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Relationship Between Employee Satisfaction and Patient Satisfaction Within the Veterans Affairs Health Care System

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This is to certify that the doctoral study by

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2021

Abstract

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MA, Naval War College, 2010

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

Within health care organizations, the experience of care is a critical measure of the quality of a health care system and is an important measure of success. Over the past several years, the quality and experience of care have been criticized within the Veterans Health Administration. Veterans Health Administration hospitals suffer from low patient satisfaction scores and high nurse turnover rates. Research shows a correlation between patient satisfaction and employee satisfaction within other health care organizations, yet there has been limited research on whether this type of relationship exists within facilities across the Veterans Health Administration. Using Donabedian's quality health care model as the theoretical foundation, this quantitative, correlational study examined the relationship between employee satisfaction and patient satisfaction within the Veterans Health Administration medical system. Secondary data obtained from the All-Employee Survey-Federal Employee Viewpoint Survey and the Survey of Healthcare Experiences of Patients were tested using Pearson and Spearman correlation. The study found a statistically significant relationship between VHA employee satisfaction except when it came to the relationship between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect. There was no statistically significant correlation between these two variables. The findings may be used by VHA administrators for positive change by understanding the relationship between employee and patient satisfaction.

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Dedication

In loving memory of my mom, Angelika. She taught me to be tenacious and never give up on my dreams. This doctoral study is also dedicated to my father, Jim. You helped mold me into a great writer beginning when I was young and served as my role model for educational success. Finally, I dedicate my work to my husband, Thomas. You were in it with me for the long haul and never stopped encouraging and believing in me. I would not have been successful if it were not for your undying support.

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Section 1: Foundation of the Study and Literature Review

Introduction

Providing high-quality care has become a top priority for health care organizations across the United States. The pay-for-performance Value-Based Purchasing (VBP) Program developed by the Centers for Medicare and Medicaid Services (CMS) has led health care systems across the United States to focus on multiple quality of care and process improvement initiatives (Burstin et al., 2016). One of the areas the VBP requires health care organizations to monitor is the patient's assessment of the quality of care, otherwise known as patient experience (Papanicolas et al., 2017). Veritably, CMS deems patient experience such a significant measurement of the quality of care that it not only requires reporting through the VBP program, but it uses patient experience survey results to establish financial incentives for health care organizations (Berkowitz, 2016).

Patient satisfaction and the quality of services delivered have also become salient points of focus in the health care industry because of how quickly information sharing via social media and the news media can impact an organization's reputation (Vogus & McClelland, 2016). Positive patient experiences are associated with quality care, financial success, and positive reputations for organizations. Consequently, patient satisfaction has become a key metric most healthcare organizations now monitor consistently.

One health care organization that has experienced the impact of a negative reputation is the Veterans Health Administration (VHA), "the largest integrated health care system in the United States" (U.S. Department of Veterans Affairs [VA], n.d.-a).

The VHA has suffered an increase in demand for services that has overwhelmed the system. This situation has resulted in criticism and ongoing concern from veterans, the public, and the media that the quality of care is suffering (Jha, 2016). VHA facilities also experience staffing shortages due to high employee turnover (Daigh, 2018). Despite these challenges, the VHA is highly dedicated to improving the quality of health care for its veterans (Gaar et al., 2016).

As part of the VHA's transformation to better address veterans' current and future health care needs, the organization has turned its focus to improving patient satisfaction within its hospitals (Shulkin, 2016). According to Guler (2017), patient experience is becoming considerably more indicative of performance within health care organizations as transparency grows and health care becomes more dominated by consumerism. Thus, improving patient satisfaction is a key component many health care organizations target when attempting to improve the quality of the care they provide, including the VHA.

In 2014, the acting Secretary of the United States Department of Veterans Affairs testified that the VHA would focus future efforts on patient satisfaction within its system and improve its patient survey process to obtain better real-time information (*The state of VA*, July 16, 2014). Later in that year, the Veterans Affairs Secretary, the Interim Under Secretary for Health, and the former Under Secretary for Health created the *Blueprint for Excellence*, a strategic guide to addressing VHA system problems, including patient experience issues (Institute of Medicine, 2014). Additionally, others internal to the VHA system themselves recommended an increased focus on patient-centered outcomes as well as evaluating the current workforce, their attitudes, and those attributes that attract a

higher quality workforce (Bakaeen et al., 2014). More recently, the VA announced it would be holding VHA leaders highly accountable for rapid performance improvement across the organization (VA, 2018).

To improve patients' experiences, hospitals tend to look at the variables known to impact patient satisfaction (Berkowitz, 2016). One of the variables that research has shown impacts patient satisfaction is the level of satisfaction employees have with their job (Golda et al., 2018). There has been an increase in attention on employee engagement as a contributing factor to improving the patient experience (Guler, 2017; Wolf, 2017). Health care leaders measure employee engagement and satisfaction in various ways. One such method is through satisfaction scores reported in response to employee satisfaction surveys that ask questions about how employees feel about their organization. Employee turnover is another indicator of job satisfaction, with lower turnover rates indicating greater employee job satisfaction (De Simone et al., 2018; Hudgins, 2016). Thus, as the VHA pursues its endeavors to improve the quality of care offered to its veterans, its administrators should consider employee satisfaction indicators and whether they correlate with patient satisfaction within VHA hospitals.

Section 1 addresses the problem statement and purpose of the study and introduces the research questions and hypotheses. It also provides the theoretical foundation of the research and the nature of the study. The bulk of this section offers the literature search strategy, the literature review related to the key variables and concepts, and a literature review summary. This section also presents the definitions of the key terms and concepts and the study's assumptions, scope, and delimitations. Finally, the

section concludes with an explanation of the significance of the research and a summary and conclusion.

Problem Statement and Background

The problem is that the VHA suffers from low patient satisfaction scores (Blay et al., 2017) and high staff turnover (Daigh, 2018). In addition, VHA leaders have been tasked with improving the experience of care (Atkins & Clancy, 2017; VA, 2018). Multiple studies conducted over the past 5 years throughout other healthcare organizations have demonstrated a correlation between employee satisfaction and patient satisfaction; the more satisfied and engaged employees are with their work, the more satisfied patients are with the care they receive from those employees (Creagh et al., 2017; McNicholas et al., 2017; Perry et al., 2018; Wolf, 2017). Therefore, VHA leaders should consider how employee satisfaction and its indicators, such as turnover rates and employee satisfaction scores, relate to patient satisfaction as a step towards improving the care provided to veterans across the United States.

Despite low patient satisfaction scores, a literature review conducted by O'Hanlon et al. (2017) revealed limited research studies related to patient satisfaction within VHA hospitals. Also, none of the literature reviewed by O'Hanlon et al. examined the relationship between patient satisfaction and employee satisfaction in VHA hospitals. Blay et al. (2017) conducted a study comparing multiple patient experience measures between VHA hospitals and non-VHA hospitals. Likewise, their analysis did not include data related to employee satisfaction or engagement either. Apaydin et al. (2020) examined the impact of patient-centered care on employee retention and exhaustion in

VHA facilities. However, this study did not evaluate how employee satisfaction and patient satisfaction are related.

Finally, a thorough search for studies evaluating patient experience in relation to employee satisfaction within VA hospitals was performed via CINAHL Plus, Google Scholar, MEDLINE, ProQuest Central, ProQuest Health & Medical Collection, ProQuest Nursing & Allied Health Source, PubMed, SAGE Journals, and ScienceDirect. This search revealed only two studies examining the relationship between patient satisfaction and employee satisfaction within VHA hospitals. Kang et al. (2019) studied the association between employee satisfaction and patient safety and satisfaction within VHA hospitals but only looked at data from a 3-month period in 2016. The Partnership for Public Service (PPS) and the Boston Consulting Group (BCG; 2019) analyzed data from 150 VHA medical centers in which they found a correlation between employee engagement and patient satisfaction as well as employee engagement and lower registered nurse turnover rates. However, this is the only research study conducted within the last 5 years that has attempted to examine the relationship between employee engagement and patient satisfaction more thoroughly than other studies.

There is a significant gap in the research despite continued problems within the VHA system. If VHA leaders better understood the relationship between patient satisfaction and employee satisfaction, it could provide information to help improve the experience of care for their patients. This study helps fill the gap in the research that currently exists by further evaluating the relationship between patient satisfaction and employee satisfaction within VHA hospitals.

Purpose of the Study

The aim of this quantitative study was to explore if employee satisfaction correlates with inpatient satisfaction within VHA hospitals. There are multiple indicators of employee satisfaction, but the ones examined in this study were the best places to work score, the recommend my organization score, and registered nurse turnover rates. On the other hand, patient satisfaction includes patients' perceptions of their environment and the care they receive (Berkowitz, 2016). This study explored the relationship between the three indicators of employee satisfaction with the following three inpatient satisfaction indicators: The inpatient overall rating of hospital linear mean score, the recommend hospital star rating score, and the percentage of inpatients who always felt their nurses treat them with courtesy and respect. This research helps add to the understanding of the relationship between employee job satisfaction and patient satisfaction while within the VHA system.

Understanding this relationship can assist the VHA in its journey to improve its patients' care experience, improve its reputation, and improve the quality of the care provided in its hospital settings. In addition, this study offers information that other health care administrators can use to continue to improve the experience of care across all types of health care systems. The independent variable for this study was employee satisfaction, and the dependent variable was patient satisfaction.

Research Questions and Hypotheses

This quantitative correlational study explored the following questions and hypotheses:

RQ1: Is there a correlation between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score?

$H_0$1: There is no statistically significant relationship between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score.

$H_1$1: There is a statistically significant relationship between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score.

RQ2: Is there a correlation between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital star rating score?

$H_0$2: There is no statistically significant relationship between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital star rating score.

$H_1$2: There is a statistically significant relationship between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital star rating score.

RQ3: Is there a correlation between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect?

$H_0$3: There is no statistically significant relationship between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect.

$H_1$3: There is a statistically significant relationship between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect.

Theoretical Foundation of the Study

The theoretical framework for this study is Donabedian's quality health care model, a widely accepted model to evaluate the quality of health care (Ayanian & Markel, 2016). According to Donabedian (1966), three components of health care should be assessed to determine whether a health care system offers quality care: structure, process, and outcome. The first component, structure, consists of elements such as the health care delivery system itself, the employees, and the providers, all critical to the delivery of care (Donabedian, 1966) and factors that can affect patient care (Kajonius & Kazemi, 2016). Donabedian (1966) defined the second component, *process*, as the means by which care is delivered. Process can include care provided, interactions with the patient, or relationships developed with the patient. Finally, the third component, *outcome*, is the effect of the care delivered. Donabedian's (1988) theory postulates that the elements of structure have an impact on process, and the process influences the outcomes. For the purpose of this study, *structure* is defined as employee satisfaction, the

process is defined as the care provided by the employees and their interactions with the patients within VHA facilities, and the *outcome* is defined as patient satisfaction.

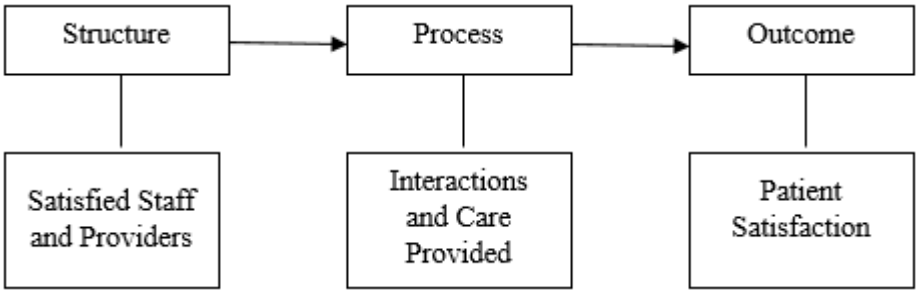
According to Donabedian (2003), monitoring both practitioner satisfaction and patient experience is necessary to provide quality care. When assessing the quality of health care in a system, part of evaluating the structure of the system includes examining the human resources of a health care organization (Donabedian, 1988). The assessment should include evaluating health care practitioner satisfaction as well. Donabedian (1966) believed that achieving satisfaction in medical care is one of the best ways to validate the quality of care. Therefore, analyzing employee satisfaction and patient satisfaction is a valuable process for improving healthcare quality within an organization.

