5-2018

Patients' Perceptions of Patient-Centered Care and the Hospital Experience Pre- and Post-Discharge

Cheryl Smith
East Tennessee State University

Patients' Perceptions of Patient-Centered Care and the Hospital Experience Pre- and Post-Discharge

A dissertation

presented to

the faculty of the Department of Nursing

East Tennessee State University

In partial fulfillment

of the requirements for

Doctor of Philosophy in Nursing

by

Cheryl A. Smith

May 2018

Janne Dunham-Taylor, PhD, Chair

Sally Blowers, PhD

Lisa Haddad, PhD

Katharine Y. Kolcaba, PhD

Keywords: Comfort, Communication, Patient-Family Engagement, Respect, Trust

ABSTRACT

Patients' Perceptions of Patient-Centered Care and the Hospital Experience

Pre- and Post-Discharge

by

Cheryl A. Smith

Florence Nightingale used the principles of patient-centered care as the foundation for nursing practice. Today, patient-centered care delivery is part of the healthcare reform process that extends interprofessionally throughout all settings of healthcare in the United States (U.S.). Patient satisfaction measurement is one primary determinant of effective patient-centered care. The standardized Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey and methods is a nation-wide tool used to measure patient satisfaction. However, this method of patient satisfaction assessment relies on recollections of patients' hospital experiences and requires accurate memory and recall. This study sought to examine the effect of the memory-experience gap on patients' perceptions of their hospital experiences and address this research question: Are there any statistical differences between in-hospital and two-week post-discharge perceptions of patient-centered care as measured with HCAHPS patient satisfaction ratings on (a) the composite scores for communication with nurses, communication with physicians, communication about medicines, pain management, staff responsiveness, (b) the individual scores for the hospital environment's cleanliness and quietness, and the inclusion of patient and family preferences in the plan of care, and (c) the overall global rating score? The design was a non-experimental, prospective, descriptive correlational study. The setting was a 255-bed regional hospital that serves individuals from eight surrounding rural counties in southern middle Tennessee. The case-mix contained diverse individuals with multiple

economic, environmental, physical, social and spiritual dynamics. A convenience sample of 82 adult patients ages 26 - 93 represented mainly Caucasian females with mostly cardiovascular and respiratory illnesses who had a minimum one-day stay.

DEDICATION

I want to dedicate the accomplishment of this dissertation research first to my Lord and Savior. Without Christ, this mission would have been un-accomplishable. I also want to include my family who never lost faith in me. To my husband Kent, thank you for the constant reminder of how God would never forsake me and for these Bible verses that were part of my motivation to continue the pursuit: "I can do all things through Christ who strengthens me" (Philippians 4:13) and "Trust in the Lord with all your heart…in all your ways, acknowledge Him…" (Proverbs 3:5-6). To Joshua, my firstborn and his wife Brittany, thank you for your love and support and for listening whenever I needed an ear. To Seth, my second child, thank you for your love and your encouragement to continue on this path. To Anna, my beautiful daughter and a nurse in this profession, thank you for believing in me, especially whenever I doubted myself. To my mother and sister Deb, thank you for your constant prayers, for without them, this research may not have reached its culmination.

I also want to dedicate this to Dr. Kenneth R. Burns, my inspiration to begin this journey and who had the faith that I could finish this degree and to Dr. Janne, my right hand, who stuck with me from start to finish, even when the obstacles were seemingly relentless. Dr. Janne always found the positives in every situation. She was my rock!!

Finally, I want to dedicate this research to all of the nurses who make daily sacrifices to ensure that patients attain the highest level of comfort possible. These nurses are the true champions who place others' needs above their own in order to deliver optimal patient-centered care. They illustrate altruism at its best.

ACKNOWLEDGEMENTS

I want to express a deep admiration and gratitude to all of my committee members for their patience as I pursued a highly complex concept. Beginning with Dr. Sally Blowers, a nursing professor with enthusiasm for nursing theory, I want to thank her for her encouraging attitude and for her expertise and the acknowledgement that Comfort Theory was a great foundation for this study. I want to thank Dr. Lisa Haddad for her competence and positive feedback in promoting a sound, rigorous, and quality nursing study. In addition, I want to thank Dr. Haddad for her encouragement to continue pursuit with this study. I want to thank Dr. Kathy Kolcaba, the nurse who developed Comfort Theory, for her participation on the dissertation committee. I deeply appreciate her insights and feedback that align with my philosophical beliefs and assumptions about the nursing profession. We must strive to meet our patients' basic comfort needs, without compromising the standards while nursing evolves technologically.

I want to thank Sue MacArthur and Beth Fleming for embracing and facilitating the opportunity to conduct this research at the study facility. I thank the ETSU and study site's information system personnel for the provisions that helped me collect data in a secure, encrypted format. To Dr. Kenneth Phillips, I thank him for his patience and encouragement throughout this process. I also want to thank my work family Barb Blum, Livia Derryberry, and Kae Fleming for their constant support and encouragement. Thank you for your understanding and covering for me whenever I needed time away from my work activities to complete this process.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Patient-centered care is the delivery of healthcare that is holistically aligned with patients' values and needs. Patient-centered care guides clinical management of illnesses and is an essential part of quality care for individuals across the lifespan in the primary, acute, and long-term care settings of the United States (U.S.). *Person-centered/centred care, person-and-family-centered/centred care, patient-and-family-centered/centred care,* and *personalized care* are interchangeable terms associated with the concept and attributes of patient-centered care. *Patient-centered care* is the label in this document.

Synopsis of Patient-Centered Care

Patient-centered care exists in a pragmatic paradigm with multiple realities and diverse human perspectives. The healthcare professionals recognize that individual beliefs and circumstances influence the patient's preferences and choices for illness prevention and treatment. The healthcare members form a collaborative team and interact respectfully with the patient and family. The team develops a trusting relationship with the patient-family-unit. The team members are open and candid about the patient's health status and engage the patient and family members. Collectively, the patient and family partner with the healthcare professionals to make decisions about the plan of care, which in turn facilitate patient satisfaction and impact the quality of patient outcomes.

Patient Satisfaction

A primary nation-wide indicator for effective patient-centered care is patient satisfaction. Currently, the Centers for Medicare and Medicaid Services (CMS) publicly report the results of facilities' patient satisfaction scores. The CMS also uses patient satisfaction data to calculate the compensation rates for acute care facilities through Value-Based Purchasing (VBP). The perceptions of discharged patients determine satisfaction scores, which are dependent upon patients' recollections of their experiences.

Problem

The performance report of healthcare providers and the reimbursement for facilities are reliant upon memories instead of real-time perceptions of the experience. The unknown factor is whether the perception of the hospital experience changes over time after discharge. A comparison of the actual experience and the memory of that experience is necessary to validate whether patients' recollections are reliable. This study explores the variances between patients' perceptions of care during and post hospitalization.

Purpose

The purpose of this study is to examine patients' perceptions of their hospital experiences. The study compares patients' perceptions of patient-centered care, as measured with items from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patient satisfaction survey, during hospitalization and two weeks following discharge.

Significance

Recent discoveries in human genomics, the Precision Healthcare Initiative, and the information from Symptoms Research (Green, 2015; National Institute of Nursing Research, 2015) provide a more compelling, comprehensive, all-inclusive need to personalize healthcare. Patient-centered care delivery is vital in order to achieve the best possible health for diverse individuals with unique symptoms, needs, and a genetic tendency to develop certain health-related problems. Stein, Day, Karia, Hutzler, and Bosco (2015) found statistically significant correlations between quality care and patient satisfaction, where an inverse relationship existed between patient satisfaction and hospital-acquired conditions. Hence, nationwide patient satisfaction measurement deserves merit. However, the current national patient satisfaction scoring and measurement processes are reliant upon the patients' memories of their hospital experiences.

Memory-Experience Gap

Responses to the HCAHPS survey depend upon the patient's or family's ability to recall certain details about the hospitalization experience up to six weeks following discharge. Some of the HCAHPS' measures require patients to extract memories about their attitudes and feelings during the hospitalization. Yet, memory of key events on the affective and emotional cognitive realms decline over time (Fredrickson & Kahneman, 1993; Kemp, Burt, & Furneaux, 2008; Miron-Shatz, Stone, & Kahneman, 2009; Redelmeier & Dickinson, 2011). In addition, only a limited amount of information is available at any given interval during the recollection process (Fredrickson & Kahneman, 1993; Kemp et al., 2008). Miron-Shatz et al. (2009) described this phenomenon as the *memory-experience gap*.

Memory-Experience Gap Factors

Redelmeier and Dickinson (2011) identified *duration neglect* and *measurement error* as phenomena that influence recall, comprehension, and the evaluation of an individual's perceived experience. Duration neglect is the inability to accurately recollect the passage of time between events. Examples of duration neglect in the inpatient setting could be the amount of time elapse between (a) a patient's request for analgesia and its administration and (b) a call for assistance and the arrival of healthcare personnel. Measurement error is a natural tendency for individuals to gage subsequent observations imperfectly. Examples that are susceptible to measurement error could include pain and nausea intensity levels. Thus, duration neglect and measurement error contribute to the memory-experience gap and could consequently affect responses to items on the HCAHPS survey. Hence, discrepancies are possible between memories and the authentic hospital experiences.

Need for Real-Time Data

There is a significant delay between the patients' experiences, the surveys of those experiences, and the public results of patient satisfaction scoring. Facilities receive the official record of their HCAHPS patient satisfaction performance about 90 days following a person's discharge (HCAHPS, 2013, 2014, 2015). In addition, patients' replies in the public report are anonymous and untraceable to an individual unit. Sick patients often do not respond to the survey (Goldstein, Farquhar, Crofton, Darby, & Garfinkel, 2005), and for each day that passes between patient discharge and survey, the response rate decreases (Avatar, 2014). Thus, opportunities for patient-centered care improvement might go undetected.

Public reporting offers a certain transparency about a facility's quality performance. The transparency renders an incentive for healthcare workers to improve the patient experience and implement quality patient-centered care, which allegedly improves the health of communities (Agency for Healthcare Research and Quality [AHRQ], 2002, 2014; CMS, 2013; Committee on the National Quality Report on Health Care Delivery, IOM [Institute of Medicine], 2001; Conway et al., 2006; Elliott, Lehrman, Goldstein, Giordano, et al., 2010; Elliott, Lehrman, Goldstein, Hambarsoomian, et al., 2010; Giordano, Elliott, Goldstein, Lehrman, & Spencer, 2010; Goldstein, et al., 2005; Goldstein, Elliott, Lehrman, Hambarsoomian, & Giordano, 2010; HCAHPS, 2013, 2014, 2015; Jha, Orav, Zheng, & Epstein, 2008; Johnson et al., 2008; McCarthy, 2006; Radwin, 2003). Healthcare professionals and facilities need timely and accurate data to make the necessary improvements to deliver effective patient-centered care.

Point of Care Surveys versus Discharge Surveys

Furthermore, the HCAHPS data must represent a healthcare facility factually and truthfully. A key question is whether patients' perceptions of the hospital experience change over time after discharge. Accurate recollections of patients' experiences are essential, since measurement of patient-centered care performance relies heavily on patients' ability to remember. A study that explores patients' accounts of their hospital experiences post discharge, in comparison to their perceptions during hospitalization, is needed.

Significance to Nursing

Patient-centered care is a longstanding value that began when Florence Nightingale (1860/1970) established nursing as a profession that meets the individual, holistic, human needs of individuals. Patients today have the expectation that nurses are to be both available *and*

attentive to their unique needs (Clementi, 2006; Day, 2014; Jasovsky, Morrow, Clementi, & Hindle, 2010; Kostovich & Clementi, 2014). Prior research supports that nurses favorably impact patient-centered care delivery whenever they communicate effectively, implement preventative patient-centered nursing care, and deliver a *true bedside presence* (Committee on the Robert Wood Johnson Foundation, IOM, 2011; Elliott, Kanouse, Edwards, & Hilborne, 2009; IOM, 2010, 2011; Jasovsky et al., 2010; Kostovich & Clementi, 2014; Peterson, 2009; Pipe, Conner, Dansky, Schraeder, & Caruso, 2005; Puetz, 2011; Radwin, 2003; Wright et al., 2013). Patients' perceptions of a *true nursing presence* are enhanced when nurses are able to form a relationship and implement (a) face-to-face interactions for assessment and communication of the patient's needs, (b) shift-to-shift bedside reporting, (c) hourly rounding, (d) collaborative reviews with the patient-family unit about the day's plan of care, and (e) interdisciplinary rounds (Becker, 2014; Clipper, 2015; Jasovsky et al., 2010; Kostovich & Clementi, 2014). Thus, a *true nursing presence* at this level requires an infrastructure that supports additional nursing staffing (Jasovsky et al., 2010; Peterson, 2009; Radwin, 2003).

However, nurse staffing levels are highly dependent upon factors associated with facilities' reimbursement rates (Aiken et al., 2010, 2014). In an effort to lower costs in today's healthcare environment, facilities and providers face the challenge to deliver care with fewer people. Since reimbursement for nursing care is an indirect process, justification of additional nursing personnel is and will continue to be a challenge (Aiken et al., 2011, 2014). In fact, reimbursement penalties from CMS under the VBP compensation method forced many facilities to either close or eliminate employee positions. For example, in 2012, several facilities in Tennessee reduced their numbers of workers and/or purged vacant positions due to lower reimbursement (DuBois, 2013; Gamble, 2012; Meredith Corporation, 2012; Rau, 2013;

Robertson, 2013). To maximize hospital VBP reimbursement and prevent cuts to nursing staff, accurate measurement of patient-centered care is essential.

Research Question

The purpose of this study is to examine the effect of the independent variable, the memory-experience gap, on patients' perceptions of their hospital experiences at two weeks post discharge. The research question for this study is: Are there any statistical differences between in-hospital and two-week post-discharge perceptions of patient-centered care as measured with HCAHPS patient satisfaction ratings on (a) the composite scores for communication with nurses, communication with physicians, communication about medicines, pain management, staff responsiveness, (b) the individual scores for the hospital environment's cleanliness and quietness, and the inclusion of patient and family preferences in the plan of care, and (c) the overall global rating score?

Study Variables

The independent variable in this study is the two-week memory-experience gap, which is the interval between the authentic patient hospital experience and the recollected experience at two weeks post discharge. The dependent variables are the patient satisfaction ratings, as measured with HCAHPS items, for (a) nurses' communication skills, (b) physicians' communication skills, (c) patient education about medications, (d) pain management, (e) hospital staff responsiveness, (f) the hospital environment's cleanliness, (g) the hospital environment's quietness, (h) the inclusion of patient and family preferences in the plan of care, and (i) the global patient satisfaction rating.

Limitations and Challenges

Although the researcher anticipated some limitations and challenges with this study, predominantly participant retention for the re-survey, the researcher encountered unforeseeable challenges and obstacles during the internal review board approval process and the data collection phase. Yet, retention for the second phase of the study proved to be remarkable. Eighty-two percent of the enrolled participants demonstrated their commitment to the research and provided purposeful responses to the post-discharge survey. The following provides a description of the challenges and limitations.

Challenges

The researcher originally proposed to recruit participants herself in the same manner as she selects patients for her nursing students in clinical. The researcher had hoped to access the electronic patient census from two different step-down units and randomly select two participants from each unit daily over a two-week period. Following a two-week in-hospital data collection phase, the researcher had planned to contact the participants for the post-discharge survey. The researcher anticipated that she would repeat the same sequencing of randomized participant recruitment, in-hospital surveying, and post-discharge surveying, until the researcher collected 80 matched pairs of in-hospital and post-discharge surveys. The researcher also envisioned that participants would access the electronic in-hospital survey from a mobile device. However, in order to comply with a change in the federal regulations that uphold patient privacy and cyber security, the researcher implemented a different recruitment plan and data collection method from those delineated in her original proposal. These processes took time to develop,

which delayed the study's launch for four months and extended the study's data collection phase over a period of twelve weeks.

Recruitment. Recruitment was the major barrier for this study. The researcher relied on the charge nurses from the two step-down units as the entrance points for access to potential study participants. Before the researcher made contact with any patient, the charge nurses approached prospective candidates and provided them a brief overview of the researcher's study and purpose. These nurses queried whether those patients were interested in learning more about the researcher's investigation.

Whenever a patient expressed the desire to hear additional information about the research, the charge nurse obtained a preliminary authorization that permitted the charge nurse to release the individual's protected health information (PHI) to the researcher. The PHI included the person's name, room number, ages, diagnoses, and dates of admission and anticipated discharge. The researcher subsequently approached the hopeful participants and sought informed consent for the study.

Although the researcher made every attempt to ensure that all patients had an equal opportunity to participate in the study, there were days when the charge nurses were unable to screen patients and obtain the PHI disclosure authorization. This circumstance happened whenever there were patients with an unstable hemodynamic and/or psychological status, multiple simultaneous admissions and/or discharges, and a heavy workload on the floor nurses. The charge nurses on both floors were responsible for assisting the bedside nurses with their patients' needs and for facilitating effective patient movement into and out of the hospital. Justifiably, recruitment for this study bore a lower priority level, as the charge and floor nurses

made every effort to keep up with the demands of the patient care needs with patient-to-nurse ratios 0f five or six patients per one registered nurse (RN). By the end of recruitment, the facility changed the staffing levels on both floors to four patients per RN. However, the patient load still remained primarily above the four-to-one ratio due to unfilled RN floor-nursing positions on both floors.

Survey and consent fatigue were also factors that impacted recruitment. On the first day of data collection, two patients declined after they learned that the study involved a follow-up phone call. These individuals had experienced prior admissions and stated that they had received numerous phone calls after their discharges, which were taxing for them. Two weeks into the study, one of the charge nurses indicated there were "several" people who rejected to participate whenever they discovered there would be a phone call after discharge. On a few occasions, potential participants, who signed the PHI disclosure authorization, withdrew their decision to participate whenever they learned that there was a four-page informed consent. These persons communicated that the PHI disclosure authorization should have been sufficient for enrollment into the study, which is indicative of consent fatigue.

Data collection. The researcher's proposed method for data collection delayed the onset of the study. Initially, the researcher intended for participants to access the in-hospital survey via a mobile device. However, the internal review boards (IRBs) at East Tennessee State University (ETSU) and the study site brought to light a legitimate concern. Patients' PHI could be compromised without an encrypted device and a secure internet access to the online survey's platform. So, the researcher obtained an encrypted Health Insurance Portability and Accountability Act (HIPAA)-compliant laptop computer from ETSU's Center of Nursing Research. The researcher removed demographic questions from the electronic in-hospital survey

and planned to obtain demographics directly from the patients. The researcher documented and stored participants' demographic responses on the encrypted laptop.

Once the researcher received clearance from the study facility to use the laptop, the servers for the electronic surveys were due for an upgrade. The anticipated delay was two weeks. Whenever the delay exceeded two weeks, in consultation with the Dissertation Chair, the researcher began data collection with hard copies of the in-hospital survey. At one point, the site facility's internet became inoperable. So, the researcher used hard-copies for all participants, which provided a consistent method for data collection. Once the electronic survey became accessible, the researcher accessed the online survey and entered the participants' responses from the hard copies. For the follow-up survey, the researcher used hard copies of the survey to record the participants' responses and entered those into the post-discharge electronic survey.

Limitations

As already denoted as a challenge, the charge nurses managed the initial screening and recruitment process for potential participants. There were instances where the charges nurses were unable to seek the PHI disclosure authorization. As a result, the researcher is unable to guarantee with 100% certainty that every patient had an equal opportunity to either consent or decline as a participant in this study.

However, there is a chance that the unscreened patients may have met one or more of the study's exclusion criteria and were therefore subsequently ineligible for the study. Unstable patients fell into the exclusion category due to a non-intact mental status and/or the inability to muster the strength to answer questions on the 19-item survey. Patients with lengths of stay less than 24 hours also met exclusion criteria. As already discussed in the *Recruitment* section, on

the days when the charge nurses prioritized patient care above recruitment for this study, individuals were often critically ill and/or newly admitted patients. Another plausible circumstance is that patients could have been discharged before a 24-hour time lapse. For example, patients with a length of stay less than 24 hours often included those with admission diagnoses of (a) acute coronary syndrome, where the healthcare provider either ruled out a diagnosis of acute myocardial infarction (AMI) with a series of negative biomarkers and/or aborted an AMI with a percutaneous intervention and (b) arrhythmias eliminated with either an electrical or medical cardioversion.

