is to determine if there are differing nursing opinions regarding environmental safety, nurse-physician collaboration and overall job satisfaction correlating to the type of obstetrical physician care delivery model utilized; in-house laborist physician model or a community-based on call physician present in the facility as needed. To participate in this study, you will complete a 102 question online survey. You will be asked to answer 3 questions determining your eligibility to participate in the survey. If the answer is "no" for any of these 3 questions, you will not be able to continue with the survey. It should take you no more than 20 minutes to complete this survey. At the end of the study, you will be directed to another page where you can submit your email address to obtain an electronic Starbucks gift card worth $10. Your participation in this study is your choice. You may skip any questions that make you feel uncomfortable and you are free to withdraw from the study at any time without penalty, however you must complete each section of the survey to receive the gift card. The risks involved with participating in this study are no more than you would experience in regular daily activities when engaging in discussion with another professional about your professional viewpoints.

Potential benefits that you may receive from participation include the satisfaction of knowing that you have contributed to a better understanding of how physician care delivery structure relates to nursing perspectives of patient and nurse outcomes.

If you experience problems or have questions regarding your rights as a research subject, contact the Florida Atlantic University Division of Research at (561) 297-1383. For other questions about the study, you should call the investigators: Dr. Rose O. Sherman at (561) 297-0055 and Olga Abiri at (954) 773-3027. By completing and submitting the attached survey, you give consent to participate in this study. If you choose, you can print a copy of the consent statement for personal records.

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Appendix C

Eligibility screening to participate in the survey

This section of the survey determines your eligibility to participate in the survey. Please be assured that your responses will remain confidential. If any of the answers to the following 3 questions is no, you will not be able to continue with the survey.

1. Are you currently working as an RN (staff nurse, charge nurse, nurse clinician, nurse leader etc.) in a labor and delivery setting?

- ◯ Yes
- ◯ No

2. Are you currently employed in an US hospital?

- ◯ Yes
- ◯ No

3. Have you worked in your current area of employment for at least 6 months?

- ◯ Yes
- ◯ No

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Demographic Charachteristics

This section of the survey asks about hospital characteristics and your background information that will be used to determine how well this questionnaire represents the overall population. Please be assured that your responses will remain confidential.This information will help in the analysis of the survey results.

4. What is your gender?

- ○ Female
- ○ Male
- ○ Other

5. What is your ethnicity? (Please select all that apply.)

- ☐ American Indian or Alaskan Native
- ☐ Asian or Pacific Islander
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ White / Caucasian
- ☐ Prefer not to answer
- ☐ Other (please specify)

6. What is your age?

- ○ 21 to 24
- ○ 25 to 34
- ○ 35 to 44
- ○ 45 to 54
- ○ 55 to 64
- ○ 65 to 70

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7. What is the highest nursing degree you have received?

- ○ Diploma in nursing
- ○ Associates Degree
- ○ Bachelor's Degree
- ○ Master's Degree
- ○ Doctoral Degree

8. What certifications do you hold

- ☐ None
- ☐ CNM
- ☐ RNC
- ☐ C-EFM
- ☐ CNS
- ☐ FNP
- ☐ PNP
- ☐ IBCLC
- ☐ Other (please specify)

9. What shift do you work? (check one)

- ○ 12 hour days
- ○ 8 hour days
- ○ 12 hour nights
- ○ 8 hour nights
- ○ Evening shift
- ○ Other (please specify)

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10. What is your role?

- ○ Staff RN
- ○ Charge Nurse
- ○ Assistant Nurse Manager
- ○ Nurse Manager
- ○ Director
- ○ Clinical Specialist
- ○ Other (please specify)

11. How long have you worked in this hospital?

- ○ Less than 1 year
- ○ 1 to 5 years
- ○ 6 to 10 years
- ○ 11 to 15 years
- ○ 16 to 20 years
- ○ 21 years or more

12. How long have you worked in your current hospital work area/unit?

- ○ Less than 1 year
- ○ 1 to 5 years
- ○ 6 to 10 years
- ○ 11 to 15 years
- ○ 16 to 20 years
- ○ 21 years or more

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13. Typically, how many hours per week do you work in this hospital?

- ◯ Less than 20 hours per week
- ◯ 20 to 39 hours per week
- ◯ 40 to 59 hours per week
- ◯ 60 to 79 hours per week
- ◯ 80 to 99 hours per week
- ◯ 100 hours per week or more

14. In your staff position, do you typically have direct interaction or contact with patients?

- ◯ YES, I typically have direct interaction or contact with patients.
- ◯ NO, I typically do NOT have direct interaction or contact with patients.

15. How long have you worked in your current specialty or profession?

- ◯ Less than 1 year
- ◯ 1 to 5 years
- ◯ 6 to 10 years
- ◯ 11 to 15 years
- ◯ 16 to 20 years
- ◯ 21 years or more

16. Does your labor and delivery unit have around the clock in-house physician coverage?

- ◯ There **IS** an in-house physician/laborist in the labor and delivery unit around the clock
- ◯ There **IS NO** in-house physician/laborist around the clock

17. What is annual delivery volume in your L&D unit?

- ◯ <500
- ◯ 500-1,000
- ◯ 1,000-2,000
- ◯ 2,000-3,000
- ◯ 3,000-4,000
- ◯ >4,000

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18. What is the level of the neonatal care?

- ◯ level III or higher
- ◯ level II
- ◯ level I
- ◯ Other (please specify)

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Collaborative Practice Scale - Nursing

This section of the survey asks for your opinions about collaboration with physicians in your work area/unit. Please indicate the frequency of the following behaviors. How often do the following behaviors happen in your work area/unit?

19. I ask physicians about their expectations regarding the degree of my involvement in the health care decision-making process

- Never
- Very Rarely
- Rarely
- Occasionaly
- Very Frequently
- Always

20. I negotiate with the physician to establish our responsibilities for discussing different kinds of information with patients.

- Never
- Very Rarely
- Rarely
- Occasionally
- Very Frequently
- Always

21. I clarify the scope of my professional expertise when it is greater than the physician thinks it is.

- Never
- Very Rarely
- Rarely
- Occasionally
- Very RarelyFrequently
- Always

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22. I discuss with physicians the degree to which I want to be involved in planning and implementing aspects of patient care.

- Never
- Very Rarely
- Rarely
- Occasionally
- Very RarelyFrequently
- Always

23. I suggest to physicians patient care approaches that I think would be useful.

- Never
- Very Rarely
- Rarely
- Occasionally
- Very RarelyFrequently
- Always

24. I discuss with physicians areas of practice that reside more within the realm of medicine than nursing.

- Never
- Very Rarely
- Rarely
- Occasionally
- Very RarelyFrequently
- Always

25. I tell physicians when, in my judgment, their orders seem inappropriate.

- Never
- Very Rarely
- Rarely
- Occasionally
- Very RarelyFrequently
- Always

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26. I tell physicians of any difficulties I foresee in the patient's ability to deal with certain treatment options and their consequences.

- ◯ Never
- ◯ Very Rarely
- ◯ Rarely
- ◯ Occasionally
- ◯ Very RarelyFrequently
- ◯ Always

27. I inform physicians about areas of practice which are unique to nursing.

- ◯ Never
- ◯ Very Rarely
- ◯ Rarely
- ◯ Occasionally
- ◯ Very RarelyFrequently
- ◯ Always

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Instructions

This section of the survey asks for your opinions about patient safety issues, medical error, and event reporting in your hospital.