Donabedian's framework works well for this study because it helps explain a potential relationship between the study variables. Donabedian (1988) felt that the interpersonal relationships and interactions patients have with health care practitioners are vital to developing good structure within a health care system. He also believed that good interpersonal interactions with health care practitioners help drive patient satisfaction. Good structure leads to good processes, and good processes drive good outcomes (Donabedian, 1988). In this study, engaged and satisfied employees fall under the measure of structure, and patient satisfaction falls under the measure of outcome. Therefore, if following Donabedian's theory, satisfied employees (good structure), through good interactions and relationships (process) should produce satisfied patients (outcome). See Figure 1 to help illustrate this connection. This study's research questions

align with Donabedian's framework because his framework suggests that structure correlates with outcome (Donabedian, 1966).

Figure 1

Conceptual Framework for the Study



Donabedian's framework, in combination with the results of this study, can be used by VHA leaders to decide whether they should focus efforts and resources on identifying or improving employee satisfaction (structure). Satisfied employees are more likely to improve their performance and provide better care (Mounteer, 2019), which would fall under the component of process according to Donabendian's (1988) framework. In turn, these processes may then have an impact on patient satisfaction (outcome). This study further solidifies Donabedian's argument that structure and outcome are related.

Nature of the Study

A quantitative analysis was used for this study to identify whether employee satisfaction within hospitals in the VHA system has any correlation with patient satisfaction in those VHA hospitals. When testing theories about relationships between variables, quantitative research methods serve best (Creswell & Creswell, 2017). Therefore, a quantitative method was the most appropriate method for this study.

A correlational design was used in this study to examine the relationship between patient satisfaction survey data and employee satisfaction survey data. Correlational studies are best for making predictions about variables that have not been manipulated and for analyzing relationships between those variables (Wilson & Joye, 2017). A correlation design is a suitable design for evaluating relationships between variables provided through secondary data sources as well (Wilson & Joye, 2017). Because the variables analyzed in this study were not manipulated and the data were obtained from a secondary source (survey results publicly reported by each VHA system hospital), a correlational design method was the most appropriate design method to use.

This study's independent variable was employee satisfaction, and in RQ1 was measured by the best places to work score. In RQ2, the score reported by VHA hospital employees in response to the statement, "I recommend my organization as a good place to work," represented employee satisfaction. Registered nurse turnover represented employee satisfaction in RQ3. The dependent variable was patient satisfaction and was measured by (a) the overall hospital rating linear mean score in RQ1, (b) the recommend hospital star rating in RQ2, and (c) the percentage of patients who reported that their nurses always treated them with courtesy and respect in RQ3. The data were collected from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Health Plan Database, which houses the Survey of Healthcare Experiences of Patients (SHEP) results from the VHA, as well as from the VA All Employee Survey-Federal Employee Viewpoint Survey (AES-FEVS) data reports available through the VA's Strategic Analytics for Improvement and Learning Value Model *(*SAIL) database.

Literature Search Strategy

The literature search included a thorough search of multiple databases to locate scholarly, peer-reviewed journal articles related to the key concepts. The search process consisted of searching key words in the following databases: CINAHL Plus, MEDLINE, ProQuest Health & Medical Collection, ProQuest Nursing & Allied Health Source, PubMed, SAGE Journals, ScienceDirect, and Thoreau. Google Scholar was also used and assisted in revealing additional relevant sources within the journal articles reviewed. Finally, resources in the reference lists of relevant literature were evaluated for inclusion within the literature review.

Either Google Scholar or the databases mentioned above were searched via the Walden University online library using the following key search terms: *patient satisfaction, patient experience, veterans' health administration, VHA, employee satisfaction, job satisfaction, nurse turnover, employee engagement, job performance, patient outcomes, and quality outcomes.* A combination of search terms was used to help locate relevant literature: *patient satisfaction* and *veterans health administration* or *VHA, employee satisfaction* or *job satisfaction, employees satisfaction* and *health care* or *healthcare, job satisfaction* and *health care* or *healthcare, employee satisfaction* or *job satisfaction,* and *veterans health administration* or *VHA, patient experience* and *employee satisfaction, patient experience* and *employee satisfaction* and *veterans health administration* or *VHA* and *nurse turnover* and *employee satisfaction* and *patient satisfaction.* Ulrich's Periodicals Directory was used to crosscheck and confirm that most of the literature in the review was peer reviewed. The search was limited to literature

published mostly between 2016 through early 2021 except for seminal literature, literature addressing the historical aspect of research on the key variables and concepts, or literature addressing the major concerns within the VHA system that predominantly came to light around 2014. Most of the research was also limited to North American studies due to the nature of this study being focused on such a specific subset of health care facilities within the United States. Research conducted in other countries with varying types of health care systems may not be as relevant.

Literature Review Related to Key Variables and Concepts

The purpose of this quantitative, correlational research study was to examine the relationship between employee satisfaction and patient satisfaction within the VHA system. In this section, I offer a review of the research literature relevant to the key variables of patient satisfaction and employee satisfaction as well as key variables specific to the VHA system. Further, this literature review summarizes the history of the research related to patient satisfaction and its importance as a quality indicator. It also identifies research literature that addresses the relationship between employee satisfaction and patient satisfaction. Finally, the review shows the gaps in the research related to the relationship between patient satisfaction scores and employee satisfaction scores specific to the VHA system.

Patient Satisfaction

Background

Patient satisfaction first became a significant concept for health care organizations beginning with Avedis Donabedian's theory about the quality of care, which quickly

became a guide for assessing the quality of care in the health care industry (Cleary, 2016). Twenty years later, researchers started developing other theories about patient experience and began creating tools to measure patients' perspectives of their care (Kash & McKahan, 2017). Thus, the first patient satisfaction surveys were developed. Then, Irwin Press and Rod Ganey paved the way towards a survey specific to patient satisfaction, offering hospitals across the country a method to track patient satisfaction in a more standardized manner using a national database (Wilson et al., 2016). Thus, patient satisfaction became a critical concept in health care research.

In the 2000s, the Institute of Medicine's Committee on Quality of Health Care in America established the six domains of quality health care in *Crossing the Quality Chasm: A New Health System for the 21st Century* (Agency for Healthcare Research and Quality [AHRQ], 2018). These six domains, which include patient-centered care and patient satisfaction, to this day offer an analytic framework for the assessment of quality in both public and private health care (AHRQ, 2018). Hence, patient satisfaction has been formally recognized as a health care quality measurement and a nationally standardized measurement method for 2 decades now.

Also, in the early 2000s, the CMS, along with the AHRQ, created the HCAHPS survey. This nationally standardized survey measures patient perceptions of hospital care and began publicly reporting the results in 2008 (CMS, n.d.-a). The Institute for Healthcare Improvement (IHI, n.d.-a) also introduced its new Triple Aim framework, which includes enhancing care experience as one of the critical components necessary for health care organizations to achieve greater quality outcomes. Finally, in 2012, patient

satisfaction was incorporated into CMS standards when it implemented the VBP Program (CMS, n.d.-b).

Today, hospitals are rewarded or penalized based on whether they meet specific quality goals, including achieving certain patient satisfaction scores (CMS, n.d.-b). Thus, health care organizations and the regulatory and accrediting bodies have fully accepted patient satisfaction as a key quality indicator in health care. Even the VHA sees the importance of patient satisfaction as a quality measure and, therefore, collects and publicly reports its data to the CMS Hospital Compare database alongside non-VHA hospitals (CMS, n.d.-c), despite not having the same regulatory requirements as non-VHA hospitals.

Patient Satisfaction in Relation to Quality Outcomes

Because patient satisfaction is considered an important measure of quality within the health care industry, thousands of studies on the topic exist, particularly concerning quality outcomes. In their analysis of 757 HCAHPS survey responses, Prabhu et al. (2018) discovered an association between lower patient satisfaction scores and complications or poor outcomes in surgical patients. Similarly, Odom-Maryon et al. (2019) found an association between patient satisfaction scores and hospital-acquired pressure ulcers. These two studies demonstrated that higher satisfaction scores are associated with better quality care, while lower satisfaction scores are associated with worse quality outcomes.

In another study, Cleveland Clinic Orthopaedic Arthroplasty (2017) found an association between patient satisfaction and quality outcomes, whereby they found a

negative correlation between patient satisfaction scores from the HCAHPS survey and surgical post-op readmission rates. Morss et al. (2016) had similar results related to quality outcomes in their study of heart failure patients throughout 895 hospitals. They found higher patient experience scores correlate with lower readmission rates. A common theme of a positive correlation between quality outcomes and patient satisfaction appears throughout the current research. The correlation between patient satisfaction and quality outcomes and the various determinants of positive patient satisfaction scores should be important to health care administrators. These determinants can assist health care leaders in improving their patients' overall experience and the quality of their care.

Determinants of Patient Satisfaction

In addition to research linking patient satisfaction to quality outcomes, an abundance of research exists that attempts to define specific aspects and elements that may or may not impact patient satisfaction. It is imperative for health care organizations to understand how patient satisfaction might specifically correlate to quality outcomes (Frankt et al., 2017). Therefore, multiple studies exist that examine specific determinants of patient satisfaction.

Mohammed et al. (2016), using a meta-narrative approach, analyzed 36 studies to identify specific dimensions of quality perceived by patients and found the most critical component of quality care perceived by patients to be good communication with their provider. Relationship-centered communication with the provider also predicted high patient satisfaction in a study Boissy et al. (2016). Similarly, the results of a study conducted by Lee et al. (2020) showed that dissatisfaction with wait times were reduced

with effective communication. Bible et al. (2018) found reliable follow-up communication to be a key factor associated with patient satisfaction in their study of 200 patients.

In addition to good communication with health care providers being a predictor of patient satisfaction, Kahn et al. (2015) found positive patient perceptions and positive interactions with the health care staff to be correlated. Similarly, Batbaatar et al. (2017) determined one of the most dominant influences on patient satisfaction to be interpersonal relationships with those who cared for them. Panagioti et al. (2018) found in their literature review and meta-analysis study that physician burnout and unprofessionalism were associated with lower patient satisfaction. Carthon et al. (2021) also found hospitals with poor work environments, and high burnout rates tend to have lower patient satisfaction scores. Studies like these, as well as those conducted by Mohammed et al. (2016), Boissy et al. (2016), Lee et al. (2020), and Bible et al. (2018), all share similar results to Guler (2017), that engaged employees can contribute to better patient experiences.

Li et al. (2016) went even further to identify risk factors that impact patient satisfaction. Their study of 1,771 patients discharged from a large urban medical center revealed that patient satisfaction was lower in communication with nurses and pain management when patients were prescribed pregabalin. Li et al. also found that the overall hospital rating correlated with good communication with doctors. Finally, the likelihood to recommend the hospital was associated with good communication with nurses and pain management. Thus, a common theme in many research studies

examining determinants of patient satisfaction appears to be the relationship between the patient and those caring for the patient.

Finally, nurse satisfaction and turnover within health care organizations can also be determinants of patient satisfaction. Perry et al. (2018) found nurse satisfaction to be a significant predictor of patient satisfaction, both in patients' willingness to recommend the organization and in overall satisfaction with care. Likewise, Manyang et al. (2020) implemented a new staffing model, leading to significant improvements in nurse satisfaction as measured by the organization's employee satisfaction survey results. With this increase in employee satisfaction, Manyang et al. noted an 82% decrease in turnover rates and a 1.94% increase in patient satisfaction. In a 6-month study of 49 patients, patient satisfaction increased for those who felt their nurses were engaged, attentive, responsive, good communicators, and treated their patients with respect (Trotta et al., in press). McHugh et al. (2016) found nursing satisfaction and a decreased turnover rate within Magnet-status hospitals to be linked to positive patient satisfaction as well.

Patient Satisfaction Within the VHA System

Since the 2014 Senate Hearing before the Committee on Veterans' Affairs, the VHA deemed patient satisfaction a significant health quality indicator that required more attention (*The State of VA*, July 16, 2014). As a result, researchers began conducting more studies examining patient experience and patient satisfaction within the VHA system. Etingen et al. (2016) studied the relationship between patient-reported experience measures and healthcare quality. They found an association between positive quality indicators and perceptions of empathy from the provider. Hepner et al. (2017) also found

a positive relationship between perceptions of care and the quality of care in their study of mental health and substance abuse patients using VHA services.

In addition to examining relationships between patient experience and quality indicators within the VHA system, other studies investigate how patient-centered care impacts patient experience within the VHA system. According to Tuepker et al. (2018), although patients often were not aware a patient-centered medical home program had been implemented, positive outcomes were identified in relation to improved communication and shorter wait times within the VHA system. Similarly, a study conducted by Frankt et al. (2017), which examined the patient-centered care of mental health patients within the VHA system, found a positive relationship between continuity of care and timely access to patient satisfaction. In another study, female veteran patients receiving care within a VHA patient-centered medical home program reported positive satisfaction with providers who demonstrated gender-sensitive attitudes and helped remove barriers to caring for women (Meredith et al., 2017). Thus, patient satisfaction within the VHA has been recently studied and found to be impacted by multiple factors. It is the relationship between patient satisfaction and employee satisfaction that researchers have minimally examined.