The feature of the current HCAHPS survey posed another limitation. All items use past tense for the inquiries. This was problematic for two questions in this study because they begin with "When I left the hospital…" (HCAHPS, 2016a, p. 4). These particular questions addressed whether patients, at the time of discharge, comprehended their written instructions and the purpose of each home medication. The researcher eliminated the past-tense items on both the in-hospital and post-discharge surveys, which could diminish the statistical reliability of composited score for communication about medications.

Another limitation to this study is the potential that hospitalized patients declined to participate out of fear that negative responses could result in retaliation from the healthcare staff. Likewise, the researcher is aware there were at least two employees of the study facility who were apprehensive and rejected the opportunity to contribute to the study. However, the charge nurses and researcher reassured all potential participants that survey responses were confidential. The researcher explained that she planned to assign each participant a number without any identifiable data that would trace them to the surveys. The researcher also communicated to each

participant that she would delete the names and phone numbers from the encrypted laptop once she either made a successful or unsuccessful post-discharge follow-up contact with the patient.

Delimitations

The data collection instrument for this study was a 19-item electronic questionnaire. Language barriers, impaired vision or hearing, speech impairments, and generalized malaise could have impacted the participants' responses to the questions. The researcher recited the questions and documented patients' responses for the majority of the individuals, especially those with vision, hearing, and physical impairments, and those who were physically weak. To eliminate the language barrier and speech impairment variables in this study, the researcher excluded non-English speaking patients and individuals who exhibited expressive aphasia.

The researcher also anticipated that patients with limited cognition would find difficulty comprehending the survey's questions. The researcher required that participants retained a conscious state and illustrated that they held an intact cognitive mental status. For each participant, the researcher determined the participant's orientation to time and place with these screener questions: *What is your name?, What is the year right now?, What is the season right now?, What is today's day of the week?, Where are you now: State?, City?*. The researcher also established that participants had organized thinking with four questions from the Confusion Assessment Method (CAM) Intensive Care Worksheet (Ely, 2002): *Will a stone float on water?*, *Are there fish in the sea?*, *Does one pound weigh more than two pounds?*, and *Can you use a hammer to pound a nail?*. The researcher only included patients who accurately answered all nine screening questions and their components. The researcher used the same screener questions for the post-discharge survey to determine whether participants possessed an intact mental status.

As an additional means to protect the rigor of this study, the researcher knew she needed to ensure that the person who participated in the post-discharge survey was the same individual who submitted responses on the in-hospital survey. So, by phone, the researcher contacted each participant for the repeat survey, except for one participant. That individual had a hearing impairment and could not understand the questions over the phone. For that reason and with permission from the participant, the researcher interviewed the individual face-to-face at her place of disposition, which was a rehab facility.

Summary

Information from this study addresses an unknown factor in patient-centered care measurement. Does the data from patient satisfaction assessments accurately depict patients' perceptions of their hospital experiences when patients complete surveys after discharge? To what extent does the memory-gap affect patients' responses that address the variables of patient-centered care?

CHAPTER 2

LITERATURE REVIEW

This chapter provides an overview of the literature that supports the implications for patient-centered healthcare, the set of empirical measures that determine the extent of effective quality patient-centered care, and the theoretical and conceptual frameworks that guide this study. As specified in *Chapter One*, patient satisfaction is one key determinant for patient-centered care delivery. The following will illustrate the connection between patient-centered care and patient satisfaction. In addition, the author will explain how this study addresses a literary gap concerning the variables that impact patients' responses to the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey after discharge.

A Nationwide Patient-Centered Care Initiative

The catalyst for a comprehensive patient-centered healthcare reform process began in the late 1990's following the Institute of Medicine's (IOM) report brief *To Err is Human: Building a Safer Health System* (IOM, 1999). The IOM unveiled a harsh reality about the quality and safety of healthcare delivery in the U.S. The IOM estimated that nearly 98,000 patient deaths occurred as the result of preventable human errors. In the full document that followed, the IOM proposed recommendations to improve patient care in the U.S. (Kohn, Corrigan, & Donaldson, Committee on Quality of Health Care in America, IOM, 2000).

In 2000, Congress endorsed the IOM's initiatives to enhance patient safety and quality patient care in all healthcare sectors of the U.S. (Kohn et al., Committee on Quality of Health Care in America, IOM, 2000). Congress designated the Agency for Healthcare Research and Quality (AHRQ) as the primary government entity to manage the IOM's design for healthcare

reform. The AHRQ formed a Center for Patient Safety ([CPS], 2015) to develop and research national safety goals, coordinate activities designed to reduce errors, facilitate partnerships with federal and non-government agencies, and create task forces to research and implement strategies for quality improvement.

Patient-Centered Care Implementation

The IOM identified patient-centered care as one of the major aims in healthcare reform (Kohn et al., Committee on Quality of Health Care in America, IOM, 2000). The AHRQ, Centers for Medicare and Medicaid Services (CMS), and IOM declared patient-centered healthcare delivery as a basic necessity, with the assumption that when patients and families become empowered, they are most likely to actively participate in the behaviors that prevent disease, attain recovery from illness, and promote patient safety, which ultimately achieves positive outcomes (AHRQ, 2002, 2014; CMS, 2013; Committee on the National Quality Report on Health Care Delivery, IOM, 2001; Conway et al., 2006; Elliott, Lehrman, Goldstein, Hambarsoomian, et al., 2010; Elliott, Lehrman, Goldstein, Giordano, et al., 2010; HCAHPS, 2013, 2014, 2015; Johnson et al., 2008; Kolcaba, 2001, 2003; Kolcaba, Tilton, & Drouin, 2006; McCarthy, 2006; Radwin, 2003). Over a span of nearly two decades, patient-centered healthcare delivery evolved into an orchestrated movement with multiple organizations that implemented the IOM's and CPS's recommendations. The AHRQ, the Institute for Healthcare Improvement (IHI), the Institute for Patient- and Family-Centered Care (IPFCC), the Picker Institute, and the Quality and Safety Education for Nurses (QSEN) Institute developed resources for effective patient-centered care implementation (AHRQ, 2014; Conway et al., 2006; CPS, 2015; IHI, 2016; IPFCC, 2010; Johnson et al., 2008; Picker Institute, 2013; QSEN, 2005, 2012; QSEN Institute,

2014ab). Patient-centered care became the central factor that would interrelate with patient safety, quality patient care, positive patient outcomes, and evidenced-based care.

Patient Satisfaction Survey Development, Validity, and Reliability

The AHRQ established quality performance measures and patient satisfaction as the empirical markers and the national standard outcome indicators for effective patient-centered care (AHRQ, 2002, 2014; Committee on Quality of Health Care in America, IOM, 2001). This nationwide patient satisfaction assessment process embraced three main components that set the stage for Value-Based Purchasing (VBP): (a) a survey of patients' hospital experiences from subjective perspectives, (b) public reporting of patients' perceptions, and (c) accountability to the agencies that compensate facilities for their healthcare services (Goldstein et al., 2005). In 2002, the CMS, the AHRQ, and the AHRQ's Consumer Assessment of Healthcare Providers and Systems (CAHPS) Consortium joined together to develop a standardized public patient satisfaction survey of discharged patients' perspectives of their hospital care in accordance with the IOM's measures for patient-centered care. These determinants included the patient's subjective analyses of the healthcare professionals' communication, demeanor, and responsiveness during the hospitalization (Giordano et al., 2010; Goldstein et al., 2005; HCAHPS, 2014, 2015; Jha et al., 2008). The group conducted a rigorous scientific process with multi-methods to create a reliable and valid survey (Goldstein et al., 2005; HCAHPS, 2013, 2014, 2015). CMS sought feedback from the public on three separate occasions and responded to more than 1,000 public comments for instrument refinement. Information from cognitive interviews, consumer focus groups, field tests, and stakeholder feedback validated the CAHPS questionnaire's content and operational measurements for patient-centered care. The revised CAHPS instrument, later known as HCAHPS, contained six composited measures that addressed

patients' and families' perceptions of (a) communication about new medications (b) communication with nurses, (c) communication with physicians, (d) comprehensibility of discharge instructions, (e) pain management, and (f) staff responsiveness. In addition, the HCAHPS survey contained (a) two individual ratings of the facility's environment, (b) one overall global rating of the facility, and (c) one endorsement item that determined whether a patient recommended the hospital to family or friends (Giordano et al., 2010; Goldstein et al., 2005; HCAHPS, 2014, 2015).

Psychometric analyses of the data from a three-state pilot in 2003 established effective construct validity, interrater reliability, and internal consistency with the tool's multi-item composites (Giordano et al., 2010; Goldstein et al., 2005; HCAHPS, 2014, 2015). After the pilot study, survey refinement reduced the number of items on the original survey from 66 to 27. In November 2004, the AHRQ and CMS sent the modified HCAHPS survey to the National Quality Forum (NQF) for further review. In 2005, the NQF endorsed the questionnaire as a reliable and effective standardized data collection tool to assess the variables of effective patient-centered care delivery across the U.S. In December 2005, the federal Office of Management and Budget approved the HCAHPS tool for patient satisfaction data collection and public reporting (Giordano et al., 2010; Goldstein et al., 2005; HCAHPS, 2014, 2015).

Survey Implementation and External Reliability

In October 2006, the CMS implemented patient satisfaction data collection with a standardized 27-item HCAHPS survey (Elliott, Lehrman, Goldstein, Giordano, et al., 2010; Giordano et al., 2010; HCAHPS 2014, 2015; Jha et al., 2008). A total of 2,429 facilities from the U.S. regions of the Northeast, Midwest, South, and West participated. Greater than 75% of

these facilities had 300 or more respondents. The data analysis of the HCAHPS 2006 – 2007 material revealed significant coefficients among the patient-centered care composites and statistically meaningful correlations between the global facility ratings and the domains for patient-centered care. Multivariate statistics validated the HCAHPS survey and methodology as a reliable source for comparable measurement of patient-centered care delivery across the U.S., despite the different characteristics of facilities. Two measures from the instrument attained a reliability less than 0.7 ($r = 0.61$ pain management; $r = 0.67$ new medication communication). All other reliability levels attained an r between 0.82 – 0.95. In March 2008, the CMS published the first HCAHPS report from the 2006 – 2007 year.

Patient-Centered Care Variables with HCAHPS and Reimbursement

Questions on the current HCAHPS survey query patients' perceptions about their hospital experiences. The survey's items address key antecedents and attributes of patient-centered care, which include the variables for this study: (a) the demeanor of the healthcare professionals, (b) the responsiveness of the healthcare staff, (c) communication by nurses and physicians with patients and families, (d) the listening skills of nurses and physicians, (e) the ability to grasp patient-family education from the nurses and the physicians, (f) pain management, and (g) attention to comfort needs (Department of Health and Human Services [HHS], CMS, 2013; Elliott, Lehrman, Goldstein, Giordano et al., 2010; Giordano et al., 2010; Goldstein et al., 2005; Goldstein et al., 2010; HCAHPS 2013, 2014, 2015; Jasovsky et al., 2010; Jha et al., 2008; McCarthy, 2006). Data analyses quantify patients' responses to seven composites, two individual elements, and two global ratings from the HCAHPS instrument, which now has 32 items.

Ongoing Reliability of the HCAHPS Survey

Each quarter, multivariate and non-parametrical statistical calculations normalize the HCAHPS data for equal comparisons of patient satisfaction performance among rural, urban, and suburban inpatient facilities across the U.S. Coefficients (unreported) are re-computed via linear regression for each quarter of public reporting (Elliott, Zaslavsky, et al., 2009; Giordano et al., 2010; HCAHPS, 2013, 2016b). In order for the HCAHPS survey and methods to sustain effective reliability of 0.8 or higher in all of the measures, facilities need at least 300 randomized complete surveys during a calendar year with an equal distribution from each quarter (AHRQ, 2002, 2014; Elliott, Lehrman, Goldstein, Giordano et al., 2010; Elliott, Zaslavsky, et al., 2009; Giordano et al., 2010; Goldstein et al., 2005; Goldstein et al., 2010; HCAHPS, 2014, 2015; Jasovsky et al., 2010; Jha et al., 2008; Lehrman et al., 2010). Reliability of the HCAHPS tool is essential since patient satisfaction scoring is now a factor in facilities' income.

Inpatient Prospective Payment System

Facilities under contract with Medicare receive revenue through the Inpatient Prospective Payment System (IPPS) (CMS, 2013, 2017; HCAHPS, 2013, 2014, 2015; HHS, CMS, 2013; HHS, 2015). The IPPS is a retroactive reimbursement method, where hospitals obtain a fixed amount of compensation, in return for the care and services rendered for patients with particular diseases and diagnoses. The IPPS clusters comparable disease processes and illnesses into specific diagnosis-related groups (DRGs). DRGs carry assigned weights in accordance with the expected resource expenditures for recovery from the sicknesses. For example, sepsis carries a higher weight than uncomplicated community-acquired pneumonia. The IPPS uses DRGs to compute the amount of facilities' Medicare payments. The premise

behind the IPPS is for hospitals to provide streamlined care in accordance with best practices that reduce hospital lengths of stays, prevent duplication of services, and limit excessive resource consumption (CMS, 2013; HCAHPS, 2013, 2014, 2015; HHS, CMS, 2013).

Value-Based Purchasing

In 2013, CMS (2013, 2017) implemented Hospital Value-Based Purchasing (VBP) as part of the IPPS reimbursement method. With VBP, facilities receive a 1.75% reduction in their IPPS compensation. Facilities have the ability to earn back the 1.75 % of IPPS funds through their total performance scores (TPS).

The TPS offers an incentive for healthcare facilities to ensure that healthcare providers implement quality patient-centered care. The TPS measures quality performance with five domains on a 100-point scale: (a) *Clinical Care*: *Process* (5%), (b) *Clinical Care: Outcomes* (25%), (c) *Patient-and Caregiver-Centered Experience of Care/Care Coordination (PEC/CC)* (25%), (d) *Safety* (20%), and (e) *Efficiency and Cost Reduction* (25%) (Elliot et al., 2013; HCAHPS, 2013, 2014, 2015; HHS, 2015). Example quality measures in the 2016 fiscal year (FY) are (a) catheter-associated urinary tract infection rates, which affect the *Clinical Care: Outcome* score and (b) immunization compliance with influenza and pneumococcal vaccines, which are the indicators for the *Clinical Care*: *Process* (HHS, 2015). The HCAHPS patient satisfaction assessment ratings determine the *PEC/CC* score, which impacts one fourth of the TPS. In years prior, the *PEC/CC* score, formerly known as the *Patient Experience*, affected the TPS by thirty percent.

When CMS first initiated VBP, two thousand facilities received penalties because their 30-day readmission rates exceeded the benchmark set for the *Outcome* domain of the TPS

(Committee of Presidents of Statistical Societies, 2012; Rau, 2013). The reductions were as high as one percent for several hospitals. Consequently, affected facilities in Tennessee eliminated positions (DuBois, 2013; Gamble, 2012; Meredith Corporation, 2012; Robertson, 2013). Nurses were included in some of the cut-backs. Cuts in reimbursement equate to increased demands to deliver effective patient-centered care wither fewer nurses.

Literature Support for the Patient-Centered Care Components

Patient-centered care is a combination of multiple interconnected concepts and constructs that form a dynamic environment for the delivery of safe, effective healthcare. Essential components are communication, collaboration, courteous conduct, and patient-family education that facilitate an effective relationship between the healthcare professionals, the patient, and the family members. The relationship provides a foundation for collaborative partnerships in an environment that solicits the patient and family as empowered, active participants on a team of interprofessional healthcare workers. Jointly, the healthcare team members design a plan of care with evidence-based illness prevention and healthcare recovery activities that best align with the individual patient's preferences, the unique patient's needs, the available resources, and the standards of care for optimal outcomes (Balint, 1968; Committee on the Health Professions Education Summit, IOM, 2003; Committee on the National Quality Report on Health Care Delivery, IOM, 2001; Committee on Quality of Health Care in America, IOM, 2001; Conway et al., 2006; IHI, 2016; Interprofessional Education Collaborative Expert Panel [IPEC], 2011; IPFCC, 2010; Johnson et al., 2008; Lipkin, Quill, & Napodano, 1984; Picker Institute, 2013; Plane tree, 2014; QSEN, 2005, 2012; QSEN Institute, 2014ab). The supporting literature for the philosophy, antecedents, attributes, and consequences of patient-centered care is as follows in the next sections.

Patient-Centered Care Philosophy

A holistic pragmatic paradigm is the foundation for patient-centered care. Multiple realities exist from patients' and families' perceptions, which are dynamic, multi-factorial, and subject to self-interpretation (Campbell & Blunting, 1999; Carnevale, 2013; Weaver & Olsen, 2006). Thus, each individual patient-family unit's perceptions are unique and variable with respect to the current set of circumstances. Healthcare providers, who embrace these ontological and epistemological assumptions, recognize this multi-dimensional truth and the countless interrelated variables that uniquely impact a patient-family's decisions and present state of health. The healthcare professionals who hold the appreciation for human diversity acknowledge that contextual beliefs influence the patients' and families' specific preferences and choices for health recovery and disease prevention.

Patient-Centered Care Antecedents

The antecedents of patient-centered care are: diverse holistic human needs, needs identification, therapeutic communication, trust, and collaborative relationships. These components are interrelated basic fundamentals that take place throughout the patient-centered care process. Patient-centered care begins with the healthcare professional's appreciation for the distinct physiological, psychosocial, environmental, and social human needs of individuals (Balint, 1968, 1969; Committee on Quality of Health Care in America, IOM, 2001; Conway et al., 2006; IHI, 2016; IOM, 1999, 2010, 2011; IPFCC, 2010; Jasovsky et al., 2010; Johnson et al., 2008; Kohn et al., Committee on Quality of Health Care in America, IOM, 2000; Kolcaba, 2001, 2003; Mead & Bower, 2000; Picker Institute, 2013; QSEN, 2005, 2012; QSEN Institute, 2014ab; Rogers, 1961; Stewart et al., 1995). Analogously, the provider uses a courteous and caring

demeanor, which is an essential component during the interactions between the patient-family unit, the healthcare providers, and the other healthcare workers. A respectful conduct lays the foundation for active listening, which opens the channel for meaningful, reciprocal exchange of information among the patient and the members of the healthcare team. As patients and families share more information about the context of their situations, the healthcare team is more equipped to accurately and appropriately identify the individual patient-family needs. Effective therapeutic communication facilitates the formation of the necessary rapport that yields a trusting patient-family-provider relationship (Clipper, 2015; IHI, 2016; IPEC, 2011; IPFCC, 2010; Jasovsky et al., 2010; Kolcaba, 2003; Lipkin et al., 1984; Picker Institute, 2013; Stewart et al., 1995;). This relationship is a key factor in forming a collaborative patient-family-provider partnership. The partnership creates an atmosphere that solicits the patient and family as empowered, active participants on a team of interprofessional healthcare workers (Clipper, 2015; Conway, et al. 2006; Drayton & Reddy, 2014; IHI, 2016; IOM, 2011; IPEC, 2011; IPFCC, 2010; Johnson et al., 2008; Kohn et al., Committee on Quality of Health Care in America, IOM, 2000; Kolcaba et al., 2006; Mead & Bower, 2000; Picker Institute, 2013; QSEN, 2005, 2012; QSEN Institute, 2014ab).

Patient-Centered Care Attributes

The key characteristics and manifestations of patient-centered care are active patients and family members who share the decision-making process with the healthcare professionals (Becker, 2014; Conway, et al. 2006; Drayton & Reddy, 2014; IHI, 2016; IPFCC, 2010; Jasovsky et al., 2010; Johnson et al., 2008; Kolcaba et al., 2006; Kohn et al., Committee on Quality of Health Care in America, IOM, 2000; Mead & Bower, 2000; Picker Institute, 2013; QSEN Institute, 2014ab). An iconic exemplar is a fully engaged patient-family unit and a healthcare

team that seeks out patient and family member involvement. The team members openly and candidly discuss the patient's health status and the treatment options. The patient, the family, and the healthcare team collectively design a plan of care with evidence-based illness prevention and healthcare restoration activities that best align with the individual patient's preferences, the unique patient's needs, the available resources, and the standards of quality care. In addition, the healthcare professionals provide education tailored to the literacy level of the patient and family (Day, 2014; Kutner, Greenberg, Jin, & Paulsen, 2006; IOM, 2004).

