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Relationship Between Hospital Size, Staff Communication, Physician Communication, and Patient Experience Scores

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Abstract

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by

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MS, University of Phoenix, 2010

BS, University of Phoenix, 2008

Doctoral Portfolio Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Healthcare leaders who struggle to understand the importance of interactions between patients, staff, and physicians can result in poor patient experience. Healthcare care leaders who understand the importance of patient experience can develop customer service training modules and tutorials to improve organizational outcomes. The purpose of this correlational study was to examine the relationship between staff communication, physician communication, size of the hospital, and patient experience. House's path-goal theory was used to frame the study. Secondary data were collected from hospitals in Northeastern Ohio, that reported patient experience scores through the Centers for Medicare and Medicaid's Hospital Consumer Assessment of Healthcare Providers and Systems survey database for the years 2016 and 2017. The results of the multiple linear regression indicated the results were significant, $F(5, 144) = 56.822$, $p < .001$, $R^2 = .652$. The findings may provide health care leaders with tools to communicate with staff on how to improve patient experience through improving employee and patient engagement, thereby improving patient experience scores.

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Dedication

I am dedicating this study to my family and friends who have played a crucial role in my success throughout this endeavor. First, I would like to thank my husband who sacrificed and dealt with my many sleepless nights while embarking on my doctoral journey. His support and confidence in me are what helped me to keep pushing forward. I am also dedicating this to my parents. I know you watch over me every day and help to give me the strength to press forward during trying times. To my brother, you have always remained by my side and encouraged me to continue with my dreams, even when I was at my weakest. I truly appreciate all your love and sometimes brutal honesty throughout this journey, as it certainly helped to keep me grounded. To my friends who always knew I could make it through this journey, even when I was unsure myself, thank you. Lastly, and most important, I dedicate this to our Lord and savior who always gives me day-to-day strength and continues to provide challenges to me so I can persevere through anything in life.

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Section 1: Background and Context

Health care regulation and reimbursement have evolved since the Affordable Care Act (ACA) in 2010. Health care organization reimbursement is a contributing factor of cost containment and reimbursement through government-funded programs, which include patient experience (Obama, 2016). Strategic decisions that help to improve patient experience scores may help health care organizations with sustainability and increased reimbursement. Health care organizations must plan and prepare to use strategic methods to improve patient experience scores to avoid consequential impacts on organizational performance (Berkowitz, 2016). Health care leaders in the United States have recognized the importance of patient experience scores and the impact on health care organizations and have increased efforts on improving the delivery of care and patient experience scores (Berkowitz, 2016). An overview of the historical background of changes to health care and patients' perceptions of care may help researchers better understand the impact of value-based reimbursement on health care organizations.

Historical Background

Health care costs in 2015 reached $3.2 trillion and are expected to continue to grow 6.2% annually from 2015 through 2022 (Centers for Medicare and Medicaid Services [CMS], 2017). Health care continues to evolve and change with more emphasis on quality and patients' perceptions of care, thereby impacting reimbursement for health care organizations. Government reimbursement plays a critical role in the success of health care organizations and contributes 30% of value-based care reimbursement to

patient experience (Das et al., 2016). Medicare plays a critical role in how reimbursement is determined for health care organizations.

Government requirements for Medicare reimbursement since the ACA require health care providers to report patient experience scores (Berkowitz, 2016). Communication between employees and patients may play a role in patients' perceptions of care, thereby improving satisfaction. Peleki et al. (2015) found that when employees are polite, sensitive, and responsive to patient needs, positive relationships develop. Kahn, Iannuzzi, Stassen, Bankey, and Gestring (2015) discovered that when patients have positive interactions with health care providers, the interactions have a direct impact on patient satisfaction, which might affect patient experience scores. Health care leaders who focus on and understand the human factors approach may contribute to a healthier population, aid in the reduction of health care costs, and meet government requirements for reimbursement (Taylor & Thomas-Gregory, 2015). The findings of the current study may help health care leaders understand the importance of employee motivation by implementing strategies to encourage employees to focus on communication, thereby affecting patient experience scores.