Employee Satisfaction

Definition

Locke (1969), one of the pioneers in job satisfaction research, said that, when studying a phenomenon, it is critical to understand what it is before examining how it correlates to other phenomena. Employee job satisfaction has been defined in multiple

ways over the years, but most definitions remain similar. More recently, Kumar and Pansari (2016) described employee satisfaction as the way employees feel overall about their job, including everything from their pay to the type of job they do. Judge et al. (2017) defined job satisfaction as how favorable an individual finds their job on a range of positive to negative.

Employee Satisfaction in Health Care Settings

There is a significant amount, and varying types, of research on employee job satisfaction within the health care sector. Tarcan et al. (2017) analyzed the relationship between job satisfaction and elements within the workplace in an emergency department. Tarcan et al. found an association between job satisfaction and burnout, a positive relationship between job satisfaction and income, and no significant relationship between job satisfaction and age, education, gender, or marital status. Chang et al. (2017) conducted a study evaluating the effectiveness of the Satisfaction of Employees in Health Care survey tool and found it was a highly reliable option for measuring job satisfaction among health care staff in the United States. Nowaskie et al. (2020) studied job satisfaction among care coordinator assistants caring for dementia patients and found that care coordinator assistants report significantly higher job satisfaction when compared to normative data. Using a correlational design, Brown et al. (2018) evaluated the relationship between job satisfaction and change fatigue in hospital nurses. They found that job satisfaction is negatively impacted by change fatigue, but resilience positively influences job satisfaction. These studies are only a few examples of the hundreds of studies performed over the past 5 years examining job satisfaction within health care

organizations, an indication that understanding job satisfaction in the health care sector is essential.

Employee Satisfaction in Relation to Improved Health Care Organization Outcomes

Satisfied employees tend to be more productive, more engaged, and are more committed to achieving organizational goals (Daley, 2017). More engaged and more satisfied employees can positively impact multiple factors within health care organizations (Lu et al., 2019). Hsieh (2016) found that job satisfaction significantly correlates positively with job performance. Improvements in job performance can lead to positive quality outcomes and better patient care in health care organizations (Judge et al., 2017). In addition, higher-performing employees generate more satisfied customers (Kumar & Pansari, 2016). This concept is also the foundation of Donabedian's Quality Framework, whereby the structure (i.e., organizational characteristics), or employee satisfaction in this case, impacts the process (i.e., care delivered), which in turn influences the outcome (i.e., patient satisfaction; Ayanian & Markel, 2016).

Boamah et al. (2017), in their study of factors influencing new graduate nurse burnout, demonstrated that job satisfaction affects the quality of patient care. Boamah et al. found a significantly positive correlation between nurse-assessed quality of care and job satisfaction. Gilmartin et al. (2018) looked at whether job satisfaction impacts quality outcomes within the VHA. Like Boamah et al., Gilmartin et al. found that increased job satisfaction among nurses improves quality outcomes by reducing central line infection rates within the VHA. A literature review of 59 research studies examining job satisfaction among nurses revealed that job satisfaction influences patients' perceptions

of their care (Lu et al., 2019). Therefore, the satisfaction an employee has with their job is vital for health care organization leaders to consider.

Employee Satisfaction Within the VHA

The VHA is an organization that should consider employee satisfaction a critical construct. The Department of Veterans Affairs Accountability and Whistleblower Protection Act of 2017 (S. 1094, 2017) requires the VA to hold its employees more accountable for their performance and conduct. In combination with the VA's announcement that it would be taking steps to hold leaders of underperforming medical centers accountable to rapid process improvement results (VA, 2018), employee satisfaction would be a pertinent focus. Evaluating the quality of care within the VA medical system can be performed using Donabedian's Quality Framework seeing as structure can ultimately impact outcomes.

There are limited studies examining employee satisfaction within the VHA with mixed findings. Teclaw et al. (2016) studied workplace perceptions of veteran employees who worked for the VA, not solely the VHA, and compared their perceptions to non-veteran employees who also worked for the VA. Teclaw et al. found that veterans were more likely to respond less favorably to questions about positive perceptions of the workplace than nonveterans, except on the item of employee engagement. In addition, the authors noted that more veterans were employed in medical departments than non-veterans. This finding could indicate a correlation between job satisfaction and health care roles within the VHA.

Another study conducted by Mohr et al. (2018) looked at factors related to physician's attitudes about their jobs within the VHA. They surveyed physicians from 36 VHA medical centers and found that physicians who perceived higher quality of care within their facility correlated with higher job satisfaction rates. Mohr et al. also found that physicians who had opportunities to be involved in research studies were more satisfied with their work, leading to a potential reduction in turnover and improvement in organizational performance.

Patient Satisfaction in Relation to Employee Satisfaction

The literature examining the correlation between patient satisfaction and the relationships with those caring for the patients indicates a strong link between patient satisfaction and employee satisfaction and engagement. One of the most cited studies out of the *Patient Experience Journal*'s collection of articles is a study conducted by Jha et al. (2017) in which they reviewed approximately 200 articles and found a positive correlation between patient satisfaction and employee satisfaction. Similarly, McNichols et al. (2017) found that implementing process changes that improved nursing satisfaction within a department correlated with improved patient satisfaction. Mazurenko et al. (2017) found complementary results in their literature review of 41 articles on patient experience. Mazurenko et al. reviewed studies from 2007 through 2015 examining characteristics associated with higher patient satisfaction scores on the HCAHPS survey. They noted that positive work environment attributes, those leading to greater employee satisfaction, positively correlate with patient satisfaction. Finally, as a result of their 2017 Employee Engagement Survey, the Advisory Board (2018, May 22) found a 0.33%

increase in HCAHPS scores for overall hospital rating and a 0.3% increase in the willingness of patients to recommend a hospital for every 1.0% increase in employee engagement scores. The results of these various studies indicate a strong link between patient satisfaction and employee satisfaction.

On the other hand, the Advisory Board (2018, May 22) did find that higher job security scores can lead to complacency and lower patient satisfaction scores. In addition, Vogus and McClelland (2016) found in their review of research on patient satisfaction a lack of studies looking at the service climate and emotional labor of employees in the healthcare industry and their impact on customer satisfaction yet, most current research finds a positive correlation between patient satisfaction and employee satisfaction. Professional satisfaction and provider engagement lead to better quality outcomes and improved patient satisfaction (Shanafelt & Noseworthy, 2017). In their evaluation of the current research, Margrave and Salinas (2020) found a strong association between nurse satisfaction and patient satisfaction. The relationship between patient satisfaction and employee engagement is critical enough that over 60% of the dimensions on the HCAHPS survey are related to interactions with hospital staff members (Terfera et al., 2016). Thus, the relationship between patient satisfaction and employee satisfaction is a key focus for health care organizations.

Patient Satisfaction in Relation to Employee Satisfaction Within the VHA System

Patient satisfaction and its relationship to employee satisfaction within the VHA system has not yet become a key focus in current research. Although there is a lack of research in this area, several studies exist that focus globally on patient satisfaction within

the VHA system. Zickmund et al. (2018) interviewed veterans at minority serving VHA facilities and found high satisfaction with minimal differences based on race, ethnicity, and gender. For all 16 domains studied, more veterans were very satisfied with their care than those who were somewhat satisfied or less than satisfied. Etingen et al. (2016) similarly studied patient-reported experience measures but looked at patients' experiences specific to patient-centered care programs within the VHA system. Etingen et al. found a positive relationship between quality indicators and positive patient perceptions, but a negative relationship between positive patient perceptions and factors related to the patient-provider relationship. Although both studies touched on components of employee engagement, neither of them focused significantly on the relationship between patient satisfaction and employee satisfaction. Blay et al. (2017) evaluated patient satisfaction scores within the VHA compared to non-VHA hospitals and found that the scores were lower in the VHA facilities. In addition, Blay et al. compared the quality-of-care outcomes between the different types of hospital systems but did not look at how employee satisfaction compared.

In fact, very little research exists that explicitly studies the relationship between patient satisfaction and employee satisfaction within the VHA system. There are only two studies conducted within the past 5 years that examine the association between employee satisfaction within the Veterans Affairs Medical Centers and patient satisfaction. Kang et al. (2019), as part of a more extensive study, examined patient satisfaction in relation to measures of patient safety and hospital ratings. Kang et al. found no correlation between employee satisfaction and patient outcomes but did find a correlation between higher

employee satisfaction scores and improved patient satisfaction scores. The authors also found that the higher the hospital's star rating, the more satisfied the employees are with their organization (Kang et al., 2019).

The PPS and the BCG (2019) also conducted a study that analyzed 3 years of data collected from 150 VA medical centers. The PPS and the BCG found a statistically significant link between employee engagement and improved performance, including patient experience scores. A one-point increase in the best places to work score was associated with approximately a one-half point increase in patient satisfaction scores.

Although Kang et al. (2019) and the PPS and the BCG (2019) found similar results to studies conducted at non-VHA hospitals, correlations exist between employee satisfaction and patient satisfaction. These studies were limited in nature and focused more on quality outcomes than patient satisfaction results. A thorough search of the literature revealed a significant gap in research related to whether a relationship exists between patient satisfaction and employee satisfaction within the VHA system.

Literature Review Summary

Because patient satisfaction has developed into a component of health care that influences reimbursement rates, patient compliance, patient outcomes, and even choice of care (Kahn et al., 2015; Mazurenko et al., 2017; Vogus & McClelland, 2016), current research exists in abundance on this topic. Health care researchers have also realized it is valuable to understand the relationship between patient satisfaction and employee satisfaction, as evidenced by research conducted by Guler (2017) and McNichols et al.

(2017) as well as the Advisory Board (2018). Patients who are more satisfied tend to be more engaged and have better outcomes (Guler, 2017).

Despite an abundance of research regarding patient and employee experience, a gap in research in this area within the VHA system currently exists, and at a time when the VHA's reputation continues to struggle. In addition to the Kang et al. (2019) study being one of only two current research studies available that considers the relationship between employee satisfaction and patient satisfaction within the VHA system, their research has several limitations. First, their study only analyzed data from one quarter in 2016. Second, it only evaluated one patient satisfaction score, the hospital "top box" rating. Therefore, Kang et al. may not have captured any trends or patterns the VHA system leadership could analyze to understand this relationship better. The PPS and the BCG (2019) found a link between employee engagement and patient experience scores. However, they only looked at one composite score representing employee engagement, the best places to work in the Federal Government engagement score. Thus, further studies in this area of research would benefit the VHA.

Definitions

Agency for Healthcare Research and Quality (AHRQ): A subagency of the U.S. Department of Health and Human Services developed to assist with understanding evidence to help improve the quality and safety of health care, as well as help make it more affordable, equitable, and accessible (AHRQ, 2019a).

Centers for Medicare and Medicaid Services (CMS): A subagency of the U.S. Department of Health and Human Services created to oversee the Medicare and Medicaid

Program. It is also responsible for the Children's Health Insurance Program, the Health Insurance Portability and Accountability Act, and other regulatory health-related programs (U.S. Office of the Federal Register, n.d.).

Consumer Assessment of Healthcare Providers and Systems (CAHPS): A program founded in 1995 by the AHRQ to help scientifically understand patient experience within health care (AHRQ, 2019b).

Employee satisfaction or job satisfaction: The positive or negative assessment of the favorability of one's job or employment (Judge et al., 2017).

All Employee Survey-Federal Employee Viewpoint Survey (AES-FEVS): A tool used to gather information about the perceptions of United States government employees and their experiences related to their work, their organization, and their management team (U.S. Office of Personnel Management [OPM], n.d.).

Institute for Health Improvement (IHI): A non-profit organization focused on leading change to improve and advance health care throughout the world (IHI, n.d.-b).

Institute of Medicine (IOM): A non-profit organization associated with the National Academies of Science committed to offering a source of research and publications to health care and medical leaders (IHI, n.d.-b).

Joint Commission on Accreditation of Healthcare Organizations (JCAHO): A non-profit organization that offers nationally recognized accreditation and certification of health care facilities and programs (The Joint Commission, n.d.).

Nurse turnover: When a nurse leaves the hospital system (Kelly et al., 2020).

