

August 2015

# Relationship-Based Care: a Test of the Quality Caring Model's Association with Nurses' Perceptions of Work and Patient Relationships

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RELATIONSHIP-BASED CARE: A TEST OF THE QUALITY CARING MODEL'S ASSOCIATION  
WITH NURSES' PERCEPTIONS OF WORK AND PATIENT RELATIONSHIPS

by

Kristopher J. Heindel

A Thesis Submitted in

Partial Fulfillment of the

Requirements for the Degree of

Master of Arts

in Communication

at

The University of Wisconsin-Milwaukee

August 2015

ABSTRACT  
RELATIONSHIP-BASED CARE: A TEST OF THE QUALITY CARING MODEL'S ASSOCIATION  
WITH NURSES' PERCEPTIONS OF WORK AND PATIENT RELATIONSHIPS

by

Kristopher J. Heindel

The University of Wisconsin-Milwaukee, 2015  
Under the Supervision of Dr. Erik Timmerman

This study assesses whether ambulatory surgery nurses who apply concepts from the Quality Caring Model (QCM) will experience different work perceptions and patient relationships than do nurses who do not directly apply QCM concepts. The QCM contends that if nurses demonstrate caring through their interaction, a patient experiences a greater level of satisfaction with the healthcare encounter. Conceptualized from the framework of a service relationship, this thesis posits that nurses employing the QCM should also perceive more positive relationship qualities with their patients and more positive workplace experiences than other nurses who are not utilizing QCM principles. Data from 27 nurses who reported 79 patient encounters revealed that, when controlling for phase of care (preoperative phase and phase 2 recovery) and length of time in the nurse's care, five relationship perceptions differed across QCM and non-QCM nurses: relationship satisfaction, expression of positive and negative valence, appreciation of unique meanings, providing a healing environment, and conversational effectiveness. In addition, QCM nurses perceived greater job satisfaction and organizational commitment than did non-QCM nurses.

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## CHAPTER 1: INTRODUCTION AND REVIEW OF LITERATURE

At some point in a person's life they, or a loved one, will require medical attention from a healthcare provider. The services patients require can range from a clinic visit to admission to the hospital for surgery. Regardless of the purpose of a visit, patients who have had infrequent contact or no pre-existing relationship with care providers must negotiate a setting that is unfamiliar to them. And, in this unfamiliar setting, they need to share personal information with healthcare providers to receive proper care. Sharing personal and intimate details of one's life with a stranger, while compromised by an ailment, places patients in a position of vulnerability as they seek assistance for their needs and to develop a plan for care with their provider (Duffy, 2013; Street, 2003; Watson, 1985).

The complexity of the treatment delivery process necessitates a level of caring, which is a key concept in healthcare and is the guiding principle of several theoretical frameworks addressing methods for treating patients (Boykin & Schoenhofer, 2000; Duffy, 2009, 2013; Duffy & Hoskins, 2003; Edmundson, 2012; Koloroutis, 2004; Martinsen, 1989; Ray, 1989; Swanson, 1991; Tomey & Alligood, 2006; Watson, 1985; Watson & Frampton, 2008; Winsett & Hauck, 2011). One of the more frequently cited theoretical frameworks is the Quality Care Model (QCM), which postulates a "caring" relationship must be developed between a patient and healthcare provider (Duffy, 2009, 2013). The caring relationship places the patient in the center of the interaction, is collaborative, and is directly related to patient satisfaction and outcomes (Duffy, 2009, 2013).

To show or exhibit care (or caring) means different things in different contexts. Caring is generally regarded as showing kindness or concern, or ensuring necessary action was taken to safeguard a person, place, or thing; it is most often regarded as a positive expression or emotion. Within the context of healthcare, however, "caring" encompasses a much broader

meaning with connections to an individual (or patient) on a personal level (Duffy, 2009, 2013; Duggan & Thompson, 2011; Dutta-Bergman, 2005; Koermer & Kilbane, 2008; Lipkin, Putnam, & Lazare, 1995; Roter & Hall, 2011; Street, 2003; Watson, 1985; Watson & Frampton, 2008; Winsett & Hauck, 2011; Zolnierrek & Matteo, 2009). These connections represent the development of a patient-provider relationship that possesses many of the same attributes found in most interpersonal relationships, including a basis in value systems and a satisfaction of basic human needs to connect with others. To demonstrate caring in a healthcare setting, providers (such as physicians and nurses) must engage in a reciprocal dialogue to build trust (Beach, Roter, Wang, Duggan, & Cooper, 2006; Roter, Frankel, Hall, & Sluyter, 2006). Both the healthcare provider and patient must be engaged and active participants in the exchange, be honest, and responsive to feedback. Further, healthcare providers need to be self-aware, with special focus on their verbal and nonverbal communication. Nonverbal communication includes facial expressions, head nodding, eye contact, posture, tone of voice, physical contact, and numerous other behaviors that healthcare providers need to be cognizant of when interacting with another and demonstrating caring.

In the QCM, the patient is the focal point for a reciprocal interaction with the healthcare provider as the elements of “caring” are administered (Duffy, 2009, 2013). However, successful implementation of the model also generates benefits for the healthcare provider. Duffy contends that *healthcare providers will experience caring much like the patient does in the QCM model*. The healthcare provider feels valued, possesses more focus, experiences a higher level of confidence, and connects on a greater level to their professional background (Duffy, 2013). As a result, healthcare providers experience greater job satisfaction (Duffy, Baldwin, & Mastorovich, 2007; Edmundson, 2012; Riley, 2004; Winsett & Hauck, 2011; Yeakel, Maljanian, Bohannon, & Coulombe, 2003). Patients and healthcare providers get to know each other and



reciprocate care for one another. By doing so, the healthcare provider feels closer to their patient.

In the patient-healthcare provider relationship, patient and care providers engage in behaviors that are somewhat unique to each role. The role of the patient is a key part of the relationship and is the individual who requires resolution of a health issue during their encounter. Thus, the patient's need for resolution may be the primary reason for the visit; however, the characteristics of the encounter with a provider will have an impact upon a patient's perception of whether a caring relationship was developed, which ultimately influences satisfaction. A patient's perception of a caring and satisfying relationship with a healthcare provider is typically associated with better outcomes (e.g., experience better health) and patient satisfaction (Conlee, Olvera, & Vagim, 1993; Crawford & Brown, 2011; Duffy, 2009, 2013; Koermer & Kilbane, 2008; Roter & Hall, 2011; Street, 2003; Wanzer, Booth-Butterfield, & Gruber, 2004; Watson, 1985; Watson & Frampton, 2008). Conversely, when patients' perceptions of interactions with healthcare providers are not "caring," patients are less satisfied and the service encounter generates poorer outcomes (Duffy, et al., 2007; Riley, 2004; Street, 2003).

Healthcare providers represent the second role in the patient-provider relationship and are typically referred to as "caregivers." The training of a healthcare provider has its foundation in science and treating an ailment (Watson, 1985). Resolving ailments is grounded in proven treatments without regard for individual variance (or personalities). Idealistically, research into health science is detached from human behavior, experiences, and values (Duffy, 2009, 2013; Watson, 1985). In other words, healthcare providers are not trained on an interpersonal level to build relationships and provide caring relationships. The preceding does not suggest all

healthcare providers are not caring, but rather they have not been trained to tend to the interpersonal elements necessary for establishing and developing a caring relationship.

Without the lack of formal training for healthcare providers in building caring relationships and providing an intangible service, it begs the question as to what defines a successful patient experience and outcome. The relationship between patients and healthcare providers typically has not been “assessed at all or are conducted by proxy through questionnaires conducted after hospitalization” (Duffy, 2013, p. 126). In addition, healthcare providers have a number of competing concerns when caring for their patient and are not dissimilar from other businesses, such as efficiency, the need to increase volume/quantity, efforts to reduce cost, a need to follow procedures and protocols, and other administrative concerns. However, unlike other businesses, healthcare providers have typically been exempt to elements of customer (or patient) satisfaction.

The healthcare environment is in a critical period of transition. Patient-provider interactions and outcomes are at the forefront of the healthcare encounter, and providers are being required to provide patient-centered care. The Institute of Medicine (IOM) defines patient-centered care as being “respectful of and responsive to individual patient preferences, needs, and values” and maintains “that patients’ values guide all clinical decisions” (2001, p. 3). Further, IOM continues to identify patient-centered care as one of their six “pillars,” or areas to focus on in the 21<sup>st</sup> century health system (1999, 2001, 2011). The Patient Protection and Affordable Care Act (PPACA) enacted into law in March, 2010 (US Dept. of Health & Human Services, 2007), requires a fundamental shift for healthcare providers. While the PPACA addresses internal concerns, such as improving clinical quality and patient safety, avoiding unnecessary costs, and upgrading information systems (e.g., electronic medical records), it also requires healthcare providers to provide patient-centered care and publicly report a variety of

measures, including patient satisfaction. Over the last several years, healthcare providers have established benchmarks for these measures with increasing targets every year. The goal is for gradual improvement as healthcare providers negotiate their improvement efforts towards these measures. Future reimbursement to health care facilities will be determined by success in these measures as it moves away from a pay for performance model (e.g., volume). The QCM directly addresses patient centered care, satisfaction, and outcomes through its caring measures and building relationships with patients.

In order to evaluate the QCM and the potential impact upon patient-provider relationships and satisfaction, this thesis will review the relevant literature on patient-provider interaction, describe the elements of the QCM, and then examine literature from the service industry. The goal of the research will be to examine whether the implementation of the QCM creates a difference in nurses' perceptions of their interactions with patients. In encounters where healthcare providers are employing the QCM and collaboratively working with a patient, the healthcare provider should perceive greater relationship satisfaction than those healthcare providers not employing the QCM. Following the review of literature and hypotheses, I will present the methods that I will use to conduct a study and test the proposed pattern of relationships.

### **Patient-Provider Communication**

The study of patient-provider communication examines the interaction between patients and their healthcare provider. Patient-provider communication is also more broadly referred to in the literature as patient-centered communication (or care) (Duffy, 2013; IOM, 2001; Street, 2003; Winsett & Hauck, 2011) or relationship-centered communication (care) (Dewar & Nolan, 2013; Duffy, 2013; Duffy, et al., 2007; Koloroutis, 2004; Roter, et al., 2006). Both terms are used interchangeably and broadly across disciplines with lack of agreement and

varied definitions of specific dimensions (Roter & Hall, 2011). Both terms, however, address common features in describing the patient-provider interaction.