An "event" is defined as any type of error, mistake, incident, accident, or deviation, regardless of whether or not it results in patient harm.

"Patient safety" is defined as the avoidance and prevention of patient injuries or adverse events resulting from the processes of health care delivery.

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Hospital Survey on Patient Safety Culture: Your Work Area/Unit

In this survey, think of your "unit" as the work area, department, or clinical area of the hospital where you spend most of your work time or provide most of your clinical services.

Please indicate your agreement or disagreement with the following statements about your work area/unit.

Think about your hospital work area/unit...

28. People support one another in this unit.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neither
- ◯ Agree
- ◯ Strongly Agree

29. We have enough staff to handle the workload.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neither
- ◯ Agree
- ◯ Strongly Agree

30. When a lot of work needs to be done quickly, we work together as a team to get the work done.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neither
- ◯ Agree
- ◯ Strongly Agree

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31. In this unit, people treat each other with respect.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

32. Staff in this unit work longer hours than is best for patient care.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

33. We are actively doing things to improve patient safety.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

34. We use more agency/temporary staff than is best for patient care.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

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35. Staff feel like their mistakes are held against them.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

36. Mistakes have led to positive changes here.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

37. It is just by chance that more serious mistakes don't happen around here.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

38. When one area in this unit gets really busy, others help out.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

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39. When an event is reported, it feels like the person is being written up, not the problem.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

40. After we make changes to improve patient safety, we evaluate their effectiveness.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

41. We work in "crisis mode" trying to do too much, too quickly.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

42. Patient safety is never sacrificed to get more work done.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

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43. Staff worry that mistakes they make are kept in their personnel file.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

44. We have patient safety problems in this unit.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

45. Our procedures and systems are good at preventing errors from happening.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

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Hospital Survey on Patient Safety Culture: Your Supervisor/Manager

Please indicate your agreement or disagreement with the following statements about your immediate supervisor/manager or person to whom you directly report.

46. My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neither
- ○ Agree
- ○ Strongly Agree

47. My supervisor/manager seriously considers staff suggestions for improving patient safety.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neither
- ○ Agree
- ○ Strongly Agree

48. Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neither
- ○ Agree
- ○ Strongly Agree

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49. My supervisor/manager overlooks patient safety problems that happen over and over.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neither
- ◯ Agree
- ◯ Strongly Agree

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Hospital Survey on Patient Safety Culture: Communications

How often do the following things happen in your work area/unit?

Think about your hospital work area/unit...

50. We are given feedback about changes put into place based on event reports.

- ◯ Never
- ◯ Rarely
- ◯ Sometimes
- ◯ Most of the time
- ◯ Always

51. Staff will freely speak up if they see something that may negatively affect patient care.

- ◯ Never
- ◯ Rarely
- ◯ Sometimes
- ◯ Most of the time
- ◯ Always

52. We are informed about errors that happen in this unit.

- ◯ Never
- ◯ Rarely
- ◯ Sometimes
- ◯ Most of the time
- ◯ Always

53. Staff feel free to question the decisions or actions of those with more authority.

- ◯ Never
- ◯ Rarely
- ◯ Sometimes
- ◯ Most of the time
- ◯ Always

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54. In this unit, we discuss ways to prevent errors from happening again.

- Never
- Rarely
- Sometimes
- Most of the time
- Always

55. Staff are afraid to ask questions when something does not seem right.

- Never
- Rarely
- Sometimes
- Most of the time
- Always

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Hospital Survey on Patient Safety Culture: Frequency of Events Reported

In your hospital work area/unit, when the following mistakes happen, how often are they reported?

56. When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?

- Never
- Rarely
- Sometimes
- Most of the time
- Always

57. When a mistake is made, but has no potential to harm the patient, how often is this reported?

- Never
- Rarely
- Sometimes
- Most of the time
- Always

58. When a mistake is made that could harm the patient, but does not, how often is this reported?

- Never
- Rarely
- Sometimes
- Most of the time
- Always

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Hospital Survey on Patient Safety Culture: Patient Safety Grade

59. Please give your work area/unit in this hospital an overall grade on patient safety.

- A - Excellent
- B - Very Good
- C - Acceptable
- D - Poor
- E - Failing

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Hospital Survey on Patient Safety Culture: Your Hospital

Please indicate your agreement or disagreement with the following statements about your hospital.

Think about your hospital...

60. Hospital management provides a work climate that promotes patient safety.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

61. Hospital units do not coordinate well with each other.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

62. Things "fall between the cracks" when transferring patients from one unit to another.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

63. There is good cooperation among hospital units that need to work together.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

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64. Important patient care information is often lost during shift changes.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

65. It is often unpleasant to work with staff from other hospital units.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

66. Problems often occur in the exchange of information across hospital units.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

67. The actions of hospital management show that patient safety is a top priority.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

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68. Hospital management seems interested in patient safety only after an adverse event happens.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

69. Hospital units work well together to provide the best care for patients.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

70. Shift changes are problematic for patients in this hospital.

- Strongly Disagree
- Disagree
- Neither
- Agree
- Strongly Agree

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Hospital Survey on Patient Safety Culture: Number of Events Reported

71. In the past 12 months, how many event reports have you filled out and submitted?

- ○ No event reports
- ○ 1 to 2 event reports
- ○ 3 to 5 event reports
- ○ 6 to 10 event reports
- ○ 11 to 20 event reports
- ○ 21 event reports or more

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Job Satisfaction

This section of the survey asks for your opinions about your satisfaction with various job elements. Please indicate the degree of your satisfaction with the following elements about your job.

72. Salary

- ◯ Very Satisfied
- ◯ Moderately Satisfied
- ◯ Neither Satisfied nor Dissatisfied
- ◯ Dissatisfied
- ◯ Very Dissatisfied

73. Vacation

- ◯ Very Satisfied
- ◯ Moderately Satisfied
- ◯ Neither Satisfied nor Dissatisfied
- ◯ Dissatisfied
- ◯ Very Dissatisfied

74. Benefits package (e.g. insurance, retirement)

- ◯ Very Satisfied
- ◯ Moderately Satisfied
- ◯ Neither Satisfied nor Dissatisfied
- ◯ Dissatisfied
- ◯ Very Dissatisfied

75. Hours that you work

- ◯ Very Satisfied
- ◯ Moderately Satisfied
- ◯ Neither Satisfied nor Dissatisfied
- ◯ Dissatisfied
- ◯ Very Dissatisfied

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76. Flexibility in scheduling your hours

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

77. Opportunity to work straight days

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

78. Opportunity for part-time work

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

79. Weekends off per month

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

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80. Flexibility in scheduling your weekends off

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

81. Compensation for working weekends

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

82. Maternity leave time

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

83. Child care facilities

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

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84. Your immediate supervisor

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

85. Your nursing peers

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

86. The physicians you work with

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

87. The delivery of care method used on your unit (e.g. functional, team, primary)

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

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88. Opportunities for social contact at work

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

89. Opportunities for social contact with your colleagues after work

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

90. Opportunities to interact professionally with other disciplines

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

91. Opportunities to interact with faculty of the College of Nursing

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

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92. Opportunities to belong to department and institutional committees

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

93. Control over what goes on in your work setting

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

94. Opportunities for career advancement

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

95. Recognition for your work from superiors

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

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96. Recognition of your work from peers

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

97. Amount of encouragement and positive feedback

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

98. Opportunities to participate in nursing research

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

99. Opportunities to write and publish

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

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100. Your amount of responsibility

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

101. Your control over work conditions

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

102. Your participation in organizational decision making

- Very Satisfied
- Moderately Satisfied
- Neither Satisfied nor Dissatisfied
- Dissatisfied
- Very Dissatisfied

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103. Thank you for completing this survey. If you agree to provide email address to receive Starbucks gift card worth $10, type your email address below.