Organizational Context

The secondary data for this analysis were obtained from the CMS archival database. The mission and vision of the CMS is centered around patient populations and government programs and policies to meet population needs (CMS, 2018). The strategic objectives of CMS focus on quality measures of care including payments and reimbursement for quality and value-based care (CMS, 2016). Value-based care is a

fundamental part of health care in the United States, and payment incentives, integration, and care coordination impact the delivery of health care, thereby impacting the overall patient experience when receiving medical care (Burwell, 2015). Health care leaders play a critical role in patient perceptions through leadership styles and motivational techniques, thereby influencing the outcome of patient experience scores (Sfantou et al., 2017). Value-based care is a key focus for CMS; therefore, the importance of patient experience could impact how health care organizations prepare staff and physicians for improved patient communication.

Problem Statement

Since the ACA adoption, a significant amount of data and literature has been documented and released regarding patient experience. The requirements for reimbursement through the CMS require health care providers to report patient experience data (Aroh, Colella, Douglas, & Eddings, 2015). The Value-Based Payment program through the CMS bases 30% of reimbursement on improved patient experience scores (Aroh et al., 2015; Blumenthal & Anupam, 2013; Elliot et al., 2016). The size of the hospital, communication between employees and patients, and communication between physicians and patients may play a role in patient perceptions of care, thereby improving satisfaction and patient experience scores. Peleki et al. (2015) found that when staff are polite, sensitive, and responsive to patient needs, positive relationships develop. Kahn et al. (2015) discovered that when patients have positive interactions with physicians, the interactions have a direct impact on patient satisfaction. Secondary data analysis that addresses the relationship between employee communication and patient

experience, physician communication and patient experience, and the size of the hospital and patient experience may help leaders understand the importance of motivating employees to improve interactions with patients to improve patient experience scores. When health care leaders understand the impact of communication on patient experience scores, health care organizations may consider developing customer service training modules and tutorials to improve organizational outcomes, thereby impacting patient experience.

Purpose Statement

The purpose of this quantitative correlational secondary data analysis was to examine the relationship between patient experience scores and (a) the size of a hospital, (b) staff communication, and (c) physician communication. The independent variables for the analysis were staff communication, physician communication, and size of the hospital. The dependent variable was patient experience scores. The targeted populations were hospitals located in Northeastern Ohio.

The social impact of improving patients' experiences when receiving health care and communicating with hospital staff could lead to improved patient outcomes by ensuring each patient's experience is a priority for health care organizations. The results from this study may influence social change by giving hospital leaders insight into how improving patient experience scores may improve overall engagement among patients and hospital employees. The results from this study may also influence social change by giving hospital leaders awareness of the importance of developing strategies to motivate

staff and physicians to learn how to better communicate with patients to aid in improving patient experience scores.

Target Audience

The key stakeholders for this quantitative correlational study were health care leaders who are responsible for ensuring patient satisfaction and improving patient experience scores. The target hospitals were in Northeastern Ohio. The secondary data analysis was conducted to examine the relationship between the independent variables and patient experience scores. Results may help health care administrators responsible for creating policies and training programs to ensure the policies and training include effective communication. Results may also help researchers who are interested in qualitative studies by supporting the theoretical concepts for their study. The data sets I used for this secondary data analysis were from The Medicare.gov Hospital Compare data archives.

Research Question and Hypotheses

RQ: What is the relationship between (a) the size of a hospital, (b) staff communication, (c) physician communication, and patient experience scores?

(H_0): There is not a statistically significant relationship between (a) the size of a hospital, (b) staff communication, (c) physician communication, and patient experience scores

(H_1): There is a statistically significant relationship between (a) the size of a hospital, (b) staff communication, (c) physician communication, and patient experience scores.