Scholars who examine patient-provider interaction address a variety of topics including patient outcomes, effects on relationship development, links to satisfaction, centeredness of the interaction, verbal and nonverbal communication, and decision making (Duggan & Thompson, 2011; Dutta-Bergman, 2005; Roter & Hall, 2011). A provider is most often considered the physician or doctor, but can represent any healthcare professional communicating with the patient (e.g., nurse, lab technician). Most research focuses on the role of the physician in the interaction, despite findings that nurses spend more time with patients than do physicians (Clayton & Ellington, 2011). The patient is the individual seeking medical attention, but is often accompanied by family members or significant others, who can also influence patient-provider interactions.

Patient-provider communication is usually initiated as a result of an illness or injury, or during routine maintenance of health. The result of patient-provider interaction is referred to as the treatment outcome, the quality of which represents one general measure of patient-provider interaction. However, research finds that treatment outcomes are not the sole measure of success in the patient-provider interaction, which are often impacted by a variety of additional communication-related, process-focused elements, which are predicated upon other features of the interpersonal interaction with the patient (Lipkin et al., 1995; Street, 2003). From a sciences perspective, to achieve a successful outcome, there are actions a patient must take in order to feel better or heal. For example, a doctor may prescribe an antibiotic to resolve an infection. If the patient does not take the antibiotic, the infection is not eradicated.

Clearly, communication is a key factor in treatment outcomes. For example, *adherence* occurs when a patient follows the instructions from a healthcare provider. A meta-analysis

examined nearly 600 studies about patients' adherence to their treatment and found nearly 25% of patients do not follow their treatment plan (DiMatteo, 2004). According to the World Health Organization (2003), non-adherence is as high as 50% throughout the world for long-term therapy for chronic illnesses. The World Health Organization (2003) outlines five reasons why patients do not follow their treatment plans and three are directly related to communication: specifically the healthcare team, the patient, and social factors. Further, a meta-analysis by Zolnieriek and DiMatteo (2009) found that physician communication is significantly correlated to patient adherence; however, nearly 70% of the studies had an author-developed measure of communication. The concern with author-developed measures is that they lead to a lack in consistency and generalizability of findings. The guiding theme for communication in these studies focused around "biopsychosocial" elements, or in other words, tending to the whole person and their needs (outside of strictly health outcomes).

In order to achieve adherence and tend to patients' needs, the interaction between patient and provider can focus on the relationship and its development (Duffy, 2013). Patient (relationship) care acknowledges that the healthcare provider and the patient are unique individuals who bring their own perspectives and expectations to an interaction. Further, this perspective recognizes the importance of emotions and sets the stage for reciprocal influence (Beach, Roter, Wang, Duggan, & Cooper, 2006; Roter et al., 2006). Patient-centered interactions have also been shown to support adherence, leading to better outcomes (Robinson, Callister, Berry, & Dearing, 2008). What is lacking in the literature is a common definition or framework for patient-centered care, and this has been noted by a number of researchers (Clayton & Ellington, 2011; Epstein, Franks, Fiscella, Shields, Meldrum, & Kravitz, 2005; Ishikawa, Hashimoto, & Kiuchi, 2013; Robinson, et al., 2008). Without a common framework for understanding patient-centered care, it is possible that different measures have been utilized by

researchers, leading to concerns about generalizability of findings and applicability of results. In addition, Roter and Hall (2011) recognized in their research that patient-centered care has been described as a “communication style, a clinical method, a philosophy of medicine, a type of therapeutic relationship, a quality indicator, and a professional moral imperative” (p. 56). The common thread to all of the perspectives on patient-centered care is placing the patient at the center of the healthcare encounter and the healthcare professional building a relationship with the patient.

To build a relationship with the patient requires a communicative effort by the healthcare provider. As nursing theorist Jean Watson notes, healthcare and its practices are based on human communication, interaction, and relationships (Watson & Frampton, 2008). It is the perception of each actor in these communication encounters that influences interactions, development of relationships, and the end result of the healthcare encounters. The communication includes verbal and nonverbal communication between the patient and healthcare provider and serves as the basis of the interaction (Roter & Hall, 2011). Street (2003) notes the manner in which healthcare providers and patients communicate with each other has a significant effect on the quality of care for the patient and outcomes after the healthcare encounter.

Outside of the reason for the healthcare encounter, the other largely studied outcome is patient satisfaction. Conlee et al. (1993) define patient satisfaction as the patient’s perceptions within affective, cognitive, and behavioral elements of the physician’s communication. Affective behaviors are comprised of verbal and nonverbal communication and include social conversation, asking questions, listening attentively, speaking with a “warm” tone, and being friendly. Cognitive behaviors refer to the physician’s competency and behavioral elements focus on task behaviors. The importance of affective behaviors has been well-documented in the

communication and medical literature and confirms that affective behaviors positively influence patient satisfaction (Corbett & Williams, 2014; Crawford & Brown, 2011; Dutta-Bergman, 2005; Koermer & Kilbane, 2008; Ratanawongsa, Wright, Vargo, & Carrese, 2011; Wanzer, et al., 2004). There is not a unified definition for the affective behaviors required to positively influence patient satisfaction; however, common themes emerge when examining verbal and nonverbal communication.

Verbal affective behaviors are described in the literature as social conversations (or sociality) and involve conversations initiated by the healthcare provider with the patient. Within the nursing discipline, nursing theorists describe affective behaviors within the context of caring (Duffy, 2013; Watson, 1985; Watson & Frampton, 2008). The content of the social conversation has no direct relationship to the healthcare encounter; however, researchers note there is substantive value to the interaction and its positive influence on patient satisfaction. Social conversation includes introductions, greetings, and salutations and demonstrates friendliness (Crawford & Brown, 2011; Roter & Hall, 2011; Wanzer et al., 2004). These conversations allow for personal information to be exchanged and make a stronger connection for both the healthcare provider and the patient, whereby basic human needs are achieved (Duffy, 2013) and engender feelings of respect and care by the patient for the healthcare provider (Beach, et al., 2006; Duggan & Thompson, 2011; Duffy, 2013; Edmundson, 2012; Roter & Hall, 2011; Street, 2003; Winsett & Hauck, 2011). In a study of patient-provider communication in an emergency department, physicians spent 22% and patients 45% of their interaction on social talk (McCarthy, Buckley, Kirsten, Engel, Forth, Adams, & Cameron, 2013). Positive talk is an extension of social conversations and includes such interpersonal behaviors as agreements, approvals, compliments, humor, laughter, and other social small talk (Corbett & Williams, 2014; Crawford & Brown, 2011; Koermer & Kilbane, 2008; Riley, 2004; Roter & Hall, 2011; Sheldon,

2009). Research points to the value of social conversation and positive talk as producing a personal communication experience, as the healthcare provider demonstrates interest in and developing a relationship with the patient (Corbett & Williams, 2014; Crawford & Brown, 2011; Duffy, 2013; Koermer & Kilbane, 2008; Riley, 2004; Roter & Hall, 2011; Sheldon, 2009; Watson & Frampton, 2008).

Roter and Hall (2011) refer to verbal communication as the “what” and nonverbal communication as the “how.” Watson (1985) considers nonverbal behaviors as a more reliable indicator of a person’s feelings than verbal. Nonverbal communication is defined as communicative behaviors without linguistic content and acknowledged as expressing affective information; such as values, attitudes, beliefs, feelings, and emotions (Knapp & Hall, 2010) and “give context and enhanced meaning to the words spoken” (Roter & Hall, 2011, p. 55). Researchers assign a large array of behaviors to nonverbal communication, which can include (among others): facial expressions (smiling, affirmation head nods, eye contact), body posture and distance, and voice qualities (tone, pitch, variation).

Interestingly, nursing literature also refers to physical contact or touch as part of the nonverbal behavior repertoire (Duffy, 2013; Watson, 1985). Referred to as nonverbal immediacy behaviors, these behaviors demonstrate a perceived sense of physical or psychological closeness to the recipient (Burgoon, Buller, & Woodall, 1989). Nonverbal immediacy behaviors can be perceived as the healthcare provider showing empathy (Duffy, 2013, Ratanawongsa et al., 2011; Riley, 2004; Roter & Hall, 2012; Sheldon, 2009; Street, 2003; Wanzer et al., 2004; Watson, 1985; Watson & Frampton, 2008). In addition, nonverbal immediacy behaviors can lead to trust, respect, greater collaboration, and shared decision making between the patient and healthcare provider (Dewar & Nolan, 2013; Dutta-Bergman, 2005; Koermer & Kilbane, 2008), as well as improved patient satisfaction (Conlee, et al., 1993;



Wanzer, et al., 2004). Despite nonverbal communication's effects on patient-provider communication, it has largely remained unstudied in the medical field (Schmid Mast, 2007). Thus, the determination of a successful healthcare encounter from the patient's perspective is the patient's perception of the interaction and their evaluation of the relationship with the healthcare provider.

### **The Quality Caring Model**

Within the nursing field, several philosophies and theoretical models have been postulated for improving communication between healthcare providers and patients; all are centered around elements of "caring" and collaborative relationships between the patient, their families, and the healthcare provider (Boykin & Schoenhofer, 2000; Duffy, 2009, 2013; Duffy & Hoskins, 2003; Edmundson, 2012; Koloroutis, 2004; Martinsen, 1989; Ray, 1989; Swanson, 1991; Tomey & Alligood, 2006; Watson, 1985; Watson & Frampton, 2008; Winsett & Hauck, 2011). There are slight variations and interpretations to each philosophy and theoretical model; however, the Quality-Caring Model© (QCM) by Joanne Duffy (Duffy & Hoskins, 2003) continues to evolve since its inception in 2003 and incorporates elements from previous theorists and models (Duffy, 2003). Unlike the other theories though, the QCM is a middle- range theory and has a narrower focus that possesses greater precision than other nursing or grand theories (Tomey & Alligood, 2006). The major components of the QCM have their foundation in communication encounters with patients, their families, and the healthcare provider.

Duffy (2013) outlines the major components of the QCM as "humans in relationship, relationship-centered professional encounters, feeling "cared for," and self-advancing systems" (Duffy, 2013, p. 34). *Humans in relationship* refers to an individual's unique perspective through the accumulation of their life experiences. It is these life experiences, then, that affect how individuals interact with one another. Some examples include how an individual's beliefs,

attitudes, and behaviors are influenced by their unique life experiences. *Relationship-centered, professional encounters* represent the interaction of the healthcare provider with patients and families. A successful, collaborative relationship exists when the patient, their family, and healthcare providers' combined interactions are based on the caring factors of the model (Duffy, 2013). The proposed end result is a *self-advancing system* providing benefits to the patient and their families, healthcare provider, and the healthcare system.