Patient-Centered Care Consequences

Healthcare professionals preserve patient and family dignity, and comfort, whenever they purposefully and intentionally deliver care with an engaging, patient-centered focus (Becker, 2014; Clipper, 2015; Committee on the Health Professions Education Summit, IOM, 2003; Committee on the National Quality Report on Health Care Delivery, IOM, 2001; Committee on Quality of Health Care in America, IOM, 2001; Conway et al., 2006; IHI, 2016; IOM, 2011; IPEC, 2011; IPFCC, 2010; Johnson et al., 2008; Kolcaba, 2001, 2003; Kolcaba et al., 2006). As a result, patients and families become empowered, which leads to gratification and active patient-family participation in the actions that attain illness recovery and future illness prevention. In due course, optimal quality health outcomes emerge, which is the basis for the IOM's initiative to improve healthcare delivery.

Theoretical and Conceptual Frameworks

Kolcaba's (2003) Comfort Theory provides the primary framework for this study, which explains the relationship between patients' perceptions of effective patient-centered care and patient satisfaction. Comfort Theory illustrates a connection between interrelated variables of

patient-centered care and the patient satisfaction indicator. In addition, Comfort Theory establishes perception as a key feature for human needs identification and whether healthcare professionals effectively meet patients' immediate needs that enhance comfort. Since recollection is a crucial factor in the measurement of patient-centered care delivery, perspectives from Kahneman's (2011) Thinking Fast and Slow Theory are included and explain the dynamics that affect memory and recall of the hospital experience. The following sections describe how (a) Comfort Theory underlines the philosophy, concepts, attributes, consequences, and operational variables of patient-centered care and (b) the Thinking Fast and Slow Theory substantiates the significance of perception and the existence of a memory-gap that could pose discrepancies between patients' in-hospital perceptions and the recall of those perceptions after discharge.

Philosophy

The ontological and epistemological views from Comfort Theory support that knowledge evolves from both the interpretive and post-positive paradigms. As with patient-centered care, the basic underlying principle of Kolcaba's (2003) Comfort Theory is holism. The individual consists of an interrelated emotional, mental, spiritual, and physical core, which contributes to the person's reality. Multiple realities are possible within the context of one's environment and circumstances.

Knowledge development emerges from the person's perception of the experience within the present moment and from the healthcare professional's interpretation of the patients' subjective and objective data (Kolcaba, 2003). Patients' needs, which affect the whole person's optimal well-being, are the patient-family unit's perceived deficits and the deficiencies identified

by the healthcare personnel. Perceptions are dynamic, which change in relation to the external stimuli. Likewise, with a heuristic factor, the Thinking Fast and Slow Theory (Kahneman, 2011) reinforces these assertions and the effect of internal and external stimuli on patients' analyses of their experiences. Heuristics explicate a potential for differences between patients' evaluations of concurrent versus recollected experiences. Thus, the appraisal of each experience is unique, relative to the person's values system, and could vary across individuals within a similar situation.

Concepts

Comfort Theory takes highly abstract concepts that mesh through four stratified layers and evolve into operational variables that become measurable through empirical health outcomes. Holistic care, preservation of human dignity, and comfort are priorities in Kolcaba's (2001, 2003) description of *comfort care*, as they are in patient-centered care (Kolcaba et al., 2006). Heuristics from Kahneman's (2011) Thinking Fast and Slow Theory explain the human thinking and decision-making processes. A conscious system and an innate automated system affect the interpretations and mental judgements that patients make about their hospital experiences.

Comfort. *Comfort* is an individualized perceived state of strengthening across interconnected and inseparable physical, psychospiritual, environmental, and sociocultural contexts (Kolcaba, 2003). The individual's perception determines the extent of the comfort level, which is a summation of *obstructing*, *facilitating*, and *interacting forces* that occur in response to stimuli from the person's total environment. *Obstructing forces* are the negative powers that counteract comfort and manifest as a person's unique healthcare needs. These

healthcare needs summon three classifications of *comfort care*: (a) *ease,* a state of contentment, (b) *relief,* a state where an intervention alleviates a particular comfort deficiency, and (c) *transcendence,* a state where one rises above the problem. The antecedents of comfort are the comfort interventions that facilitate patients to attain *relief, ease,* and *transcendence*.

Comfort care. *Comfort care* is the artful application of individualized interventions, designed to meet the patient's ease, relief, and transcendence needs across the physiological, psychospiritual, sociocultural, and environmental realms (Kolcaba, 1995; 2003). In order to enhance patients' comfort to the optimal level, the nurse uses an intentional and purposeful approach to ensure that all needs are identified and addressed across the contexts. In addition, the nurse makes a conscious effort to anticipate potential deficits and consistently conducts re-assessments at regular intervals. Furthermore, comfort care is a focused and deliberate process that preserves patient dignity and promotes patient autonomy during healthcare delivery.

Facilitating forces are the positive influences, such as nursing interventions that diminish or mitigate the symptoms of illness and/or side effects of treatments. Facilitating forces promote *enhanced comfort*, which is the desired outcome of *comfort care*. *Interacting forces* are the intervening variables that augment the person's perception of his/her healthcare needs and the effect of the comfort care interventions (Kolcaba, 2003). The augmentation may produce a net positive or net negative effect (sum of the obstructive, facilitating, and interacting forces), depending upon (a) the individual's past experiences, age, attitude, emotional state, and support system, (b) the person's interpretation of the healthcare professional's demeanor and attitude, (c) the timeliness of a healthcare provider's activity in response to the individual's request and/or needs, and (d) the presence or absence of purposeful healthcare that intentionally and proactively addresses the patient's individual, holistic needs.

Comfort Theory and antecedents of patient-centered care. Comfort Theory supports the interdependency between and among the elements of patient-centered care. The comfort needs for *ease*, *relief,* and *transcendence* relate with the *human needs* that transcend across the individual's inseparable whole. The *facilitating* and *interacting forces* of Comfort Theory correlate to *needs identification*, *therapeutic communication*, *trust*, and the *collaborative patient-family-provider relationship*. For effective needs identification, both facilitating and interacting forces interrelate for an accurate analysis of the initial subjective and objective assessment data. In addition, the facilitating and interacting forces assert a positive effect whenever the healthcare professional makes a commitment to a continuous monitoring and surveillance for comfort needs, the effect of comfort interventions, and the development of new comfort needs. The facilitating and interacting forces also interlink the demeanor, actions, and behaviors of the healthcare professionals with the patient's dynamic perception of care. The result either facilitates or obstructs therapeutic communication, trust, and the patient-family-provider relationship.

Perception. Perception is the key indicator for (a) the first-time improved comfort status, (b) the effectiveness of comfort care interventions, (c) the achievement of enhanced comfort (Kolcaba, 1995; 2003), and (d) the extent of patient-centered care delivery. Perception consists of subjective conclusions and interpretations that one makes about experiences, which occurs with two interconnected systems within the mind (Kahneman, 2011). *System I* is the intrinsic and more rapid structure of the brain that reacts automatically to internal and external influences. *System II* is the logical and methodical part of thinking that contributes to effective, conscious discernment and reasoning related to memory. *System II* involves attentive cognizance and personal beliefs, which affect judgements and decisions. Each subsequent

experience has the ability to affect the automaticity and responsiveness of *System I*, which play a role in memory, recall, and the inferences made with *System II.* Thus, incidents following discharge and/or surrounding an individual on the day of the HCAHPS survey could be contributing factors to the memory-experience gap.

Attributes of Comfort and Patient-Centered Care

The properties of comfort are inseparable and interrelated. A 3 x 4 taxonomy illustrates these aspects (Kolcaba, 1991, 1992, 2001, 2003). The types of comfort are in columns and the contexts are in rows. (See Figure 1). Every cell from the taxonomy exhibits a two-dimensional conceptual characteristic that is interdependent with the other cells' traits. A change in one cell within the grid affects the rest of the cells, thus exemplifying that a person's comfort status is an interconnected and individualized situation across multiple contexts.

Context in which Comfort Occurs	Type of Comfort		
	Relief	Ease	Transcendence
Physical			
Psychospiritual			
Environmental			
Social			

Figure 1. Taxonomic structure of comfort. Type of comfort: *Relief*, the state of having had a specific need met or mediated. *Ease*, the state of calm and contentment. *Transcendence*: the state in which one rises above problems or pain. Context in which comfort occurs: *Physical*, pertaining to bodily sensations or functioning. *Psychospiritual*, pertaining to bodily to internal awareness of self, including esteem, concept, sexuality, and meaning in one's life. *Environmental*, one's relationship to a higher order or being. *Social*, pertaining to interpersonal, family, and societal relationships, including financial. (Recreated from Kolcaba, 2001, p. 88).

Each unit of the taxonomy provides the foundation for twelve empirical attributes of enhanced comfort, as healthcare providers attend to the comfort needs of patients and their families (Kolcaba, 2003). Subjective questions from a 48-item General Comfort Questionnaire (GCQ) convey a means to operationalize the three types of perceived comfort needs across the individual's holistic core. For example, one of the twelve attributes is *physical ease* that manifests with this comment, "My body is relaxed…" (Kolcaba, 2003, p. 215). Although each question addresses an attribute, the overall score is a computation of the interrelated needs among the contexts. Thus, the taxonomy and GCQ support and place an emphasis that (a)

perceptions are the person's reality and (b) a patient's comfort status is unique and inter-reliant upon multiple factors.

The attributes of patient-centered care are interrelated and depend primarily upon the healthcare recipient's perception of the healthcare team members' interactions. The facilitating and interacting forces of Comfort Theory depict the manifestations of effective patient-centered care, which embrace a respectful and courteous demeanor from the healthcare providers. Although therapeutic communication is an antecedent, communication is a key attribute, which exhibits as a two-way mutual exchange of information between the patient-family unit and the healthcare team. In addition, the health professionals who attend to the comfort needs of patients and their families demonstrate a patient-family educational process with topics of discussion that include the patient's health status and treatment options on a literacy level congruent with the patient's knowledge base.

Communication also facilitates the remaining patient-centered care attributes. Healthcare professionals intentionally include the patient-family unit during daily rounds and ask for direct patient-family input in the plan of care. The healthcare professionals recognize that patients and family members are active participants who become collaborative partners with the healthcare team and contribute to the process of shared decision making. The patients' needs, values, and choices determine whether to pursue aggressive treatment and/or supportive care. The healthcare providers illustrate a purposeful and intentional responsiveness to the person's individualized requests with caring and empathetic behavior, provided the patient/family's unique wishes and desires address the patient's holistic needs *and* uphold the integrity of patient safety.

Consequences of Comfort and Patient-Centered Care

The consequences of enhanced comfort are patient engagement and patient satisfaction (Kolcaba, 2001, 2003; Kolcaba et al., 2006). Satisfied, engaged patients participate in health-seeking behaviors (HSBs). HSBs are the activities that promote optimal health or a peaceful death, which lead to optimal quality of life and optimum empirical health outcomes. Perceived comfort has a positive linear relationship with desirable health-seeking behaviors and patient satisfaction (Kolcaba, 2003).

The assertions from Comfort Theory (Kolcaba 2003; Kolcaba et al., 2006) support the underlying principles of effective patient-centered care and that patient satisfaction measurement is an operational indicator for the quality of patient-centered healthcare delivery. (See Figure 2.) The consequences of enhanced patient-centered care result in engaged, empowered patients and families, who become collaborative partners in a shared decision-making process that yields active participation in illness prevention activities and patient/family self-management of their diseases. As with Kolcaba's depiction of enhanced comfort, effective patient-centered care correlates positively with patient satisfaction and quality outcomes.

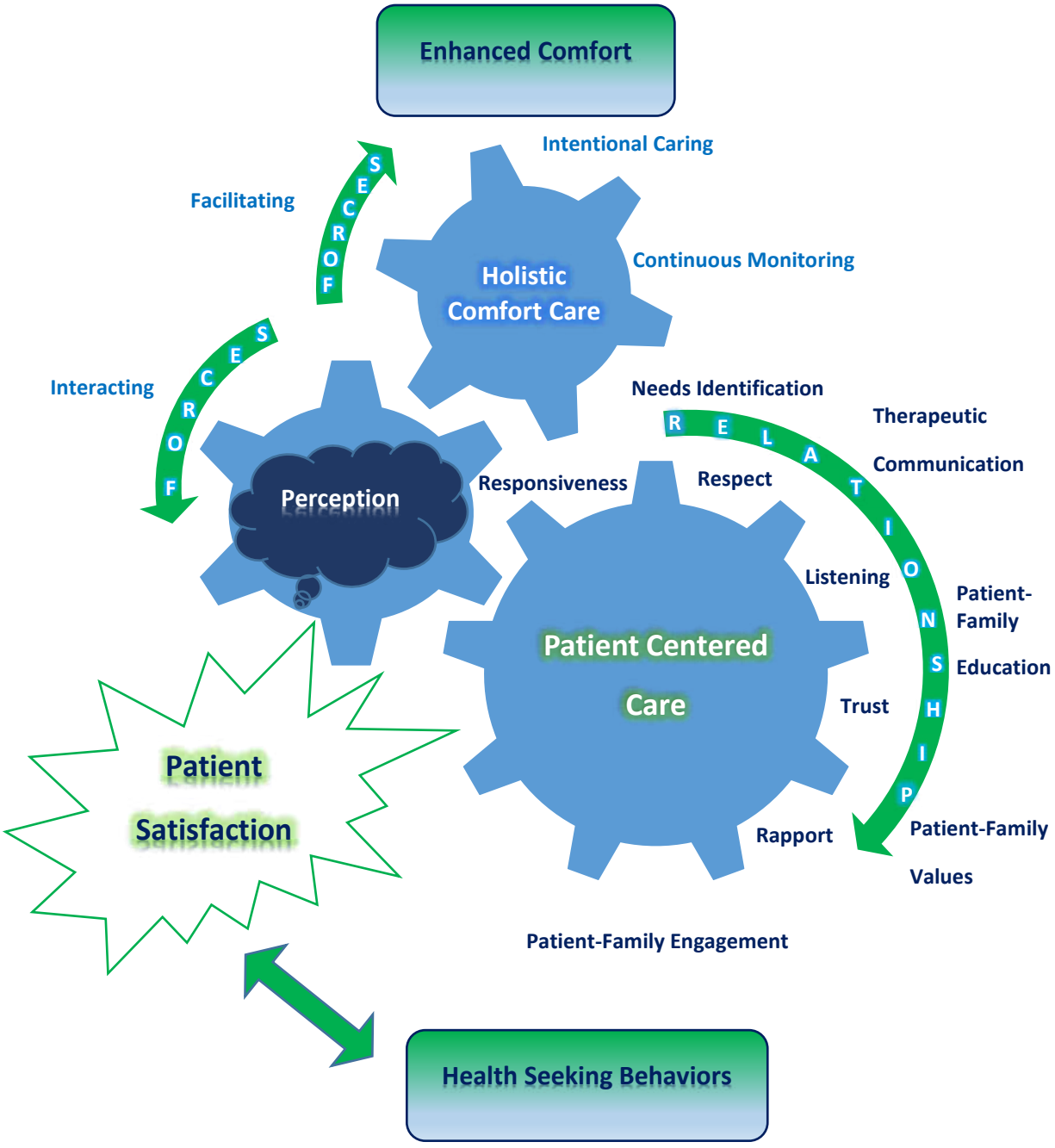

Figure 2. Comfort Theory, patient-centered care, and patient satisfaction. Illustration of Comfort Theory with perception of patient-centered care and patient satisfaction.

Operational Variables

The operational variables of patient-centered care emerge from its synergetic antecedents, characteristics, and consequences. Perception is the crucial mediating element that links the conceptual components of patient-centered healthcare delivery with empirical evidence. Patients' perceptions of their healthcare providers' demeanor, communication skills, responsiveness, and patient education are variables that influence the extent of patient and family member engagement in the health-seeking activities. These variables are measurable through patient health outcomes (i.e. effective glycemic control, prevention of acute exacerbations from chronic heart, kidney, and/or respiratory failure, and infection control) and patient satisfaction scoring with the HCAHPS survey.

The HCAHPS addresses the interacting forces of Comfort Theory, which affect subjective patient responses to items on the survey. The HCAHPS survey measures the degree of perceived effective (a) physician and nursing communication, (b) healthcare staff responsiveness to the patients' diverse human needs, and (c) healthcare provider education about medications, symptom control, illness prevention, and disease management within the patients' realms of available resources. The HCAHPS also addresses the facilitating forces from patients' perceptions of pain control, a clean, quiet environment, and whether healthcare professionals incorporated patient and family preferences into the plan of care. Interacting and facilitating forces affect the individual's perception of the hospital experience and determine the magnitude to which the healthcare members deliver the attributes of comfort and patient-centered care satisfactorily. However, certain interacting forces at the time of the HCAHPS survey could influence an individual's reality and skew the results of a recollected experience. Figure 3 illustrates the correlations of this study's operational variables with (a) the elements of patient-

centered care, (b) the obstructing, facilitating, and interacting forces from Comfort Theory, and (c) the HCAHPS composite measures, the individual rating items, and the global rating.

P C C Elements & CT's Interacting F O R C E S	**STUDY'S VARIABLES**	**COMPOSITES**	**SURVEY QUESTIONS**		
	Nurse Communication Skills	**1.** Communication w/ Nurses	**Question # 1:** During this hospital stay, how often did nurses treat you with courtesy and respect?	**Question # 2:** During this hospital stay, how often did nurses listen carefully to you?	**Question # 3:** During this hospital stay, how often did nurses explain things in a way you could understand?
	Physician Communication Skills	**2.** Communication w/ Physicians	**Question #5:** During this hospital stay, how often did doctors treat you with courtesy and respect?	**Question #6:** During this hospital stay, how often did doctors listen carefully to you?	**Question #7:** During this hospital stay, how often did doctors explain things in a way you could understand?
	Patients' Perceptions of Providers' Demeanor, Listening skills, Patient Education		**Providers' Demeanor**	**Listening skills**	**Holistic Patient Education**
P C C Elements & CT's Obstructing/ Interacting/ Facilitating F O R C E S	Patient Education about Medications	**3.** Communication about Medications	**Question # 16:** Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?	**Question # 17:** Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?	
	Pain Management	**4.** Pain Management	**Question # 13:** During this hospital stay, how often was your pain well controlled?	**Question # 14:** During this hospital stay, how often did the hospital staff do everything they could to help you with your pain?	
	Staff Responsiveness	**5.** Staff Responsiveness	**Question # 4:** During this hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it?	**Question #11:** How often did you get help in getting to the bathroom or in using a bedpan as soon as you wanted?	
	Patients' Perceptions of Collaboration w/Patient-Family & Team Members, Trust, Patient-Family-Provider Relationships		**Patients' Perceptions of the Staff's Ability to (a) Anticipate & Accurately Identify Needs and (b) Purposefully Deliver Comfort Care & Holistic Patient-Family Education**		
	Environment	**1.** Environment's Cleanliness	**Question # 8:** During this hospital stay, how often were your room and bathroom kept clean?		
		2. Environment's Quietness	**Question # 9:** During this hospital stay, how often was the area around your room quiet at night?		
	Patients' Perceptions of Staff's Demeanor and Ability to Identify Holistic Needs		**Patients' Perceptions of Purposeful Attention to Comfort Needs**		
	Individual Rating for Inclusion of Preferences	Inclusion of Patient Preferences in the Plan of Care	**Question # 18:** During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my health care needs will/would be when I left.		
	Patients' Perceptions of Holistic Comfort Care, Attention to Ease, Relief, & Transcendence Needs, Provider Collaboration w/Patient-Family, and Patient-Family-Provider Relationships		**Patients' Perceptions of Accurate Holistic Needs Identification, Extent of Provider-Patient-Family Shared Decision Making, and Active Participation**		
	Overall Global Rating Score	**GLOBAL RATING**	**Question # 19:** Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would you use to rate this hospital?		
	Patients' Perceptions of Holistic Comfort Care		**Patient Satisfaction**		

Figure 3. Correlation of patient-centered care with Comfort Theory and HCAHPS items. Correlation of patient-centered care (PCC) variables and Comfort Theory (CT) with the study's variables and HCAHPS Survey's composites and rating items.