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Appendix D

THE UNIVERSITY OF IOWA
COLLEGE OF NURSING

Permission to use form:

This gives permission to use the McCloskey/Mueller Satisfaction Scale (MMSS) to Olga Abiri for the purpose as stated in the request dated 4/11/16

The instrument may be reproduced in a quantity appropriate for this project.

Signed:

Sue Moorhead

Sue Moorhead, Associate Professor, College of Nursing

Date: April 18, 2016

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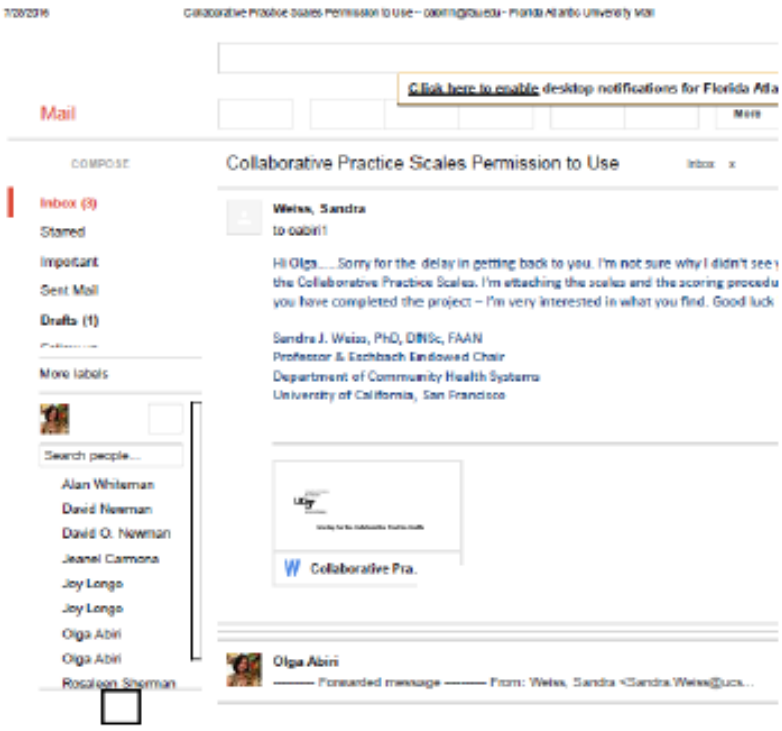
Appendix E



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Appendix F

AWHONN

Research Integrity Office
Florida Atlantic University
777 Glades Road
Boca Raton, FL 33431
(561) 297-1188

Dear Institutional Review Board (IRB) Members,

After reviewing the proposed study, "Difference in nurses' perspective between labor and delivery units which employ in-house physicians and labor and delivery units which do not have obstetricians in-house", presented by Olga Abiri, I have granted authorization for Olga Abiri to conduct research of Association of Women's Health Obstetric and Neonatal Nurses (AWHONN) members once the research has been approved by AWHONN staff.

I understand the purpose of the study is to determine the difference in nurses' perspective between labor and delivery units which employ in-house physicians and labor and delivery units which do not have obstetricians in-house. Olga Abiri will conduct the following research activities: develop the content of the survey, distribute survey link via Survey Monkey to AWHONN members who are labor and delivery nurses in the United States, collect, and mine the data.

I have indicated to Olga Abiri that my company will allow the following research activities: distribute the survey link via purchased email addresses of AWHONN's membership once it has been approved.

To ensure that the members are protected, Olga Abiri has agreed to provide to AWHONN a copy of any Florida Atlantic University IRB-approved, consent documents before she recruits participants at AWHONN. Olga Abiri has agreed to provide a copy of the study results, in aggregate, to our organization.

If the IRB has any concerns about the permission being granted by this letter, please contact me at the phone number listed below.

Sincerely,

Ilene Sciarra-Donato

Printed Name

Ilene Sciarra-Donato MSN, RNC Date 7-27-16

Signature

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REFERENCES

AbuAlRub, R. F., Omari, F. H., & Al-Zaru, I. M. (2009). Support, satisfaction and retention among Jordanian nurses in private and public hospitals. *International Nursing Review*, *56*(3), 326–332.

AbuAlRub, R. F., Gharaibeh, H. F., & Bashayreh, A. E. I., (2012). The relationships between safety climate, teamwork, and intent to stay at work among Jordanian hospital nurses. *Nursing Forum*, *47*(1), 65–75.

Acorn, S., Ratner, P. A., & Crawford, M. (1997). Decentralization as a determinant of autonomy, job satisfaction, and organizational commitment among nurse managers. *Nursing Research*, *46*(1), 52–58.

Adams, A., & Bond, S. (1995) *Nursing organisation in acute care: The development of scales* (Report no. 71). Newcastle upon Tyne, UK: Centre for Health Services Research, University of Newcastle upon Tyne.

Adams, A., Bond, S., & Arber, S. (1995). Development and validation of scales to measure organizational features of acute hospital wards. *International Journal of Nursing Studies*, *32*(6), 612–627.

Agency for Healthcare Research and Quality. (2015). Hospital survey on patients safety culture. Retrieved from https://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/hospital/index.htmlv

Aiken, L. H., & Patrician, P. (2000). Measuring organizational traits of hospitals: The revised nursing work index. *Nursing Research*, *49*, 146–153.

www.manaraa.com

Al-Enezi, N., Chowdhury, R. I., Shah, M. A., & Al-Otabi, M. (2009). Job satisfaction of nurses with multicultural backgrounds: a questionnaire survey in Kuwait. *Applied Nursing Research*, *22*(2), 94–100.

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology*, *63*, 1–18.

Altier, M. E., & Krsek, C. A. (2006). Effects of a 1-year residency program on job satisfaction and retention of new graduate nurses. *Journal for Nurses in Professional Development*, *22*(2), 70–77.

American Association of Colleges of Nursing. (n.d.). Strategies to reverse the new nursing shortage. Retrieved from http://nursingworld.org/MainMenuCategories/ThePracticeofProfessionalNursing/workforce/NursingShortage/LegislationStrategies/NursingShortage.html

American College of Obstetricians and Gynecologists. (2015). Levels of maternal care. *American Journal of Obstetrics and Gynecology*, *212*(3), 259–271.

American Nurses Credentialing Center. (n.d.). ANCC Magnet Recognition Program. Retrieved from http://www.nursecredentialing.org/Magnet

Anderson, B. L., Hale, R. W., Salsberg, E., & Schulkin, J. (2008). Outlook for the future of the obstetrician-gynecologist workforce. *American Journal of Obstetrics and Gynecology*, *199*(1), 1–8.