The self-advancing system emerges through the successful use of eight caring behaviors by the healthcare provider. The caring factors in the QCM are mutual problem solving, attentive reassurance, human respect, encouraging manner, appreciation of unique meanings, healing environment, basic human needs, and affiliation needs (Duffy, 2013). *Mutual problem solving* is the interaction between the patient and healthcare provider to develop their plan of care and requires both parties to provide information, ask questions, and listen. *Attentive reassurance* involves the healthcare provider being accessible, available, and giving full attention to the patient and their needs. The third caring behavior is *human respect* and is defined as "honoring the worth of humans through unconditional acceptance" and "kind and careful handling of the human body" (Duffy, 2013, p. 36). *Encouraging manner* refers to the approach of the healthcare provider through their verbal and nonverbal communication with the patient. Communication is customized to meet the unique characteristics of the interaction and always supportive.

The fifth caring behavior is *appreciation of unique meanings*, which requires the healthcare provider to value each patient as an individual and to take into consideration the collective life experiences and the impact on the patient. This caring behavior recognizes each person has their own worldview and for nurses to be cognizant and sensitive to this. The sixth caring behavior, *healing environment*, refers to the physical setting and providing a comfortable

and stress free environment. The healing environment looks at the patient's surroundings with regard to noise, lighting, aesthetics, privacy, and safety (Duffy, 2013, p. 36). The seventh caring behavior is *basic human needs* and is based on Maslow's hierarchy of needs: physical needs, safety and security needs, social and relational needs, self-esteem, and self-actualization (Duffy, 2013). The final caring behavior is *affiliation needs* and includes memberships in groups and refers to a patient's family or others close to the patient, involvement in their healthcare and decisions.

With patients and families involved in planning and execution of their healthcare decisions, the QCM acknowledges that this situates the healthcare provider with power, or referred to as "authority gradient" (Duffy, 2013, p. 118), as patients and families learn about their illness and have to make decisions. This authority gradient contains the possibility of influencing the patients' communication and ultimately their ability to make decisions. Healthcare providers utilizing the QCM are aware of authority gradients and employ specific caring behaviors to prevent negative consequences. Duffy (2013) calls attention to caring verbal and nonverbal behaviors in the model, but describes verbal behaviors only as those "to convey mutuality and reciprocity" and "caring words that are reaffirming" (p. 199). Essentially, this translates to showing caring by giving special attention to what a practitioner says and how something is said. There is a far more detailed and descriptive itemization of nonverbal behaviors to show caring, such as "timing of language, facial expressions, human physical contact, tone of voice, distance, head nodding, and eye contact" (Duffy, 2013, p. 119). Duffy (2013) further explains caring, nonverbal communication as: smiling, sitting close to and facing the patient, giving the patient your full attention with no interruptions, showing enthusiasm and energy, not interrupting the patient while they are speaking, and using "soft, gentle touch... relaxed body posture, even leaning in" (p. 121). The caring behaviors are to allow the patient to

relax and feel comfortable in conversing with the healthcare provider as they develop a collaborative relationship leading to a self-advancing system.

Within the QCM and its caring behaviors, and other theoretical models where the healthcare provider exhibits “caring,” it has been hypothesized and studies have shown to increase patient satisfaction and improve patient outcomes (Duffy, 2013; Duffy et al., 2007; Edmundson, 2012; Winsett & Hauck, 2011; Wolf, Miller, Devine, 1998). Other studies have examined specific verbal and nonverbal communication, which are inherent in the QCM. For example, Koermer and Kilbane (2008) examined dimensions of sociality in physician and patient communication. Sociality is defined as “communicative behaviors that encourage a cooperative, social smoothness” (Koermer & Kilbane, 2008, p. 70). Courtesy expressions and personal connections were found to increase patient satisfaction and are strongly correlated with the former. For the healthcare provider, caring relationships with your associates is as important as the caring relationship fostered with patients (Duffy, 2013; Riley, 2004) in the development of self-advancing systems. The self-advancing systems lead to personal growth and gives meaning to the healthcare providers’ work (Duffy, 2013) and increases nurse satisfaction (Duffy et al., 2007; Edmundson, 2012; Winsett & Hauck, 2011; Yeakel et al., 2003). Further, studies have also shown a positive correlation to nurse satisfaction and reduced turnover rates (Winsett & Hauck, 2011). Conversely, when “the caring factors” are not utilized or utilized inappropriately, it leads to decreased satisfaction and less positive outcomes for patients and decreased job satisfaction for the healthcare provider (Duffy et al., 2007; Riley, 2004). Then, the QCM proposes the successful administration of caring behaviors during the development and ongoing interaction in an interpersonal relationship should positively influence outcomes for patients and their families, healthcare providers, and ultimately the healthcare system.

#### **Patient as Partial Employee in the Healthcare Encounter**

The service encounter between a patient and healthcare provider is initiated for a specific reason, which is often an injury, illness, or health maintenance. The patient and provider engage in a complex, interpersonal interaction that is part of their service relationship. When the relationships between provider and patient have more positive features, interactions between the parties can lead to better outcomes and patient satisfaction (Duggan & Thompson, 2011; Roter & Hall, 2001; Vinagre & Neves, 2008). Numerous studies have examined the effect that a healthcare provider can have on patient outcomes (e.g., adherence to treatment, quality of life, perception of service) and satisfaction from the patient's perspective (Duffy, 2013; Koermer & Kilbane, 2008; Street, 2003; Vinagre & Neves, 2008; Wanzer et al., 2004); however, an area worthy of investigation is the perspective of the healthcare provider delivering the service to the patient. The existing research focuses on the customer/patient and puts less emphasis on the service provider (Halbesleben & Stoutner, 2013); specifically, examining the perspective of the healthcare role spending the most time with patients, or nurses (Clayton & Ellington, 2011), and their perceptions of the healthcare interaction.

In order for a nurse to perform his or her role and provide care for a patient in a service encounter, information is required from the patient. Through a series of questions, the nurse gathers information from the patient to assess the patient's condition and determine future steps for providing care. Without this information from a patient, it is extremely difficult to provide the service. Thus, a coordinated service transaction occurs in which the patient's (or customer's) participation is critical to the production and delivery of the service. Because the patient shares responsibility with the provider for completing the service, there is a blurring of the boundary between what counts as the service recipient (patient) and the service provider (nurse). Other researchers have discussed these issues of blurred role boundaries by referring to customers as "partial employees" because service transactions require information from the

customer in order to provide the service (Halbesleben & Buckley, 2004; Halbesleben & Stoutner, 2013; Hoffman & Kretovics, 2004; Hsieh, Yen, & Chin, 2004; Keh & Teo, 2001; Kelley, Donnelly, & Skinner, 1990; Mills, Chase, & Margulies, 1983; Mills & Morris, 1986; Wu, 2011). Within this context, the interpersonal encounter and the ensuing service are co-created by the nurse and the patient (Mills & Morris, 1986), which can impact perceptions of the overall service experience for both parties in the transaction.

A challenge to nurses in the co-production of the service transaction is the level of involvement and participation of the patient. Mills and Margulies (1980) propose the level of involvement and participation by the customer varies based on the type of service organization, task requirements, and the skills and motivation of the customer. They contend that there are three types of service organizations: (1) maintenance-interactive, (2) task-interactive, and (3) personal-interactive. Examples of *maintenance-interactive* service organizations are financial institutions, retail stores, and insurance companies for which transactions are routinized, expectations of service are clear, and the customer displays predictable behaviors. The information exchanged is small, precise, and unambiguous. Within a maintenance-interactive service organization, task uncertainty is low and any provider (employee) can assist the customer. The customer's awareness of why they came to the provider is high.

A *task-interactive* service organization is slightly more complex than the maintenance-interactive service organization. Examples of task-interactive service organizations are legal or engineering firms. A customer seeks out an organization to accomplish a specific task (e.g., legal defense, building a structure) and it is up to the provider or service organization to figure out how to accomplish the task. A task-interactive service organization possesses moderate levels of task uncertainty, amount and clarity of information, duration of the encounter, and

customer's knowledge about the task. In this category, the provider has more control and power over the customer with regard to information.

*Personal-interactive* service organizations are comprised of individualized services tailored specifically for a customer; and requires enormous sums of information from the customer. Examples of personal-interactive service organizations are education and healthcare (e.g., teacher-student; nurse-patient). The provision of healthcare services requires greater involvement from patients, increased task uncertainty, and high levels of ambiguity. The patient must provide personal, possibly intimate details about themselves to a stranger in an unfamiliar setting; positioning the patient in a subservient (albeit essential) role in the interaction. Mills and Margulies (1980) note this type of service organization as the most dynamic and typically require novel approaches to resolution of customer needs. Within this context, obtaining accurate or complete information may be difficult and researchers have found varied levels of participation by the patient (Cegala, Street, Clinch, 2007; Street, Gordon, Ward, Krupat, & Kravitz, 2005) and that it is possible for participation to be repressed or reticent under these conditions (Gallan, Jarvis, Brown, & Bitner, 2013).

The strategies nurses employ to elicit greater involvement and participation by the patient vary because the specific circumstances and behavior of each patient are unique. In addition, the provision of healthcare service often yields no tangible end product. In the absence of a tangible end product, the customer's perceptions of the service determine satisfaction with the encounter (Mills et al., 1983; Schneider & Bowen, 1985) and require higher levels of customization and effort on behalf of the service provider (Gallan et al., 2013; Kelley, et al., 1990). So, customers (patients) rely on relational and emotional behaviors in the interaction (Johnson & Grayson, 2005; Solomon, Surprenant, Czepiel, & Gutman, 1985; Vinagre & Neves, 2008) to gauge the quality of the experience. In her study of customer service competencies,

Ruff-Eft (2004) identified “the most effective service representatives are able to integrate the business side of the interaction with the customer’s human needs” (p. 220) and to establish a relationship with the customer and demonstrate true caring.

Through demonstrating caring and building a relationship with a patient, information gathering by the nurse can be improved. Improving the ease with which the nurse collects information about patients and their conditions (including breadth and depth), theoretically, makes the nurse’s job easier and allows for a more expedient assessment and determination of treatment or plan. This higher performance by the customer is associated with an increase in perceived satisfaction in the service exchange by customers (Halbesleben & Stoutner, 2013). Because patient behaviors that allow a nurse to complete his or her job more easily may positively impact nurses’ perceptions about the patient’s helpfulness, the result may be a more positive and fulfilling interaction, which enhances a nurses’ job satisfaction. The manner in which the nurse interacts with the patient and the specific communication behaviors employed also factor into the relationship and satisfaction.