Literature Gap

Value-Based Purchasing places a significant weight on patient satisfaction scores with the assumption that satisfied patients are most likely to participate in self-management of their diseases and achieve the CMS's benchmarks for quality care. However, due to the anonymity and randomization of the patients selected to participate in the HCAHPS survey process, an individual's satisfaction score is untraceable to his/her quality outcomes. Thus, there is a potential for misrepresentation, where a group of patients, with either optimal or sub-optimal quality outcomes, fail to represent the sample of patients who participated in the HCAHPS survey, and vice versa. This is an area of exploration that would require a non-blinded case study approach to explore correlations between the variables of in-hospital HCAHPS patient satisfaction assessment, HCAHPS post-discharge patient satisfaction measurement, and quality measures. Before exploring these variables, researchers need to determine whether significant statistical differences exist between in-hospital and post-discharge patient satisfaction assessment, which is another gap in the literature.

The goal of this study is to determine whether patients' perceptions are accurate post discharge. A comparison between in-hospital and post-discharge HCAHPS responses warrants investigation to establish whether time affects the memory and recollection of in-hospital perceptions. This study addresses whether patients' post-discharge responses are a reliable method for measuring facilities' patient satisfaction performance, since multiple factors, such as duration neglect and measurement error, affect perception. In addition, there is no guarantee that the person responding to the HCAHPS survey is the actual healthcare recipient, which further perpetuates the need to explore for discrepancies.

Assumptions

Comfort is a nursing value, as is patient-centered care. The HCAHPS nursing communication composite of the survey correlates the most strongly with the global patient satisfaction measure (Elliott, Kanouse et al., 2009). Patients' perceptions are reality and may change over time. Perceptions are one's successes or failures created during the confrontations with circumstances. Respect from healthcare providers augments the patients' and families' perceptions positively, which fosters an effective communication channel for the development of a trusting collaborative relationship. The relationship supports patients and families as active participants in their care. Active participation leads to effective adherence, useful therapy, quality outcomes, and optimal patient satisfaction. Healthcare professionals must recognize that each individual is diverse with variable realities. Healthcare professionals have an ethical duty to preserve patients' values, comfort, and dignity. However, even when healthcare providers deliver effective patient-centered care, certain factors, unrelated to the hospitalization itself, could impact the way a patient responds to items on the HCAHPS survey post discharge.

Conclusion

Quality outcomes and patient satisfaction are determinants for effective patient-centered care. Value-Based Purchasing places a substantial remuneration on facilities' patient satisfaction scores. However, certain variables affect the memory-gap and consequently perception. Therefore, a comparative measurement of patients' perceptions, during hospital and post hospitalization, is needed.

CHAPTER 3

METHOD

This chapter includes the study's purpose, research question, design, and variables. Immediately following are sections that describe the setting, the data collection methods, and the procedures for this study. In addition, the discussion contains the ethical considerations and the measures that protected patient anonymity, patient confidentiality, and patient dignity.

Purpose

The purpose of this study was to examine patients' perceptions of their hospital experiences. The study compared patients' perceptions of patient-centered care, as measured with items from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patient satisfaction survey, during hospitalization and two weeks following discharge.

Research Question

Are there any significant statistical differences between in-hospital and two-week post-discharge perceptions of patient-centered care as measured with HCAHPS patient satisfaction ratings on (a) the composite scores for communication with nurses, communication with physicians, communication about medicines, pain management, staff responsiveness, (b) the individual scores for the hospital environment's cleanliness and quietness, and the inclusion of patient and family preferences in the plan of care, and (c) the overall global rating score?

Design

The researcher used a non-experimental descriptive correlational design to identify an association between the memory-experience gap and patients' perceptions of their hospital experiences at two weeks post discharge. The study compared patients' in-hospital responses with their post-discharge responses on a survey that contained items from the standardized HCAHPS questionnaire. The in-hospital and post-discharge surveys were identical.

Variables

The independent variable in this study is the two-week memory-experience gap, which is the interval between the authentic patient hospital experience and the recollection of that experience at two weeks post discharge. The dependent variables are the patient satisfaction ratings, as measured with HCAHPS items, for (a) nurses' communication skills, (b) physicians' communication skills, (c) patient education about medications, (d) pain management, (e) hospital staff responsiveness, (f) the hospital environment's cleanliness, (g) the hospital environment's quietness, (h) the inclusion of patient and family preferences in the plan of care, and (i) the global patient satisfaction rating.

Setting

The setting is a 255-bed regional hospital that provides a broad range of inpatient healthcare services to individuals from eight surrounding rural counties in South Central Tennessee. This selection is the result of a few factors. First, the facility carries a patient census that was most probable to generate the necessary number of participants for a substantial, reliable, and valid inquiry. Secondly, the facility offers the prospect to produce a diverse sample

of individuals with a variety of conditions for a trustworthy representation of a rural population. As a resident in southern Tennessee, this researcher's interests exist among these inhabitants.

The facility's provisions include specialty care in the cardiac, gastrointestinal, gynecological, infectious disease, internal medical, neurological, nephrological, obstetrical, orthopedic, pulmonary, surgical, and urological capacities. In the role of a former care manager and an outcomes agent for this hospital, the researcher is familiar with the facility's service area, which contains a case mix of people with diverse economic, environmental, physical, social, and spiritual dynamics. In addition, the individuals from this population have wide range of co-morbidities and limited outside resources. Patients in this rural setting often present to this hospital without access to primary care and consequentially without any primary care illness prevention. Thus, patients are frequently on the higher end of disease severity. Patient-centered healthcare delivery is essential for the health of this community. Accurate measurement of patient-centered care is critical.

Data Collection Methods and Procedures

The HCAHPS Project Team granted permission to use items from the HCAHPS survey with the contingency that the researcher clearly specified this study was a separate investigation from the official HCAHPS method for nationwide patient satisfaction measurement. For each participant, the primary investigator (PI) articulated clearly that this study's purpose and the Centers for Medicare and Medicaid Services' (CMS) measurement of patient satisfaction scores were two distinct procedures. The PI emphasized that this study focused particularly on the comparison of patients' responses, during hospitalization and post-discharge, from one facility on two separate floors.

Data Collection Instrument

As discussed in *Chapter One* and *Chapter Two*, the HCAHPS survey and methodology provides a means to measure the operational variables of patient-centered care. The researcher used sixteen core items from the HCAHPS survey to address five summary measures, three individual ratings, and one global item for both the in-hospital and post-discharge surveys (See Appendix A). The design of the data collection instrument in this study followed HCAHPS' format and contained items scaled for data measurement on the nominal, interval, and ratio levels. Patients' responses to questions quantified patient satisfaction levels for each of the nine variable as follows: (a) *nurses' communication skills* (three interval level responses), (b) *physicians' communication skills* (three interval level responses), (c) *communication about medications* (two interval level responses), (d) *pain management* (two interval level responses), (e) *hospital staff responsiveness* (two interval level responses), (f) the *hospital environment's cleanliness* (one interval level response), (g) *the hospital environment's quietness* (one interval level response), (h) the *inclusion of patient and family preferences* in the plan of care (one interval level response), and (i) the *global patient satisfaction rating* (one ratio level response).

The researcher included three items from the HCAHPS survey that served as screeners to direct patients to relevant questions. Answers to these three questions are *Yes* = 1 and *No* = 2. Responses to the composite measures (nurses' communication skills, physicians' communication skills, communication about medications, pain management, and hospital staff responsiveness) and two individual comfort ratings of the facility's environment incorporated a 4-point Likert-type scale with *Never* =1, *Sometimes* = 2, *Usually* = 3, and *Always* = 4. An additional response for one question about responsiveness is *I never pressed the call button* = 5. One individual rating item about the inclusion of patients' preferences used a 4-point Likert-type scale with

Strongly disagree = 1, *Disagree* = 2, *Agree* = 3, and *Strongly agree* = 4. The global item of interest asked participants to rate the hospital overall on a scale of 0 – 10 scale with 0 = *Worst hospital possible* and 10 = *Best hospital possible*. The PI used this tool for both the in-hospital and post-discharge surveys and entered all patients' responses on the inpatient and post-discharge surveys via access to Checkbox Survey. The PI collected demographic data directly from the participants during the initial contact with each patient, which included: age, county of residence, gender, race, education level, and disposition status (home, home health, physical rehabilitation center). The PI contacted all discharged patients by phone and conducted the post-discharge survey with a phone conversation with one exception. With permission from the participant, the PI interviewed one individual face-to-face post discharge in a rehab center because the person had difficulty hearing and comprehending the questions during the follow-up telephone conversation.

Sample

The researcher used a convenience sample of 82 participants from a population of medical/surgical adult patients on a 24-bed cardiovascular step-down (SD) unit and a 24-bed intensive care step-down unit (ICUSD). To meet the inclusion criteria for the study, qualified participants were English-speaking individuals aged 18 years or older upon admission who were (a) admitted with a medical or surgical diagnosis, (b) hospitalized for at least 24 hours, (c) declared neurologically intact, (e) willing to participate in the two-week post-discharge survey, and (f) dispositioning with a status of *discharge* to *home*, *home-health*, or *medical/surgical rehab*. The researcher further validated that participants were mentally sound and able to demonstrate organized thinking with (a) questions about the current year, their location, etc. (*What is your name?, What is the year right now?, What is the season right now?, What is*

today's day of the week?, Where are you now: City?, State?) and (b) four questions from the Confusion Assessment Method (CAM) Intensive Care Worksheet (Ely, 2002): *Will a stone float on water?*, *Are there fish in the sea?*, *Does one pound weigh more than two pounds?*, and *Can you use a hammer to pound a nail?*. To satisfy the requirement for a sound mental state, the PI expected the participants to answer all nine questions and their components accurately. Exclusion criteria included anyone (a) under the age of 18 years, (b) admitted with a non-medical or non-surgical diagnosis, (c) hospitalized for less than 24 hours, (d) who demonstrated impaired cognition (the inability to accurately answer the nine mental status screening questions as described above), (e) unwilling to participate in the two-week post-discharge survey, and (f) alleging a disposition status that involved a transfer to a substance abuse rehab, psychiatric facility and/or facility with a higher level of care for complex medical/surgical issues (i.e. cardiothoracic surgery, organ transplantation). The researcher excluded non-English speaking patients and individuals who exhibited expressive aphasia to remove any potential variables associated with language barriers and speech impairment. The researcher used the same inclusion and exclusion criteria for the post-discharge survey.

Recruitment. While seeking approval from the internal review boards (IRBs) of the study facility and East Tennessee State University (ETSU), the PI learned that new requirements prevented the researcher to directly approach the patient. The PI sought input from the nurse managers and the charge nurses on both SD floors to determine the most efficient means to screen for study participants without compromising patient confidentiality and privacy. The charge nurses collectively concluded that they would have the background knowledge and would be the most likely individuals who could identity possible participants and give all patients a chance to participate in the study. The PI explained the study's purpose and discussed the

inclusion criteria with the charge nurses. The PI provided a folder with the study's abstract and a laminated copy of the inclusion criteria so that the charge nurses could use the copy as a reference to screen for potentially qualified English-speaking participants (see Appendix B). The PI requested that the charge nurses approach all potential participants using a laminated copy of a script (see Appendix C) to determine whether patients were interested in learning more about the PI's study.

Following approval from the IRBs of the study facility and ETSU, the PI began the participant selection process with the assistance of the charge floor nurses on the SD units. Patients who expressed interest in the study signed the written Health Insurance Portability and Accountability Act (HIPAA) Authorization for the release of their names, room numbers, admission dates, potential discharge dates, ages, and diagnoses to the PI. Before the PI approached potentially qualified participants, patients signed the written authorization for PHI disclosure.

With each candidate, the PI introduced herself as an East Tennessee State University graduate nursing student seeking to learn whether memory affects patients' responses to patient satisfaction surveys. The PI explained that consenting participants in this study would complete a patient satisfaction survey at the bedside and an identical survey two weeks following discharge via a phone call from the PI. The PI explained the importance of the post-discharge survey and validated whether potential participants were receptive in participating in the PI's follow-up phone call.

Sampling plan. Since the study's onset wavered for several months and due to time restraints on the PI's behalf (faculty responsibilities beginning August 1, 2017), the PI used a

convenience sampling plan for participant selection. Between July 18, 2017 to July 31, 2017, the PI enrolled the majority of all patients (n = 60). The PI enrolled the remaining participants (n = 40) between August 2017 and October 2017 and conducted the follow-up phone calls during this time period.

The PI preferred to survey patients on the day of their discharge in order to abort any confounding variables that could impact responses and create false variances between the in-hospital and post-discharge surveys. The PI worked very closely with the charge nurses on both floors to coordinate the appropriate timing to survey patients without delaying the discharge process. The PI surveyed hospitalized patients until there were at least 80 complete sets of in-hospital and post-discharge surveys which extended through October 2017. The researcher calculated a sample size of 80 by multiplying five participants per sixteen core items on the survey. The PI enrolled 100 participants and successfully surveyed 82 participants for the Post-Discharge Survey. The PI de-enrolled 18 patients. See Table 1 for details.

Table 1

De-Enrolled Participants

n	Rationale
13	Failed to either answer/return the PI's phone call for seven consecutive days.
1	Readmitted following a cardiopulmonary arrest. Physically and mentally unable to answer survey questions.
1	Transferred to a tertiary facility for a left-ventricular assist device. Physically unable to answer survey questions.
2	Re-admitted with pneumonia and too dyspneic to answer survey questions.
1	Physically declined after discharge and unable to vocalize responses to the survey.
Total 18	

Informed Consent

The primary researcher approached in-hospital patients who signed the HIPAA Authorization PHI disclosure form and sought written consent for the study. At the time of consent for the in-hospital survey, the researcher informed all participants about the follow-up survey at two weeks following discharge. The consent form included a description of the study's purpose, duration, and procedures. Participants consented for both the in-hospital and post-discharge surveys at the time of study enrollment. The researcher only enrolled the participants who agreed to complete both surveys. The researcher explained that the post-discharge phone call for this study was clearly separate from any of the facility's queries. As an additional

measure to differentiate this study from any other facility-focused queries about patient satisfaction and patients' medical conditions, the researcher provided each participant a folder that contained the researcher's contact information, a letter of thanks for participation, the tentative date the researcher had planned to phone for the follow-up, and the participant's copy of the informed consent.

Data Analysis

The primary purpose of this study was to compare participants' responses to HCAHPS items for significant differences on an identical survey administered during hospitalization and in the second week following discharge from one facility. The researcher followed HCAHPS' design and used the highest level of measurement possible for each variable. Like HCAHPS (Lehrman et al., 2o1o), the researcher treated the questions for every composited item as interval level measurement and computed averages for each composite per survey: communication skills of nurses, communication skills of physicians, communication about medications, staff responsiveness, and pain management. In addition, the researcher used interval level measurements for these variables: hospital cleanliness, hospital quietness, and preference inclusion. Since the global satisfaction rating contained a 'true zero' (Kellar & Kelvin, 2013, p. 24), the researcher handled the global patient satisfaction rating as ratio level measurement, as aligned with HCAHPS' method for data collection (Lehrman et al., 2o1o).

The researcher entered the data into the Statistical Package for the Social Sciences (SPSS) program, which contained the participants' demographics, the nominal level responses for the *yes/no* directional items, the numerical ranks for each item within the five composited measures, the average scores for the composites, and the individual and global ratings for the in-

hospital and post-hospital surveys. The researcher used the SPSS software to compute descriptive, non-parametric, and parametric analyses. An alpha level of .05 determined the level of significance for all correlations and comparisons.

As is the goal for facility performance on HCAHPS, the descriptive statistics revealed distributions with a negative skew for all distributions of the composited, the individual, and the global ratings with one exception. The distribution of the discharge individual rating for preference inclusion contained (a) a positive skew and (b) a median and mode of *3*. The medians and modes for the composites and individual ratings were a *4* and a *10* for the global rating (the highest numbers possible), except for a median of *9* for the discharge global rating. Since one of the assumptions for the *t*-test is a normal distribution and the *t*-test can generate reliable results with large samples (> 30 pairs) if the distributions contain a limited amount of skewing (Kellar & Kelvin, 2013; Polit, 2010), the researcher conducted both non-parametric and parametric testing. The researcher used the Wilcoxin matched-paired signed rank test and the two-way paired *t*-tests to compare the scores for the in-hospital and post-discharge variables. The results of the non-parametric and parametric testing revealed no significant differences between the in-hospital and post-discharge responses, except for the nominal variable that inquired whether patients needed assistance and the correlation between inclusion of preferences, a measure that indicates the extent that patients agree whether they had an active voice in the decision-making process for the plan of care.

Protection of Human Subjects

The anticipated potential harm to human subjects in this study was breach of confidentiality and survey fatigue. The researcher submitted all forms associated with this

investigation to the IRBs of the study site and ETSU. The researcher received full approval to proceed with the study in July 2017. Through the informed consent process, the researcher established a contract with all 100 participants to provide an assurance that she would uphold patients' confidentiality and privacy continually.

In order to track and contact participants for the post-discharge phone call, the researcher needed patients' names and contact numbers. The researcher used an Excel spreadsheet to store participants' names, contact numbers, and demographics on an encrypted laptop. The researcher kept the laptop with her at all times during data collection and stored the laptop in a locked cabinet within her place of residence whenever the laptop was not in use. Once the researcher successfully contacted participants for the post-discharge survey or de-enrolled participants from the study, the researcher removed the names and numbers from the Excel document. For the surveys, the researcher labelled all respondents numerically with Arabic characters in order to pair the in-hospital data with the post-discharge data.

To avert survey fatigue, the researcher informed each potential participant that the survey contained 19 questions and proceeded whenever patients were agreeable and medically stable to move forward with the survey. In the event that the researcher suspected a patient's condition needed medical attention during the follow-up phone call, the researcher had planned to instruct the patient to either contact the provider or phone 911. No such incidents occurred.

Ethical Considerations

The researcher held an ongoing presence during the data collection for this study. Plus, a majority of the staff nurses knew the researcher as a clinical instructor and/or former employee. As a result, the researcher, the staff nurses, and the charge nurses formed a mutually respectful

and trusting relationship. So, at times, the nurses confided in the researcher about their working conditions. On more than one occasion, the nurses stated that their patient load was heavy and they had insufficient time for effective patient teaching. These nurses held a true appreciation that their performance affected the facility's HCAHPS scoring. These nurses also indicated that they felt the study facility's administration held nursing as the key personnel accountable for meeting the facility's patient satisfaction and quality benchmarks. One nurse even commented that she believed a patient's fall on the floor would affect the nurse's performance evaluation and consequently the nurse's merit raise, even though the patient was unassigned to that nurse.

Also, the nurses expressed concern about the anticipated increased workload for the floors' nursing technicians. Since there were plans to lower the patient-to-nurse ratio from six patients to four patients, the patient-to-technician ratio would increase. The nurses and the technicians feared that the burden of patient care, such as a timely response to patients' requests for assistance, would then fall on the nursing technicians and subsequently affect the staff's ability to respond to patients' requests in a suitable fashion. The nursing personnel placed a significant value on their technicians and stated that they were reluctant to add anything additional to their technicians' already large volume of responsibilities. Thus, the nurses and technicians voiced that they were apprehensive about how they would perform on the HCAHPS scoring since they felt the pressure from administration to achieve patient satisfaction scores above the 95th percentile.

The researcher felt ambivalent about providing these findings in this report. However, there were descriptive patient statements to support the nurses' comments and concerns. The researcher maintained confidentiality for all participants and the nurses and included the

participants' meaningful comments in *Chapter Five*, which emphasize the assumptions of Comfort Theory.

Summary

The design for this study included descriptive, non-parametric, and parametric statistical tests to explore for significant differences between participants' responses to HCAHPS items on an identical survey during hospitalization and two weeks post discharge. Although some texts reference Likert-type responses as measurements on the ordinal level, the PI treated the survey's items in consistence with the HCAHPS' method. The items for the composites and the individual ratings were interval level measurement. The global rating was ratio level measurement.

CHAPTER 4

RESULTS

The purpose of this chapter is to present the findings of this study, where the researcher used a descriptive correlational approach to explore the effects of the memory-gap on patients' perceptions of patient-centered care via a comparison of participants' responses to items from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey during hospitalization and two weeks following discharge. This chapter reveals the statistics calculated with descriptive, non-parametric, and parametric testing. Included are the frequency distributions for each survey item, the means for each composite, the correlations between each item within each composite, and the correlations between the preference ratings and global ratings.