ANM Healthcare. (2013). 2013 Survey of registered nurses: Generation gap grows as healthcare transforms. Retrieved from https://www.amnhealthcare.com/

www.manaraa.com

uploadedFiles/MainSite/Content/Healthcare_Industry_Insights/Industry_Research/2013_RNSurvey.pdf

Applebaum, D., Fowler, S., Fiedler, N., Osinubi, O., & Robson, M. (2010). The impact of environmental factors on nursing stress, job satisfaction, and turnover intention. *The Journal of Nursing Administration*, *40*, 323–332.

Aspden, P., Corrigan, J., Wolcott, J., et al., Eds. (2004). *Patient safety: Achieving a new standard for care.* Washington, DC: National Academies Press.

Atwood, J. R., & Hinshaw, A. S. (1980). Job satisfaction instrument: A program of development and testing (Abstract). *Communicating Nursing Research, 13*, 55.

Austin, J. M., Jha, A. K., Romano, P. S., Singer, S. J., Vogus, T. J., Wachter, R. M., & Pronovost, P. J. (2015). National hospital ratings systems share few common scores and may generate confusion instead of clarity. *Health Affairs, 34*(3), 423–430.

Baernholdt, M., & Mark, B. A. (2009). The nurse work environment, job satisfaction and turnover rates in rural and urban nursing units. *Journal of Nursing Management, 17*(8), 994–1001.

Baggs, J. (1994). Development of an instrument to measure collaboration and satisfaction about care decisions. *Journal of Advanced Nursing, 20*(1), 176–182.

Baggs, J. G., Ryan, S. A., Phelps, C. E., Richeson, J. F., & Johnson, J. E. (1992). The association between interdisciplinary collaboration and patient outcomes in medical intensive care. *Heart Lung, 21*(1), 18–24.

Baggs, J. G., & Schmitt, M. H. (1988). Collaboration between nurses and physicians. *Journal of Nursing Scholarship, 20*(3), 145–149.

www.manaraa.com

Baggs, J. G., & Schmitt, M. H. (1995). Intensive care decisions about level of aggressiveness of care. *Research in Nursing & Health*, *18*(4), 345–355.

Baggs, J. G. et al. (1999). Association between nurse-physician collaboration and patient outcomes in three intensive care units. *Critical Care Medicine*, *27*(9), 1991–1998.

Barnhart, R. K. (1988). *The Barnhart dictionary of etymology*. New York, NY: HW Wilson Co.

Beales, J., Walji, R., Papoushek, C., & Austin, Z. (2011). Exploring professional culture in the context of family health team interprofessional collaboration. *Health and Interprofessional Practice*, *1*(1), 1–12.

Benner, P., Sutphen, M., Leonard, V., & Day, L. (2009). *Educating nurses: A call for radical transformation* (Vol. 15). New York, NY: John Wiley & Sons.

Biswas, S., Varma, A., & Ramaswami, A. (2013). Linking distributive and procedural justice to employee engagement through social exchange: A field study in India. *The International Journal of Human Resource Management*, *24*(8), 1570–1587.

Blegen, M. A., Gearhart, S., O'Brien, R., Sehgal, N. L., & Alldredge, B. K. (2009). AHRQ's hospital survey on patient safety culture: psychometric analyses. *Journal of Patient Safety*, *5*(3), 139–144.

Bodur, S., & Filiz, E. (2009). A survey on patient safety culture in primary healthcare services in Turkey. *International Journal for Quality in Health Care*, *21*(5), 348–355.

Bowles, D., McIntosh, G., Hemrajani, R., Yen, M. S., Phillips, A., Schwartz, N., ... & Dow, A. W. (2016). Nurse–physician collaboration in an academic medical

www.manaraa.com

centre: The influence of organisational and individual factors. *Journal of Interprofessional Care*, *30*(5), 655–660.

Boykin, A., & Schoenhofer, S.O. (2001). *Nursing as caring: A model for transforming practice.* Sudbury, MA: Jones & Bartlett.

Boyle, S. M. (2004). Nursing unit characteristics and patient outcomes. *Nursing Economics*, *22*(3), 111–119.

Brayfield, A. H., & Rothe, H. F. (1951). An index of job satisfaction. *Journal of Applied Psychology*, *35*(5), 307–311.

Burns, D. G. (1969). Exploring for clientele attitudes toward agricultural extension programming. Retrieved from http://trove.nla.gov.au/version/165153408

Campbell, S. L., Fowles, E. R., & Weber, B. J. (2004). Organizational structure and job satisfaction in public health nursing. *Public Health Nursing*, *21*(6), 564–571.

Centers for Disease Control and Prevention. (2017). About perinatal quality collaborative. Retrieved from https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pqc.htm

Centers for Medicare and Medicaid Services. (2017). Value-based purchasing. Retrieved from https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/index.html

Chang, W. Y., Ma, J. C., Chiu, H. T., Lin, K. C., & Lee, P. H. (2009). Job satisfaction and perceptions of quality of patient care, collaboration and teamwork in acute care hospitals. *Journal of Advanced Nursing*, *65*(9), 1946–1955.

www.manaraa.com

Cheater, F. M., Hearnshaw, H., Baker, R., & Keane, M. (2005). Can a facilitated programme promote effective multidisciplinary audit in secondary care teams? An exploratory trial. *International Journal of Nursing Studies*, *42*(7), 779–791.

Chen, L. M., Birkmeyer, J. D., Saint, S., & Jha, A. K. (2013). Hospitalist staffing and patient satisfaction in the national Medicare population. *Journal of Hospital Medicine*, *8*(3), 126–131.

Chen, I. C., & Li, H. H. (2010). Measuring patient safety culture in Taiwan using the hospital survey on patient safety culture (HSOPSC). *BMC Health Services Research*, *10*(1), 152–162.

Choi, S. P. P., Cheung, K. I. N., & Pang, S. M. C. (2013). Attributes of nursing work environment as predictors of registered nurses' job satisfaction and intention to leave. *Journal of Nursing Management*, *21*(3), 429–439.

Coffman, S. (2014). Marilyn Anne Ray's theory of bureaucratic caring. In M. Alligood (Ed.), *Nursing theorists and their work* (8th ed.; pp. 98–119). St. Louis, MO: Elsevier.

Coluccio, M., & Maguire, P. (1983). Collaborative practice: becoming a reality through primary nursing. *Nursing Administration Quarterly*, *7*(4), 59–63.

Committee on Perinatal Health. (1976). *Toward improving the outcome of pregnancy: Recommendations for the regional development of maternal and perinatal health services.* White Plains, NY: The National Foundation, March of Dimes.

Committee on the Quality of Health Care in America. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academy Press.

www.manaraa.com

Coomber, B., & Barriball, K. L. (2007). Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: a review of the research literature. *International Journal of Nursing Studies*, *44*(2), 297–314.

Corley, M. C., Elswick, R. K., Gorman, M., & Clor, T. (2001). Development and evaluation of a moral distress scale. *Journal of Advanced Nursing*, *33*(2), 250–256.

Cortese, C. G. (2001). Prima standardizzazione del Questionario per la Soddisfazione per il lavoro (QSO). *Risorsa Uomo*, *8*, 331–349.