Nurses, then, must employ a variety of interpersonal strategies in working with the patient to obtain the needed information and assist the patient in navigating the complexities of the healthcare encounter. When the nurses do so by implementing the eight caring behaviors outlined in the Quality Caring Model (mutual problem solving, attentive reassurance, respect, encouragement, appreciation of unique meanings, healing environment, human needs, affiliation), there will be a shared emotional experience and mutual liking between provider and patient. Researchers have documented the role of reciprocity in terms of caring and liking between patients and providers (Duffy, 2013; Hall, Horgan, Stein, & Roter, 2002). In other words, if the nurse and patient like one another, their behavior is reflective of this. Consistent with the Quality Caring Model (QCM) then, if both the nurse and patient like each other, it can



lead to a stronger relationship for both parties in the interaction. Indeed one of the aspects of the QCM is the quality of patient care and service is derived from early nursing theorists “who believed while nursing draws on other disciplines, it is, by its very nature, an assistive, compassionate discipline that provides services in the contexts of relationships” (Duffy, 2013, p. 40).

***H1: Healthcare providers utilizing the QCM should perceive more positive relationship qualities with their patients (e.g., satisfaction, closeness, similarity, openness, respect) than providers who are not using the QCM.***

***H2: Healthcare providers utilizing the QCM should perceive more positive workplace experiences (e.g., job satisfaction, organizational, and professional commitment) than providers who are not using the QCM.***

## CHAPTER 2: METHOD

### Sample

The sample for this study included registered nurses working in the day surgery and post-anesthesia care units at three acute care hospitals and one ambulatory surgery center. An opportunity was available to collect data from one acute care hospital (QCM Site) where the quality caring model was implemented for ambulatory surgery patients in an effort to improve patient satisfaction scores. The other two acute care hospitals (Non-QCM Site 1 [NQCM1] and Non-QCM Site 2 [NQCM2]) and the ambulatory surgery center (Non-QCM Site 3 [NQCM3]) in the sample were not implementing the quality caring model and provided a comparison to determine if the nurses implementing the quality caring model perceived differences in relationships with patients and workplace perceptions. Across all locations, the survey was distributed to 53 nurses (QCM Site: 25; NQCM1-3 Sites: 28) who provide direct patient care as a regular part of their job (sample did not include leadership positions that do not provide patient care, such as managers and supervisors). Nurses were asked to describe their feelings of satisfaction in the workplace as well as report observations of their experiences with three patients each.

A total of 27 nurses responded, for an overall response rate of 51% (44% at QCM site and 57% at the non-QCM sites). All participants (*N*) were female, the sample varied somewhat in terms of age, years as an RN, length of time at their current work site, and education (See Table 1). The overall mean age of respondents was 52.29 (*SD* = 6.45) years, which was slightly higher at the QCM site (*M* = 54.57, *SD* = 5.80) than at the non-QCM sites (*M* = 51.14, *SD* = 6.66). The overall mean for number of years working as a nurse was 28.89 (*SD* = 7.97). The QCM site was slightly higher on this measure (*M* = 30.64, *SD* = 6.70) than the non-QCM site (*M* = 27.69, *SD* = 8.74). The overall mean length of time a nurse had worked at their current site was 9.87 (*SD* =

8.93). The QCM site was considerably higher ( $M = 13.78$ ,  $SD = 11.22$ ) than the non-QCM site ( $M = 7.19$ ,  $SD = 5.96$ ). For the type of nursing degree, overall 46% (12) of the nurses had a bachelor's degree, 35% (9) had an associate's degree, and 19% (5) were diploma nurses. At the QCM site, 50% (5) of the nurses had a bachelor's degree, 30% (3) had an associate's degree, and 20% (2) were diploma nurses. At the non-QCM sites, 43% (7) of the nurses had a bachelor's degree, 38% (6) had an associate's degree, and 19% (3) were diploma nurses. There were no large variations to FTE worked, typical hours in a shift, and typical number of patients in a shift.

### **Study Sites and Procedures**

The goal of the QCM implementation was to increase patient satisfaction scores at the location. The application of the QCM involved a change to all perioperative phases of care for ambulatory surgery patients, to essentially allow nurses the opportunity to ask patients to identify any special needs or requirements and then be able to follow through on those requirements during all phases of care delivery: preoperative phone interview with the patient, preoperative, intraoperative, post-operative, phase two recovery, and post-operative/follow up phone call. During the preoperative phone interview, the nurse conducting the interview asked the patient a series of three questions: (1) How would you like to be addressed? (2) What are your concerns regarding your surgery today? (3) Are there any special needs or considerations that you want the post-anesthesia care unit (or post-operative phase) nurse to know about? Answers to each question were documented on a form and this form was included in the patient's master chart for all staff providing care to the individual. The patient's answers to the questions were used on the day of surgery, in all phases. In addition, two to three days after surgery, a post-operative phone call was made by a nurse to patients. The patients were addressed as they requested, and two questions were asked: (1) We documented prior to your surgery that you were concerned about management of \_\_\_\_\_. Was this addressed? (2)

Would you describe the nursing care that you received throughout your perioperative experience as caring? These questions and subsequent interactions with patients tend to the basic tenets of the QCM, which is focused upon building relationships and mutual problem solving, attentive reassurance, respect, an encouraging manner, appreciation of unique meanings healing environment, basic human needs, and affiliation needs (Duffy, 2013). By asking these questions, it allowed for an exchange of information between the nurse and patient and an opportunity for either party to ask questions. The interaction allowed the nurse to identify specific patient needs, such as physical, safety/security, and social/relational needs. Essentially, when the nurses have the answers to the questions available at every phase of the healthcare encounter, there is greater potential for continuity of care as the patient moves through each phase; each with a different nurse.

To gather the data for this study, a pencil and paper survey was distributed to the nurses in the day surgery and post-anesthesia care units. The survey was distributed by the director or manager at each unit's monthly staff meeting. A cover letter explained the purpose of the study and instructions for completing and returning the survey. Each survey was accompanied by a cover letter indicating approval by the researcher's university Institutional Review Board, the Institutional Review Board of the healthcare system, and an envelope addressed to the researcher. Each nurse was asked to complete a first survey with information about their perceptions of the workplace and the nursing profession (measures of satisfaction and commitment) and then three additional surveys reflecting on their perceptions of three outpatient encounters with patients. All surveys were anonymous and no items sought information that would make it possible to personally identify the respondent (e.g., name, employee number), nor was there information identifying patient by name or any other identifier (e.g., social security number, medical record number, account number).

The first survey asked for demographic information about the respondent: hospital site they work at, unit they work in, gender, age, FTE (full or part-time), length of time on the job, average number of patients in their care on a typical shift, how many hours in their typical shift, type of nursing degree (2 year or 4 year), perceptions of current staffing levels (e.g., “Do you feel your unit is sufficiently staffed?”), perceptions of working environment, and if the respondent enjoys being an RN. The instructions stated that if nurses were concerned they would disclose their identity by answering a demographic item, it was acceptable to skip the item and fill out the other portions of the survey. Each individual survey response concerning a specific patient encounter required the date for the week of the surgery, type of surgery being performed (e.g., blepharoplasty, hemorrhoidectomy, hernia repair, laparoscopic cholecystectomy, lesion excision, endoscopic carpal tunnel), service line of the surgery (e.g., ENT, general, orthopedic, urology), how long the patient was in the nurse’s care, and the date the survey was completed. Upon completion of the survey, the nurse placed the survey in the accompanying pre-addressed envelope, was asked to seal the envelope, and return the survey to the researcher via the organization’s interoffice mail system.

### **Measures**

Responses to all survey items utilized a 7-point, Likert-type scale ranging from “very dissatisfied” or “strongly disagree” to “very satisfied” or “strongly agree.”

#### **Job Satisfaction**

To measure job satisfaction, we selected seven items from a study by Downs and Hazen (1977). Items were chosen based upon the relevance of the phrasing for the participants at the organization where data was collected. Survey items asked participants to consider the nursing profession and indicate their degree of satisfaction in each of the following areas. Sample items include: “Recognition of my efforts by my supervisor,” “Feedback on how problems in my job

are being handled," "Information about the requirements of my job," "Information about how my job compares with others," "Information about how I am being judged," "Information about my progress," and "Information about benefits and pay." Two additional survey items were included that were designed for this study, "Recognition of my efforts" and "Recognition of my efforts by my co-workers." The mean score for job satisfaction in this sample was 5.17 ( $SD = 1.56$ ) (See Table 2). The overall measure had an acceptable level of reliability ( $\alpha = .92$ ).

### **Occupational Commitment**

The items evaluating occupational commitment included six items from a study by Meyer, Allen, and Smith (1993). The items were specifically designed for nurses and assess overall affective perceptions of one's occupation (as opposed to a specific organization). Items from the measures included "Nursing is important to my self-image" and "I am proud to be in the nursing profession." The mean score for occupational commitment in this sample was 6.28 ( $SD = 1.18$ ) (See Table 2). The overall measure had an acceptable level of reliability ( $\alpha = .79$ ). One additional survey item was included based on feedback from perioperative services leadership, "My department is sufficiently staffed." The mean score for this measure was 4.48 ( $SD = 1.93$ ).

### **Patient Relationship Perceptions (Satisfaction, Closeness, Similarity)**

The items evaluating relationship perceptions were modified from the items that originally appeared in a study by Vangelisti and Caughlin (1997) and assessed relationship satisfaction, closeness, and similarity. There were three, two, and two items measured, respectively, for each variable. Sample satisfaction items were "I was happy with my relationship with this patient" and "I liked this patient." The mean score for satisfaction was 6.55 ( $SD = .79$ ) and had an acceptable level of reliability ( $\alpha = .85$ ) (See Table 2). Closeness sample statements included "I was very close to this patient" and "I discussed personal things

with this patient.” The mean score for closeness was 3.46 ( $SD = 2.06$ ) and had a somewhat low reliability ( $\alpha = .62$ ). Sample similarity items were “This patient and I were very similar” and “This patient and I liked a lot of the same things.” The mean score for similarity was 3.61 ( $SD = 1.67$ ) and had an acceptable level of reliability ( $\alpha = .86$ ).