Descriptive Statistics

The descriptive statistics include information about the sample's characteristics and the frequencies and distributions for each variable. The following contains summaries, tables, and graphs that display these findings.

Sample

The sample contained 82 individuals between the ages of 26 to 93. (See Figure 4). The quartered age percentiles were as follows. The first 25% were ages 26 through 52. The next 25% were between the ages of 53 to 60. The third quarter contained participants ages 61 through 72 while the fourth quarter included participants ages 73 to 93. The majority of participants'

ages were between 54 and 79. The mean age was 60.27 with a median of 60.83 and multi modes for ages 54, 65, and 76. See Table 2.

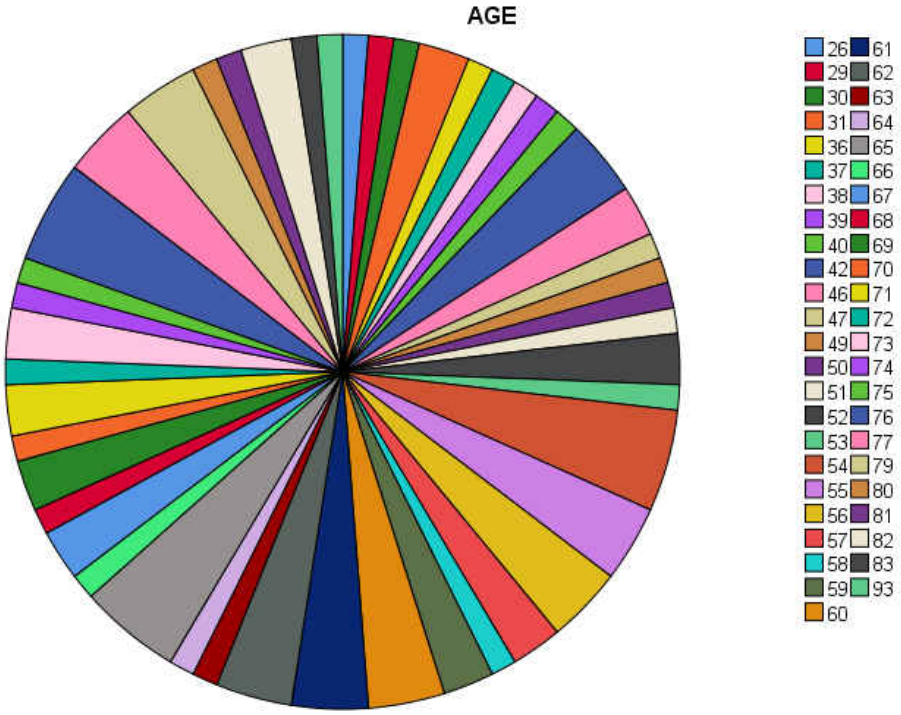

Figure 4. Age distribution

Table 2

Age Frequency

Age	Frequency	Age	Frequency	Age	Frequency
26	1	53	1	69	2
29	1	54	4	70	1
30	1	55	3	71	2
31	2	56	3	72	1
36	1	57	2	73	2
37	1	58	1	74	1
38	1	59	2	75	1
39	1	60	3	76	4
40	1	61	3	77	3
42	3	62	3	79	3
46	2	63	1	80	1
47	1	64	1	81	1
49	1	65	4	82	2
50	1	66	1	83	1
51	1	67	2	93	1
52	2	68	1		
Total					82

The participants represented ten different counties in Middle Tennessee, which included the facility's county, eight surrounding rural counties within the facility's service area, and a metropolitan county located outside the service region. In addition, one participant resided out of state because that individual's children shared the responsibility for housing that person year round. At the time of the in-hospital survey, the patient had been a resident in Tennessee at the daughter's home. For the post-discharge survey, the participant was in route to a home located in a middle, northern state of the United States.

Thirty-five percent of the participants represented the facility's local county. Participants in the next highest percentile (18.3%) resided in a county with a rural for-profit, 99-licensed-bed, acute care hospital with an average daily census of 20. Another group (12.2%) populated a county with a rural for-profit, 95-licensed-bed, acute care hospital with an average daily census of 21. Participants from two counties (17.1% and 4.9%) resided in areas with critical access hospitals that are part of the study site's healthcare system. Four participants represented 4.8% of the remaining three service area counties (1.2%, 1.2%, and 2.4%).

The majority of the participants were Caucasian (*n*=66). (See Table 3.) Females (*n*=54) outnumbered males (*n*=28). Six individuals (7.3%) had an education level below the eighth grade. Twelve (14.6%) were non-graduates from high school (HS) while 41.5% were HS graduates. Almost 40% of the participants either attended college or graduated from college. (See Table 4.)

Table 3

Race Frequency

Race	Frequency	Percent
American Indian or Alaska Native	5	6.1
Black or African American	8	9.8
Hispanic	1	1.2
White	66	80.5
Other	2	2.4
Total	82	100

Table 4

Education Level

Level	Frequency	Percent
8th grade or <	6	7.3
Some HS Non-Graduate	12	14.6
HS or GED	34	41.5
2 Years College or <	21	25.6
4-Year Graduate	6	7.3
> 4 Years	3	3.7
Total	82	100.0

The participants' length of stay for the majority of individuals was four days or less. (See Table 5.) Most participants dispositioned to home. (See Table 6.)

Table 5

Length of Stay

Number of Days	Frequency	Percent
1	23	28.0
2	20	24.4
3	10	12.2
4	13	15.9
5	4	4.9
6	5	6.1
7	3	3.7
12	1	1.2
13	1	1.2
15	1	1.2
22	1	1.2
Total	82	100.0

Table 6

Disposition Status

Location	Frequency	Percent
Home	67	81.7
Home-Health	9	11.0
Rehabilitation Center	6	7.3
Total	82	100.0

The participants' diagnoses were uniquely variable. The PI only had access to the current diagnoses on the day of the interviews because the facility codes patients by diagnostic related groups after discharge. The PI grouped participants with similar diagnoses to simplify Table 7. For example, patients with atrial fibrillation (AFib) experienced different levels of severity, but the PI grouped all of those with AFib in one group. Similarly, the PI place all patients with pneumonia (PNA) into one grouping and those with chest pain (with and without known cardiac disease) into the acute coronary syndrome group. The majority of patients suffered from cardiorespiratory illnesses.

Table 7

Diagnosis (DX) Groups

DX	*f*	DX	*f*	DX	*f*	DX	*f*
Acute Coronary Syndrome (Negative & Positive for Myocardial Infarction)	12	Chronic Obstructive Pulmonary Disease Exacerbation	3	Lactic Acidosis	1	Small Bowel Obstruction	1
Anemia w/Vaginal Bleeding	1	Colon Disease	1	Open Reduction Orthopedic Fracture	2	Syncope	2
Angioedema	1	Coumadin Toxicity	1	Pancreatitis	2	Upper Gastrointestinal Bleed with Pneumonia	1
Appendectomy	1	Dehydration	2	Peri-Rectal Abscess	1	Unstable Angina	1
Atrial Fibrillation	5	Esophageal Stricture	1	Pneumonia	11	Urinary Tract Infection	3
Autonomic Nervous System Disorder	1	Gastrointestinal Bleed with Cholecystectomy	1	Port Infection	1	Urolithiasis	1
Cardiac Stent	2	Guillain-Barré Syndrome	1	Pulmonary Edema	1		
Carotid Endarterectomy	3	Heart Failure	5	Pulmonary Embolus	2		
Cellulitis	2	Hypertension	2	Pulmonary Fibrosis	1		
Cholecystectomy	2	Hypotension	1	Sepsis	3		
						Total	82

Variables

The paired variable's distributions were quite similar in shape and contained negative skews except for the discharge individual rating for preference inclusion. (See Figures 5 and 6). The medians and modes for each Likert-type rating on the in-hospital and discharge surveys were *4*, except for item #18 on the discharge survey. The median and mode for that item, preference inclusion, were both a *3*. The median and mode for the in-hospital global rating were both *10*, while the post-discharge global rating's median was a *9* and the mode was a *10*. The means and standard deviations for each paired variable were similar. (See Table 8.)

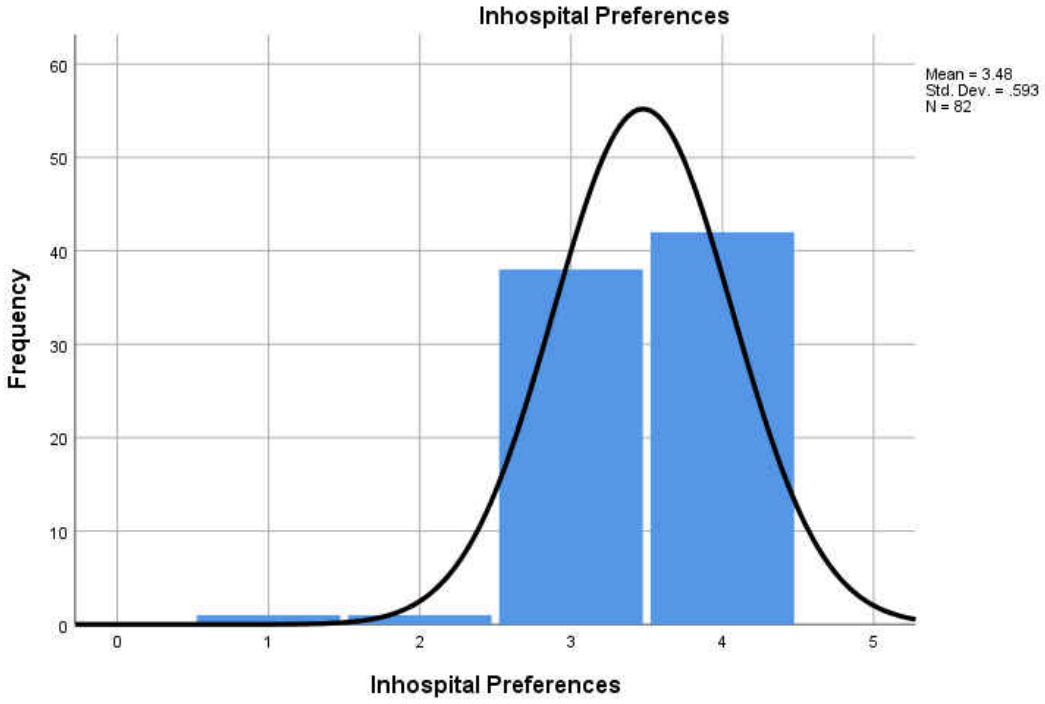

Figure 5. Distribution for in-hospital rating of preference inclusion. Illustration of participants' in-hospital responses to item #18. "During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left."

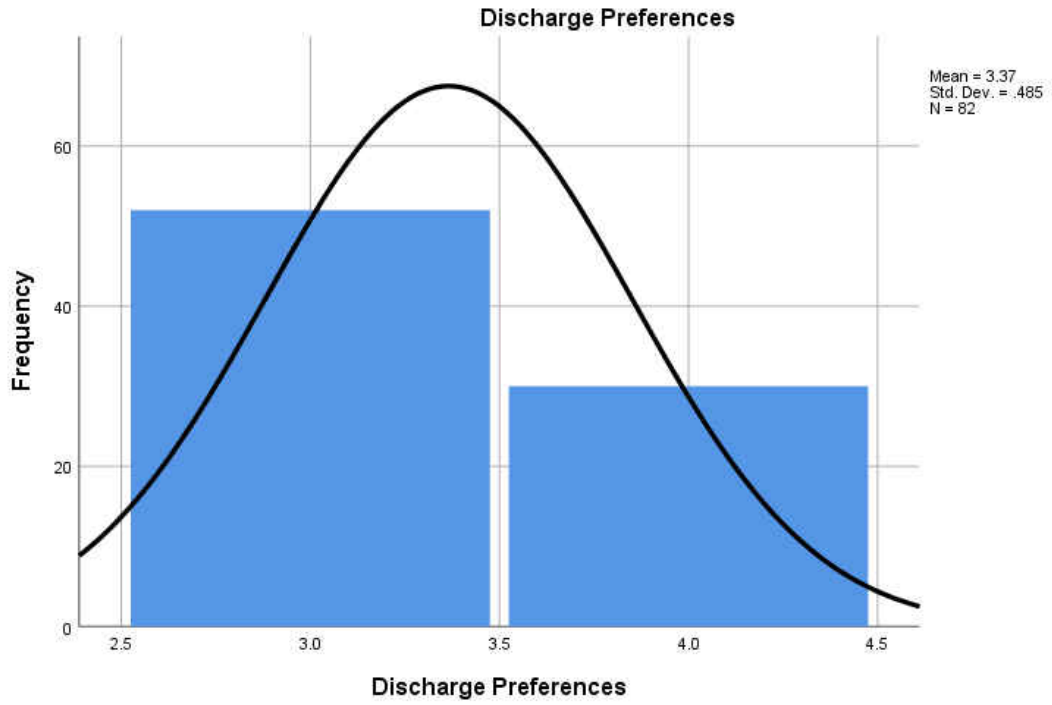

Figure 6. Distribution for discharge rating of preference inclusion. Illustration of participants' discharge responses to item #18. "During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left."

Table 8

Descriptive Statistics of the Composites, Individual Ratings, and Global Ratings

Dependent Variables		*N*	Valid	Missing	*M*	Median	Mode	*SD*	Range	Minimum	Maximum
Nursing Communication	In-hospital	*N*	82	0	3.85	4	4	0.354	2	2	4
	Discharge	*N*	82	0	3.80	4	4	0.410	2	2	4
Physician Communication	In-hospital	*N*	82	0	3.87	4	4	0.311	1.7	2.3	4
	Discharge	*N*	82	0	3.80	4	4	0.460	2	2	4
Environment Cleanliness	In-hospital	*N*	82	0	3.62	4	4	0.748	3	1	4
	Discharge	*N*	82	0	3.70	4	4	0.715	3	1	4
Environment Quietness	In-hospital	*N*	82	0	3.49	4	4	0.758	3	1	4
	Discharge	*N*	82	0	3.57	4	4	0.703	3	1	4
Responsiveness	In-hospital	*N*	82	0	3.67	4	4	0.704	3.5	1.5	5
	Discharge	*N*	82	0	3.70	4	4	0.820	4	1	5
Pain Control	In-hospital	*N*	82	0	3.71	4	4	0.551	2	2	4
	Discharge	*N*	82	0	3.70	4	4	0.525	2	2	4
Medication Communication	In-hospital	*N*	82	0	3.42	4	4	0.830	3	1	4
	Discharge	*N*	82	0	3.42	4	4	0.782	3	1	4
Preference Inclusion	In-hospital	*N*	82	0	3.48	4	3	0.593	3	1	4
	Discharge	*N*	82	0	3.37	3	3	0.485	1	3	4
Global Rating	In-hospital	*N*	82	0	9.16	10	10	1.071	4	6	10
	Discharge	*N*	82	0	9.12	9	10	1.271	9	1	10

Survey's Items

The distributions of each Likert-type question were similar in shape and contained a negative skew. The means and modes of each questions were a *4* (except the discharge rating for preference inclusion, as already discussed). (See Table 9.) The distributions for the dichotomous questions with *Yes* = 1 and *No* = 2 were also similar in shape with a positive skewing, except for two items on the Discharge Survey which included #10: "During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?" and #15: "During this hospital stay, were you given any medicine that you had not taken before?". Responses to item #15 on the Discharge Survey contained a normal distribution with an equal number of participants who responded with *Yes* or *No*. (See Figures 7 and 8.) The distribution of participants' responses to the Discharge Survey item for #10 was close to normal. Nearly 66% of the respondents indicated they needed assistance on the In-Hospital Survey while only 51% of these same respondents selected *yes* on the Discharge Survey. (See Figures 9 and 10.)

Table 9

Descriptive Statistics of the Composited Items

Items		*N*	Valid	Missing	*M*	Median	Mode	*SD*	Range	Minimum	Maximum
Nursing Communication #1	In-hospital	*N*	82	0	3.89	4	4	0.385	2	2	4
	Discharge	*N*	82	0	3.84	4	4	0.484	2	2	4
Nursing Communication #2	In-hospital	*N*	82	0	3.80	4	4	0.456	2	2	4
	Discharge	*N*	82	0	3.77	4	4	0.551	2	2	4
Nursing Communication #3	In-hospital	*N*	82	0	3.85	4	4	0.389	2	2	4
	Discharge	*N*	82	0	3.78	4	4	0.567	3	1	4
Physician Communication #5	In-hospital	*N*	82	0	3.90	4	4	0.337	2	2	4
	Discharge	*N*	82	0	3.83	4	4	0.540	3	1	4
Physician Communication #6	In-hospital	*N*	82	0	3.85	4	4	0.389	2	2	4
	Discharge	*N*	82	0	3.80	4	4	0.554	3	1	4
Physician Communication #7	In-hospital	*N*	82	0	3.84	4	4	0.457	2	2	4
	Discharge	*N*	82	0	3.76	4	4	0.600	3	1	4
Responsiveness Call Button #4	In-hospital	*N*	82	0	3.74	4	4	0.682	3	2	5
	Discharge	*N*	82	0	3.75	4	4	0.814	4	1	5
Responsiveness #11	In-hospital	*N*	54	28	3.43	4	4	0.860	3	1	4
	Discharge	*N*	42	40	3.45	4	4	0.832	3	1	4
Pain Control #13	In-hospital	*N*	57	25	3.63	4	4	0.672	2	1	4
	Discharge	*N*	50	32	3.62	4	4	0.526	3	1	4
Pain Control #14	In-hospital	*N*	57	25	3.79	4	4	0.667	2	2	4
	Discharge	*N*	50	32	3.78	4	4	0.507	2	2	4
Medication Explanation #16	In-hospital	*N*	46	36	3.72	4	4	0.688	3	1	4
	Discharge	*N*	41	41	3.68	4	4	0.722	3	1	4
Medication Explanation #17	In-hospital	*N*	46	36	3.13	4	4	1.24	3	1	4
	Discharge	*N*	41	41	3.15	4	4	1.195	3	1	4

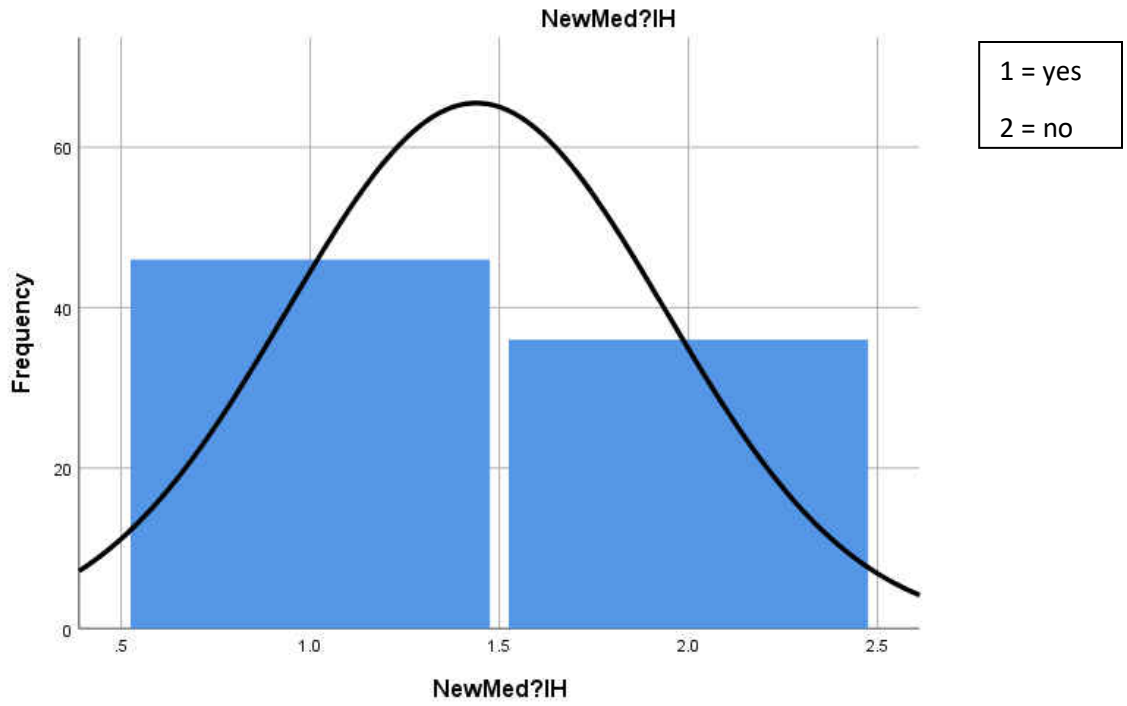

Figure 7. Distribution for in-hospital screening item about new medications. Screening question with dichotomous response *yes* or *no*. Responses to the In-Hospital Survey Question # 15: "During this hospital stay, were you given any medicine that you had not taken before?"