Cowin, L. (2002). The effects of nurses' job satisfaction on retention: an Australian perspective. *Journal of Nursing Administration*, *32*(5), 283–291.

Cox, P., Willis, K., & Coustasse, A. (2014). The American epidemic: The U.S. nursing shortage and turnover problem. *Insights to a Change World Journal, 2(*3), 54–71. Retrieved from http://franklinpublishing.net

Cumbey, D. A., & Alexander, J. W. (1998). The relationship of job satisfaction with organizational variables in public health nursing. *Journal of Nursing Administration*, *28*(5), 39–46.

Cushway, D., Tyler, P. A., & Nolan, P. (1996). Development of a stress scale for mental health professionals. *British Journal of Clinical Psychology*, *35*(2), 279–295.

De Meester, K., Verspuy, M., Monsieurs, K. G., & Van Bogaert, P. (2013). SBAR improves nurse–physician communication and reduces unexpected death: A pre and post intervention study. *Resuscitation*, *84*(9), 1192–1196.

DiCuccio, M. H. (2015). The relationship between patient safety culture and patient outcomes: a systematic review. *Journal of Patient Safety*, *11*(3), 135–142.

www.manaraa.com

Djukic, M., Kovner, C. T., Brewer, C. S., Fatehi, F. K., & Cline, D. D. (2013). Work environment factors other than staffing associated with nurses' ratings of patient care quality. *Health Care Management Review*, *38*(2), 105–114.

Dougherty, M. B., & Larson, E. (2005). A review of instruments measuring nurse–physician collaboration. *Journal of Nursing Administration*, *35*(5), 244–253.

Eggenberger, T. L. (2011). *Holding the frontline: The experience of being a charge nurse in an acute care setting* (Doctoral dissertation). ProQuest Dissertations Publishing, 3462565.

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71*, 500–507.

El-Jardali, F., Dimassi, H., Jamal, D., Jaafar, M., & Hemadeh, N. (2011). Predictors and outcomes of patient safety culture in hospitals. *BMC Health Services Research, 11*(1), 45–57.

El-Jardali, F., Dimassi, H., Dumit, N., Jamal, D., & Mouro, G. (2009). A national cross-sectional study on nurses' intent to leave and job satisfaction in Lebanon: implications for policy and practice. *BMC Nursing*, *8*(1), 1–13.

Emerson, R. M. (1976). Social exchange theory. *Annual Review of Sociology*, *2*, 335–362.

Etchells, E., Koo, M., Daneman, N., McDonald, A., Baker, M., Matlow, A., ... Mittmann, N. (2012). Comparative economic analyses of patient safety improvement strategies in acute care: a systematic review. *BMJ Quality & Safety*, *21*(6), 448–456.

www.manaraa.com

Faller, M. S., Gates, M. G., Georges, J. M., & Connelly, C. D. (2011). Work-related burnout, job satisfaction, intent to leave, and nurse-assessed quality of care among travel nurses. *Journal of Nursing Administration*, *41*(2), 71–77.

Feldman, D., Bollman, D. L., Korst, L., Fridman, M., Ibrahim, S. E. H., & Gregory, K. (2014, February). *496: The laborist on labor and delivery: Is this new trend associated with higher rates of VBAC?* Paper presented at the 34th Annual Meeting of the Society for Maternal-Fetal Medicine The Pregnancy Meeting, 34th Annual Scientific Meeting, New Orleans, LA.

Feldman, D. S., Bollman, D. L., Fridman, M., Korst, L. M., Ibrahim, S. E. H., Fink, A., & Gregory, K. D. (2015). Do laborists improve delivery outcomes for laboring women in California community hospitals? *American Journal of Obstetrics and Gynecology*, *213*(4), 587.e1–587.e13.

Field, A. P. (2013). *Discovering statistics using IBM SPSS Statistics* (4th ed.). London: Sage.

Funai, E. (2008). New strategy helps reduce errors in obstetrical care [Press release]. *Yale News,* Yale University.

Funk, C., Anderson, B. L., Schulkin, J., & Weinstein, L. (2011). Survey of obstetric and gynecologic hospitalists and laborists. *Obstetrical & Gynecological Survey*, *66*(4), 212–214.

Galletta, M., Portoghese, I., Battistelli, A., & Leiter, M. P. (2013). The roles of unit leadership and nurse–physician collaboration on nursing turnover intention. *Journal of Advanced Nursing*, *69*(8), 1771–1784.

www.manaraa.com

Galletta, M., Portoghese, I., Carta, M. G., D'aloja, E., & Campagna, M. (2016). The effect of nurse-physician collaboration on job satisfaction, team commitment, and turnover intention in nurses. *Research in Nursing & Health*, *39*(5), 375–385.

Gee, R. E., & Winkler, R. (2013). Quality measurement: What it means for obstetricians and gynecologists. *Obstetrics & Gynecology*, *121*(3), 507–510.

Gotlib Conn, L., Kenaszchuk, C., Dainty, K., Zwarenstein, M., & Reeves, S. (2014). Nurse–physician collaboration in general internal medicine: a synthesis of survey and ethnographic techniques. *Health and Interprofessional Practice*, *2*(2), 1–14.

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly*, *6*(2), 219–247.

Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, *60*(2), 159–170.

Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

Hakstian, A. R., Roed, J. C., & Lind, J. C. (1979). Two-sample T^2 procedure and the assumption of homogeneous covariance matrices. *Psychological Bulletin, 86*, 1255–1263.

Health and Safety Commission. (1993). *Organizing for safety. ACSNI human factors study group, Third Report*. London: HMSO.

Hebert, J. S. (2014). *Advancing interprofessional collaboration in nursing education* (Doctoral dissertation). ProQuest Dissertations Publishing, 3642189

www.manaraa.com

Hedsköld, M., Pukk-Härenstam, K., Berg, E., Lindh, M., Soop, M., Øvretveit, J., & Sachs, M. A. (2013). Psychometric properties of the hospital survey on patient safety culture, HSOPSC, applied on a large Swedish health care sample. *BMC Health Services Research*, *13*(1), 332–343.

Higgins, L. W. (1999). Nurses' perceptions of collaborative nurse–physician transfer decision making as a predictor of patient outcomes in a medical intensive care unit. *Journal of Advanced Nursing*, *29*(6), 1434–1443.

Hinshaw, A. S., & Atwood, J. R. (1984). Nursing staff turnover, stress, and satisfaction: Models, measures, and management. In H. H. Werley & J. J. Fitzpatrick, *Annual Review of Nursing Research* (pp. 133–153). Berlin: Springer.

Hofmann, D. A., & Mark, B. (2006). An investigation of the relationship between safety climate and medication errors as well as other nurse and patient outcomes. *Personnel Psychology*, *59*(4), 847–869.

Hofmann, D. A., & Morgeson, F. P. (1999). Safety-related behavior as a social exchange: The role of perceived organizational support and leader–member exchange. *Journal of Applied Psychology*, *84*(2), 286–296.

Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology*, *63*(6), 597–606.