Significance

Health care organizations are challenged with improving patient experience scores and reporting the scores to CMS to increase reimbursement of government funding. The CMS reimbursed $1.4 billion to hospitals for improved patient care (Figueroa, Tsugawa, Zheng, Orav, & Jha, 2016). CMS evaluates health care organizations on eight patient experience domains (categories) in addition to other clinical domains and requires that health care organizations show improvement in the domains to qualify for reimbursement (Aroh et al., 2015). Patient experience scores are the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey measures that hospitals provide to qualify for the Value-Based Purchasing (VBP) government reimbursement program, which had a significant impact on 3,000 hospitals nationwide in 2014 (Aroh et al., 2015; Figueroa et al., 2016). HCAHPS surveys may influence how patients determine where to seek medical care.

The results of HCAHPS surveys are accessible to the public and could have an impact on how a patient determines which health care facility to use for health care services, thereby increasing the importance of ensuring positive patient experiences (Elliot et al., 2016). Organizational leaders may choose to consider pursuing influential approaches to improve employee communication with patients that could aid in improving patient experience scores, thereby influencing CMS reimbursement. The findings of this study could encourage collaborative efforts among health care providers and insurers to improve the quality of care for patients. In addition, the findings may provide health care leaders with tools to communicate with staff on how to improve

patient experience by improving employee and patient engagement, thereby improving patient experience scores. Patient outcomes may improve when health care organizations focus on improving patient experiences for the citizens of Northeastern Ohio.

Theoretical Framework

Strategic leadership and influences in an organization were central to this study. I used path-goal theory (House, 1971) as my framework for this study. House (1971) developed path-goal theory to show the impact that leaders have on employee motivation and organizational effectiveness. Path-goal theory depicts two behavioral elements of leaders, instrumental and social-emotional, which derive from aspects of expectancy theories of motivation (House, 1971). House described instrumental behavior as the behavior taken by a leader to define specific tasks and instructions for employees that are clear and concise. In social-emotional behavior, a leader encodes, decodes, regulates, and controls communication through emotional and social expressions to motivate employees (Riggio & Reichard, 2008). In 1996, House redefined path-goal theory to include additional classes of leadership behavior.

The eight classes of leadership behavior added by House (1996) include path-goal clarifying behavior, achievement-oriented behavior, work facilitation behavior, supportive behavior, interaction facilitation behavior, group-oriented decision process behavior, representation and networking behavior, and value-based behavior. The path-goal theory implies that influences from leaders can have a direct impact on organizational success by improving patient experience scores (Almatrooshi, Singh, & Farouk, 2016). Improving staff communication with patients and improving physician

communication with patients in hospitals could positively impact patient experience scores. Leaders who have the skills to motivate staff to improve communication with patients could aid in the improvement of organizational goals and outcomes (Almatrooshi et al., 2016). According to House's path-goal theory, when a leader can influence and motivate employees, performance improvement can occur, which can assist with improving patient experience scores in both larger and smaller hospitals.

The purpose of this quantitative correlational study was to help health care leaders understand the impact of employee and physician communication on patient experience scores, which may influence government reimbursement. The demand for documented quality improvements, in conjunction with patient care and patient experience from government legislation, is placing pressure on health care organizations to become more efficient with internal training, procedures, and practices (Zhao, Haley, Spaulding, & Balogh, 2015). Organizational performance may improve with consistent patient experience scores. The focus of the literature review was to explain the impact of leadership involvement in encouraging health care employees and physicians to improve communication with patients, thereby influencing patient experience scores. When leaders embrace the role of motivating employees and physicians in hospitals to enhance communication with patients, patient experience scores may improve, and government reimbursement might increase.

The link between patient experience and customer service supported the literature review by connecting the VBP program's patient experience domain with business reimbursement. I explored how government reimbursement may require additional

knowledge, skills, and training to enhance communications that might affect the patient experience in hospitals. Lastly, I connected leadership roles in the development of strategies to improve employee and physician communication with patients in hospital settings that may improve patient experience scores and organizational effectiveness. By addressing the need for leadership involvement to improve patient experience scores, I supported the secondary analysis in my study.