### **Self-Disclosure**

The items evaluating self-disclosure (or open communication) were modified from the items that originally appeared in a study by Wheelless (1978) and examined self-disclosure in terms of the *amount, depth, honesty and accuracy, intentionality, and positive and negative valence*. For each measure of self-disclosure there were four items, except positive and negative valence had 3 items. Sample items included “I talked about myself a lot with this patient” (amount), “My self-disclosure with this patient lasted a long time” (depth), “I was always honest in my self-disclosures with this patient” (honesty and accuracy), “When I self-disclosed with this patient, I was consciously aware of what I revealed” (intentionality), and “I expressed my good feelings about myself with this patient” (positive/negative valence). The mean score for amount was 2.29 ( $SD = 1.98$ ) and had an acceptable level of reliability ( $\alpha = .73$ ) (See Table 2). The mean score for depth was 1.88 ( $SD = 1.55$ ) and had an acceptable level of reliability ( $\alpha = .86$ ). The mean score for honesty and accuracy was 4.75 ( $SD = 1.84$ ) and had acceptable level of reliability ( $\alpha = .73$ ). The mean score for intentionality was 4.89 ( $SD = 1.81$ ) and had an acceptable level of reliability ( $\alpha = .97$ ). The mean score for positive and negative valence was 4.35 ( $SD = 1.86$ ) and had an acceptable level of reliability ( $\alpha = .90$ ).

### **Conversational Effectiveness Scale**

The items evaluating conversational effectiveness included three items from a study by Spitzberg and Cupach (1984). Example items included “I was effective in the conversation with this patient” and “I had a rewarding conversation with this patient.” The mean score for the

conversational effectiveness scale was 6.39 ( $SD = 1.15$ ) and had a low level of reliability ( $\alpha = .65$ ) (See Table 2).

### **Caring Assessment Tool (CAT)**

The CAT (Duffy, Hoskins, & Seifert, 2007) was originally designed to assess the quality of the patient-nurse relationship (Watson, 2002) and then further refined in the 2007 study. Specifically, the CAT assesses the perceptions of nurses' caring behaviors from the patient's perspective. This study uses the same measures, but modified the questions to assess the perceptions of the nurse in their application of the caring measures. For example, an item on the original CAT asked a patient to respond to the statement "The nurse respected me." Adapted to the nurses' perspective, the item said, "I respected the patient."

The categories of evaluation on the CAT were: respect, affiliation needs, attentive reassurance, mutual problem solving, encouraging manner, appreciation of unique meanings, healing environment, and basic human needs (See Table 2). The mean score for respect was 6.92 ( $SD = .27$ ) and had an acceptable level of reliability ( $\alpha = .90$ ). The mean score for affiliation needs was 5.92 ( $SD = 1.42$ ) with acceptable reliability ( $\alpha = .93$ ). Attentive reassurance had a mean of 6.88 ( $SD = .41$ ) and somewhat low reliability ( $\alpha = .64$ ). Mutual problem solving had a mean score of 5.50 ( $SD = 1.74$ ) and had an acceptable level of reliability ( $\alpha = .77$ ). The mean score for encouraging manner was 5.56 ( $SD = 1.51$ ) and an acceptable level of reliability ( $\alpha = .75$ ). The mean score for appreciation of unique meanings was 5.68 ( $SD = 1.62$ ) with acceptable reliability ( $\alpha = .72$ ). The mean score for healing environment was 6.89 ( $SD = .31$ ) and had an acceptable level of reliability ( $\alpha = .89$ ). Finally, basic human needs had a mean score of 6.43 ( $SD = 1.14$ ) but had poor reliability ( $\alpha = .42$ ).



## CHAPTER 3: RESULTS

### Preliminary Analysis

#### Demographic Comparisons Across Study Sites

In order to evaluate the similarity in participant characteristics across the QCM and non-QCM sites, independent samples *t*-tests were computed using demographic items (see Table 1). There were no significant differences across the QCM and non-QCM sites in terms of participant age, FTE level, years as an RN, years at the current site/location, typical hours in a shift, or typical number of patients per shift. The only variable for which there was a slight trend toward a significant difference was the comparison of years at the participants' current site. At the QCM site, the average number of years was 13.78 ( $SD = 11.22$ ) and at the non-QCM sites, the average was 7.19 ( $SD = 5.96$ ),  $t(25) = 1.99$ ,  $p = .06$ . Given that the samples appear to be largely consistent with one another on the vast majority of variables, we proceeded with the analysis to determine whether the QCM was the factor contributing to differences in the dependent variables of interest.

#### Test for Independence of Observations

In addition to reporting personally-experienced levels of job satisfaction and commitment, each nurse also provided surveys indicating their perceptions of relationships with patients. Because each nurse was reporting multiple cases, this potentially violates the assumption of independence of observations (i.e., each observation from a nurse is potentially nonindependent from that same nurse's other observations).

To assess whether the violation of independence would have implications for the analysis, we computed intraclass correlation coefficients (ICC), which provide an index of the degree to which data are nonindependent (Kenny, Mannetti, Pierro, Livi, & Kashy, 2002). Using the procedures described by Grawitch and Munz (2004), we calculated ICC values for the

dependent variables. Following calculation of ICC, we computed an  $F$ -statistic to determine whether ICC was significant at a fairly liberal  $p$  value of  $p < .25$ . If ICC was significant at this level, we would conclude that the degree of nonindependence could have the implications of increased Type I error. As a result, analysis would then have to be performed at the group level (taking average scores for each nurse and analyzing on that basis) or other steps taken to adjust for the independent violation.

Calculations of ICC for the dependent variables ranged from  $-.28$  (conversational effectiveness) to  $.26$  with  $F$  values ranging from  $.33$  to  $2.04$ . The computed  $F$  statistics did not exceed the critical value at  $p = .25$ , which was  $3.44$ . Thus, we conclude that there does not appear to be a very high degree of nonindependence among observations in this sample. Thus, a decision was made to proceed with the analysis at the patient/case level of analysis rather than to average across patients/cases for each nurse who recorded the observations.

### **Hypothesis Tests**

Hypothesis 1 predicted that healthcare providers would perceive more positive relationship qualities (e.g., satisfaction, closeness, similarity, openness, respect) with patients at the QCM site than healthcare providers at the non-QCM sites (*See Table 3*). The average level of relationship satisfaction at the QCM site was  $6.65$  ( $SD = .70$ ) and at the non-QCM sites the average was  $6.49$  ( $SD = .69$ ). An independent groups  $t$ -tests showed no statistically significant difference,  $t(77) = 1.02$ ,  $p = .31$ . For the measure of closeness, the average at the QCM site was  $3.53$  ( $SD = 1.74$ ) and the non-QCM sites the average was  $3.41$  ( $SD = 1.59$ ). An independent groups  $t$ -tests revealed no statistically significant difference across sites,  $t(77) = .31$ ,  $p = .76$ . For the measure of perceived similarity, the average at the QCM site was  $3.97$  ( $SD = 1.21$ ) and at the non-QCM sites, the average was  $3.35$  ( $SD = 1.74$ ). An independent groups  $t$ -tests revealed a statistical trend toward difference in similarity across the QCM and non-QCM sites,  $t(77) = 1.77$ ,

$p = .08$ . For the amount of self disclosure, the average level at the QCM site was 2.10 ( $SD = 1.47$ ) and the non-QCM sites was 2.43 ( $SD = 1.35$ ). An independent groups  $t$ -tests showed no statistically difference in the amount of self disclosure,  $t(77) = -1.04$ ,  $p = .30$ . The average score for control of depth was 1.75 ( $SD = 1.26$ ) at the QCM site and 1.97 ( $SD = 1.35$ ) at the non-QCM sites. An independent groups  $t$ -tests revealed no statistically significant difference for control of depth,  $t(77) = -.74$ ,  $p = .46$ . The average level of honesty and accuracy at the QCM site was 4.70 ( $SD = 1.35$ ) and the non-QCM sites was 4.59 ( $SD = 1.64$ ). An independent groups  $t$ -tests showed no statistically significant difference for honesty and accuracy,  $t(79) = .34$ ,  $p = .74$ . For intended disclosure, the average was 4.86 ( $SD = 1.79$ ) for the QCM site and 4.70 ( $SD = 1.94$ ) for the non-QCM sites. An independent groups  $t$ -tests showed no statistically significant result for intended disclosure,  $t(79) = .39$ ,  $p = .70$ . The average score for positive and negative valence was 4.11 ( $SD = 1.82$ ) for the QCM site and 4.53 ( $SD = 1.59$ ) for the non-QCM sites. An independent groups  $t$ -tests showed no statistically significant result for positive and negative valence,  $t(77) = -1.08$ ,  $p = .28$ . For the conversational effectiveness measures, the average score for the QCM site was 6.55 ( $SD = .94$ ) and 6.28 ( $SD = .77$ ) for the non-QCM sites. An independent groups  $t$ -tests showed no statistically significant result for the conversational effectiveness scale,  $t(77) = 1.40$ ,  $p = .17$ .

Next, are the measures for the Caring Assessment Tool (CAT). The average for human respect was 6.94 ( $SD = .24$ ) at the QCM site and 6.91 ( $SD = .27$ ) at the non-QCM sites (See Table 3). An independent groups  $t$ -tests showed no statistically significant difference for human respect,  $t(77) = .45$ ,  $p = .65$ . The average score for affiliation needs was 5.66 ( $SD = 1.44$ ) at the QCM site and 6.12 ( $SD = 1.24$ ) at the non-QCM sites. An independent groups  $t$ -tests showed no statistically significant result for affiliation needs,  $t(77) = -1.52$ ,  $p = .13$ . For attentive reassurance, the average score was 6.92 ( $SD = .25$ ) for the QCM site and 6.85 ( $SD = .41$ ) for the

non-QCM sites. An independent groups *t*-tests showed no statistically significant result for attentive reassurance,  $t(77) = .95, p = .34$ . For mutual problem solving, the average score at the QCM site was 5.07 ( $SD = 1.80$ ) and 5.81 ( $SD = .96$ ) for the non-QCM sites. An independent groups *t*-tests showed no statistically significant difference in mutual problem solving,  $t(77) = -2.36, p = .02$ . The average score for encouraging manner was 5.71 ( $SD = 1.29$ ) at the QCM site and 5.45 ( $SD = 1.40$ ) at the non-QCM sites. An independent groups *t*-tests showed no statistically significant difference in encouraging manner,  $t(74) = .86, p = .39$ . Appreciation of unique meanings had an average score of 5.84 ( $SD = 1.43$ ) for the QCM site and 5.57 ( $SD = 1.18$ ) for the non-QCM sites. An independent groups *t*-tests showed no statistically significant result for appreciation of unique meanings,  $t(77) = .92, p = .36$ . The average score for healing environment was 6.94 ( $SD = .24$ ) at the QCM site and 6.86 ( $SD = .33$ ) at the non-QCM sites. An independent groups *t*-tests showed no statistically significant result for healing environment,  $t(77) = 1.20, p = .23$ . Basic human needs had an average score of 6.40 ( $SD = .68$ ) for the QCM site and 6.45 ( $SD = .78$ ) for the non-QCM sites. An independent groups *t*-tests showed no statistically significant result for basic human needs,  $t(77) = -.27, p = .79$ . In sum, with the exception of a trend toward differences in perceptions of similarity, there was no support for the first hypothesis.