Homans, G. C. (1974). *Social behavior: Its elementary forms* (Rev. ed.). New York, NY: Harcourt- Brace

Huberty, C. J., & Morris, J. D. (1989). Multivariate analysis versus multiple univariate analysis. *Psychological Bulletin*, *105*, 302–308.

www.manaraa.com

Hughes, B., & Fitzpatrick, J. J. (2010). Nurse–physician collaboration in an acute care community hospital. *Journal of Interprofessional Care*, *24*(6), 625–632.

IBM. (2016). Statistical Package for the Social Sciences (SPSS) Graduate Pack 24.0 for Windows. Retrieved from http://www-01.ibm.com/support/docview.wss?uid=swg24041224.

Iriye, B. K., Huang, W. H., Condon, J., Hancock, L., Hancock, J. K., Ghamsary, M., & Garite, T. J. (2013). Implementation of a laborist program and evaluation of the effect upon cesarean delivery. *American Journal of Obstetrics and Gynecology*, *209*(3), 251–256.

James, J. T. (2013). A new, evidence-based estimate of patient harms associated with hospital care. *Journal of Patient Safety*, *9*(3), 122–128.

Jesus, A. O., Caldwell, D., & Srinivas, S. K. (2015). Why hospitals adopt the laborist model of obstetric care: A qualitative analysis. *Women's Health and Gynecology, 1*(1), 1–4.

Joint Commission. (2015). New optional perinatal care certification program. Retrieved from https://www.jointcommission.org/assets/1/6/New_Optional_Perinatal.pdf

Kalisch, B. J., Lee, H., & Rochman, M. (2010). Nursing staff teamwork and job satisfaction. *Journal of Nursing Management*, *18*(8), 938–947.

Karanikola, M. N. et al. (2014). Moral distress, autonomy and nurse-physician collaboration among intensive care unit nurses in Italy. *Journal of Nursing Management*, *22*(4), 472–484.

www.manaraa.com

Kassebaum, N. J., Lopez, A. D., Murray, C. J., & Lozano, R. (2014). A comparison of maternal mortality estimates from GBD 2013 and WHO. *The Lancet, 384*(9961), 2209–2210.

Kilmann, R. H., & Thomas, K. W. (1977). Developing a forced choice measure of conflict-handling behaviour: The MODE instrument. *Educational and Psychological Measurement, 37*, 309–325.

Kohn, K. T., Corrigan, J. M., & Donaldson, M. S. (1999). *To err is human: Building a safer health system.* Washington, DC: National Academy Press.

Krugman, M., & Smith, V. (2003). Charge nurse leadership development and evaluation. *Journal of Nursing Administration*, *33*(5), 284–292.

Kuthy, J. E., Ramon, C., Gonzalez, R., & Biddle, D. A. (2013). Practical Implications of Pre-employment Nurse Assessments. *The Health Care Manager, 32*(2), 189–192.

Lake, E. T. (2002). Development of the practice environment scale of the Nursing Work Index. *Research in nursing & health*, *25*(3), 176–188.

Larrabee, J. H., Ostrow, C. L., Withrow, M. L., Janney, M. A., Hobbs, G. R., & Burant, C. (2004). Predictors of patient satisfaction with inpatient hospital nursing care. *Research in Nursing & Health, 27*(4), 254–268.

Laschinger, H. K. S., & Leiter, M. P. (2006). The impact of nursing work environments on patient safety outcomes: The mediating role of burnout engagement. *Journal of Nursing Administration*, *36*(5), 259–267.

Laschinger, H. K. S., Shamian, J., & Thomson, D. (2001). Impact of magnet hospital characteristics on nurses' perceptions of trust, burnout, quality of care, and work satisfaction. *Nursing Economics*, *19*(5), 209–219.

www.manaraa.com

Leigh, J., Kravitz, R., Schembri, M., Samuels, S., & Mobley, S. (2002). Physician career satisfaction across specialties. *Archives of Internal Medicine, 62,* 1577–1584.

Li, Y. I. N., & Jones, C. B. (2013). A literature review of nursing turnover costs. *Journal of Nursing Management, 21*(3), 405–418.

Liden, R. C., & Maslyn, J. M. (1993, September). *Scale development for a multidimensional measure of leader-member exchange*. Paper presented at Annual Meeting of the Academy of Management, Atlanta, GA.

Lu, H., While, A. E., & Barriball, K. L. (2005). Job satisfaction among nurses: A literature review. *International Journal of Nursing Studies*, *42*(2), 211–227.

Lu, K. Y., Lin, P. L., Wu, C. M., Hsieh, Y. L., & Chang, Y. Y. (2002). The relationships among turnover intentions, professional commitment, and job satisfaction of hospital nurses. *Journal of Professional Nursing*, *18*(4), 214–219.

Lyndon, A., Zlatnik, M. G., & Wachter, R. M. (2011). Effective physician-nurse communication: A patient safety essential for labor and delivery. *American Journal of Obstetrics and Gynecology*, *205*(2), 91–96.

MacDorman, M. F., Mathews, T. J., Mohangoo, A. D., & Zeitlin, J. (2014). International comparisons of infant mortality and related factors: United States and Europe, 2010. *National Vital Statistics Report*, *63*(5), 1–6.

Manojlovich, M. (2010). Nurse/physician communication through a sensemaking lens: Shifting the paradigm to improve patient safety. *Medical Care*, *48*(11), 941–946.

Martin, J. A., Hamilton, B. E., Ventura, S. J., Osterman, M. J., Wilson, E. C., & Mathews, T. J. (2012). Births: Final data for 2010. *National Vital Statistics Reports*, *61*(1), 1–72.

www.manaraa.com

Maslow, A. (1954). *Hierarchy of human needs*. *Motivation and personality*. New York, NY, Harper & Row, Publishers.

Maylone, M. M., Ranieri, L., Griffin, M. T. Q., McNulty, R., & Fitzpatrick, J. J. (2011). Collaboration and autonomy: Perceptions among nurse practitioners. *Journal of the American Association of Nurse Practitioners*, *23*(1), 51–57.

McCaffrey, R., Hayes, R. M., Cassell, A., Miller-Reyes, S., Donaldson, A., & Ferrell, C. (2012). The effect of an educational programme on attitudes of nurses and medical residents towards the benefits of positive communication and collaboration. *Journal of Advanced Nursing*, *68*(2), 293–301.

McCloskey, J. (1974). Influence of rewards and incentives on staff nurse turnover rate. *Nursing Research*, *23*(3), 239–247.

McCue, B. (2015). What is an obstetrics/gynecology hospitalist? *Obstetrics and Gynecology Clinics*, *42*(3), 457–461.

McCue, B. et al. (2016). Definitions of obstetric and gynecologic hospitalists. *Obstetrics & Gynecology*, *127*(2), 393–397.

McFadden, K. L., Stock, G. N., & Gowen III, C. R. (2015). Leadership, safety climate, and continuous quality improvement: impact on process quality and patient safety. *Health Care Management Review*, *40*(1), 24–34.

McHugh, M. D., Kutney-Lee, A., Cimiotti, J. P., Sloane, D. M., & Aiken, L. H. (2011). Nurses' widespread job dissatisfaction, burnout, and frustration with health benefits signal problems for patient care. *Health Affairs*, *30*(2), 202–210.