Literature Review

The purpose of this quantitative correlational study was to help health care leaders understand the impact of employee and physician communication on patient experience scores, which may influence government reimbursement. The demand for documented quality improvements, in conjunction with patient care and patient experience from government legislation, is placing pressure on health care organizations to become more efficient with internal training, procedures, and practices (Zhao et al., 2015). Organizational performance may improve with consistent patient experience scores. The focus of the literature review was to explain the impact of leadership involvement in encouraging health care employees and physicians to improve communication with patients, thereby influencing patient experience scores. When leaders embrace the role of motivating employees and physicians in hospitals to enhance communication with patients, patient experience scores may improve, and government reimbursement might increase.

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reimbursement. I emphasized the patient experience aspect of government reimbursement that may require additional knowledge, skills, and training to enhance communication that might affect the patient experience in hospitals. Lastly, I connected leadership roles in the development of strategies to improve employee and physician communication with patients in hospital settings that may improve patient experience scores and organizational effectiveness. By addressing the need for leadership involvement with improving patient experience scores, I supported the secondary analysis in my study.

Theoretical Framework

House's (1971) path-goal theory differentiated leadership styles and the influence of the leadership styles on employee performance and engagement. Path-goal theory is derived from various aspects of the expectancy theory of motivation and has two behavioral dimensions: instrumental and social-emotional. Instrumental behavior is the use of actionable behaviors that influence followers to perform specific tasks that have desirable outcomes (Rowold, 2014). Social-emotional behavior used in leadership is when a leader can encode and decode information and provide social-emotional support to motivate employees (Groves, 2005). Although instrumental and social-emotional leadership behaviors differ, both leadership behaviors may influence employee motivation by providing actionable and emotional support. In 1996, House reformulated path-goal theory to advance the theory's impact on organizational and work unit performance.

Empowerment and influence on employee behavior could impact organizational outcomes and performance. Leadership behaviors that support motivation and

empowerment for work units can help to influence employee behavior that improves organizational performance (Dixon & Hart, 2010). A few dependent factors of employee motivation include routine and nonroutine tasks; interdependent, varied, and ambiguous tasks; cohesiveness and teamwork; and external and internal stressors (House, 1996). The requirements include a description of performance goals, an explanation of means to perform tasks, clarification of the principles used to monitor performance, clarification of expectancies on how employees should respond, and determination of the delivery of rewards and punishment (House, 1996). House's (1996) refined path-goal theory also includes multiple conditions for adequate performance and motivation of employees.

Different classes of leadership behavior may enhance employee empowerment and affect employee motivation. The eight categories of leadership behavior explained in House's (1996) reformulated theory included path-goal clarifying behavior, achievement-oriented behavior, work facilitation behavior, supportive behavior, interaction facilitation behavior, group-oriented decision process behavior, representation and networking behavior, and value-based behavior. Dixon and Hart (2010) analyzed three path-goal leadership styles in a large manufacturing firm consisting of blue- and white-collared workers. The three methods analyzed included participative, supportive, and instrumental leadership. All three leadership styles were significant and had a positive impact on workgroup effectiveness and employee turnover, thereby supporting path-goal theory and the connection between successful work groups, increased employee retention, and leadership styles of management and influence on organizational performance.