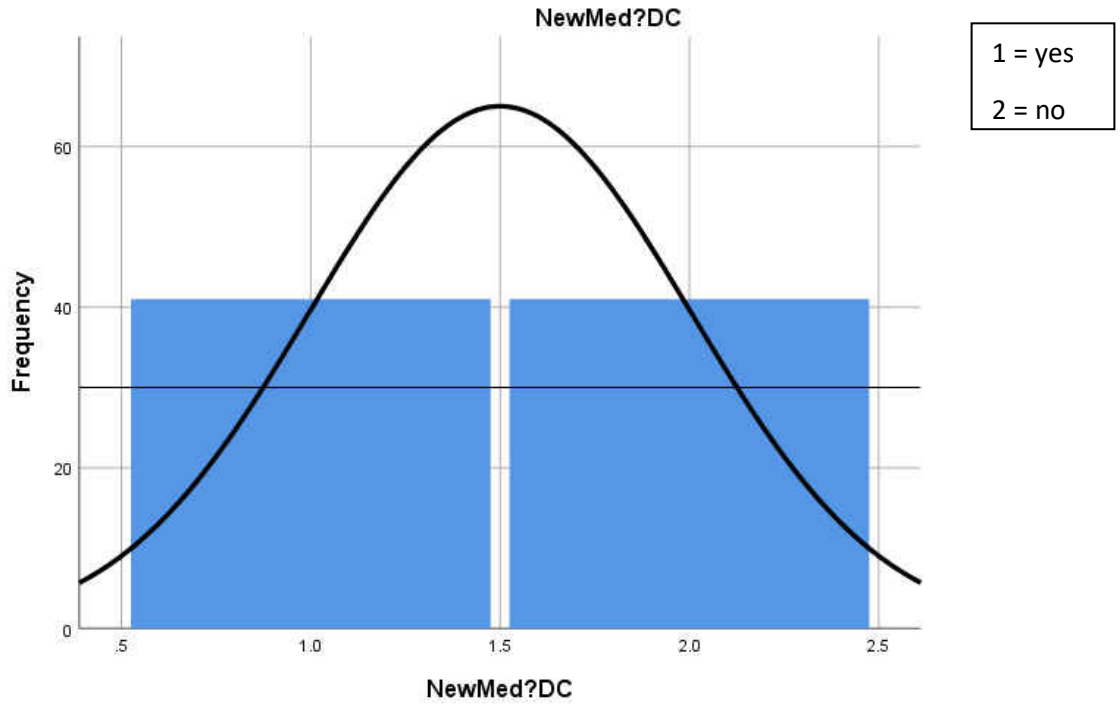

Figure 8. Distribution for discharge screening item about new medications. Screening question with dichotomous response *yes* or *no*. Responses to the Discharge Survey Question # 15: "During this hospital stay, were you given any medicine that you had not taken before?"

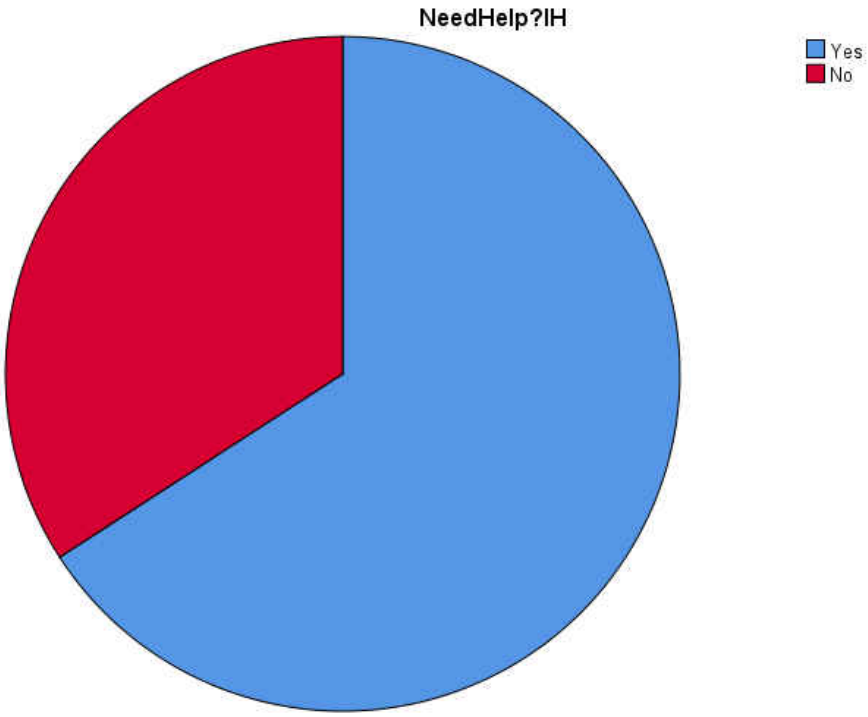

Figure 9. In-Hospital responses to the screening question about help. Screening question with dichotomous response *yes* or *no*. Responses to the In-Hospital Survey Question # 10: "During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?"

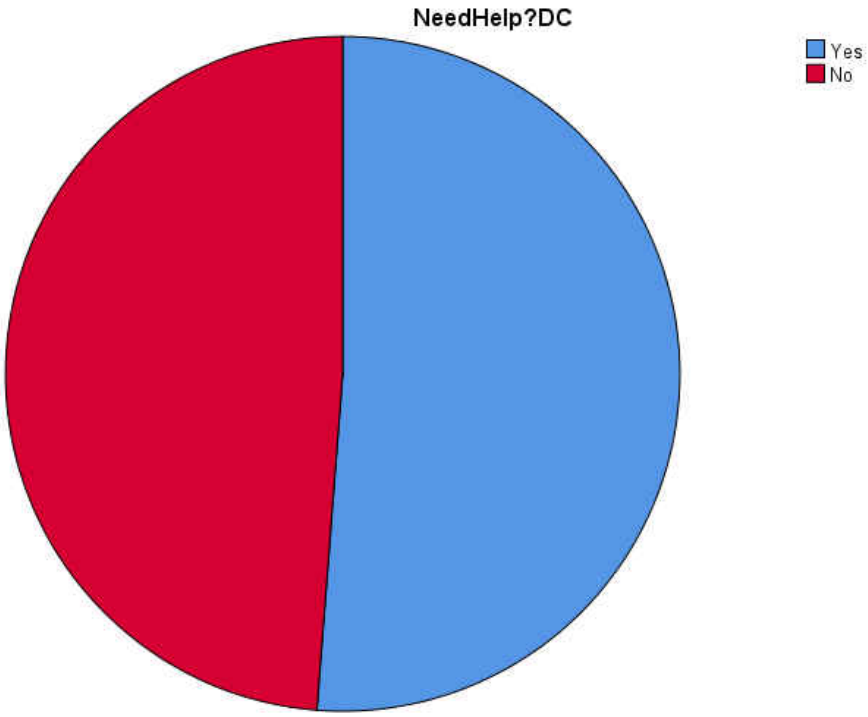

Figure 10. Discharge responses to the screening question about help. Screening question with dichotomous response *yes* or *no*. Responses to the Discharge Survey Question # 10: "During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?"

Correlations

The correlational statistics contain information about the relationships between the paired in-hospital and post-discharge variables. Included are paired correlations of the in-hospital individual preference items with the in-hospital global ratings and the post-discharge individual preference items with the post-discharge global ratings. The following is a discussion about the results from (a) nonparametric correlations performed with the Wilcoxin matched-paired signed rank test and the McNemar test, (b) parametric correlations conducted with the two-way paired *t*-test, (c) the reliability statistics of the data collection instrument's composted items that were

calculated with the Spearman's rho and the Cronbach's alpha, and (d) nonparametric and parametric comparisons between and among the study variables.

Nonparametric

Since the majority of the distributions variables' and screening questions' contained negative and positive skewing, the researcher conducted nonparametric testing statistical tests to explore for significant differences between the in-hospital and post-discharge responses on the 19-item patient satisfaction survey. The researcher compared each in-hospital measurement with the measurements from the Post-Discharge Survey for (a) the composites, (b) the individual ratings, (c) the global ratings, and (d) the dichotomous nominal screening items. Correlations with the Wilcoxon signed-ranks test revealed no significant differences between the paired variables and the ratings from each composited question. (See Tables 10 and 11.) In addition, the researcher found insignificant differences between the in-hospital and post-discharge screening items with the McNemar test, except for item # 10: "During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?" There was a significant difference between the in-hospital responses and the discharge responses ($N = 82$, $p = .008$), as shown in Table 12. Fewer participants (51%) indicated they needed assistance with elimination following discharge in comparison with participants' responses (66%) on the in-hospital survey.

Table 10

Wilcoxon Signed-Ranks Test of the Discharge Composite Ratings with the In-hospital Composite Ratings

Composites		Z	Asymp. Sig. (2-tailed)
Nursing Communication	Discharge - Inhospital	-1.229	0.219
Physician Communication	Discharge - Inhospital	-1.355	0.175
Environment Cleanliness	Discharge - Inhospital	-.941	0.347
Environment Quietness	Discharge - Inhospital	-.903	0.367
Responsiveness	Discharge - Inhospital	-.603	0.547
Pain Control	Discharge - Inhospital	-.242	0.809
Medication Communication	Discharge - Inhospital	-.225	0.822
Preferences	Discharge - Inhospital	-1.567	0.117
Global Rating	Discharge - Inhospital	-.150	0.881

Table 11

Wilcoxon Signed-Ranks Test of the Discharge Items with the In-hospital Items

Composite		Item #	Z	Asymp. Sig. (2-tailed)
Nursing Communication	Discharge - Inhospital	1	-1.155	.248
	Discharge - Inhospital	2	-.677	.499
	Discharge - Inhospital	3	-1.049	.294
Physician Communication	Discharge - Inhospital	5	-1.294	.196
	Discharge - Inhospital	6	-.758	.449
	Discharge - Inhospital	7	-1.469	.142
Responsiveness	Discharge - Inhospital	4	-.471	.637
	Discharge - Inhospital	11	-.194	.847
Pain Control	Discharge - Inhospital	13	-.577	.564
	Discharge - Inhospital	14	-.265	.791
Medication Communication	Discharge - Inhospital	17	-.707	.480
	Discharge - Inhospital	17	-.281	.779

Table 12

McNemar Test of the Nominal Screening In-hospital and Discharge Items

Nominal Responses Yes or No	#10: Need Help?	#12: Need Pain Medication?	#15: New Medication?
N	82	82	82
Exact Sig. (2-tailed)	.008	.118	.405

Parametric

The researcher performed parametric testing to test for differences between the in-hospital and post-discharge variables, even though the variable's distributions contained negative skews. The researcher based this decision upon the fact that the expected benchmarks for facilities' performances on the HCAHPS Survey exist on the higher end of the Likert-type items, which are: (a) a *4* = *Always* for items #1 – #3, #5 – #9, #11, #13 – #14, and #16 – #17, (b) a *5* = *I never pressed the call button*, (c) a *4* = *Strongly agree* for item # 18, and (d) a *9* or *10* for the global rating. In addition, the shapes of the paired distributions for the composites, the individual ratings, and the global ratings were similar, thus supporting the researcher's use of parametric tests to comparatively explore for significant differences between the sets of responses.

The researcher conducted paired two-tailed *t*-tests for each variable and found the comparisons negative for any significant differences. The variance in the degrees of freedom differed for the pain control and medication education variables because participants' responses to the screening items on either the in-hospital or discharge survey prompted omission of responses to the pain control and/or medication education composites whenever the participants selected *No* = 2. However, paired two-tailed *t*-tests for the pain control and medication screening items were insignificant for any differences. As expected, there were significant differences between the in-hospital and post-discharge paired item #10: "During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?" ($t = -2.96$, $df = 81$, $p = .004$). (See Tables 13 and 14.)

Table 13

T-Tests and Paired Sample Differences of the Composite, Individual, and Global Ratings

					95% Confidence Interval of the Difference				
		M	*SD*	Std. Error Mean	Lower	Upper	*t*	*df*	Sig. (2-tailed)
Pair 1	Nursing Communication Inhospital - Discharge	.050	.332	.037	-.023	.123	1.36	81	.177
Pair 2	MD Communication Inhospital - Discharge	.068	.406	.045	-.021	.158	1.52	81	.132
Pair 3	Environment Cleanliness Inhospital - Discharge	-.073	.644	.071	-.215	.068	-1.03	81	.306
Pair 4	Environment Quietness Inhospital - Discharge	-.085	.724	.080	-.244	.074	-1.07	81	.289
Pair 5	Responsiveness Inhospital - Discharge	-.031	.635	.070	-.170	.109	-.435	81	.665
Pair 6	Pain Control Inhospital - Discharge	-.033	.591	.087	-.208	.141	-.374	45	.710
Pair 7	Medication Communication Inhospital - Discharge	-.016	.641	.113	-.247	.216	-.138	31	.891
Pair 8	Preferences Inhospital - Discharge	.110	.629	.069	-.028	.248	1.58	81	.118
Pair 9	Global Rating Inhospital - Discharge	.037	.949	.105	-.172	.245	.349	81	.728

Table 14

T-Tests and Sample Differences of the Screening Items

					95% Confidence Interval of the Difference				
		M	*SD*	Std. Error Mean	Lower	Upper	*t*	*df*	Sig. (2-tailed)
Item #10	Need Help? Yes/No Inhospital - Discharge	-.146	.448	.049	-.245	-.048	-2.96	81	.004
Item #12	Need Pain Med? Yes/No Inhospital - Discharge	-.085	.422	.047	-.178	.007	-1.83	81	.070
Item #15	New Med? Yes/No Inhospital - Discharge	-.061	.529	.058	-.177	.055	-1.04	81	.300

The correlations from the paired *t*-tests revealed moderate to strong relationships between each paired variable, thus supporting the finding that any differences between the in-hospital and post-discharge responses were nonsignificant. Despite a lower correlation between the paired patient preferences variables, the differences were insignificant ($t = 1.58$, $df = 81$, $p = .118$). (See Table 15.)

Table 15

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Nursing Communication Inhospital - Discharge	82	.630	.000
Pair 2	MD Communication Inhospital - Discharge	82	.501	.000
Pair 3	Environment Cleanliness Inhospital - Discharge	82	.613	.000
Pair 4	Environment Quietness Inhospital - Discharge	82	.511	.000
Pair 5	Responsiveness Inhospital - Discharge	82	.662	.000
Pair 6	Pain Control Inhospital - Discharge	46	.449	.002
Pair 7	Medication Communication Inhospital - Discharge	32	.700	.000
Pair 8	Preferences Inhospital - Discharge	82	.332	.002
Pair 9	Global Rating Inhospital - Discharge	82	.684	.000

Reliability Statistics

The researcher conducted nonparametric and parametric reliability testing of the ratings for each question within each composite for both the in-hospital and post-discharge surveys. The Spearman's rho correlations of the questions within their composites revealed moderately to strong coefficients, which were most consistent between the in-hospital and post-discharge pain control and medication communication composites. All coefficients were significant with a *p* value < .001 (See Table 16). The Cronbach's alpha correlations revealed (a) strong coefficients between the items for in-hospital nursing communication and those for in-hospital pain control, (b) a weak coefficient for the discharge medication education, and (c) moderate to strong correlations between the remaining composites. (See Table 17.) The researcher already anticipated a weak coefficient for the medication education composite since she omitted an HCAHPS item due to the past tense nature of the question: "When I left the hospital, I clearly understood the purpose for taking each of my medications".

Table 16

Spearman's rho Correlations for the Composites

Composites		Survey Items		
Inhospital Nursing Communication		Inhospital #1	Inhospital #2	Inhospital #3
	Correlation Coefficient	.622	.837	.728
	Sig. (2-tailed)	.000	.000	.000
	N	82	82	82
Discharge Nursing Communication		Discharge #1	Discharge #2	Discharge #3
	Correlation Coefficient	.579	.691	.735
	Sig. (2-tailed)	.000	.000	.000
	N	82	82	82
Inhospital MD Communication		Inhospital #5	Inhospital #6	Inhospital #7
	Correlation Coefficient	.646	.776	.776
	Sig. (2-tailed)	.000	.000	.000
	N	82	82	82
Discharge MD Communication		Discharge #5	Discharge #6	Discharge #7
		.720	.799	.858
		.000	.000	.000
	N	82	82	82
Inhospital Responsiveness		Inhospital #4	Inhospital #11	
	Correlation Coefficient	.898	.875	
	Sig. (2-tailed)	.000	.000	
	N	82	82	
Discharge Responsiveness		Discharge #4	Discharge #11	
	Correlation Coefficient	.788	.938	
	Sig. (2-tailed)	.000	.000	
	N	82	82	

Table 16 (continued)

Composites		Survey Items	
Inhospital Pain Control		Inhospital #13	Inhospital #14
	Correlation Coefficient	.965	.772
	Sig. (2-tailed)	.000	.000
	N	82	82
Discharge Pain Control		Discharge #13	Discharge #14
	Correlation Coefficient	.961	.767
	Sig. (2-tailed)	.000	.000
	N	82	82
Inhospital Medication Communication		Inhospital #16	Inhospital #17
	Correlation Coefficient	.655	.963
	Sig. (2-tailed)	.000	.000
	N	82	82
Discharge Medication Communication		Discharge #16	Discharge #17
	Correlation Coefficient	.602	.949
	Sig. (2-tailed)	.000	.000
	N	82	82

Table 17

Cronbach's Alpha Correlations for the Composites

Composites	Cronbach's Alpha	Number of Items
Inhospital Nursing Communication	.819	3
Discharge Nursing Communication	.631	3
Inhospital MD Communication	.675	3
Discharge MD Communication	.744	3
Inhospital Responsiveness	.721	2
Discharge Responsiveness	.760	2
Inhospital Pain Control	.814	2
Discharge Pain Control	.745	2
Inhospital Medication Communication	.606	2
Discharge Medication Communication	.446	2

Nonparametric Comparisons Among and Between the Variables

Using the Spearman's rho, the researcher conducted correlations between and among each variable, which revealed moderate to substantial relationships between and among for most of the variables at a significant level of $p < .05$ or higher ($p < .001$). However the results of the Spearman's rho for the environmental variables in comparison with the variables for communication, medication education, preference inclusion, and the global ratings were inconsistent. In some cases the relationships were non-existent. The correlation between the

discharge environment's quietness with the in-hospital and post-discharge variables did show significant moderate to strong correlations with a p <.05 and p = .004. The correlations between the in-hospital and the post-discharge environment's cleanliness (r_s = .562, p < .000) and the in-hospital and post-discharge environment's quietness (r_s = .640, p < .000) did show moderate relationships, thus supporting the fact that these results indicate insignificant differences between the in-hospital and post-discharge ratings. The relationship between the in-hospital preferences and both of the in-hospital and post-discharge global ratings revealed a moderate relationship (r_s = .354, p = .001; r_s = .384, p < .001), which should indicate that patients were active in their care. However, the relationship between the post-discharge preference ratings and both of the global ratings reveal a non-existent relationship (r_s = 0.13, p > .05; r_s = .159, p > .05), which could explain the differences discovered in the descriptives. Thus, the participants' recall of preference inclusion faded over time without a significant effect on the global satisfaction rating. As an additional measure to look for differences between the demographic categories, the researcher used an automated program in SPSS for nonparametric comparisons of related samples with the command *explore*. The command prompted a Friedman's two-way analysis of variance that indicated insignificant differences between the in-hospital and post-discharge variables' distributions (p = .000).

Parametric Comparisons Among the Variables

The researcher used the Pearson's correlation coefficient to explore for a correlation between the in-hospital preference and global ratings and the post-discharge preference and global ratings. The relationship between the in-hospital preferences and in-hospital global ratings were significant (r = .366, p = .001). However, as anticipated, the relationship between

the discharge preferences and the discharge global ratings is non-existent, yet insignificant (r = .167, p = .113).