Patient satisfaction: The perception a patient has about the care they receive in a

health care setting and expectations about how it should be delivered (AHRQ, n.d.).

Strategic Analytics for Improvement and Learning Value Model (SAIL): A database that summarizes performance data of VHA hospitals (VA, 2021).

Survey of Healthcare Experiences of Patients (SHEP): A nationally standardized tool that asks veterans who used VHA inpatient services the same questions found on the HCAHPS Survey (CMS, n.d.-c).

Veterans Health Administration: The health care system that serves approximately 9 million veterans across the United States (VA, n.d.-a).

Assumptions

This study was based on the primary assumption that the AES-FEVS and the SHEP data were valid, reliable, and reported accurately. An example of inaccurate data entry into the National Cancer Institute Survey and End Results (SEER) database resulted in inaccurate risk estimates for dermatological cancer (Gimotty et al., 2016). Thus, incorrect data can lead to erroneous results.

In addition, it was assumed that the employees of the VHA, as well as the patients using VHA services, answered the survey questions honestly. According to Bachman (2016), patients may answer survey questions differently depending on the timing of the survey. Their attitude towards their care may change further out from the care received. If participants do not answer questions honestly or answer differently than anticipated, they might skew the results.

Finally, it was assumed that the patient responses were not manipulated in any way, whether influenced by the hospital staff or by the illness itself (Junewicz &

Youngner, 2015). Junewicz and Youngner (2015) imply that hospitals can shape patients' perceptions by designing specific interventions based on the survey questions. In turn, the patients must step out of their "sick role" to provide useful information. This situation could lead to the results indicating a positive correlation when one does not actually exist.

Scope and Delimitations

Scope of the Study

The scope of this research was to study the relationship between employee satisfaction and the satisfaction of inpatients from all VHA hospitals that reported their annual results of both the AES-FEVS and SHEP for the years of 2018 and 2019. Secondary data were obtained from AES-FEVS and SHEP survey results reported through the SAIL database and CMS's Hospital Compare website. The data collected from the patient satisfaction surveys included inpatient results only as the VHA did not report data for hospital outpatient departments to CMS's Hospital Compare database in 2018 and 2019. Data were abstracted on a total of 147 VHA facilities spanning a broad geographic arena. Only data from 2018 and 2019 were analyzed.

Delimitations

Hospitals that did not report data for the best places to work score from the AES-FEVS or the patient overall rating of hospital (inpatient) score from the SHEP were not included in the analysis as these scores were required to help answer RQ1. Facilities that do not report a score in response to the AES-FEVS question "I recommend my organization as a good place to work" were also eliminated. Facilities that did not report the inpatient recommend hospital star rating score were also not included. Finally, if a

nurse turnover rate was not reported for a facility, or the percentage of patients who reported that their nurse always treated them with courtesy and respect was missing, those facilities were eliminated. If the variables necessary for analysis were not available, the ability to test the hypotheses was not possible.

Generalizability

The results of this study could be generalized to other health care facilities, both inside and outside the VHA system. Within the system, these results could be generalized to outpatient facilities, clinics, and diagnostic testing locations. Outside the VHA system, the results could be generalized to similar non-VHA health care facilities. Since employee satisfaction and patient satisfaction are quality metrics most health care organizations across the United States track and evaluate (McCay et al., 2018), the results could be generalized to other health care organizations as well.

Significance, Summary, and Conclusions

U.S. Veterans, and the general public, have lost trust in the VHA system to consistently provide high-quality care throughout its hospitals. In 2015, the U.S. Government Accountability Office (GAO, n.d.) designated VA health care as being high risk. In 2017, the GAO continued to designate VA health as high risk for not making enough progress towards resolving its issues. The latest report, released in December of 2018, indicated there were over 100 outstanding recommendations from the GAO that were not addressed. Butler et al. (2015) identified several gaps perceived by veterans and their family members regarding VA health care, such as a lack of respect, minimization of their concerns, and issues around cultural competency. Conversely, focusing on

provider engagement and patient experience can begin the re-establishment of trust (Lee et al., 2019). In addition, hospitals that offer better patient experiences develop loyalty from their patients and see an increase in the utilization of that hospital's services over others (Sadeh, 2017). Re-establishing trust and building loyalty could help the VHA system improve its reputation among both veterans and the general public.

Current research studies indicate that higher levels of job satisfaction among employees in non-VHA facilities lead to greater employee engagement, and greater employee engagement results in improved patient experiences (Creagh et al., 2017; McNicholas et al., 2017; Perry et al., 2018; Wolf, 2017). Until recently, no research had been conducted examining whether this type of relationship exists within the VHA system. Only the two studies, the one by Kang et al. (2019) and the one by the PPS and the BBG (2019), have been conducted to address the relationship between employee satisfaction and patient satisfaction within the VHA system, but with limited data sets and a focus more on quality than patient satisfaction. Therefore, this research study was performed to analyze data from the AES-FEVS and SHEP responses to determine whether a relationship exists between employee satisfaction and patient satisfaction within VHA hospitals.

Understanding the relationship between patient experience and employee satisfaction can offer VHA leaders and administrators valuable information to use to determine whether improving employee satisfaction and engagement might improve patient experiences as it does in non-VHA facilities. VHA leaders may want to consider implementing similar strategies to non-VHA hospitals that have demonstrated a positive

correlation between employee satisfaction and patient satisfaction. The knowledge gained from this study could also positively shape social change within the VHA system by specifically addressing veterans' needs and improving their experiences with the care they receive. VHA leaders can help rebuild veterans' trust and loyalty in their health care system, develop a more positive reputation for the VHA system as a whole, and improve the quality of care for the veteran population at the same time. Because the VHA serves approximately 9 million veterans across the country (Hatef et al., 2019), the results of this study could impact a significantly large and vulnerable population.

As the VHA remains under close examination by the public, its veteran patients, and the media, focusing on quality improvement is most likely the best option for improving its reputation at this time. Patient satisfaction is an excellent measurement of the quality of care for a health care organization to monitor (Etingen et al., 2016). Research shows a correlation between patient satisfaction and employee satisfaction within non-VHA health care organizations, but limited studies examining this relationship within the VHA system exist. Additional studies may reveal information about this relationship within the VHA system that could help the VHA in its journey towards improving the quality of health care delivery, the experience it offers its veteran patients, and the engagement of its employees.

Although there is a significant amount of literature that addresses the relationship between employee satisfaction and patient satisfaction (Creagh et al., 2017; McNicholas et al., 2017; Perry et al., 2018; Wolf, 2017), very few studies examine this relationship within the VHA. More research is necessary to validate whether there is a correlation

within the VHA system. This research is valuable because the VHA has been struggling for years with its reputation, quality of care, and the experience of care received by United States veterans (O'Hanlon, 2017). This study helps address the gap in research by using data collected from VHA employee and patient satisfaction surveys to determine whether a correlation between the two exists within the VHA system. Section 2 provides a detailed explanation of the research design and data collection process that was used to conduct this research.

Section 2: Research Design and Data Collection

Introduction

The purpose of this study was to explore whether employee satisfaction correlates with patient satisfaction within the VHA system. Many studies have examined this relationship in non-VHA organizations (Creagh et al., 2017; McNicholas et al., 2017; Perry et al., 2018; Wolf, 2017), but only two studies have briefly looked at this relationship within the VHA system (Kang et al., 2019; PPS & BBG, 2019). This study further investigates the relationship between patient satisfaction and employee satisfaction within the VHA system using a correlational research design approach. The VHA should be able to use the results to help improve the experience for its veterans and address the issues that impact the organization's overall reputation.

In Section 2, I will identify the study variables, the research design, and the alignment with the research questions. I will also outline the methodology, including the population, sampling procedures, data collection and access, instrumentation and operationalization of constructs, and data analysis. In addition, threats to validity and ethical considerations will be addressed with a summary concluding the section.

Research Design and Rational

A quantitative, correlational research design was used to answer the research questions in this study. A quantitative research design is a design that uses numerical values and statistical analysis to determine relationships between variables (Creswell, 2017). The variables in the research questions in this study are employee satisfaction and patient satisfaction as measured by survey results reported out in a Likert-type scale

ranging from 1 to 5, in the form of ordinal numerical data in a star rating format on a scale of 1 to 5, or in the form of a response percentage rate. Thus, a quantitative research design was the most appropriate design for this type of study. I analyzed these variables using IBM SPSS Statistics for Windows (Version 27) software. Bivariate linear regression and both Pearson's correlation and Spearman's correlation testing were used due to the nature of the data.

The purpose of this study was to determine whether there was a relationship between variables. This type of research, the type that evaluates how two or more variables are related, is known as correlational research (Seeram, 2019). Correlational design methods are frequently used in health care because, rather than manipulating any variables, the relationship between variables is examined (Curtis et al., 2016). Additionally, all the variables' levels of measurement in correlational research must be ordinal, interval, or ratio (Curtis et al., 2016). In this study, the level of measurement for the variables was either ordinal or interval. Therefore, a correlational design method was most appropriate for this study.

Methodology

Population

There were two sets of populations of importance to this study. One population consisted of patients discharged from VA Medical Center sites from across the United States in either 2018 or 2019. The other population was that of employees who worked for those same VA Medical Centers during the same period. Only patients and employees from VA medical centers were included in the study because the research questions

focused on the relationship between patient satisfaction and employee satisfaction within the VHA system.

Additional criteria for the patient population required the patients discharged from the VA Medical Centers to have participated in the VA's SHEP. This survey asks the same questions as the HCAHPS Survey and holds the same eligibility requirements (CMS, n.d.-c). Patient eligibility for participating in the HCAHPS Survey requires (a) an overnight, inpatient hospital stay of at least one night, (b) a minimum age of 18, (c) a principal diagnosis that falls into the category of Medical, Surgical, or Maternity Care, and (d)) the patient must be alive at the time of discharge (CMS, 2018). In addition, some criteria exclude certain patients from the HCAHPS Survey: (a) Patients who choose not to be contacted and sign a "no-publicity" request, (b) patients who hold a foreign home address, (c) court or law enforcement patients such as prisoners, (d) patients with a discharge status to a hospice-home or hospice-certified medical facility, (e) patients required to be excluded based on state regulations or laws, and (f) any patients discharged to a nursing home or skilled nursing facility. Finally, hospitals are required to perform de-duplication, a process that removes any duplicate, eligible patients who, within the same month, have multiple discharges or another eligible adult member within the same household (CMS, 2018).

Sampling and Sampling Procedures

Sampling for the patient population begins with the requirements for the HCAHPS Survey process, which the VA follows for the SHEP as well. Each hospital is required to submit a minimum of at least 300 surveys within the 12-month reporting

period by drawing a random sample from a pool of eligible discharged patients (CMS, 2018). The minimum requirement of 300 completed surveys is requested to increase statistical rigor and reliability. Occasionally, smaller hospitals are unable to achieve the requirement of at least 300 surveys. If smaller hospitals are unable to achieve the goal of 300 surveys, all eligible discharges must be included. These results are still publicly reported through the Hospital Compare website as long as they reach a minimum of 25 completed surveys (CMS, 2018).

The final monthly sample for each hospital must represent a random sample of the patient population. If a hospital cannot achieve a minimum of 25 surveys, that hospital's results are not reported through the Hospital Compare databases (CMS, 2018). Therefore, when I extracted the datasets from the Hospital Compare website and the SAIL databases, I adjusted the total number of hospitals if the required data elements were found to be missing. The final number of hospitals included in the study was less than the originally predicted sample size of 147 VA Medical Centers as seen in Figure 2.