Hypothesis 2 predicted that job satisfaction and organizational and professional commitment would be greater at the QCM site than at the non-QCM sites. The average level of job satisfaction at the QCM site was 5.87 ( $SD = .76$ ) and at the non-QCM sites, the average level of job satisfaction was 4.69 ( $SD = 1.23$ ) (See Table 3). An independent groups *t*-tests revealed that the average level of job satisfaction at the QCM site was greater than at the non-QCM sites,  $t(25) = 2.83, p = .009$ . Nurses at the QCM site were more satisfied than nurses at the non-QCM sites. The average level of organizational and professional commitment at the QCM site was

6.65 ( $SD = .54$ ). At the non-QCM sites, the average level of organizational and professional commitment was 6.03 ( $SD = .89$ ). An independent groups  $t$ -tests revealed that the average level of organizational and professional commitment is higher at the QCM site, than at the non-QCM sites,  $t(25) = 2.07, p = .049$ . Thus, nurses at the QCM site were more committed than nurses at the non-QCM sites. A third measure evaluated whether there were perceptions of differences in level of staffing across the QCM site and non-QCM sites. That is, we sought to determine whether staff felt that their site was more/less understaffed because such a variation could account for a difference in perceptions of work satisfaction and commitment. For this third measure, which asked participants to indicate the degree to which “my department is sufficiently staffed,” there was no evidence of statistically significant differences across QCM and non-QCM sites,  $t(25) = 1.17, p = .26$ . In sum, these analyses suggested support for the second hypothesis.

### **Post Hoc Analysis**

#### **Phase of Care**

Following the collection of data from various sites, we noted a pattern in the responses, to suggest that the largest numbers of reports of patient care were completed about patients who were in the post-operative phase of care (or post-anesthesia care unit). During this phase of recovery, the patient is typically coming out of anesthesia and is not fully awake or able to communicate more than a few words. As a result, nurses have only very general interactions with patients during this phase of recovery and would not have opportunity for a meaningful communicative exchange aligned with the CAT. Because of this, we wanted to look more closely at only those patient encounters that took place during phases when nurses would be able to have a greater level of interaction with patients. Thus, we compared measures of relationship properties across the QCM site and non-QCM sites but only for nurse-patient exchanges that

occurred during either the preoperative phase or phase two recovery. During the preoperative phase, patients have not been administered anesthesia, are fully awake, and are interacting with the nurse. After the nurse has completed their duties in the preoperative phase, patients proceed to having their surgery (when anesthesia is administered). After surgery, most patients receiving general anesthesia proceed to the postoperative phase for recovery. After the postoperative phase, patients return to phase two recovery where they are again in a more interactive state until a determination is made that the patient has recovered to a degree (e.g., completed milestones such as eating/drinking, using the restroom, being able to stand, etc.) at which the patient may be discharged home.

A total of five of the relationship perceptions differed significantly (or approached significance) across the QCM and non-QCM sites when considering only the phases of patient care when the nurses would be most interactive with patients (See Table 4). First, nurses' perception of satisfaction with their relationship with a patient was significantly greater at the QCM site ( $M = 6.92$ ,  $SD = .29$ ) than at the non-QCM site ( $M = 6.56$ ,  $SD = .59$ ),  $t(34) = 2.00$ ,  $p = .05$ . Second, the difference between QCM and non-QCM nurses' expression of positive and negative valence approached significance (QCM  $M = 3.42$ ,  $SD = 1.73$ ; non-QCM sites ( $M = 4.57$ ,  $SD = 1.67$ ),  $t(34) = -1.93$ ,  $p = .062$ ). Third, nurses' perceptions of appreciation of unique meanings was significantly greater at the QCM site ( $M = 6.75$ ,  $SD = .43$ ) than at the non-QCM sites ( $M = 5.85$ ,  $SD = 1.05$ ),  $t(34) = 2.86$ ,  $p = .01$ . Fourth, nurses' perceptions of providing a healing environment was significantly greater at the QCM site ( $M = 7$ ,  $SD = 0$ ) than at the non-QCM sites ( $M = 6.77$ ,  $SD = .39$ ),  $t(34) = 2.02$ ,  $p = .05$ . Lastly, nurses' perceptions of their conversational effectiveness with their patients was significantly greater at the QCM site ( $M = 6.94$ ,  $SD = .19$ ) than at the non-QCM sites ( $M = 6.29$ ,  $SD = .89$ ),  $t(34) = 2.51$ ,  $p = .02$ . There were no significant differences found for the other measures: perceptions of relationship (closeness,

similarity), self-disclosure (amount, depth, honesty and accuracy, intentionality, and the measures for the CAT (respect, affiliation, attentive reassurance, mutual problem solving, encouraging manner, basic human needs).

### **Length of Time in Care**

A second variation across of the nurse-patient interactions was the amount of time that the patient was in the care of the nurse. If patients were in the nurse's care for only a brief period of time, it is less likely that QCM nurses would have opportunities to interact with patients to a degree that allows the sharing of information and development of relationship that the QCM framework would predict. We used multiple regression to test whether length of time was a factor that predicted differences across the QCM and non-QCM sites. To do so, we compared relationship perceptions across the QCM and non-QCM site and sought to determine whether there was a significant interaction between site (QCM or non-QCM) and length of time in care upon the dependent variables. First the site (QCM or non-QCM) was entered into the regression equation, followed by the continuous measure of minutes of time in care at the second step. Then a product term (non-QCM = 0 or QCM = 1 X time in care) was entered at the third step. A significant increase in explained variance at the third step would indicate that the interaction was accounting for significant variance. Interpretation of the beta weight indicates the direction of the relationship with a positive beta indicating that the relationship between time in care and the dependent variable (perceptions of relationships) was stronger at the QCM site.

To run the analysis, we initially used the SPSS GLM procedure with all relationship perceptions as the criterion variables and predictor variable as site (QCM or non-QCM), length of time in care (minutes), and the product term. The omnibus test was significant, indicating a pattern of relationship was present among the combinations of predictor and criterion

variables, Wilk's Lambda = .38,  $F(34, 116) = 2.11$ ,  $p = .002$ . Follow-up analyses used linear regression procedures to estimate increases in variance that are accounted for by the interaction and relevant beta coefficients. These results focus only upon identifying the instances in which the interaction term yielded a sizeable increase in the proportion of explained variance in the dependent variable. That is, we do not report the non-significant relationships here.

First, the interaction between QCM site and time of care accounted for a significant amount of variation in nurse's perceived closeness of relationships with their patients (above that explained by QCM site or time of care, separately),  $\Delta R^2 = .12$ ,  $F(1, 73) = 10.85$ ,  $p = .002$ , Model  $R^2 = .22$ ,  $F(3, 73) = 6.66$ ,  $p < .001$ . The beta of .75 for the QCM x Time interaction was significant,  $p < .05$ . This indicates that there was a stronger relationship between time in care and perceived closeness at the QCM site than the non-QCM site.

Second, the interaction between QCM site and time of care accounted for a significant increase in the explained variance for the amount of perceived self disclosure with a patient (above that explained by QCM site or time of care, separately),  $\Delta R^2 = .06$ ,  $F(1, 73) = 5.45$ ,  $p = .02$ , Model  $R^2 = .22$ ,  $F(3, 73) = 6.80$ ,  $p < .001$ . The beta of .53 for the interaction was significant,  $p < .05$ . Nurses at QCM sites who care for patients for a longer period of time perceive that they disclose larger amounts of information to patients than do nurses at the non-QCM sites who care for patients for a longer period of time.

Third, the interaction between QCM site and time of care accounted for a significant increase in the explained variance in the Caring Assessment Tool's items that deal with affiliation needs between patients and providers,  $\Delta R^2 = .10$ ,  $F(1, 73) = 8.95$ ,  $p = .004$ , Model  $R^2 = .18$ ,  $F(3, 73) = 5.34$ ,  $p = .002$ . The beta of .69 for the interaction was significant,  $p < .05$ . Thus,



the positive correlation between time in care and perceived work to address affiliation needs was greater at the QCM site than the non-QCM site.

Fourth, the interaction between QCM site and time of care accounted for a significant increase in the explained variance for the CAT measure of perceived mutual problem solving (above that explained by QCM site or time of care, separately),  $\Delta R^2 = .13$ ,  $F(1, 73) = 11.71$ ,  $p = .001$ , Model  $R^2 = .20$ ,  $F(3, 73) = 6.24$ ,  $p = .001$ . The beta of .78 for the interaction was significant,  $p < .05$ . Thus, nurses at the QCM site who care for patients for a longer period of time report higher levels of mutual problem solving with patients than do nurses at non-QCM sites.

Fifth, the interaction between QCM site and time of care accounted for a significant increase in the explained variance for the CAT's measure of the degree to which nurses appreciate the unique meanings expressed by patients,  $\Delta R^2 = .06$ ,  $F(1, 73) = 4.68$ ,  $p = .001$ , Model  $R^2 = .11$ ,  $F(3, 73) = 3.01$ ,  $p = .04$ . The beta of .52 for the interaction was significant,  $p < .05$ . Thus, nurses at the QCM site expressed appreciation of unique meanings to a higher degree the longer the patient was in care. In contrast, nurses at non-QCM sites did not report that there was as strong of a correlation between length of time that a patient was in care and expressions of appreciation for unique meanings.

Sixth, the interaction between QCM site and time of care accounted for a significant increase in the explained variance for CAT's items addressing communication about basic human needs,  $\Delta R^2 = .07$ ,  $F(1, 73) = 5.70$ ,  $p = .02$ , Model  $R^2 = .08$ ,  $F(3, 73) = 2.34$ ,  $p = .08$ . The beta of .58 for the interaction was significant,  $p < .05$ . Thus, the correlation between time in care and communication about basic human needs was greater at the QCM site than the non-QCM site.

## **CHAPTER 4: DISCUSSION**

This study examined the use of the Quality Caring Model to assess whether a focus upon relationship-based nursing care could influence nurse perceptions of relationships with their patients and satisfaction with the workplace and the nursing profession. The sample consisted of registered nurses working in a healthcare system in the day surgery and post-anesthesia care units at 3 hospitals and 1 ambulatory surgery center. The Quality Caring Model had been implemented at one of the hospitals and consisted of asking patients three personal questions during the preoperative phone consultation. This information was kept in the patient's medical record so each nurse providing care had access to the information. For the study, nurses were asked to complete a paper and pencil survey about their feelings of workplace satisfaction, as well as report observations of their experiences with three patients each.