Summary

The researcher used nonparametric and parametric statistical testing to explore for variances between the in-hospital and post-discharge variables. Both types of tests revealed insignificant differences between the test variables, despite differing responses on the surveys' items. Even though the mode and median (mode = 3, M = 3) for the discharge variable, preference inclusion, differed from the in-hospital preference inclusion variable (mode = 4, M = 4), these differences were insignificant. However, the researcher found significant differences between the in-hospital and post-discharge nominal screening questions inquiring whether the participants needed assistance to the bathroom for item #10. The reasoning behind these differences could be related to (a) the memory gap affected patients' perceptions following discharge, where the participants used the more slower logical and methodical thinking from *System II* (Kahneman's Thinking Fast and Slow Theory) and associated this question with the word *bedpan* and/or (b) the participants reacted automatically to the internal and external influences (unconscious thinking from *System I*) and the interacting and facilitating forces of Comfort Theory because nurses were a physical presence during the in-hospital survey.

CHAPTER 5

DISCUSSION

This chapter provides an explanation and culmination of the study's findings. Although the researcher used a descriptive correlational quantitative design to collect and analyze the data to explore for significant differences between patients' perceptions of their hospital experiences during and post hospitalization, the researcher has some notable observations of occurrences during data collection that warrant discussion. Included are this study's significance to nursing science and future nursing research about patient-centered care, patients' comfort needs, and the comfort care that nurses provide, so patients may attain the most optimal state of enhanced comfort.

Study Modifications for IRB Approval

The primary purpose of the study was to explore the effects of the two-week memory-gap on patients' perceptions of patient-centered care during hospitalization and post discharge. The researcher used a 19-item survey that contained items from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey to query patients (a) face-to-face at the bedside and (b) via telephone post discharge. Due to tighter restraints that enhance effective cyber security and compliance with the proper handling of patients' protected health information (PHI), the researcher made adjustments to the original proposal.

Initially, the researcher had planned to conduct a randomized participant recruitment process by accessing the electronic medical records (EMR) of patients admitted to the cardiac and intensive care step-down units (SDU) at the study site. In the original proposal, the

researcher planned to screen participants for inclusion/exclusion criteria and alternating even and odd numbered rooms every other day. The researcher also envisioned a data collection process where enrolled participants would access the electronic in-hospital surveys via a mobile device, such as an iPad or the participants' smart phones. During the process of obtaining internal review board (IRB) approval from the IRBs of the study site and East Tennessee State University (ETSU), new regulations denied the researcher access to each potential patient participant, as well as the EMR. As a derivative of the federal regulations that protect participants' privacy and their PHI to the highest standard, the researcher complied and changed the methods for participant recruitment and data collection. Instead of the researcher approaching and screening potential participants for recruitment, the study site's charge nurses recruited participants. These circumstances subsequently imposed a convenience sampling process.

In addition, there were some initial technology issues: (a) a requirement for the researcher to use an encrypted computer and (b) connectivity to the electronic surveys. So, the researcher conducted the in-hospital surveys using paper copies. To be consistent, the researcher used paper copies for all of the in-hospital surveys. Most of the participants requested the researcher to read the questions to them and asked the researcher to manually record their responses. This method was consistent with the post-discharge surveys in which the researcher read the questions via phone conversations and documented participants' responses. The researcher accessed the electronic in-hospital and post-discharge surveys housed by Checkbox Survey and entered all responses from the in-hospital and post-discharge surveys. As a result of the researcher's commentary and interactions with the participants, the researcher discovered some valuable incidental findings from observations during the informed consent and surveying processes.

Findings and the Benefits of Study Modifications

The researcher's observations from this study provide an invaluable insight into the perceptions and expectations of patients. The incidental notations observed during the data collection process correlate with the philosophy and the concepts of Comfort Theory. This ancillary information underlines the operational variables of the patient-centered care and the comfort interventions that help patients attain relief, ease, and transcendence. The incidental observations are next, as they affect participants' responses to the quantitative data collection instrument.

Incidental Observations

Many participants expressed the expectation that nurses should be proactive and anticipate their basic needs. Several patients, who were (a) voiding into containers for accurate fluid intake and output tracking and/or (b) using a bedside commode due to an inability to ambulate to the bathroom, expected nurses to empty the elimination containers independently and promptly, without any requests from the patients. In one case, an individual verbalized the desire for nurses to help with simple things like a face wash in the morning and assistance with showering without patient prompting, which supports that patients expect nurses to predict and address needs that facilitate enhanced comfort. Some participants went further to say that they expected nurses to attend to their needs before they used their call buttons, which operationalizes an assumption from Comfort Theory where nurses (a) use a determined and deliberate process to ensure that they identify all comfort care needs across the physiological, psychospiritual, sociocultural, and environmental domains and (b) implement comfort care interventions that focus directly on those needs. The researcher measured this concept with item #4: "During this

hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it?" *I never pressed the call button* = 5 was one of the responses to the question. Five individuals (6.1%) selected *I never pressed the call button* on the in-hospital survey and ten individuals (12.2%) selected this response on the post-discharge survey.

Other comments from the participants indicated that they had difficulty distinguishing between *Usually* = 3, and *Always* = 4, especially whenever their hospital stays were greater than one day. Many participants even answered "usually-always". For some with extended stays (average length of stay of was close to 4 days: $M = 3.39$, Mode = 1, Median = 2), *usually* was a more realistic response than *always* when participants responded to questions about responsiveness and the environment's quietness and cleanliness. Most of the participants expressed an understanding that their nurses cared for other patients with a realization that there might be times where there was a justifiable rationale if participants had to wait for assistance when needed. One participant indicated that a 15-minute wait for help was a reasonable amount of time. Another individual was reluctant to answer item #4: "During this hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it?" That participant was fearful that the nurses might suffer punitive consequences if the individual selected a low number on the Post-Discharge Survey. The researcher encouraged the participant to answer candidly and that the results were non-traceable to the nurses and participants. Nevertheless, the researcher found no common patterns between the participants with shorter length of stay (LOS) versus a longer LOS. Any differences between responses on the in-hospital and post-discharge surveys were insignificant.

Other items that were difficult for participants to answer were items #16: "Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?" and

#17: “Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?” Participants often could not recall whether they were taking any new medications. However, the responses to these items on the in-hospital and post-discharge surveys were similar without any significant differences.

Another item that posed difficulty for participants was how to address item #9 truthfully without imposing a negative mark against the nurses (“During this hospital stay, how often was the area around your room quiet at night?”). Many patients illustrated an appreciation that their floors admitted multiple patients during the night-time hours and that there were patients with a disoriented mental status. The participants often stated, that although the environment was noisy, the nurses were non-liable for other individuals’ conduct.

The question that posed the most difficulty was item # 18: “During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left.” Most participants asked the meaning of this question on the in-hospital and post-discharge surveys. Although this question addresses a component in the shared-decision making process, the researcher concluded that a majority of the participants in the sample failed to comprehend this question addressed whether participants were active in their care. Scoring for this item was lower on the post-discharge survey, but the results were insignificant between the paired variables.

Another interesting phenomenon was how participants used words and/or phrases to describe their experiences: *great, wonderful, this is the best hospital, they took such great care of me, they were so kind to me and my family,* and *they answered my call light immediately.* Yet, some participants who viewed their care as *the best possible* selected an *8* on the global ratings.

Fourteen individuals (17.1%) selected an *8* on the in-hospital global rating and thirteen individuals (15.9%) selected an *8* on the post-discharge survey.

One more remarkable finding was that most patients did not associate the bathroom with the bedside commode (BSC) in item # 10: "During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?" Since the term *bedside commode* is missing from this item, the researcher had to clarify that this question addressed BSC. Often, participants would initially answer no because s/he denied using a bedpan or ambulating to the bathroom. This could explain why nearly 66% of the respondents indicated they needed assistance on the In-Hospital Survey while the number dropped to 51% of the participants who needed assistance on the Post-Discharge Survey, which were significantly different.

Quantitative Results

Although only two individuals selected the same responses on the in-hospital and post-discharge surveys, the differences between the paired in-hospital and post-discharge study variables with nonparametric and parametric testing were insignificant with an alpha level of .05 and in many cases at .001. However, correlation testing indicated that there were significant differences in the strength of the relationship between the in-hospital preference inclusion and the global ratings ($r = .366$, $p = .001$) in comparison to the relationship between the post-discharge preference inclusion and the global ratings ($r = .167$, $p = .113$). Thus, the recollection of preference inclusion made no effect on participants' global ratings of their hospital experiences. A nonparametric comparison of the relationship between the post-discharge preference ratings and both of the in-hospital and post-discharge global ratings revealed a non-

existent relationship, as measured with the Spearman's rho ($r_s = 0.13$, $p > .05$; $r_s = .159$, $p > .05$). Hence, the sample's perception of preference inclusion post discharge made no impact on the in-hospital and discharge global ratings. However, the researcher felt that participants failed to fully comprehend item #18: "During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left", which could explain the rationale for these differences or that the participants in the sample felt short of an active role in the shared decision making.

As discussed, there were significant differences between the nominal dichotomous screening item # 10: "During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?", which might be related to the wording of the question where *bedside commode* is absent from the survey. The paired *t*-test (Table 14 in Chapter 4) illustrated significant changes between the in-hospital responses in comparison with the post-discharge response ($t = -2.96$, $df = 81$, $p = .004$), where 66% of the participants indicated that they needed assistance from nurses with elimination on the in-hospital survey in comparison to the 51% of participants who replied to this item on the post-discharge survey. The nonparametric comparison (Table 12 in Chapter 4) revealed similar results with the two-tailed McNemar test ($N = 82$, $p = .008$).

With the Cronbach's alpha, the researcher found a weak coefficient for the discharge medication education composite. As already described in *Chapter Four,* the omission of the past tense HCAHPS item from the medication education composite ("When I left the hospital, I clearly understood the purpose for taking each of my medications") could have impacted the correlation between items #16: "Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?" and #17: Before giving you any new medicine, how

often did hospital staff describe possible side effects in a way you could understand?" However, as evident from the researcher's observations, the weak correlation may be related to a difficulty in recalling whether there were new medications added to an already cumbersome medication regimen. For this composite, memory faded over time, as indicated in Kahneman's (2011) Thinking Fast and Slow Theory.

Sample

This study contained participants who met the inclusion criteria according to their admission diagnoses, without the researcher's knowledge of their assigned diagnostic related groups (DRGs). DRGs are the key diagnoses codes that coders assign to patients post-discharge for appropriate reimbursement as deemed by the Centers for Medicare and Medicaid Services (CMS). Since coders allocate DRGs post discharge following a thorough review of patients' events over the course of their admissions, the researcher was unaware of how the DRGs would culminate for each participant. In addition, patients admitted into an acute care setting have two different types of admission categories, which are either an inpatient or observation status. The different classifications also affect reimbursement. The CMS considers only those patients with an inpatient status as eligible for participation in the HCAHPS Surveys. However, the knowledge of whether the sample of participants were inpatient versus observation (which can change post discharge during the chart review) was unknown to the researcher. Therefore, researcher more than likely surveyed a combination of patients with an inpatient or observational status.

As mentioned in *Chapter Four*, the sample of 82 participants were primarily female and Caucasian. The mean age was 60.27 with a range between 26 and 93. There were multi modes,

ages 54, 65, and 76, thus placing most of the patients between these ages. About 80% were educated at the high school or college level. Each participant illustrated a sincere dedication and responsibility to contribute to the study as each individual carefully listened to the questions and provided thoughtful and purposeful responses to the questions for both the in-hospital and post-discharge surveys. This commitment may be related in part due to the relationship that the researcher formed at the bedside during the in-hospital survey and the relationships with the nurses involved with recruitment. Other plausible reasons for the participants' dedication could be due to their level of education and/or desire to contribute to the study.

Implications and Significance to Nursing and Future Nursing Research

This study supports that nurses are key agents who influence the facilitating and interacting forces that affect patients' perceptions of their hospital experiences. The mean scores, modes, and medians awarded for nursing communication, responsiveness, pain control, environmental cleanliness and quietness, and global satisfaction illustrate how important the simple elements of nursing affect patients' perceptions and the memories of their in-hospital experiences. In addition, the participants' statements confirm the assertions from Comfort Theory and that patients value when nurses implement individualized actions that facilitate enhanced comfort. However, the differences between (a) the in-hospital and post-discharge results of the dichotomous *yes/no* nominal item about whether patients' regimens included new medications and (b) the median and mode for the post-discharge preferences inclusion seem to indicate that nurses need to (a) discuss patients' medications more often, (b) encourage patients to participate in shared decision making, and (c) openly ask what preferences their patients have.

At this point, the researcher believes that other similar studies are non-existent. Thus, replications with a randomized sample selection are indicated to validate these findings in other acute care facilities. Also, if possible, a study that explores all patients' perceptions of their hospital experiences on the day of discharge and with a randomized sample selection for the post-discharge survey would be beneficial.

Recommendations

The participants' comments, and difficulty that patients often experienced while attempting to distinguish between *usually* and *always,* indicate perhaps that the HCAHPS Survey needs a clarification with these responses, such as a legend that explains how to use *never, sometimes, usually,* and *always*. *Always* in most participants' minds implied that the nurses and personnel met the criteria for the designated item 100% of the time, which is unrealistic with high patient-to-nurse ratios. The participants who selected *usually* verbalized an appreciation that their nurses cared for several other patients. Most participants stated that their nurses were "great" and/or "wonderful", even when they selected *usually.*

Since the differences between the in-hospital and post-discharge variables were insignificant and the HCAHPS methodology suggests that facilities achieve 300 completed surveys per year, a way to capture the data might be to conduct surveys on the day of discharge, provided that this process causes no delay with discharge. The independent companies who already conduct the post-discharge HCAHPS surveys could instead send a surveyor/s to randomly select participants for the HCAHPS Survey at the bedside. Also, given that nurses use the same standards to deliver patient-centered comfort care to all patients, the sample of patients should include those in observation status, rather than limiting the sample to those with assigned

DRGs. After all, the nurses are expending the same resources to this population and as a whole, the results could reveal areas for improvement that affect all patients. The researcher plans to communicate these suggestions and the observational findings to the HCAHPS Project Team.

Limitations

The sample contained homogeneousness characteristics with regards to race, gender, and county. The sample selection process was a non-randomized via a convenience method where the charge nurses conducted a screening process for recruitment. The researcher is unable to validate that all patients were given a chance to participate or decline. Since the researcher had no access to PHI, the researcher is unable to determine the characteristics and numbers of the patients who declined.

Summary

Although the researcher anticipated significant changes between responses to an in-hospital survey and an identical survey at two week post discharge, the statistical analyses indicate inconsequential effects of the memory gap on in-hospital and two-week post-discharge perceptions of patient-centered care and the hospital experience. The data support the assertions of Comfort Theory, where a respectful demeanor and prompt responsiveness opens the door for a therapeutic patient-nurse-family relationship. Purposeful interactions that seek to identify the total patient-family's needs and a sincere, proactive, anticipatory responsiveness to the patient-family's comfort deficits yields positive patient-perceptions and effective patient-centered care.

REFERENCES

Agency for Healthcare Research and Quality. (2002). Expanding patient-centered care to empower patients and assist providers. *Research in Action,* (Issue No. 5). Retrieved from http://www.ahrq.gov/research/findings/factsheets/patient-centered/ria-issue5/index.html#Questionnaires

Agency for Healthcare Research and Quality. (2014). *National quality healthcare report 2013,* (AHRQ Publication No. 14-0005). Retrieved from http://www.ahrq.gov/research/findings/nhqrdr/index.html

Aiken, L. H., Cimiotti, J. P., Sloane, D. M., Smith, H. L., Flynn, L., & Neff, D. F. (2011). Effects of nurse staffing and nurse education on patient deaths in hospitals with different work environments. *Medical Care, 49*(12), 1047-1053.

Aiken, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., Griffiths, P., Busse, R., … Sermeus, W. (2014). Nurse staffing and education and hospital mortality in nine European countries: A retrospective observational study. *The Lancet, 383,* 1824-1830.

Aiken, L. H., Sloane, D. M., Cimiotti, J. P., Clarke, S. P., Flynn, L. P., Seago, J. A,… Smith, H. L. (2010). Implications of the California nurse staffing mandate for other states. *Health Services Research*, *45*(4), 905–921. doi:10.1111/j.1475-6773.2010.01114.x

Avatar. (2014). HCAHPS surveys: Response rates, demographics, and performance. Retrieved from http://cdn2.hubspot.net/hub/249362/file-1678371031-pdf/HCAHPS_Surveys_-_Response_Rates_Demographics

Balint, E. (1968). *The possibilities of patient-centered medicine*. Paper presented at the symposium conducted at the American Psychiatric Association, New Orleans, LA.

Balint, E. (1969). The possibilities of patient-centered medicine. *The Journal of the Royal College of General Practitioners, 17,* 269-274.

Becker, C. A. (2014). *Patient perceptions of bedside shift report: A qualitative case study* (Doctoral dissertation). Available from ProQuest Dissertations and Theses Global database (UMI No. 3691427)

Campbell, J. C. & Bunting, S. (1999). Voice and paradigms: Perspectives on critical and feminist theory in nursing. In E. C. Polifroni & M. Welch (Eds.), *Perspectives on philosophy of science in nursing* (Section 5, Reading 32, pp. 411-422). New York City, NY: Lippincott

Carnevale, F. A. (2013). Charles Taylor: Hermeneutics and social imaginaries: A framework for ethics research. *Nursing Philosophy, 14,* 86-95.

Centers for Medicare and Medicaid Services. (2013, August). *Federal register: Part II, 78*(160), 50495–51040.

Centers for Medicare and Medicaid Services. (2017). *Hospital value-based purchasing*. Retrieved from https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/Hospital_VBPurchasing_Fact_Sheet_ICN907664.pdf

Center for Patient Safety. (2015). *About the center for patient safety.* Retrieved from http://www.centerforpatientsafety.org/about-us/

Clementi, P. S. (2006). *Patient expectations during health care encounters theory: A grounded theory study* (Unpublished doctoral dissertation). Loyola University, Chicago IL. (UMI Number: 3229775)

Clipper, C. L. (2015). *Behavioral engagement with pure presence in patient-provider relationships: Communication and the effect on patients and providers* (Doctoral dissertation). Available from ProQuest Dissertations and Theses Global database (UMI No. 3688232)

Committee on the Health Professions Education Summit, Institute of Medicine. (2003). *Health professions education: A bridge to quality*. Washington, D.C.: National Academy Press. doi: 10.17226/10681

Committee on the National Quality Report on Health Care Delivery, Institute of Medicine. (2001). *Envisioning the national health care quality report.* Washington, D.C.: National Academy Press. Retrieved from http://www.nap.edu/catalog.php?record_id=10073

Committee of Presidents of Statistical Societies. (2012). *Statistical issues in assessing hospital performance.* Retrieved from https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/Downloads/Statistical-Issues-in-Assessing-Hospital-Performance.pdf

Committee on Quality of Health Care in America, Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, D.C.: National Academy Press. Retrieved from http://www.nap.edu/catalog.php?record_id=10027

Committee on the Robert Wood Johnson Foundation, Institute of Medicine. (2011). *The future of nursing: Leading change, advancing health.* Washington, D.C.: National Academy Press. Retrieved from http://www.thefutureofnursing.org/IOM-Report

Conway, J., Johnson, B., Edgman-Levitan, S., Schlucter, J., Ford, D., Sodomka, P., & Simmons, L. (2006). *Partnering with patients and families to design a patient- and family-centered health care system: A roadmap for the future. A work in progress.* Bethesda, MD/Cambridge, MA: Institute for Family- Centered Care/Institute for Healthcare Improvement.

Day, D. (2014). *Postpartum patient teaching success: Implications from nursing and patient perspectives* (Doctoral dissertation). Available from ProQuest Dissertations and Theses Global database (UMI No. 3624269)

Department of Health and Human Services, Centers for Medicare and Medicaid Services, Medical Learning Network. (2013). *Acute care hospital inpatient prospective payment system*. Available from Centers for Medicare and Medicaid Services website: http://www.cms.gov/

Department of Health and Human Services. (2015, October). *Survey of hospital experiences.* Available from https://www.medicare.gov/hospitalcompare/profile.html#profTab=1&ID=440175&cmprID=440175&dist=100&loc=38464&lat=35.3208843&lng=-87.5000082&cmprDist=14.9&Distn=14.9

Drayton, N., & Reddy, D. (2014). How an active learning initiative identified shared decision making as a key influence in patient care. *International Practice Development Journal, 4*(2), 1-10.