Figure 2

VA Medical Centers Categorized by Veteran Integrated Services Network (VISN)

VISN 1	VISN 2	VISN 4	VISN 5	VISN 6
Bedford	Albany	Altoona	Baltimore	Ashville
Boston	Bath	Butler	Beckley	Durham
Connecticut	Bronx	Coatesville	Clarksburg	Fayetteville NC
Manchester	Brooklyn	Erie	Huntington	Hampton
Northampton	Buffalo	Lebanon	Martinsburg	Richmond
Providence	Canandaigua	Philadelphia	Perry Point	Salem
Togus	East Orange	Pittsburg	Washington	Salisbury
White River	Hudson Valley	Wilkes Barre		
	New York	Wilmington		
	Northport			
	Syracuse			

VISN 7	VISN 8	VISN 9	VISN 10	VISN 12
Atlanta	Bay Pines	Lexington	Ann Arbor	Chicago
Augusta	Gainesville	Louisville	Battle Creek	Danville
Birmingham	Lake City	Memphis	Chillicothe	Hines
Charleston	Miami	Mountain Home	Cincinnati	Iron Mountain
Columbia SC	Orlando	Murfreesboro	Cleveland	Madison
Dublin	San Juan	Nashville	Dayton	North Chicago
Montgomery	Tampa		Detroit	Tomah
Tuscaloosa	West Palm		Fort Wayne	
			Indianapolis	
			Saginaw	

VISN 15	VISN 16	VISN 17	VISN 19	VISN 20
Columbia MO	Alexandria	Amarillo	Cheyenne	Anchorage
Kansas City	Fayetteville AR	Big Spring	Denver	Boise
Leavenworth	Gulf Coast HCS	Dallas	Grand Junction	Portland
Marion IL	Houston	El Paso	Montana	Puget Sound
Poplar Bluff	Jackson	Harlingen	Muskogee	Roseburg
St. Louis	Little Rock	San Antonio	Oklahoma City	Spokane
Topeka	New Orleans	Temple	Salt Lake City	Walla Walla
Wichita	Shreveport		Sheridan	White City

VISN 21	VISN 22	VISN 23
Fresno	Albuquerque	Central Iowa
Honolulu	Loma Linda	Fargo
Las Vegas	Long Beach	Fort Meade
Palo Alto	Los Angeles	Hot Springs
Reno	Phoenix	Iowa City
Sacramento	Prescott	Minneapolis
San Francisco	San Diego	Omaha
	Tucson	Sioux Falls
		St. Cloud

As for the employee population, the VA Medical System employees selected for the study came from a pool of VHA employees that chose to respond to the 2018 and 2019 AES-FEVS. The data collected from the AES-FEVS were scrubbed prior to release by the VHA's National Center for Organization Development whereby responses that raised concerns (i.e., all questions were scored high or low, the majority of questions were skipped, an implausible combination of demographics was reported; VA, 2019). As a result, approximately 2.0% of the responses were removed from the 2018 results and 2.8% from the 2019 results (VA, 2018, 2019). A total of 210,057 responses were obtained from the 2018 AES-FEVS (a 61.6% response rate), while 224,891 employees responded to the 2019 AES-FEVS (a 63.9% response rate; VA, 2018, 2019). These results were then reported via the SAIL database, which is publicly accessible through the Department of Veterans Affairs website.

Alternatively, the employee satisfaction data that were used for this study were reported at the facility level, not the employee level. If any data were missing from the measures that were required to answer the research questions, facilities missing that data were eliminated. For example, if the VHA facility in Syracuse did not provide nurse turnover rate data, then the facility was not included in the data analysis for RQ3. Once all facilities that did not provide the necessary data were eliminated, there were 113 facilities remaining for 2018 and 116 for 2019 for the analysis. I used the G*Power v3.1.9.7 for Windows software to perform power analysis and determine the appropriate sample size for this study. Using a medium effect size of 0.3, $\alpha = 0.05$, and a power of 80%, an *a* priori analysis with the G*Power software showed the required total sample

size to be 84 for a bivariate normal correlation model. An adequate sample size is crucial for correlational studies. If the sample is too small, there may appear to be a correlation when there actually is none (Aggarwal & Ranganathan, 2016). In this study, both the 2018 and 2019 sample sizes were adequate.

Instrumentation

The plan to evaluate the relationship between employee satisfaction and patient satisfaction within the VHA requires finding data representing the two constructs. Multiple sources report data that could have been used for this study. However, only a few sources offer publicly reported data that do not require the researcher to be an employee of the VHA. Two secondary sources provide access to data that address employee satisfaction and patient satisfaction within the VHA. One source is the SAIL database, which consists of data reports that summarize hospital performance across the VHA system (VA, 2020). The other source is the CMS Hospital Compare website, a database that reports hospital performance measures, including patient experience survey results.

Both the SAIL and the Hospital Compare databases gather the original data from survey instruments. The SAIL reports contain succinct summaries of data from the AES-FEVS, the survey the VHA uses to obtain employee feedback and input about each facility (VA, 2019). VHA facilities report the results of their SHEP, a survey used to obtain and report inpatient experience of care feedback from each facility within the VHA, to CMS's Hospital Compare database (CMS, n.d.-c).

Several researchers have used AES and FEVS data to conduct their research Simonetti et al. (2020) used AES from the VHA to evaluate the prevalence of burnout among employees, finding that 36.1% of VHA primary care workers experience burnout, with 58.5% of them being female. Another study conducted by Leider et al. (2016) looked at turnover in relation to job satisfaction among federal, state, and local public health practitioners. Leider et al. used FEVS data to evaluate job satisfaction perceptions of federal employees. Their study revealed that 67% of federal employees are satisfied with their job, and 40% consider leaving. The limitation of their research is that it only included federal employees from the Centers for Disease Control and Prevention. Kim and Fernandez (2017) used data from the FEVS to determine whether employee empowerment affects the intent to leave a position with the federal government. They found that employee empowerment has both direct and indirect adverse effects on turnover intent and a positive impact on job satisfaction. Simonetti et al., Leider et al., and Kim and Fernandez all used AES or FEVS data to study employee satisfaction amongst federal employees. Thus, these types of instruments were appropriate for this kind of study.

Data collected via the VA SHEP were used in this study. The SHEP asks the same questions as the HCAHPS survey, but of VA patients only (CMS, n.d.-c). The SHEP results are reported via the Hospital Compare and SAIL databases from which the secondary data used for this study were obtained. The data used for this study represent patient responses regarding their overall hospital rating, how well they recommend the hospital, and the rating of staff responsiveness.

Secondary data collected from the Hospital Compare website, such as the SHEP survey results, is used frequently in research. In their study examining the quality-of-care characteristics between VA and Non-VA facilities, Price et al. (2018) used VA SHEP survey results and compared them with HCAHPS results from non-VA hospitals. They found that VA facilities either outperformed or performed the same as non-VA facilities (Price et al., 2018). Pizer et al. (2017) also used SHEP data to evaluate how consult wait times impact patient satisfaction and found that longer wait times lead to decreased patient satisfaction. Thus, the SHEP, just like the AES-FEVS, is a standard tool used to provide data for research studies involving the VA health care system.

Operationalization of Constructs

The best places to work *score* referenced in RQ1 was a composite score calculated from the weighted percentage of multiple positive employee responses to specific questions on the AES-FEVS about job satisfaction, satisfaction with the organization, and organizational commitment (VA, 2020). The score ranges from 0 to 100, and the higher the score, the greater the level of workplace satisfaction within the reporting facility. The other variable in RQ1, the overall hospital rating linear mean score, was obtained from the VA SHEP which converts the survey responses to all questions within the hospital rating category into one single metric that is reported on a scale of 0 to 100 (Health Services Advisory Group, 2021). The higher the score, the better (VA, 2020). Because both these variables were reported as a score on a scale of 0 to 100, they were tested for correlation.

In RQ2, the satisfaction measurements were ordinal in nature and were reported on a scale of measurement. The score reported by VHA hospital employees in response to the AES-FEVS question "I recommend my organization as a good place to work" was reported on a scale of 1 to 5 and used the following definitions: 1 – *Strongly disagree*, 2 – *Disagree*, 3 – *Neutral*, 4 – *Agree*, 5 – *strongly agree* (VA, 2018; VA, 2019). The final score per facility was the average of all employee responses for that facility. The patient star rating for "recommend hospital" was also reported on a scale of 1 to 5, with a higher score indicating a better score (VA, 2020). These two variables were also tested for a correlation.

In RQ3, the two variables that were tested for correlation were both reported in the form of percentage rates. The employee satisfaction variable in this research question was measured by facility registered nurse turnover rate. The AES-FEVS defines registered nurse turnover rate in the VHA as the percentage of nurses lost per facility during the defined period (VA, 2020). The patient satisfaction variable in RQ3 was measured by the percentage of patients who reported that their "nurses always treated them with courtesy and respect." This study examined whether a correlation exists between these two variables as well.

Data Analysis Plan

The data for this study were obtained from two different secondary sources. I extracted the patient satisfaction data from the Hospital Compare website. The data were available in Microsoft Excel files for download from the archives. The downloaded data were organized and filtered within the Microsoft Excel files to include only VHA

facilities. Any facilities missing data were eliminated. Only those VHA facilities that submitted complete responses to the survey questions required for this study were included in the data analysis. The data from the Hospital Compare website archives for 2018 and 2019 were reported in one data point for each year for each survey question per facility.

I obtained the employee satisfaction data from the SAIL database only. The employee satisfaction data were also processed and cleaned up using Microsoft Excel, eliminating any outliers or missing responses. The SHEP survey results were reported in quarterly reports for each year. Once a clean and organized data set was completed, the quarterly data were averaged together to create a new data point representing an annual metric. The employee satisfaction data were then married, by facility and by year, for each research question to the corresponding patient satisfaction data point for the same research question. This process ensured a more straightforward process for analyzing the relationship between patient satisfaction and employee satisfaction within the same facility. The results of the calculations for the sample size, using the G*Power software, were compared to the final sample size to ensure the power of the sample size was appropriate for the study. G*Power is a free and easily downloadable software program that can be used to determine the proper sample size for research studies (Verma & Verma, 2020). After confirming the sample sizes to be adequate, the final data sets were exported into IBM SPSS Statistics for Windows (Version 27) to complete the analysis process.

The data analysis for this study was performed using SPSS. SPSS is one of the most commonly used software products for statistical analysis worldwide (Aljandali, 2016). It allows researchers to work in multiple different windows, on simultaneous data sets, and without having to learn command language. Finally, it runs on multiple types of computer systems, making it a widely used product across various industries (Aljandali, 2016). Therefore, SPSS served well for analyzing this type of health care data.

Research Questions and Hypotheses

RQ1: Is there a correlation between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score?

$H_0$1: There is no statistically significant relationship between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score.

$H_1$1: There is a statistically significant relationship between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score.

RQ2: Is there a correlation between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital star rating score?

$H_0$2: There is no statistically significant relationship between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital star rating score.

$H_1$2: There is a statistically significant relationship between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital star rating score.

RQ3: Is there a correlation between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect?

$H_0$3: There is no statistically significant relationship between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect.

$H_1$3: There is a statistically significant relationship between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect.

Statistical Testing

Because the purpose of this study was to determine whether a relationship exists between the variables, statistical testing that analyzes data for a correlation was most relevant. Bivariate linear regression analysis was used to identify a potential relationship between the variables in each research question. Bivariate linear regression can help explain how one variable might change based on differences in values of another variable (Bertani et al., 2018). The plan was to create a plot diagram for each research question to

determine the existence of a linear or non-linear relationship or any outliers. Visualizing the data in this manner helps identify the best correlation test to use (Aggarwal & Ranganathan, 2016).

In addition, testing to determine the strength of the relationship was performed. Pearson's correlation is one of the most common methods for testing and measuring relationships between two continuous and normally distributed variables in quantitative research studies (Curtis et al., 2016; Schober et al., 2018). Conversely, Spearman's correlation is the better option for testing ordinal variables for correlation, particularly variables measured using Likert scales (Curtis et al., 2016). It is also the better test for determining a correlation between non-normal, continuous variables (Curtis et al., 2016). Therefore, whether it is ordinal or interval, the nature of the data determines which tests to use.

Threats to Validity

One potential threat to the internal validity of this study was the instrumentation. The SHEP survey consisted of 32 questions which could lead to survey fatigue. Survey fatigue can occur if a survey takes longer than 20 minutes to complete and can result in a decreased response rate (Guo et al., 2016). A reduced response rate can impact the sample size, which, as stated earlier, can affect the power and significance of a study if the sample size is too small. This threat was challenging to minimize as the survey results used were from a secondary data source and had already been collected. Suppose too many facilities were eliminated due to a lack of responses to the required survey questions or a lack of data reported by hospitals. In that case, the sample size may have

been too small to determine whether there is a correlation between the variables. Thus, G*Power software was used to ensure an appropriate sample size was available.

In addition, threats to external validity existed in this study as well. A common threat to external validity occurs when the results from a research study are used to make generalizations about an overall population based on a sampling of the population (Lesko et al., 2017). This threat was highly likely as only a sampling of the total employee population was being used for the study. Power analysis is essential to minimize this potential threat and achieve the most significant and meaningful results (Ledolter & Kardon, 2020). Another potential threat to the external validity within this study was that the patient mix from one medical facility to another may have differed. This difference in the patient mix can affect the results specific to each facility (CMS, n.d.-c). This threat is minimized through a patient-mix adjustment made by CMS before reporting the results on the Hospital Compare website. Thus, the results are reported as if there was a similar mix of patients at all reporting hospitals (CMS, n.d.-c).