Initially, with the exception of a trend indicating a presence of differences in perceived similarity across the QCM and non-QCM sites, support was not found for Hypothesis 1. However, in the post hoc analysis, when controlling for phase of care (preoperative phase and phase 2 recovery) and length of time in the nurse's care, five relationship perceptions emerged and differed significantly (or approached significance) : relationship satisfaction, expression of positive and negative valence, appreciation of unique meanings, providing a healing environment, and conversational effectiveness. The longer amount of time the patient was in the nurse's care, the stronger the relationship perception. The study also found support for Hypothesis 2, indicating that nurses perceived greater job satisfaction and organizational commitment at the QCM site than did the nurses at the non-QCM sites.

### **Conclusions**

Although the QCM did not receive unequivocal support, there is evidence that it is associated with heightened perceptions of nurse-patient relationships. Whereas the QCM

should evoke improved patient perceptions of care via strengthened nurse-patient relationships (Duffy, 2009, 2013; Duffy et al., 2007; Duffy & Hoskins, 2003), this study sought to determine if nurses, too, experience strengthened relationships as a result of adhering to QCM practices. While we did not find support for Hypothesis 1 in the sample as a whole, the post hoc analysis indicated that some nurses who utilize the QCM do experience heightened perceptions of relationships with their patients. First, when examining the results for the preoperative phase and phase 2 recovery (eliminating the postoperative phase); the results suggest that nurses perceive stronger relationship qualities at the QCM site. This may be because the nurse had more meaningful, communicative time and interpersonal exchanges with the patient. In the postoperative phase, patients are recovering from anesthesia and are not necessarily fully awake and able to communicate substantially. The preoperative and phase 2 recovery nurses then, spent more time with the patient and during this time, the nurse and patient were able to have meaningful exchanges to develop their relationship and perceive a higher level of closeness.

Second, customized care appears to be related to the ways that nurses perceive their relationships with patients. At the QCM site, the interpersonal exchanges between the patient and nurses were customized to individual patients by asking the QCM questions in the preoperative phone call (what they prefer to be called, if they had any specific concerns about their surgery, and if the patient had any concerns in the postoperative phase/post-anesthesia care unit). Patients were then greeted by their name preference and then a discussion ensued between the nurse and patient about concerns they may have had about their surgery and recovering from the anesthesia. By having this information before the patient walked through the door of the hospital, it allowed the nurse (and others involved in the patient's care) to create a foundation for planning the patient's care, leading to a shared emotional experience

and possibly mutual liking. This could also be why there was support for the Caring Assessment Tool (Duffy, et al., 2007) measures of mutual problem solving, appreciation of unique meanings, affiliation needs, and basic human needs. The three questions and the subsequent information elicited from the patient-nurse interaction all factor into these measures. In addition, with the nurse possessing supplementary information about the patient, it may have allowed the nurse to deliver the service in an expedient manner and to devote more nursing time to enhancing the collective, interpersonal experience with the patient. In a sense, the nurse may have developed a connection to the patient before meeting in person based on this information. By possessing some intimate or personal information about the patient before meeting, this may explain why the nurses reported higher perceptions of closeness we found in the study. When one develops a relationship with another (or feels close to another person); self-disclosure may occur more easily as the two individuals get to know one another (Wheeless, 1978).

Third, the amount of time a QCM nurse spent with a patient appears to be correlated to nurse perceptions of the strength of the relationship with the patient. The longer periods of time spent with the patient allow the nurse opportunities to interact with the patient and to get to know the patient better. Meaningful conversational exchanges may occur and the nurse learns more about the patient, allowing for greater customization of the care being delivered. In addition, the development of the relationship may allow the nurse to see the patient as a person, and not the reason for their visit to the hospital. Conversely, those nurses spending less time with the patient did not perceive as strong of a relationship with their patient. Nurses spending less time with their patients have decreased opportunity for interacting and learning more personal information about their patient.

In addition to the limited impact upon nurse perceptions of their relationships with patients, the QCM framework also appears to heighten nurse's job satisfaction and

commitment. The relationship between the nurse and the patient had begun with the preoperative phone call, including creating a shared emotional experience, by the nurse having personal information about the patient. The personal information from and about the patient likely assisted the nurse with their intended plan of care and customization of the service experience. The nurse and patient may have perceived they knew each other, at least somewhat, with this personal information about the patient. In other words, the nurse and patient were not complete strangers. Just as patients rely on relational and emotional behaviors to gauge the quality of their interaction in healthcare (Johnson & Grayson, 2005; Solomon, Surprenant, Czepiel, & Gutman, 1985; Vinagre & Neves, 2008), nurses likely respond similarly. In addition, this personal information about the patient allowed the nurse to plan the patient's visit and course of treatment while in their care, before the patient arrived. The nurse then will have a general idea of who their patient is along with some of their preferences and concerns. The nurse would not need to dedicate time to this activity when meeting face-to-face for the first time. Instead, the nurse may devote more time to applying other concepts of the QCM, providing patient-centered care, and relationship building. By being able to prepare for the patient's visit ahead of time, the nurse likely felt less rushed and could more expediently deliver the service with the patient, thus leading to feelings of a pleasant service encounter and greater satisfaction with their occupation and organizational and professional commitment.

### **Limitations and Future Directions**

There were several limitations and opportunities presented with the current study. First, because the overall sample size was small and only from a single group of hospitals, there is some limit to the generalizability of these results. Although small sample size was addressed in the statistical calculations, future work may wish to expand the sample size and types of hospital care that are included in the investigation. In addition, all respondents in the sample

were female and this matches the population of nurses in these departments at the organization. The Demographics reported by the US Department of Health and Human Services (2013) are not completely consistent with the sample for this study. US demographics indicate that approximately 91% of the nurse workforce is female and 9% male. So, some care should be taken when attempting to generalize findings from the current data set to the larger population of nurses.

Second, this study was done in a naturalistic setting, with actual nurses tending to actual patients who were visiting the hospital for an outpatient surgery. Although this naturalistic quality is beneficial, it can also make it difficult to rule out confounding factors, as we do not know with absolute certainty whether the QCM implementation is producing the results we have seen here. Future studies should include a more comprehensive design to rule out the confounding factors. We believe that this study can be utilized to assist in developing a design to this end, and have provided substantial information about all measures so that they may be re-used if researchers would wish to extend this line of analysis with a pretest and posttest design that would allow for more direct comparison. We did attempt to account for some of these characteristics, such as asking about staffing levels and if there was a perceived difference between sites, but future work should incorporate a more sophisticated design to address these issues.

Next, according to Duffy (2009, 2013), a full-scale implementation of the QCM includes the self (nurse), patients and their families, each other (nurses and their co-workers), and the community at large. We acknowledge that the current study was not a full implementation of the QCM. With that said, we did find patterns of significance even for this partial implementation of the approach. A full scale implementation may generate more clear definition in the findings.

Fourth, the Caring Assessment Tool (CAT) comprised the bulk of the individual patient encounter survey and was originally designed to measure perceptions of nurses' caring behaviors from the patient's perspective and may not transfer well to assess the perceptions of the nurses in their application of the caring measures. However, the items on the CAT were developed by nurses and speak to the reciprocity required of the QCM and a necessity in the delivery of healthcare services (Beach, Roter, Wang, Duggan, & Cooper, 2006; Duffy, 2009, 2013; Roter, Frankel, Hall, & Sluyter, 2006). In addition, the CAT may not be an appropriate instrument when patients are recovering from anesthesia and not fully awake or aware. It is possible the delivery of healthcare services and the process is so complex and contains great variability; it may be too complex to explain from the perspective of the current study. The current study though can offer guidance into developing appropriate measures for future studies.

Fifth, although not a focus of the current study, nurse tenure may be another factor impacting more positive relationship qualities for nurses. At the QCM site, nurses had been in their profession three years longer than the non-QCM sites. Nurses at the QCM site also had longer tenure in their department by seven years over the non-QCM sites. In general, the longer one has been in their profession; the better one should be able to do their job. Although there was not a statistically significant difference in tenure across the two sites, there was an indication of a statistical trend toward differences. Given that there was some variation in tenure across the sites for this sample, future research should note any such differences in the samples and consider utilizing methods for controlling any effects if the difference presents a potential confound.

Last, an area worthy of investigation and not studied here, is the preoperative and postoperative phone call by a nurse to the patient. Both phone calls embody a significant

opportunity to enhance and potentially strengthen the relationship for the nurse and patient. The preoperative phone call represents the first contact made by the hospital nurse to the patient and could set the tone for subsequent interactions, including the patient arriving to and navigating the physical environment of the hospital to arrive in the correct destination. The postoperative phone call typically signifies the end of the relationship and service encounter between the nurse and the patient. The postoperative phone call is initiated by the nurse to the patient and occurs 24 to 48 hours after the leaving hospital. Within this 24 to 48 hour time period, the patient will have had an opportunity to reflect on their ambulatory surgery experience. The postoperative phone call then is the last chance the nurse has to address issues or concerns the patient may have, as well as extend the components of the Quality Caring Model.

### **Implications**

As healthcare providers continue to negotiate the ever-changing healthcare environment and shift to a patient-centered delivery model as required by the Patient Protection and Affordable Care Act (US Dept. of Health & Human Services, 2007), while balancing administrative concerns and fiscal responsibility such as efficiency, reducing cost, and following procedures/protocols; the Quality Caring Model could assist with efforts to not only improve patient satisfaction, but also improve nurse's satisfaction and commitment. Healthcare organizations may want to consider utilizing at least some aspects of the QCM because doing so can have a positive effect upon nurse perceptions of their relationships with patients and it will translate to a better experience and greater satisfaction for the patient. Further, by improving nurse satisfaction and commitment it could reduce turnover and aid in retention of a highly trained and specialized workforce, avoiding the high cost of orientation and training for new nurses.



Although the patient experience is the most frequently studied aspect of the healthcare encounter (Halbesleben & Stoutner, 2013), the current study suggests the perceptions of the nurses and their relationships with their patients are equally as important. Efforts designed to improve the patient (or customer) experience should not neglect the experiences and perceptions of employees. Nurses spend more time with patients than any other role in the healthcare experience (Clayton & Ellington, 2011), which make a significant contribution and impact to the overall experience. Concentrating improvement efforts during integral timeframes of the experience may also reap a greater return for both patients and nurses. For example, the study suggests the largest amount of direct, face-to-face contact occurs when the nurse spends the most time with the patient while they are not being affected by anesthesia (preoperative phase and phase 2 recovery). Based on this finding, other areas in healthcare, such as GI lab, radiology, cath lab, and floor nurses may examine their current processes to realize where they can make the most significant impact.