Messler, J., & Whitcomb, W. F. (2015). A history of the hospitalist movement. *Obstetrics and Gynecology Clinics*, *42*(3), 419–432.

www.manaraa.com

Modak, I., Sexton, J. B., Lux, T. R., Helmreich, R. L., & Thomas, E. J. (2007). Measuring safety culture in the ambulatory setting: the safety attitudes questionnaire—ambulatory version. *Journal of General Internal Medicine, 22*(1), 1–5.

Mrayyan, M. T. (2005). Nurse job satisfaction and retention: comparing public to private hospitals in Jordan. *Journal of Nursing Management*, *13*(1), 40–50.

Mueller, C. W., & McCloskey, J. C. (1990). Nurses' job satisfaction: a proposed measure. *Nursing Research*, *39*(2), 113–116.

Nair, D. M., Fitzpatrick, J. J., McNulty, R., Click, E. R., & Glembocki, M. M. (2012). Frequency of nurse–physician collaborative behaviors in an acute care hospital. *Journal of Interprofessional Care*, *26*(2), 115–120.

Nelson, G. A., King, M. L., & Brodine, S. (2008). Nurse-physician collaboration on medical-surgical units. *Medsurg Nursing*, *17*(1), 35–40.

Niehoff, B. P., & Moorman, R. H. (1993). Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior. *Academy of Management journal*, *36*(3), 527–556.

Nieva, V. F. & Sorra, J. (2003). Safety culture assessment: a tool for improving patient safety in healthcare organizations. *BMJ Quality and Safety*, *12*, 17–23.

Nordin, A., Theander, K., Wilde-Larsson, B., & Nordström, G. (2013). Health care staffs' perception of patient safety culture in hospital settings and factors of importance for this. *Medicine & Healthcare*, *3*(8A), 28–40.

Nyberg, J. (1990). The effects of care and economics on nursing practice. *Journal of Nursing Administration*, *20*(5), 13–18.

www.manaraa.com

O'Donoghue, P. G. (2012). *Statistics for sport and exercise studies: An introduction*. London, U.K.: Routledge.

Ouzouni, C., & Nakakis, K. (2009). An exploratory study of the relationships between interprofessional working, clinical leadership, stress and job satisfaction in Greek registered mental health and assistant nurses. *Health Science Journal*, *3*(3), 175–186.

Papathanassoglou, E. D., Karanikola, M. N., Kalafati, M., Giannakopoulou, M., Lemonidou, C., & Albarran, J. W. (2012). Professional autonomy, collaboration with physicians, and moral distress among European intensive care nurses. *American Journal of Critical Care*, *21*(2), e41–e52.

Peltier, J. W., Schibrowsky, J. A., & Nill, A. (2013). A hierarchical model of the internal relationship marketing approach to nurse satisfaction and loyalty. *European Journal of Marketing*, *47*(5/6), 899–916.

Pettker, C. M. et al. (2011). A comprehensive obstetrics patient safety program improves safety climate and culture. *American Journal of Obstetrics and Gynecology*, *204*(3), 216.e1–216.e6.

Png, C. Y. M., Faries, P. L., Qian, L. Y., Lee, I. T., Chander, R., Finlay, D. J., . . . Tadros, R. O. (2016). Vascular surgery pain outcomes improved by implementing hospitalist comanagement service. *Pain Management and Medicine*, *2*(109), 1–3.

Price, M. (2002). Job satisfaction of registered nurses working in an acute hospital. *British Journal of Nursing*, *11*(4), 275–280.

Pritts, K. E., & Hiller, L. G. (2014). Implementation of physician and nurse patient rounding on a 42-bed medical unit. *MedSurg Nursing*, *23*(6), 408–414.

www.manaraa.com

Rangaraj, R., Abrahamson. K., & Anderson, J. G. (2008). Influence of workplace demands on nurses' perception of patient safety. *Nursing & Health Sciences, 10*(2), 144–150.

Ray, M. (1981). *A study of caring within the institutional culture* (Doctoral dissertation). ProQuest Dissertations Publishing, 8127787

Ray, M. (1987). Health care economics and human caring: Why the moral conflict must be resolved. *Family and Community Health 10*(1), 35–43.

Ray, M. (1989). The theory of bureaucratic caring for nursing practice in the organizational culture. *Nursing Administration Quarterly*, *13*(2), 31–42.

Ray, M.A. (2006). Part one: Marilyn Anne Ray's theory of bureaucratic caring. In Marilyn E. Parker (Ed.), Nursing theories & nursing practice (2nd ed., p. 360–368). Philadelphia, PA: F. A. Davis Company.

Ray, M. (2010). *Transcultural caring dynamics in nursing and health care*. Philadelphia, PA: F. A. Davis Company.

Ray, M., & Turkel, M. (2009). The theory of bureaucratic caring. In M. Smith & M. Parker (Eds.), *Nursing theory and nursing practice* (3rd ed., pp. 421–444). Philadelphia: FA Davis Company.

Ray, M. & Turkel, M. (2014). Caring as emancipatory praxis: The theory of relational caring complexity. *Advances in Nursing Science, 37*(2), 132–146.

Rhoades, L., Eisenberger, R., & Armeli, S. (2001). Affective commitment to the organization: The contribution of perceived organizational support. *Journal of applied psychology*, *86*(5), 825–836.

www.manaraa.com

Riley, W. J., Meredith, L., & Parrotta, C. (2014). Measuring high reliability in hospital perinatal units. *International Journal of BioSciences, 2*(1), 104–109.

Roberts, B. J., Jones, C., & Lynn, M. (2004). Job satisfaction of new baccalaureate nurses. *Journal of Nursing Administration*, *34*(9), 428–435.

Robertson, E. M., Higgins, L., Rozmus, C., & Robinson, J. P. (1999). Association between continuing education and job satisfaction of nurses employed in long-term care facilities. *The Journal of Continuing Education in Nursing*, *30*(3), 108–113.

Robinson, F. P., Gorman, G., Slimmer, L. W., & Yudkowsky, R. (2010). Perceptions of effective and ineffective nurse–physician communication in hospitals. *Nursing Forum*, *45*(3), 206–216.

Rothschild, J. M. et al. (2006). Recovery from medical errors: the critical care nursing safety net. *The Joint Commission Journal on Quality and Patient Safety*, *32*(2), 63–72.

Russo, C. A., Wier, L., & Steiner, C. (2009). Hospitalization related to childbirth, 2006 statistical Brief#71. Healthcare Cost and Utilization Project. Retrieved from http://www.hcup-us.ahrq.gov/reports/statbriefs/sb71.jsp

Sawatzky, J.A.V., Enns, C.L., & Legare, C. (2015). Identifying the key predictors for retention in critical care nurses. *Journal of Advanced Nursing*, *71*(10), 2315–2325.

Scherer, D., & Fitzpatrick, J. J. (2008). Perceptions of patient safety culture among physicians and RNs in the perioperative area. *AORN journal*, *87*(1), 163–175.

www.manaraa.com

Schraeder, C., Britt, T., & Shelton, P. (2000). Integrated risk assessment and feedback reporting for clinical decision making in a Medicare risk plan. *The Journal of Ambulatory Care Management*, *23*(4), 40–47.

Settoon, R. P., Bennett, N., & Liden, R. C. (1996). Social exchange in organizations: Perceived organizational support, leader–member exchange, and employee reciprocity. *Journal of Applied Psychology*, *81*(3), 219–227.