Ethical Procedures

The data that were collected and analyzed for this study are publicly accessible and did not require formal written permission to obtain. In addition, the data used in this study had no personally identifiable information associated with it that would lead to the identification of any of the participants. Despite the low risk for ethical malfeasance, approval from the Institutional Review Board (IRB) at Walden University was obtained (IRB approval number 05-10-21-061797) to ensure ethical standards were met.

Summary

This section described the quantitative, correlational design and methodology for this research study. It also explained how it was the most appropriate approach to determining a correlation between employee satisfaction and patient satisfaction within the VHA system. The methodology was outlined to include descriptions of the two populations, VHA employees and inpatients recently discharged from VHA facilities. The survey instruments used to collect the secondary data for this study were discussed as well. Sampling procedures were discussed, as was the plan for data collection. The method for data analysis using the IBM SPSS Statistics for Windows (Version 27) software to perform bivariate linear correlation testing and the plan to use Pearson's correlation and Spearman's correlation testing was also reviewed. In addition, threats to validity and ethical considerations were addressed. In Section 3, the results of the study and the study's findings will be described.

Section 3: Presentation of the Results and Findings

Introduction

The purpose of this quantitative, correlational study was to explore the relationship between employee satisfaction and inpatient satisfaction within VHA hospitals. The research questions addressed whether there was a statistically significant relationship between employee satisfaction survey results and patient satisfaction survey results within VHA hospitals. The hypotheses suggested that there is no relationship between employee satisfaction and patient satisfaction within VHA hospitals. In this section, I restate the research questions and hypotheses, describe the data collection of the secondary data set, provide the results of the statistical testing, and offer a summary of the statistical results and findings.

Research Questions and Hypotheses

RQ1: Is there a correlation between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score?

$H_0$1: There is no statistically significant relationship between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score.

$H_1$1: There is a statistically significant relationship between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score.

RQ2: Is there a correlation between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital star rating score?

$H_0$2: There is no statistically significant relationship between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital star rating score.

$H_1$2: There is a statistically significant relationship between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital star rating score.

RQ3: Is there a correlation between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect?

$H_0$3: There is no statistically significant relationship between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect.

$H_1$3: There is a statistically significant relationship between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect.

Data Collection of Secondary Data Set

After approval from Walden University's IRB, the secondary data sets used for this study were collected from two different sources. The employee satisfaction scores were collected from the VA's AES-FEVS results reported via the VA's SAIL database. The patient satisfaction scores came from the SHEP results. These results were collected from the HCAHPS Health Plan Database, which houses the VA's survey data. The data collected from both sources were the data reported for the years 2018 and 2019 from a total of 147 VA medical centers.

I extracted the data into two separate Excel spreadsheets, one for each year. The data were then assessed for missing responses to the survey questions required for the study. Medical centers that did not report a result for the data elements necessary for this study were removed. After the collection, organization, and elimination of the data was complete, the data was imported into the IBM SPSS Statistics for Windows (Version 27) program for testing purposes.

Descriptive Statistics

Out of the 147 VA medical centers, the final number of medical centers included for 2018 was 113 and for 2019 was 116. Descriptive statistics were calculated for each measure used within the study to include the mean, median, standard deviation, minimum, and maximum for each year of data. Table 2 shows the descriptive statistics for each measure used for 2018, and Table 3 shows the descriptive statistics for each measure used for 2019.

Table 1

Descriptive Data for 2018 Measures

Measure	*n*	Minimum	Maximum	*M*	*SD*
Staff best places to work	113	45.724	76.780	64.254	5.477
Inpatient overall hospital rating linear mean	113	48	94	76.290	11.675
Staff recommend organization	113	3.255	4.155	3.785	.158
Patient recommend star rating	113	1	5	3.14	.925
RN turnover	113	1.709	11.271	5.201	1.982
Nurse respect	113	72	95	85.390	4.854

Table 2

Descriptive Data for 2019 Measures

	n	Minimum	Maximum	*M*	*SD*
Staff best places to work	116	52.702	78.231	65.610	4.828
Inpatient overall hospital rating linear mean	116	80	96	89.410	2.750
Staff recommend organization	116	3.520	4.240	3.855	.139
Patient recommend star rating	116	1	5	3.28	.871
RN turnover	116	2.487	10.770	6.264	1.897
Nurse respect	116	72	97	86.720	4.564

Results

Initially, scatterplots were created to evaluate the relationship between the study variables. The scatterplots showed a slight linear correlation and a monotonic relationship using the 2018 data for the best places to work score and the inpatient overall hospital rating linear mean score, as seen in Figure 3. Figure 4 shows a slightly stronger positive linear correlation and monotonic relationship for the 2019 data. Scatterplots of the recommend my organization score and the inpatient recommend hospital star rating score, seen in Figure 5 for the 2018 data and Figure 6 for the 2019 data, also showed a potential linear correlation but with a less monotonic relationship. Finally, the scatterplots of registered nurse turnover rates and inpatients who always felt their nurses treated them with courtesy and respect appear to have either a weak relationship or no relationship at all for both the 2018 and 2019 data.

Figure 3

Scatterplot With Fit Line of Staff Best Places to Work and Inpatient Overall Hospital Rating 2018

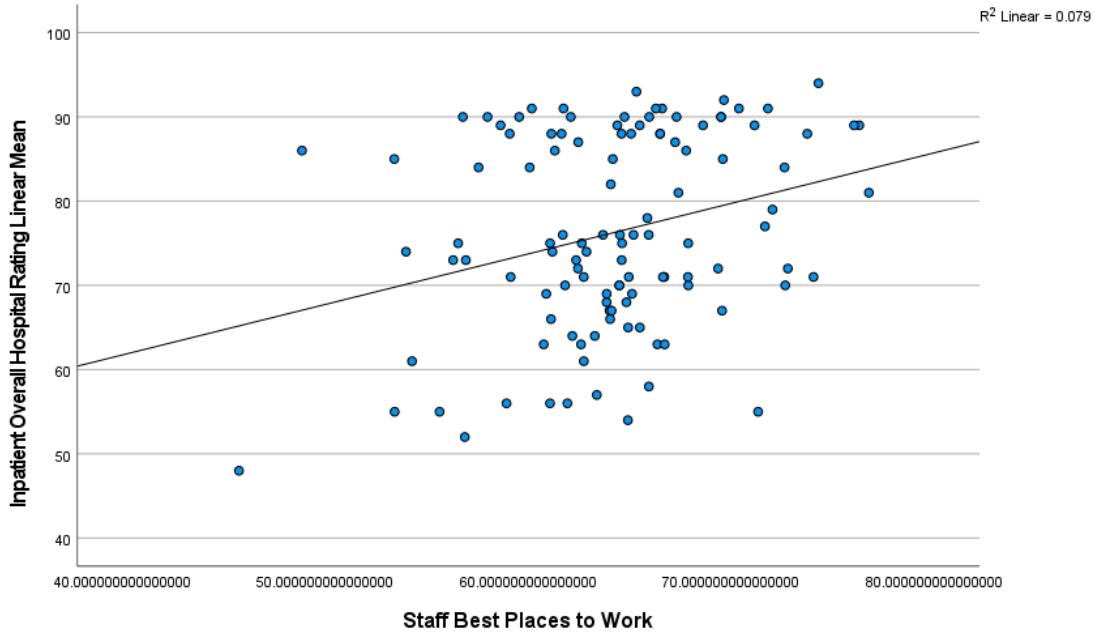


Figure 4

Scatterplot With Fit Line of Staff Best Places to Work and Inpatient Overall Hospital Rating 2019

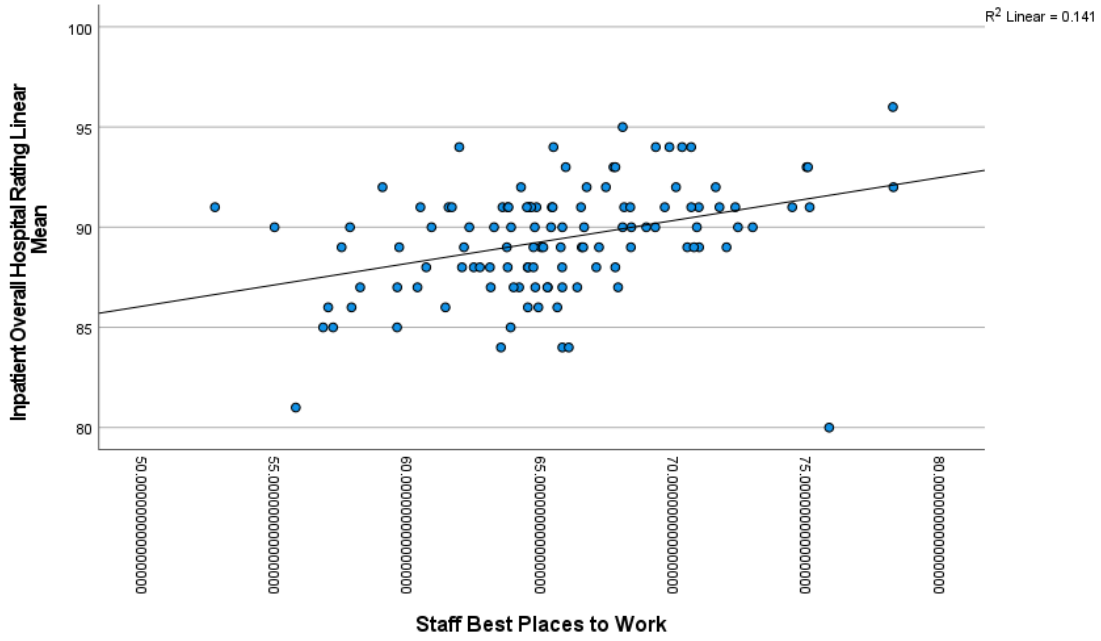


Figure 5

Scatterplot With Fit Line of Staff Recommend Organization and Patient Recommend Star Rating 2018

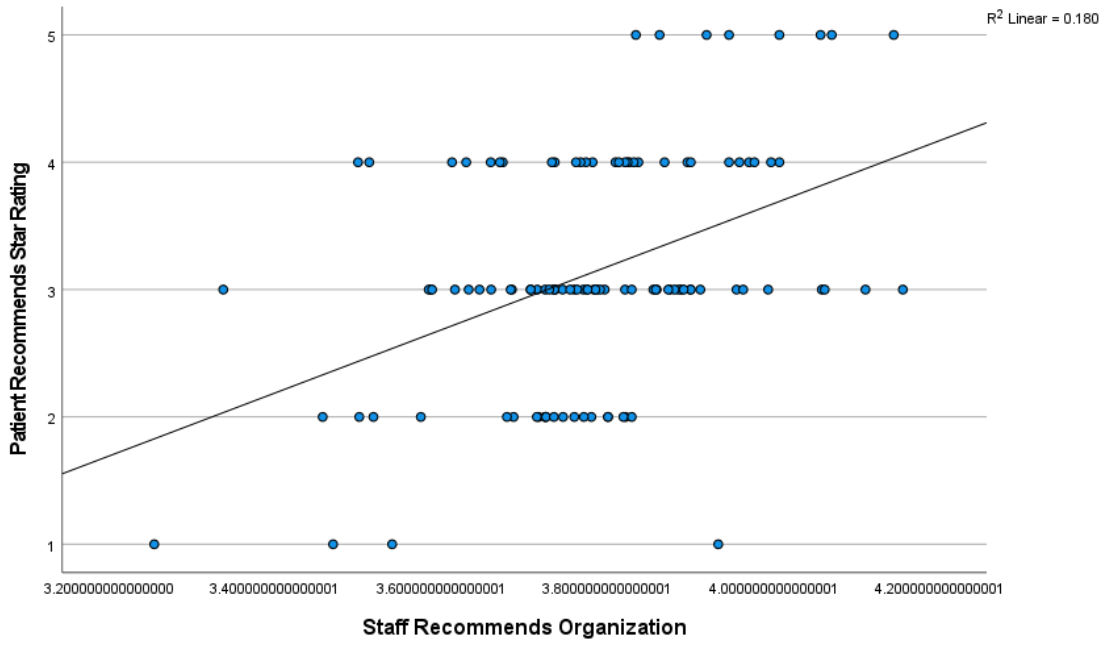


Figure 6

Scatterplot With Fit Line of Staff Recommend Organization and Patient Recommend Star Rating 2019