Service environments outside of healthcare may also benefit from the implementation of some of the core principles of the QCM. When other service organizations focus their efforts on building relationships with customers and then examining perceptions of those relationships by employees, it could offer insight to the critical timeframes for the experience and when the organization and its employees should intensify their improvement efforts. Knowing the type of service organization, as outlined by Mills and Marguiles (1980) and customizing service encounters for maximum impact could improve both customer and employee perceptions of the experience and relationship, leading to greater satisfaction for both and stronger commitment from the organization's employees.

### **Summary**

This study examined whether ambulatory surgery nurses applying the Quality Caring Model will experience different perceptions about their relationships with their patients and workplace satisfaction than those nurses not applying the QCM. The QCM contends that if nurses demonstrate caring through their provision of care, the patient experiences a greater level of satisfaction with the healthcare encounter. Similarly, the nurse will also experience stronger relationship qualities with the patient and greater workplace satisfaction and organizational commitment. The current study found support for stronger relationship qualities with the patient, when controlling for the phase of care and length of time the patient was in the nurse's care. The study also found support for greater workplace satisfaction and organizational commitment at the QCM site.

Table 1

*Demographic Characteristics of Sample*

Demographic Characteristic	Overall (n=27)		QCM Site (n=11)		Non-QCM Sites (n=16)		t-test
	Mean	SD	Mean	SD	Mean	SD	
Age	52.29	6.45	54.57	5.80	51.14	6.66	1.16
Full Time Equivalent (FTE)	0.69	0.17	0.70	0.20	0.68	0.15	0.28
Years as RN	28.89	7.97	30.64	6.70	27.69	8.74	0.94
How long at current site	9.87	8.93	13.78	11.22	7.19	5.96	1.99
Typical Hours in Shift	8.18	0.38	8.18	0.40	8.19	0.37	-1.47
Typical # of Patients per Shift	7.19	2.93	6.86	2.27	7.44	3.47	-0.23
Degree	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	
Diploma	5	19	2	20	3	19	-
Associate	9	35	3	30	6	38	-
Bachelor	12	46	5	50	7	44	-

Note: 6 participants did not report age and one did not report degree completed.

Table 2

*Measures and Descriptive Statistics*

Variable and Items	Mean	SD	$\alpha$
<b><u>Job Satisfaction</u></b>	5.17	1.56	0.92
* Recognition of my efforts			
* Recognition of my efforts by my co-workers			
* Recognition of my efforts by my supervisor			
* Feedback on how problems in my job are being handled			
* Information about the requirements of my job			
* Information about how my job compares with others			
* Information about how I am being judged			
* Information about my progress in my job			
* Information about benefits and pay			
<b><u>Occupational and Organizational Commitment</u></b>	6.28	1.18	0.79
* Nursing is important to my self-image			
* I regret having entered the nursing profession			
* I am proud to be in the nursing profession			
* I dislike being a nurse			
* I do not identify with the nursing profession			
* I am enthusiastic about nursing			
<b><u>Relationship Satisfaction</u></b>	6.55	0.79	0.85
* I was happy with my relationship with this patient			
* I was satisfied with my relationship with this patient I provided care to			
* I liked this patient			
<b><u>Closeness</u></b>	3.46	2.06	0.62
* I was very close to this patient			
* I discussed personal things with this patient			
<b><u>Similarity</u></b>	3.61	1.67	0.86
* This patient and I liked a lot of the same things			
* This patient and I were very similar			
<b><u>Self-Disclosure: Amount</u></b>	2.29	1.98	0.73
* I did not talk about myself with this patient			
* I discussed feelings about myself with this patient			
* I talked about myself a lot with this patient			
* With this patient, I talked about myself for a fairly long period of time			

<b><u>Self-Disclosure: Control of Depth</u></b>	1.88	1.55	0.86
* I intimately disclosed who I really am, openly and fully in my conversation with this patient			
* My self-disclosure with this patient lasted a long time			
* I disclosed intimate, personal things about myself with this patient, without hesitation			
* I felt that I sometimes did not control self-disclosure of personal or intimate things about myself with this patient			
<b><u>Self-Disclosure: Honesty-Accuracy</u></b>	4.75	1.84	0.73
* I felt completely sincere when I revealed my own feelings and experiences with this patient			
* My self-disclosures with this patient were completely accurate reflections of who I really am			
* I was not always honest in my self-disclosures with this patient			
* I was always honest in my self-disclosures with this patient			
<b><u>Self-Disclosure: Intended Disclosure</u></b>	4.89	1.81	0.97
* When I expressed my personal feelings with this patient, I was aware of what I did and said			
* When I revealed my feelings about myself, with this patient, I consciously intended to do so			
* When I self-disclosed with this patient, I was consciously aware of what I revealed			
* When I shared information about myself with this patient, the information was a true reflection of who I am			
<b><u>Self-Disclosure: Positive-Negative</u></b>	4.35	1.86	0.90
* I disclosed positive things about myself with this patient			
* I expressed my good feelings about myself with this patient			
* On the whole, my disclosures about myself were more positive than negative with this patient			
<b><u>Conversational Effectiveness Scale</u></b>	6.39	1.15	0.65
* I achieved everything I hoped to achieve in my conversation with this patient			
* I was effective in the conversation with this patient			
* I had a rewarding conversation with this patient			
<b><u>Caring Assessment Tool: Human Respect</u></b>	6.92	0.27	0.90
* I treated the patient kindly			
* I respected the patient			
<b><u>Caring Assessment Tool: Affiliation Needs</u></b>	5.92	1.42	0.93

\* I felt as though I was responsive to the patient's family, friends, and significant others

\* I felt as though I spoke openly with the patient's family, friends, and significant others

\* I felt as though I allowed the patient's family, friends, and significant others to be involved

**Caring Assessment Tool: Attentive Reassurance**

6.88 0.41 0.64

\* I felt I made myself available to this patient

\* In my interactions with this patient, I seemed interested

**Caring Assessment Tool: Mutual Problem Solving**

5.50 1.74 0.77

\* I asked this patient for their thoughts on what they know

\* I helped this patient explore alternate ways of dealing

\* I helped this patient understand their thoughts

**Caring Assessment Tool: Encouraging Manner**

5.56 1.51 0.75

\* I supported this patient's beliefs

\* I encouraged this patient to go on

**Caring Assessment Tool: Appreciation Unique Meanings**

5.68 1.62 0.72

\* I was concerned about how this patient viewed things

\* I knew what was important to this patient

\* I acknowledged this patient's inner feelings

**Caring Assessment Tool: Healing Environment**

6.89 0.31 0.89

\* I made this patient feel comfortable

\* I respected this patient's privacy

**Caring Assessment Tool: Basic Human Needs**

6.43 1.14 0.42

I made sure this patient had food/beverages when needed

I helped this patient get rest/sleep

I helped this patient feel less worried

Table 3

*Comparisons of Job Experiences and Nurse-Patient Relationships across QCM and non-QCM Sites*

	QCM Site (n=11)		Non-QCM Sites (n=16)		t-test
Job Experience Measures	Mean	SD	Mean	SD	
Job Satisfaction	5.87	1.06	4.69	1.67	2.83**
Commitment	6.65	0.71	6.03	1.36	2.07*
Sufficient Staffing Perception	5.00	1.61	4.13	2.09	1.17
	QCM Site (n=33)		Non-QCM Sites (n=46)		t-test
Nurse-Patient Relationship Measures	Mean	SD	Mean	SD	
Relationship Satisfaction	6.65	0.70	6.49	0.84	1.02
Closeness	3.53	2.19	3.41	1.97	.31
Similarity	3.97	1.29	3.35	1.86	1.77*
Self-disclosure (Amount)	2.10	1.96	2.43	1.98	-1.04
Self-disclosure (Control of Depth)	1.75	1.47	1.97	1.60	-.74
Self-disclosure (Honesty-Accuracy)	4.70	1.85	4.79	1.83	.34
Self-disclosure (Intended Disclosure)	4.86	1.88	4.90	1.76	.39
Self-disclosure (Pos-Neg)	4.11	2.04	4.53	1.71	-1.08
CAT-Human Respect	6.94	0.24	6.91	0.28	.45
CAT-Affiliation Needs	5.66	1.49	6.12	1.35	-1.52
CAT-Attentive Reassurance	6.92	0.27	6.85	0.49	.95
CAT-Mutual Problem Solving	5.07	2.06	5.81	1.39	-2.36**
CAT-Encouraging Manner	5.71	1.38	5.45	1.60	.86
CAT-Apprec Unique Meanings	5.84	1.68	5.57	1.57	.93
CAT-Healing Environment	6.94	0.24	6.86	0.35	1.20
CAT-Basic Human Needs	6.40	1.14	6.45	1.14	-.27
Conversational Effectiveness	6.55	1.04	6.28	1.21	1.40

Note \* =  $p < .10$ ; \*\* =  $p < .05$

Table 4

*Comparisons of Nurse-Patient Relationships across QCM and non-QCM Sites Only During Preoperative Phase and Phase 2 Recovery*

	QCM Site (n=12)		Non-QCM Sites (n=24)		t-test
	Mean	SD	Mean	SD	
Relationship Satisfaction	6.92	.29	6.56	.59	2.00*
Closeness	3.54	1.95	3.31	1.56	.38
Similarity	3.46	1.80	3.42	1.83	.07
Self-disclosure (Amount)	2.29	1.63	2.03	1.14	.56
Self-disclosure (Control of Depth)	1.58	1.35	1.76	1.14	-.41
Self-disclosure (Honesty-Accuracy)	4.56	1.73	4.91	1.46	-.63
Self-disclosure (Intended Disclosure)	4.13	2.19	5.20	1.77	-1.59
Self-disclosure (Pos-Neg)	3.42	1.73	4.57	1.67	-1.93*
CAT-Human Respect	7.00	0	6.88	.34	1.27
CAT-Affiliation Needs	6.72	.86	6.67	.72	.20
CAT-Attentive Reassurance	7.00	0	6.75	.53	1.62
CAT-Mutual Problem Solving	5.61	1.01	5.60	1.05	.04
CAT-Encouraging Manner	5.67	1.29	5.40	1.36	.57
CAT-Apprec Unique Meanings	6.75	.43	5.85	1.05	2.86**
CAT-Healing Environment	7.00	0	6.77	.39	2.02*
CAT-Basic Human Needs	6.67	.65	6.24	.96	1.40
Conversational Effectiveness	6.94	.19	6.29	.89	2.51**

Note \* =  $p < .10$ ; \*\* =  $p < .05$



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