DuBois, S. (2013, August 19). Vanderbilt University Medical Center layoffs spark lawsuit. *The Tennessean.* Retrieved from http://archive.tennessean.com/article/20130820/BUSINESS05/308200022/Vanderbilt-University-Medical-Center-layoffs-spark-lawsuit

Elliott, M. N., Kanouse, D. E., Edwards, C. A., & Hilborne, L. H. (2009). Components of care vary in importance for overall patient-reported experience by type of hospitalization. *Medical Care, 47*(8), 842–851.

Elliott, M. N., Lehrman, W. G., Goldstein, E., Giordano, L. A., Beckett, M. K., Cohea, C. W., & Cleary, P. D. (2010). Hospital survey shows improvements in patient experience. *Health Affairs, 29*(11), 2061 – 2067. doi:10.1377/hlthaff.2009.0876

Elliott, M. N., Lehrman, W. G., Goldstein, E., Hambarsoomian, K., Beckett, M. K., & Giordano, L. A. (2010). Do hospitals rank differently on HCAHPS for different patient subgroups? *Medical Care Research and Review, 67*(1), 56-73. doi:10.1177/1077558709339066

Elliott, M. N., Zaslavsky, A. M., Goldstein, E., Lehrman, W., Hambarsoomian, K., Beckett, M. K., & Giordano, L. (2009). Effects of survey mode, patient mix, and nonresponse on CAHPS hospital survey scores. *Health Research and Educational Trust, 44*(2), 501-518. doi:10.1111/j.14756773.2008.00914.x

Ely, E. W. (2002). Assessment of ICU Delirium: Confusion assessment method ICU worksheet. In R. L. Wilkins, J. R. Dexter, & A. J. Heurer (Eds.), C*linical assessment in respiratory care* (6th ed.). (Neuro Assessment. Chapter 6, pp. 95-116). St. Louis, MO: Mosby Elsevier.

Fredrickson, B. L., & Kahneman, D. (1993). Duration neglect in retrospective evaluations of affective episodes. *Journal of Personality & Social Psychology, 65*(1), 45-55.

Gamble, M. (2012, August 22). Saint Thomas Health in Tennessee cuts 150 positions. *Becker's Hospital Review.* Retrieved from http://www.beckershospitalreview.com/hospital-management-administration/saint-thomas-health-in-tennessee-cuts-150-positions.html

Giordano, L. A., Elliott, M. N., Goldstein, E., Lehrman, W. G., & Spencer, P. A. (2010). Development, implementation, and public reporting of the HCAHPS Survey. *Medical Care Research and Review, 67*(1), 27-37.

Goldstein, E., Elliott, M. N., Lehrman, W. G., Hambarsoomian, K., & Giordano, L. A. (2010). Racial/ethnic differences in patients' perceptions of inpatient care using the HCAHPS survey. *Medical Research and Review, 67*(1), 74-92. doi: 10.1177/1077558709341066

Goldstein, E., Farquhar, M., Crofton, C., Darby, C., & Garfinkel, S. (2005). Measuring hospital care from the patients' perspective: An overview of the CAHPS hospital survey development process. *Health Services Research, 40*(6), 1977-1995. doi:10.1111/j.1475-6773.2005.00477.x

Green, E. (2015, July). Human genomics, precision medicine initiative, and advancing human health. In *NINR big data in symptoms research methodologies boot camp.* Symposium conducted at the National Institute of Nursing Research, Bethesda, MD.

Hospital Consumer Assessment of Healthcare Providers and Systems. (2013, August). *HCAHPS fact sheet*. Baltimore, MD: Centers for Medicare & Medicaid Services (CMS).

Hospital Consumer Assessment of Healthcare Providers and Systems. (2014, March). *Survey instruments*. Baltimore, MD: Centers for Medicare & Medicaid Services (CMS).

Hospital Consumer Assessment of Healthcare Providers & Systems. (2015, June). *HCAHPS fact sheet*. Baltimore, MD: Centers for Medicare & Medicaid Services (CMS).

Hospital Consumer Assessment of Healthcare Providers and Systems. (2016, March). *HCAHPS survey.* Retrieved from http://hcahpsonline.org

Hospital Consumer Assessment of Healthcare Providers and Systems. (2016, December). *Patient-mix coefficients for December 2016 (2Q15 through 1Q16 Discharges). Publicly reported HCAHPS results.* Retrieved from http://www.hcahpsonline.org/globalassets/hcahps/mode-patient-mix-adjustment/2016-12_mode_patient_mix_adj_pma.pdf

Institute for Healthcare Improvement. (2016). Overview. *Person- and family-centered care.* Retrieved from http://www.ihi.org/Topics/PFCC/Pages/Overview.aspx

Institute for Patient- and Family-Centered Care. (2010). *Patient- and family-centered care.* Retrieved from http://www.ipfcc.org

Institute of Medicine. (1999). *To err is human: Building a safer health system*. (Report Brief). Retrieved from http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/1999/To-Err-is-Human/To%20Err%20is%20Human%201999%20%20report%20brief.pdf

Institute of Medicine (2004). *Health literacy: A prescription to end confusion*. Washington, DC: Institute of Medicine, Board on Neuroscience and Behavioral Health, Committee on Health Literacy.

Institute of Medicine. (2010). *The future of nursing: Leading change, advancing health* (Report Brief). Retrieved from http://iom.nationalacademies.org/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx.

Institute of Medicine. (2011). *The future of nursing: Leading change, advancing health.* Washington DC: The National Academies Press.

Interprofessional Education Collaborative Expert Panel. (2011). *Core competencies for interprofessional collaborative practice.* Washington, DC: Interprofessional Education Collaborative. Retrieved from http://www.aacn.nche.edu/education-resources/IPECReport.pdf

Jasovsky, D. A., Morrow, M. R., Clementi, P. S., & Hindle, P. A. (2010). Theories in action and how nursing practice changed. *Nursing Science Quarterly, 23*(1), 29-38. doi:10.1177/0894318409353806

Jha, A. K., Orav, J., Zheng, J., and Epstein, A. M. (2008). Patients' perception of hospital care in the United States. *New England Journal of Medicine, 359,* 1921-1931. doi:10.1056/NEJMsa0804116

Johnson, B., Abraham, M., Conway, J., Simmons, L., Edgman-Levitan, S., Sodomka, P., . . . Ford, D. (2008). *Partnering with patients and families to design a patient- and family-centered health care system: Recommendations and promising practices*. Bethesda, MD: Institute for Family-Centered Care.

Kahneman, D. (2011). *Thinking fast and slow.* New York City, NY: Farrar, Straus and Giroux.

Kellar, S. P. & Kelvin, E. A. (2013). *Munro's statistical methods for health care research* (6th ed.). New York, NY: Wolters Kluwer/Lippincott Williams & Wilkins.

Kemp, S., Burt, C. D. D., & Furneaux, L. (2008). A test of the peak–end rule with extended autobiographical events. *Memory & Cognition, 36*(1), 132 – 138. doi:10.3758/MC.36.1.1

Kohn, L. T., Corrigan, J. M., & Donaldson, M. S. (Eds.). Committee on Quality of Health Care in America, Institute of Medicine. (2000). *To Err is human: Building a safer health system.* Washington, D.C.: National Academy Press. Retrieved from http://www.nap.edu.

Kolcaba, K. (2001). Evolution of the mid range theory of comfort for outcomes research. *Nursing Outlook, 49*(2), 86-92. doi:10.1067/mno.2001.110268

Kolcaba, K. (2003). *Comfort theory and practice: A vision for holistic health care and research.* New York City, NY: Springer.

Kolcaba, K. & Steiner, R. (2000). Empirical evidence for the nature of holistic comfort. *Journal of Holistic Nursing, 18*(1), 46-62.

Kolcaba, K., Tilton, C., & Drouin, C. (2006). Comfort theory: A unifying framework to enhance the practice environment. *The Journal of Nursing Administration, 36*(11), 538-544. Retrieved from http://thecomfortline.com/files/pdfs/

Kolcaba, K. Y. (1991). A taxonomic structure for the concept comfort. *Journal of Nursing Scholarship, 23*(4), 237-240. Retrieved from http://thecomfortline.com/files/pdfs/

Kolcaba, K. Y. (1992). Holistic comfort: Operationalizing the construct as a nurse-sensitive outcome. *Advances in Nursing Science, 15*(1), 1-10. Retrieved from http://thecomfortline.com/files/pdfs/

Kolcaba, K. Y. (1995). The art of comfort care. *Journal of Nursing Scholarship, 27*(4), 287-289. Retrieved from http://thecomfortline.com/files/pdfs/

Kostovich, C. T., & Clementi, P. S. (2014). Nursing presence. *Journal for Nurses in Professional Development, 2,* 70-75. doi:10.1097/NND.0000000000000045

Kutner, M., Greenberg, E., Jin, Y., & Paulsen, C., U.S. Department of Education. (2006). *The health literacy of America's adults: Results from the 2003 national assessment of adult literacy* (NCES Publication No. 2006-483). Washington, DC: National Center for Education Statistics.

Lehrman, W. G., Elliott, M. N., Goldstein, E., Beckett, M. K., Klein, D. J., & Giordano, L. A. (2010). Characteristics of hospitals demonstrating superior performance in patient

experience and clinical process measures of care. *Medical Care Research and Review, 67*(1), 38-55. doi:10.1177/1077558709341323

Lipkin, M., Quill, T. E., & Napodano, R. J. (1984). The medical interview: A core curriculum for residencies in internal medicine. *Annals of Internal Medicine, 100,* 277-284.

McCarthy, B. (2006). Translating person-centred care: A case study of preceptor nurses and their teaching practices in acute care areas. *Journal of Clinical Nursing, 15,* 629-638.

Mead, N., & Bower, P. (2000). Patient-centredness: A conceptual framework and review of the empirical literature. *Social Science & Medicine, 51,* 1087-1110.

Meredith Corporation. (2012, September 4). *St. Thomas cuts 150 hospital jobs in Nashville.* Retrieved from http://www.wsmv.com/story/19334658/st-thomas-cuts-150-hospital-jobs-in

Miron-Shatz, T., Stone, A., & Kahneman, D. (2009). Memories of yesterday's emotions: Does the valence of experience affect the memory-experience gap? *Emotion, 9*(6), 885-891. doi:10.1037/a0017823

National Institute of Nursing Research. (2015, August). *Precision medicine and NINR-supported nursing science.* Retrieved from http://www.ninr.nih.gov/researchandfunding/precisionmedicine#.VjWdabkm5o

Nightingale, F. (1970). *Notes on nursing: What it is, and what it is not.* London and Edinburgh, Great Britain: Brandon/Systems Press. (Reprinted from *Notes on nursing: What it is, and what it is not,* pp. 1-136, by Nightingale, F. 1860, London, England: Harrison and Sons.)

Peterson, K. S. (2009). *Measuring hospital climate for the delivery of patient- and family-centered care* (Unpublished doctoral dissertation). Brandeis University, The Heller School for Social Policy and Management, Brandeis University, Boston, MA. (Order No. AAI3355654.)

Picker Institute. (2013). *Principles of patient-centered care.* Retrieved from http://pickerinstitute.org/about/picker-principles/

Pipe, T. B., Conner, K., Dansky, K., Schraeder, C., & Caruso, E. (2005). Perceived involvement in decision-making as a predictor of decision satisfaction in older adults. *Southern Online Journal of Nursing Research, 4*(6), 1-13. Retrieved from www.snrs.org

Planetree. (2014). *Your partner in patient-centered care.* Retrieved from http://planetree.org/

Polit, D. (2010). *Statistics and data analysis for nursing research* (2nd Ed). Upper Saddle River, NJ: Pearson Education.

Puetz, B. E. (2011). Editorial: The Institute for Medicine report…Our future is now. *Journal for Nurses in Staff Development, 27*(2), 53.

Quality and Safety Education for Nurses. (2005). *Press release: Phase I.* Retrieved from http://qsen.org/about-qsen/project-overview/project-phases/

Quality and Safety Education for Nurses. (2012). Endnote session. In *Innovation to transformation 2012 QSEN national forum.* QSEN, Tuscan, AZ.

Quality and Safety Education for Nurses Institute. (2014a). The evolution of the quality and safety education for nurses (QSEN) initiative. In *Project overview.* Retrieved from http://qsen.org/about-qsen/project-overview/

Quality and Safety Education for Nurses Institute. (2014b). Pre-licensure KSAs: Patient-centered care. *Competencies.* Retrieved from http://qsen.org/competencies/pre-licensure-ksas/

Radwin, L. E. (2003). Cancer patients' demographic characteristics and ratings of patient-centered nursing care. *Journal of Nursing Scholarship, 35*(4), 365-370. doi:10.1111/j.1547-5069.2003.00365.x

Rau, J. (2013, August 2). Medicare readmission penalties by hospital (Year 2). *Kaiser Health News.* Retrieved from http://www.kaiserhealthnews.org/Stories/2013/August/02/readmission-penalties-medicare-hospitals-year-two.aspx

Redelmeier, D. A., & Dickinson, V. M. (2011). Determining whether a patient is feeling better: Pitfalls from the science of human perception. *Journal of Internal Medicine, 26*(8), 900-906. doi:10.1007/s11606-011-1655-3

Robertson, R. (2013, August 28). Baptist Health Care announces new round of Memphis layoffs. *Memphis Business Journal.* Retrieved from http://www.bizjournals.com/memphis/news/2013/08/28/baptist-health-care-announces-new.html

Rogers, C. R. (1961). *On becoming a person*. New York City, NY: Houghton Mifflin.

Stein, S. M., Day, M., Karia, R., Hutzler, L., & Bosco, J. A. (2015). Patients' perceptions of care are associated with quality of hospital care: A survey of 4605 hospitals. *American Journal of Medical Quality, 30*(4), 382-388. doi:10.1177/1062860614530773

Stewart, M., Brown, J. B., Weston, W., McWhinney, I., McWilliam, C., & Freeman, T. (1995). *Patient-centered medicine: Transforming the clinical method.* London, England: Sage.

Weaver K., & Olson, J. (2006). Understanding paradigms for nursing research. *Journal of Advanced Nursing, 53*(4), 459-469.

Wright, G., Causey, S., Dienemann, J., Guiton, P., Coleman, F. S., & Nussbaum, M. (2013). Patient satisfaction with nursing care in an urban and suburban emergency department. *Journal of Nursing Administration*, *43*(10), 502-508. doi: 10.1097/NNA.0b013e3182a3e821

APPENDICES

Appendix A

In-Hospital and Post-Discharge Patient Survey

SURVEY INSTRUCTIONS

Please answer all the questions by clicking the box that best matches your experience.

You are sometimes told to skip over some questions in this survey. When this happens the survey will automatically advance you the next meaningful question like this:

- ❑ [1]Yes
- ❑ [2]No. If No, the survey will automatically advance to Question #_.

All information that would allow someone to identify you or your family will be kept private.

1. During this hospital stay, how often did nurses treat you with courtesy and respect?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

2. During this hospital stay, how often did nurses listen carefully to you?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

3. During this hospital stay, how often did nurses explain things in a way you could understand?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

4. During this hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always
- ❑ [5]I never pressed the call button

5. During this hospital stay, how often did doctors treat you with courtesy and respect?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

6. During this hospital stay, how often did doctors listen carefully to you?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

7. During this hospital stay, how often did doctors explain things in a way you could understand?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

8. During this hospital stay, how often were your room and bathroom kept clean?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

9. During this hospital stay, how often was the area around your room quiet at night?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

10. During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?

- ❑ [1]Yes
- ❑ [2]No. If No, the survey will automatically advance to Question #12

11. How often did you get help in getting to the bathroom or in using a bedpan as soon as you wanted?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

12. During this hospital stay, did you need medicine for pain

- ❑ [1]Yes
- ❑ [2]No. If No, the survey will take you to Question #15

13. During this hospital stay, how often was your pain well controlled?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

14. During this hospital stay, how often did the hospital staff do everything they could to help you with your pain?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

15. During this hospital stay, were you given any medicine that you had not taken before?

- ❑ [1]Yes
- ❑ [2]No. If No, the survey will take you to Question #18

16. Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

17. Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?

- ❑ [1]Never
- ❑ [2]Sometimes
- ❑ [3]Usually
- ❑ [4]Always

18. During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left.

- ❑ [1]Strongly disagree
- ❑ [2]Disagree
- ❑ [3]Agree
- ❑ [4]Strongly Agree

19. Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would you use to rate this hospital?

- ❑ [0] 0 Worst hospital possible
- ❑ [1] 1
- ❑ [2] 2
- ❑ [3] 3
- ❑ [4] 4
- ❑ [5] 5
- ❑ [6] 6
- ❑ [7] 7
- ❑ [8] 8
- ❑ [9] 9
- ❑ [10]10 Best hospital possible

Appendix B

Inclusion and Exclusion Criteria for the Charge Nurse/Nurse Manager

Inclusion criteria are English-speaking participants who are: (a) age 18 years or older upon admission, (b) admitted with a medical or surgical diagnosis, (c) hospitalized for at least 24 hours, (d) willing to participate in the post-discharge survey, and (e) neurologically intact.

Exclusion criteria are non-English speaking individuals who (a) are under the age of 18 years, (b) have a non-medical/surgical diagnosis, (c) are hospitalized less than 24 hours, (d) are unwilling to participate in the post-discharge survey, and (e) demonstrate impaired cognition.

Appendix C

Recruitment Script for Charge Nurse/Nurse Manager

We have a doctoral nursing student who is investigating how memory affects patients' responses on a patient-satisfaction survey after discharge. Would you be interested in learning more about her study, *Patients' Perceptions of Patient-Centered Care and the Hospital Experience Pre- and Post-Discharge?* (If the patient responds with *yes*), may I obtain your written consent to give your name, room number, diagnosis, age, admission date, and anticipated discharged date to the primary investigator, Cheryl Anne Smith? (If the patient responds with *yes*), will you please sign this form to authorize the disclosure of your protected health information?

VITA

CHERYL ANNE SMITH

Education	Lawrence County High School, Lawrenceburg, Tennessee 1983 A.A.S. Nursing, Columbia State Community College, Columbia, Tennessee 1985 B.S.N. University of North Alabama, Florence, Alabama 1992 M.S.N. University of Phoenix, Phoenix, Arizona 2003 Ph.D. Nursing, East Tennessee State University, Johnson City, Tennessee 2018
Professional Experience	Clinical Coordinator and Clinical Instructor, Columbia State Community College, Columbia, Tennessee, 2013 - present Research and Evidence Based Practice Council Member, Maury Regional Medical Center, Columbia, Tennessee, 2013 – present Assistant Program Coordinator, Division of Nursing, Martin Methodist College, Pulaski, Tennessee, 2012 – 2013 Interim Chair, Division of Nursing, Martin Methodist College, Pulaski, Tennessee March, 2012 – August, 2013 Instructor of Nursing, Division of Nursing, Martin Methodist College, Pulaski, Tennessee, 2006 – 2013 Outcomes Manager, Cardiovascular Service Line, Maury Regional Hospital, Columbia, Tennessee, 2005 – 2006 Care Manager and Congestive Heart Failure Educator, Maury Regional Hospital, Columbia, Tennessee, 2003 – 2005 Staff Nurse, Charge Nurse, Nurse Manager 1985 – 2003 Emergency Department and Cath Lab, Maury Regional Hospital, Columbia Tennessee; Emergency Department, Vanderbilt Medical Center, Nashville, Tennessee; Emergency Department, Crockett Hospital, Lawrenceburg, Tennessee; Medical Surgical Unit, Baptist Hospital, Nashville, Tennessee and Scott Memorial, Lawrenceburg, Tennessee
Publications	Smith, Cheryl (2012). "QSEN Concepts Creatively Incorporated into the Fundamentals and Medical/Surgical Component of a Small Baccalaureate Nursing Program Curriculum". Innovation to transformation. Quality and Safety Education for Nurses (QSEN) National Forum, Tuscan, AZ.