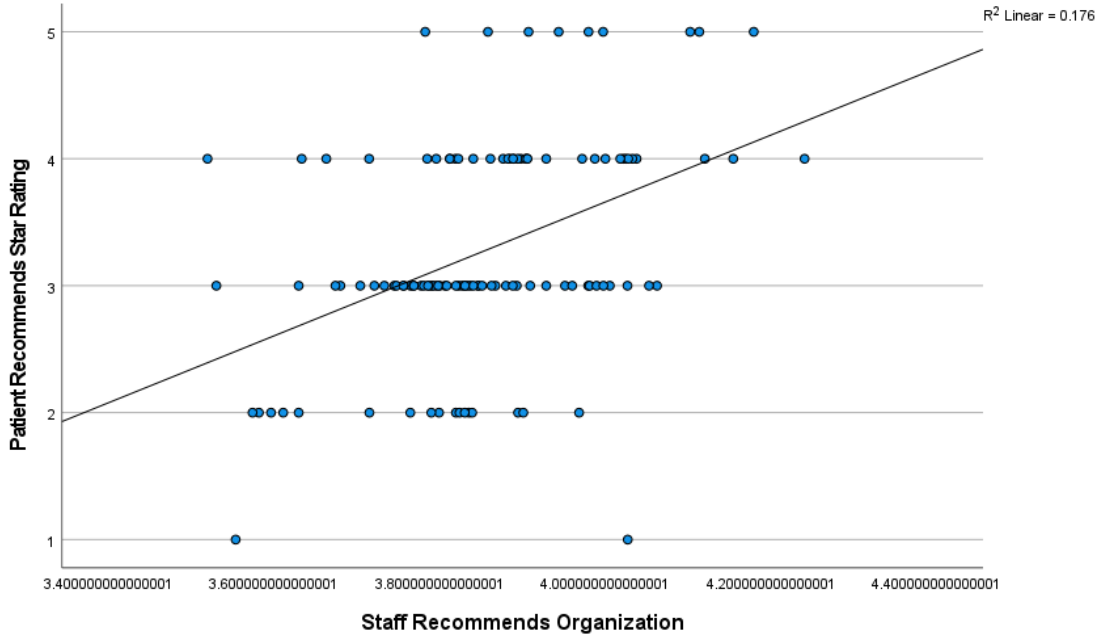


Figure 7

Scatterplot With Fit Line of RN Turnover and Inpatients Who Always Felt Their Nurses Treated Them With Courtesy and Respect 2018

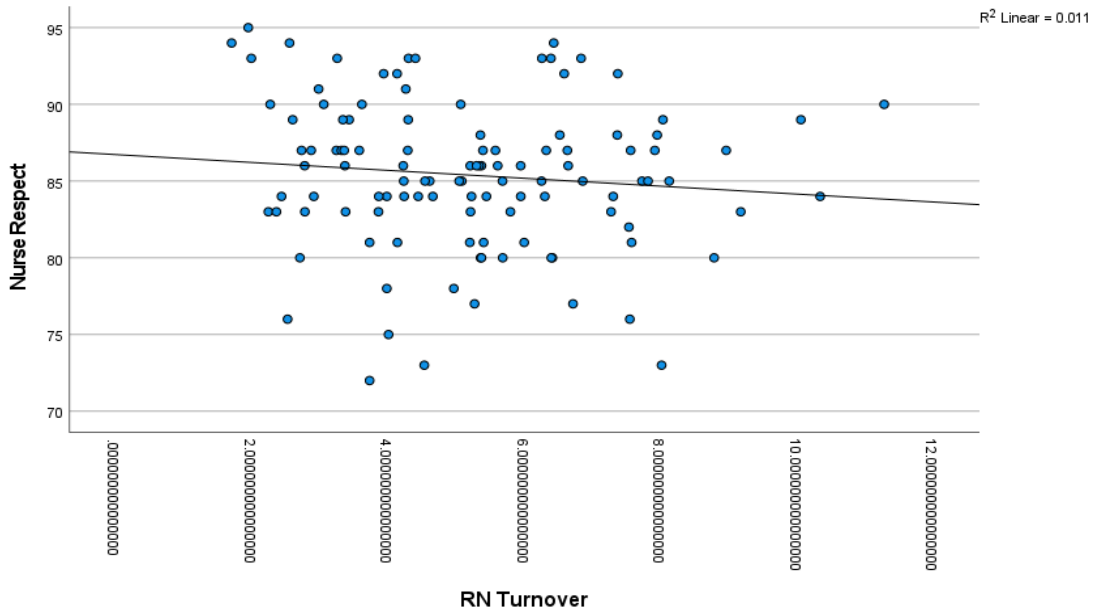
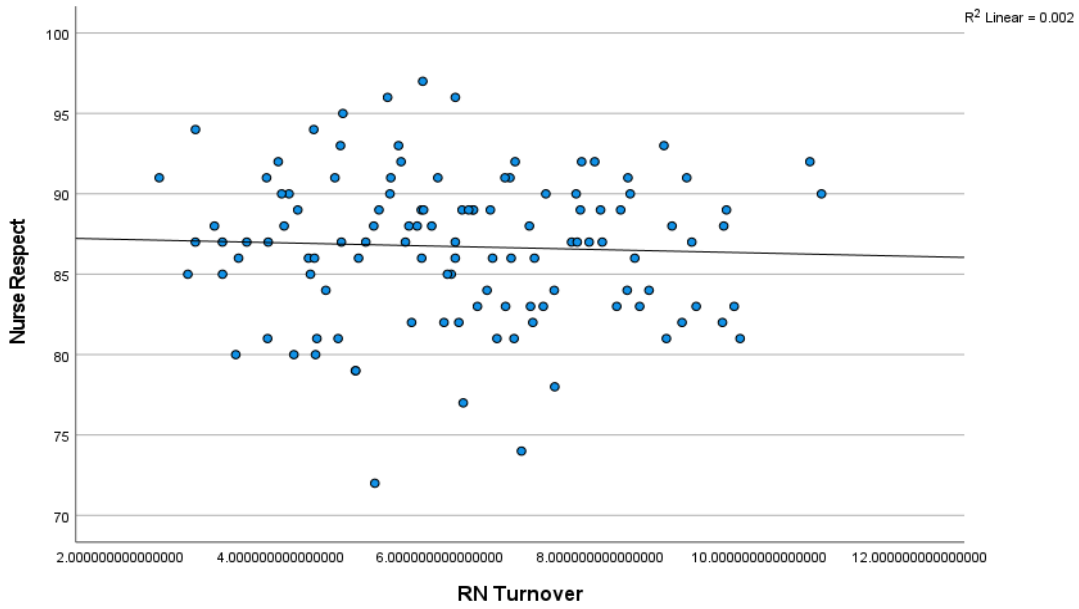


Figure 8

Scatterplot With Fit Line of RN Turnover and Inpatients Who Always Felt Their Nurses Treated Them With Courtesy and Respect 2019



Additional testing using Pearson's correlation was performed to further assist in understanding the relationship between the variables and to test the hypotheses. The following assumptions were met for testing RQ1 and RQ2: (a) The variables being analyzed were on a continuous scale, (b) two continuous variables were paired, (c) there was independence of cases, (d) there was a linear relationship, (e) each variable was normally distributed, and (f) there was homoscedasticity. As many as four outliers were noted on all measures except for RN turnover and inpatient overall hospital rating linear mean. Although the outliers are based on valid survey results, testing using Spearman correlation was performed as well. Spearman correlation is a more appropriate means of testing for correlation when extreme outliers still need to be included and for situations where there appears to be a monotonic relationship but not necessarily a linear

relationship (Schober & Vetter, 2020). The scatterplot for RN turnover and inpatients who always felt their nurses treated them with courtesy and respect appeared to be monotonic but not linear. Because the results of the scatterplot indicated either extreme outliers or non-linear relationships, Spearman correlation tests were performed to test each hypothesis in addition as the results are not as influenced by these types of situations as Pearson correlation testing can be (Schober & Vetter, 2020).

Research Question 1

Table 4 shows the Pearson correlation for the best places to work score and the inpatient overall hospital rating linear mean score from 2018. The results indicate a statistically significant positive relationship (r = .281, p = .003) at the 0.01 level between these two measures. On the other hand, Table 5 shows the Spearman correlation results. The nonparametric Spearman correlation results indicate a significant positive relationship (r_s = .249, p = .008) as well at the 0.01 level. In both cases, the p value is less than the significance level of 0.01. Therefore, the null hypothesis of there being a statistically significant relationship between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score, is retained.

Table 3

Pearson Correlation for Staff Best Places to Work and Inpatient Overall Hospital Rating Linear Mean 2018

Measure	Test	Staff best places to work	Inpatient overall hospital rating linear mean
Staff best places to work	Pearson Correlation	1.000	.281**
	Sig. (2-tailed)		.003
	n	113	113
Inpatient overall hospital rating linear mean	Pearson Correlation	.281	1.000
	Sig. (2-tailed)	.003	
	n	113	113

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

Table 4

Spearman Correlation for Staff Best Places to Work and Inpatient Overall Hospital Rating Linear Mean 2018

Measure	Test	Staff best places to work	Inpatient overall hospital rating linear mean
Staff best places to work	Correlation Coefficient	1.000	.249**
	Sig. (2-tailed)		.008
	n	113	113
Inpatient overall hospital rating linear mean	Correlation Coefficient	.249**	1.000
	Sig. (2-tailed)	.008	
	n	113	113

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

Pearson correlation test results for 2019 for Staff Best Places to Work and Inpatient Overall Hospital Rating Linear Mean can be seen in Table 6. The results indicate a positive statistically significant correlation (r = .376, p = .000) at the 0.01 level. Additionally, the Spearman correlation indicates a positive and significant correlation (r_s = .404, p = .000) at the 0.01 level, as is seen in Table 7. The same holds true using the 2019 data as it was with the 2018 data: Since the p value is less than the significance level of 0.01, the null hypothesis of their being a statistically significant relationship

between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score is retained.

Table 5

Pearson Correlation for Staff Best Places to Work and Inpatient Overall Hospital Rating Linear Mean 2019

Measure	Test	Staff best places to work	Inpatient overall hospital rating linear mean
Staff best places to work	Pearson Correlation	1.000	.376**
	Sig. (2-tailed)		.000
	n	116	116
Inpatient overall hospital rating linear mean	Pearson Correlation	.376**	1.000
	Sig. (2-tailed)	.000	
	n	116	116

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

Table 6

Spearman Correlation for Staff Best Places to Work and Inpatient Overall Hospital Rating Linear Mean 2019

Measure	Test	Staff best places to work	Inpatient overall hospital rating linear mean
Staff best places to work	Correlation Coefficient	1.000	.404**
	Sig. (2-tailed)		.000
	n	116	116
Inpatient overall hospital rating linear mean	Correlation Coefficient	.404**	1.000
	Sig. (2-tailed)	.000	
	n	116	116

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

Research Question 2

Table 8 shows the Pearson correlation test results for the relationship between the recommend my organization score and the inpatient recommend hospital star rating score from 2018. The results indicate a positive and statistically significant correlation (*r* =

.424, p = .000) between the two measures at a significance level of 0.01. The Spearman correlation results for the same measures, seen in Table 9, indicate a positive correlation (r_s = .378, p = .000), also significant at the 0.01 level. Based on these findings, the null hypothesis for RQ2 was retained for the 2018 data.

Table 7

Pearson Correlation for Recommend My Organization and Inpatient Recommend Hospital Star Rating 2018

Measure	Test	Staff recommend organization	Inpatient recommend hospital star rating
Staff recommend organization	Pearson Correlation	1.000	.424**
	Sig. (2-tailed)		.000
	n	113	113
Inpatient recommend hospital star rating	Pearson Correlation	.424**	1.000
	Sig. (2-tailed)	.000	
	n	113	113

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

Table 8

Spearman Correlation for Recommend My Organization and Inpatient Recommend Hospital Star Rating 2018

Measure	Test	Staff recommend organization	Inpatient recommend hospital star rating
Staff recommend organization	Correlation Coefficient	1.000	.378**
	Sig. (2-tailed)		.000
	n	113	113
Inpatient recommend hospital star rating	Correlation Coefficient	.378**	1.000
	Sig. (2-tailed)	.000	
	n	113	113

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

Pearson correlation test results for the same measures, but from 2019, can be seen in Table 10, while Table 11 shows the results for the Spearman correlation testing. The Pearson correlation results show a positive and statistically significant correlation (r =

.420, p = .000) at the 0.01 level as do the Spearman correlation results (r_s = .411, p = .000). The findings from the 2019 data indicate the null hypothesis for RQ2 should be retained, the same as for the 2018 data.