Sexton, J., Holzmueller, R., Pronovost, V., Thomas, E., McFerran, S., & Nunes, J. (2006). Variation in caregiver perceptions of teamwork climate in labor and delivery units. *Journal of Perinatology*, *26*, 463–470.

Shekelle, P. G., Pronovost, P. J., Wachter, R. M., Taylor, S. L., Dy, S. M., Foy, R. ... & Walshe, K. (2011). Advancing the science of patient safety. *Annals of Internal Medicine*, *154*(10), 693–696.

Shields, M. A., & Ward, M. (2001). Improving nurse retention in the National Health Service in England: the impact of job satisfaction on intentions to quit. *Journal of health economics*, *20*(5), 677-701.

Simpson, K. R., James, D. C., & Knox, G. E. (2006). Nurse-physician communication during labor and birth: Implications for patient safety. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, *35*(4), 547–556.

Sims, H. P., Szilagyi, A. D., & Keller, R. T. (1976). The measurement of job characteristics. *Academy of Management Journal*, *19*(2), 195–212.

Smith, D. C. (2015). *Interprofessional collaboration between midwives and physicians* (Doctoral dissertation). ProQuest Dissertations Publishing, 3721566

www.manaraa.com

Sorra J.S., & Nieva, V.F. (2004). *Hospital Survey on Patient Safety Culture*. (Prepared by Westat, under Contract No. 290-96-0004). Rockville, MD: Agency for Healthcare Research and Quality. Retrieved from https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/patientsafetyculture/hospital/resources/hospscanform.pdf

Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences* (Vol. 3). Thousand Oaks, CA: Sage Publications.

Srinivas, S. K., Jesus, A. O., Turzo, E., Marchiano, D. A., Sehdev, H. M., & Ludmir, J. (2013). Patient satisfaction with the laborist model of care in a large urban hospital. *Patient Preference and Adherence*, *7*, 217–222.

Srinivas, S. K., & Lorch, S. A. (2012). The laborist model of obstetric care: We need more evidence. *American Journal of Obstetrics and Gynecology*, *207*(1), 30–35.

Srinivas, S. K., Shocksnider, J., Caldwell, D., & Lorch, S. (2012). Laborist model of care: Who is using it?. *The Journal of Maternal-Fetal & Neonatal Medicine*, *25*(3), 257–260.

Srinivas, S. K., Small, D. S., Macheras, M., Hsu, J. Y., Caldwell, D., & Lorch, S. (2016). Evaluating the impact of the laborist model of obstetric care on maternal and neonatal outcomes. *American Journal of Obstetrics and Gynecology*, *215*(6), 770.e1–770.e9.

Stevens, T. A., Swaim, L. S., & Clark, S. L. (2015).The role of obstetrics/gynecology hospitalists in reducing maternal mortality. *Obstetrics and Gynecology Clinics, 42*(3), 463–475.

www.manaraa.com

Sullivan, L. M. (2017). *Essentials of biostatistics in public health* (3rd ed.). Burlington, MA: Jones and Bartlett Learning.

SurveyGizmo. (2015). Three ways to improve your survey response rates. Retrieved from https://www.surveygizmo.com/survey-blog/survey-response-rates/.

Swanson, K. M. (1991). Empirical development of a middle range theory of caring. *Nursing Research*, *40*(3), 161–166.

Tadros, R. O. et al. (2015). The effect of a hospitalist comanagement service on vascular surgery inpatients. *Journal of Vascular Surgery*, *61*(6), 1550–1555.

Tekle, W., Hassan, A., Sanchez, C., Malik, A., Abantao, E., Sanchez, O. ... & Qureshi, A. (2015). Does hospitalist directed care reduce the length of stay for acute ischemic stroke patients and improve adherence to the "Get with the Guidelines" inpatient quality measures? *Neurology*, *84*(14 Supl.), P5–153.

Theodosios, S. (2012). The development of patient safety culture. *Health Science Journal*, *6*(2), 201–211.

Toh, S. G., Ang, E., & Devi, M. K. (2012). Systematic review on the relationship between the nursing shortage and job satisfaction, stress and burnout levels among nurses in oncology/haematology settings. *International Journal of Evidence-Based Healthcare*, *10*(2), 126–141.

Trinchero, E., Brunetto, Y., & Borgonovi, E. (2013). Examining the antecedents of engaged nurses in Italy: Perceived Organisational Support (POS); satisfaction with training and development; discretionary power. *Journal of Nursing Management*, *21*(6), 805–816.

www.manaraa.com

Turkel, M. (2007). Dr. Marilyn Ray's theory of bureaucratic caring. *International Journal for Human Caring, 11*(4), 57–74.

Tzeng, H. M., Ketefian, S., & Redman, R. W. (2002). Relationship of nurses' assessment of organizational culture, job satisfaction, and patient satisfaction with nursing care. *International Journal of Nursing Studies, 39*(1), 79–84.

Van Bogaert, P., Kowalski, C., Weeks, S. M., & Clarke, S. P. (2013). The relationship between nurse practice environment, nurse work characteristics, burnout and job outcome and quality of nursing care: a cross-sectional survey. *International Journal of Nursing Studies*, *50*(12), 1667–1677.

Varjus S.-L., Suominen T, & Leino-Kilpi, H. (2003). Autonomy among intensive care nurses in Finland. *Intensive Critical Care Nursing, 19*(1), 31–40.

Vazirani, S. et. al. (2005) Effect of a multidisciplinary intervention on communication and collaboration among physicians and nurses. *American Journal of Critical Care*, *14*, 71–77.

Vifladt, A., Simonsen, B. O., Lydersen, S., & Farup, P. G. (2016). Changes in patient safety culture after restructuring of intensive care units: Two cross-sectional studies. *Intensive and Critical Care Nursing*, *32*, 58–65.

Wachter, R. M. (1999). An introduction to the hospitalist model. *Annals of Internal Medicine*, *130*(4), 338–342.

Wade, G., Osgood, B., Avino, K., Bucher, G., Bucher, L., Foraker, T., . . . Sirkowski, C. (2008). Influence of organizational characteristics and caring attributes of managers on nurses' job enjoyment. *Journal of Advanced Nursing, 64*(4), 344–353.

www.manaraa.com

Wagner, B., Meirowitz, N., Shah, J., Nanda, D., Reggio, L., Cohen, P., & Abrams, K. J. (2012). Comprehensive perinatal safety initiative to reduce adverse obstetric events. *Journal for Healthcare Quality*, *34*(1), 6–15.

Weinstein, L. (2015). Laborist to obstetrician/gynecologist–hospitalist: An evolution or a revolution? *Obstetrics and Gynecology Clinics of North America*, *42*(3), 415–417.

Weiss, S. J., & Davis, H. P. (1985). Validity and reliability of the collaborative practice scales. *Nursing Research*, *34*(5), 299–305.

Weller, J. M., Barrow, M., & Gasquoine, S. (2011). Interprofessional collaboration among junior doctors and nurses in the hospital setting. *Medical Education*, *45*(5), 478–487.

Zohar, D. (1980). Safety climate in industrial organizations: theoretical and applied implications. *Journal of Applied Psychology*, *65*(1), 96–102.

www.manaraa.com