Table 9

Pearson Correlation for Recommend My Organization and Inpatient Recommend Hospital Star Rating 2019

Measure	Test	Staff recommend organization	Inpatient recommend hospital star rating
Staff recommend organization	Pearson Correlation	1.000	.420**
	Sig. (2-tailed)		.000
	n	116	116
Inpatient recommend hospital star rating	Pearson Correlation	.420**	1.000
	Sig. (2-tailed)	.000	
	n	116	116

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

Table 10

Spearman Correlation for Recommend My Organization and Inpatient Recommend Hospital Star Rating 2019

Measure	Test	Staff recommend organization	Inpatient recommend hospital star rating
Staff recommend organization	Correlation Coefficient	1.000	.411**
	Sig. (2-tailed)		.000
	n	116	116
Inpatient recommend hospital star rating	Correlation Coefficient	.411**	1.000
	Sig. (2-tailed)	.000	
	n	116	116

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

Research Question 3

Table 12 provides the results of Pearson correlation testing for 2018 registered nurse turnover rates and the percentage of inpatients who always felt their nurses *treated them with courtesy and respect* from 2018. The results demonstrate a negative relationship with no statistically significant relationship (r = -.105, p = .267). Table 13 shows the results of the Spearman correlation test for the two 2018 measures, also confirming there is no statistically significant relationship (r_s = -.115, p = .224). Because the p value is greater than 0.01, the null hypothesis for RQ3 using the 2018 data was rejected, and the hypothesis that there is no statistically significant relationship was accepted.

Table 11

Pearson Correlation for Registered Nurse Turnover Rates and the Percentage of Inpatients Who Always Felt Their Nurses Treated Them with Courtesy and Respect 2018

Measure	Test	RN turnover	Nurse respect
RN turnover	Pearson Correlation	1.000	-.105
	Sig. (2-tailed)		.267
	n	113	113
Nurse respect	Pearson Correlation	-.105	1.000
	Sig. (2-tailed)	.267	
	n	113	113

Table 12

Spearman Correlation for Registered Nurse Turnover Rates and the Percentage of Inpatients Who Always Felt Their Nurses Treated Them with Courtesy and Respect 2018

Measure	Test	RN turnover	Nurse respect
RN turnover	Correlation Coefficient	1.000	-.115
	Sig. (2-tailed)		.224
	n	116	116
Nurse respect	Correlation Coefficient	-.115	1.000
	Sig. (2-tailed)	.224	
	n	116	116

The results of correlation testing for the 2019 data for registered nurse turnover *rates* and the percentage of inpatients who always felt their nurses *treated them with courtesy and respect* can be seen in Table 14 for Pearson correlation and Table 15 for Spearman correlation. The findings from the 2019 data for these measures exhibited a *p* value greater than 0.01, the same results as the 2018 data. Neither the Pearson correlation test results (r = -.044, p = .638) nor the Spearmen correlation test results (r_s = -.046, p = .625) indicated a statistically significant relationship between the two measures. Therefore, the hypothesis was accepted, indicating no statistically significant relationship between these two measures.

Table 13

Pearson Correlation for Registered Nurse Turnover Rates and the Percentage of Inpatients Who Always Felt Their Nurses Treated Them with Courtesy and Respect 2019

Measure	Test	RN turnover	Nurse respect
RN turnover	Pearson Correlation	1.000	-.044
	Sig. (2-tailed)		.638
	n	116	116
Nurse respect	Pearson Correlation	-.044	1.000
	Sig. (2-tailed)	.638	
	n	116	116

Table 14

Spearman Correlation for Registered Nurse Turnover Rates and the Percentage of Inpatients Who Always Felt Their Nurses Treated Them with Courtesy and Respect 2019

Measure	Test	RN turnover	Nurse respect
RN turnover	Correlation Coefficient	1.000	-.046
	Sig. (2-tailed)		.625
	n	116	116
Nurse respect	Correlation Coefficient	-.046	1.000
	Sig. (2-tailed)	.625	
	n	116	116

Summary

Based on the results of this study, statistically significant correlations were noted between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score in both 2018 and 2019. In addition, statistically significant correlations were noted between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital

star rating score in both 2018 and 2019. The null hypotheses for both RQ1 and RQ2 were rejected.

Contrarily, the null hypothesis for RQ3 was accepted based on the findings from the analysis of data from both 2018 and 2019, which examined the relationship between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect. There was no statistically significant correlation between these measures in either year.

I will address the interpretation of these findings in Section 4. The study's limitations, recommendations, and implications for professional practice and social change will also be discussed in the next section. Finally, I will summarize the key essence of the study in the conclusion of Section 4.

Section 4: Application to Professional Practice and Implications for Social Change

Introduction

The purpose of this quantitative study was to explore whether employee satisfaction correlates with inpatient satisfaction within VHA hospitals. More specifically, it was to examine the best places to work score in relation to the inpatient overall rating of hospital linear mean score, the recommend my organization score with regard to the inpatient recommend hospital star rating score and the registered nurse turnover rates in relation to the percentage of inpatients who always felt their nurses treat them with courtesy and respect. The results of this study can assist VHA administrators in better understanding the relationship between employee satisfaction and patient satisfaction with the VHA system and assist with future decision-making necessary to help improve the experience of care for their patients.

A correlational design was the appropriate method for analyzing the relationships between the variables being studied. I used scatterplots to identify linear relationships between the variables. Pearson and Spearman correlation testing was then used to identify further whether the relationships were statistically significant. The Spearman test was used to allow for consideration of the outliers. The test results identified statistically significant, positive relationships between the best places to work score in relation to the inpatient overall rating of hospital linear mean score as well as the recommend my organization score with regard to the inpatient recommend hospital star rating score. However, the test results revealed no statistically significant relationship between the

registered nurse turnover rates in relation to the percentage of inpatients who always felt their nurses treated them with courtesy and respect.

Interpretation of the Findings

The findings from this study for RQ1 and RQ2 were similar to those found in existing research examining the relationship between employee satisfaction and patient satisfaction within the VHA system. Kang et al. (2019) found a correlation between employee job-specific satisfaction and patient satisfaction within the VHA system as measured by the "top box" ratings of the hospitals using Pearson and Spearman correlation. The PPS and the BCG (2019) also found a correlation between employee engagement and patient experience scores within VHA medical centers. These findings also substantiate current research within the civilian health care sector. For example, Perry et al. (2018) found that nurse satisfaction predicts patient satisfaction. Thus, this study's results, which show a statistically significant and positive relationship for two of the three research questions analyzed, help contribute to current existing research.

In addition, the results found when analyzing RQ1 and RQ2 help contribute to Donabedian's quality health care framework that consists of the three components of health care: structure, process, and outcome (Donabedian, 1966). The results of this study support the argument of Donabedian's framework, that structure and outcome are related. In the case of this study, the findings for RQ1 and RQ2 showed employee satisfaction (structure) as having a positive association with patient satisfaction (outcome).

On the other hand, the findings for RQ3 examining the relationship between nurse turnover and patient satisfaction were contradictory to existing research. McHugh et al.

(2016) found that turnover rates decreased as patient satisfaction increased within Magnet-status hospitals. Similarly, De Simone et al. (2018) found a correlation between nurse turnover intention and patient satisfaction. However, this study showed no significant relationship between nurse turnover and the patient satisfaction measure of the percentage of inpatients who always felt their nurses treated them with courtesy and respect. Further investigation and research into nurse turnover and its relationship to patient satisfaction measures are warranted.

Limitations of the Study

There were several limitations to this study. First, including more current data from 2020 was not possible as the measures reported by the VHA changed beginning with 2020. The 2020 data could not be included in the study as it did not match the measures analyzed from 2018 and 2019. Thus, the study was limited to 2 years and did not include the most current survey data.

Second, this study did not consider other variables or demographics such as gender, facility size, geographical location, or quality outcomes. These are all variables that could influence both employee and patient satisfaction that were not accounted for in this study. For example, McFarland et al. (2017) conducted a study to determine whether hospital size affected patient satisfaction. The study found a significant correlation in that the larger the hospital, the less satisfied the patients. In addition, the VHA survey results were not adjusted for survey administration methods or patient-mix either. Therefore, future research should consider examining the impact of demographic characteristics on the other measures being examined.

Finally, although there was a large enough sample to meet the requirements for an appropriate sample size, as determined by performing power analysis using G*Power software, not all VHA facilities were included in the study. Several facilities were eliminated because they did not report the survey results required for this study. If those additional facilities had reported data and been included, that data may have influenced the results.

Recommendations

The results of this study help corroborate current research on the topic in that there is a correlation between employee satisfaction with the organization and patient satisfaction with the organization. Contrarily, the lack of a relationship between nurse turnover and patient satisfaction, as measured by the percentage of patients who felt respected by their nurses, should be further investigated. The percentage of patients who felt their nurses treated them with courtesy and respect may not have been the best measure of patient satisfaction to use to determine whether there was an association with nurse turnover rates. Further research utilizing other SHEP measures from the VHA should be conducted to determine whether a correlation exists between nurse turnover and patient satisfaction.

Another recommendation is to use more current data. Once the survey results for the 2021 calendar year are released, data from 2020 and 2021 can be analyzed to determine whether anything has changed since the prior years' results were released. This data can help VHA leaders determine if process improvements they have implemented are working and whether the findings of this study remain consistent. In addition, the

inclusion of more VHA facilities may be possible if the facilities that did not fully report all the necessary data in 2018 and 2019 report all essential data in 2020 and 2021.

Finally, more thorough research should be performed to analyze how other variables might influence patient satisfaction. Such characteristics as facility size, patient mix, gender, and race may produce different results. Understanding how these characteristics can affect the relationship between employee satisfaction and patient satisfaction can help leaders determine better approaches to improving satisfaction overall.

Implications for Professional Practice and Social Change

The findings from this study have several implications for professional practice and social change. The first is to help address the long-standing issues the VHA has been dealing with regarding patient satisfaction within their facilities. Several VHA facilities have low patient satisfaction scores (Blay et al., 2017) and higher than normal staff turnover rates (Daigh, 2018). In addition, VHA leaders are expected to focus on improving the patient care experience (VA, 2018). This study helped solidify the theory that there is a positive correlation between employee satisfaction and patient satisfaction by rejecting the null hypothesis that a statistically significant correlation does not exist. Therefore, VHA leaders should consider how employee satisfaction and engagement might impact patient satisfaction rather than just focusing on other determinants of patient satisfaction.

This study also has implications for social change. The VA classifies veterans as a potentially vulnerable population (Morales et al., 2019) because they are at high risk for

mental health issues, substance abuse, homelessness, and incarceration (Edwards et al., 2021). Veterans are a vulnerable population more susceptible to these types of problems, making it even more critical that they receive excellent care when they seek help for their healthcare needs.

Current research demonstrates a correlation between patient satisfaction and quality outcomes (Hepner et al., 2017; Kahn et al., 2019; Morss et al., 2016). Using the findings from the current research, along with the results of this study, it appears that improving employee satisfaction can improve the quality of care delivered, and in turn, influence patient satisfaction. Thus, Donabedian's Quality Framework worked well for this study, whereby satisfied employees (good structure) provide good care (process), which produces satisfied patients (outcome).

Conclusion

Improving patient satisfaction has become a top priority and goal for most health care organizations. The VHA is one organization that has seen both public and media scrutiny regarding their satisfaction that has significantly impacted their reputation. VHA administrators and leaders have been assigned the responsibility of ensuring their patients' satisfaction and experiences are addressed and improved. Although past research conducted on other health care facilities throughout the United States has shown a correlation between employee satisfaction and patient satisfaction, there is limited research examining the relationship between these two variables within the VHA system. This study was one of only three studies addressing this issue.

Although this study's statistical results demonstrated no statistically significant relationship between VHA employee satisfaction, as measured by registered nurse turnover rates, and VHA patient satisfaction, as measured by the percentage of inpatients who always felt their nurses treated them with courtesy and respect, the results did reveal a correlation between VHA employee satisfaction, as measured by the best places to work score, and VHA patient satisfaction, as measured by the inpatient overall hospital rating linear mean score. The results also showed a correlation between VHA employee satisfaction, as measured by the recommend my organization score, and VHA patient satisfaction, as measured by the inpatient recommend hospital star rating score.

The findings of this study provide corroborating evidence that, for the most part, employee satisfaction is related to patient satisfaction. This information can be helpful for VHA leaders and leaders of other health care organizations to assist them in developing plans to address and improve patient satisfaction. However, further study is necessary regarding how nurse turnover rates relate to how patients feel about their nurses treating them with courtesy and respect.

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