When leaders clarify the importance of team alignment and fundamental goals, the impact on business performance could become relevant. O'Boyle and Cummins (2013) suggested the use of performance management systems that support a goal theory that represents employee achievements that are task oriented. The concepts align with path-goal theory through the clarification of tasks and goals from leaders to improve organizational performance (O'Boyle & Cummins, 2013). O'Boyle and Cummins's analysis aligned with Dixon and Hart's (2010) analysis from workgroup effectiveness and employee retention on internal organization performance. When leaders play a pivotal role in influencing employee interactions and behaviors, organizations may reap the benefits. A leader's style and behaviors may connect to employee expectancies and may influence the success of an organization. Middle managers can impact employee performance through motivation, clarification, extracting obstacles, and rewards (Malik, 2013). Current situational factors, and directive or participative leadership styles and behaviors enhance the connection with employee motivation and expectancies (Malik, 2013). The improved motivation is like path-goal theory where support teams and individuals with an increased need for success rely on varied leadership styles (Malik, 2013). However, if the perceptions of the reward systems are similar between performers and nonperformers in an organization, the impact of a reward system is redundant and irrelevant, a concept different from path-goal theory (Malik, 2013). The different perceptions of reward systems between House and Malik may guide organizations to lean toward accountability and transparency.

Leaders can influence situations that hold employees accountable. Path-goal theory links to corporate sustainability through accountability and transparency, and through leaders' impact on situational influences (Landrum & Daily, 2012). Four variables (followers' self-assurance, degrees of job challenge, incentive rewards, and situational uncertainty) could contribute to the lack of an organization's sustainability because leadership characteristics impact each variable (Landrum & Daily, 2012). Kumar and Krishnaraj (2018) deduced that leadership styles influence how motivated staff are to provide quality services. Kumar and Krishnaraj determined that when leaders encourage participation in decision-making, employees are more receptive to providing improved services. Similarity, Duan, Liu, and Che (2018) discovered that when leaders empower employees, trustful relationships develop that help to engage staff creativity. Duan et al. also discovered that when leaders hold staff accountable and have high ethical standards, employees respond with creativity. Path-goal theory may contribute to the perceptions of leaders' influence and impact on employee and organizational performance. House's (1996 path-goal theory explains the diverse types of leadership behaviors and styles. Leaders may want to consider the importance of ensuring preparation of various techniques and strategies to (a) influence employee motivation, (b) influence employees' adherence to industry standards, and (c) influence the willingness of leadership to help guide an organization to success. Leadership influence and strategies may become important in guiding organizational change and performance, thereby supporting the concepts in path-goal theory and a secondary data analysis of the impact of communication on patient experiences scores in hospitals.

Hospital Consumer Assessment of Health Care Providers and Systems

Transparency in health care may be one of the most important aspects for consumers. The HCAHPS surveys, implemented by CMS in 2006 through a public reporting website, provide comparable health care provider information to consumers that can aid in health care decisions by providing transparent information (CMS, 2014a). HCAHPS surveys also offer standardization for reporting data on patient experience scores, thereby contributing to the VBP program's intent of reimbursing health care providers for improved services and holding health care organizations accountable (CMS, 2014a). Kemp, Chan, McCormack, and Douglas-England (2015) explained that the use of HCAHPS surveys can provide a comparison of survey results on health care organizations. Goldstein, Elliott, Lehrman, Hambarsoomian, and Giordano (2010) explained the intent of the HCAHPS surveys to provide incentives for hospitals that provide quality services and to ensure accountability and transparency. The HCAHPS surveys consist of questions regarding patient experiences with care in nine areas (CMS, 2014a). Four of the items on the HCAHPS survey address staff responsiveness and communication related to the patient's needs, two address the hospital environment, and three address care transition, discharge information, and cleanliness of the hospital (CMS, 2014a). The link between HCAHPS and patient experience scores may assist health care organizations with implementing communication training by providing an understanding of consumer perceptions and expectations.

Patient perceptions and expectations drive the results of patient experience scores. Improving patient experiences and clinical outcomes is the intent of HCAHPS surveys

(CMS, 2014b). In a study conducted through Voluntary Hospitals of America, Manary, Staelin, Kosel, Schulman, and Glickman (2015) noted an increased need for leadership to address strategies that misalign with the understanding of the drivers that influence an organization's patient experience. Managing internal cultures through relationship development and a strong leadership presence that supports consistent training for improving patient experiences is the key to successful outcomes (Manary et al., 2014). Keith, Doucette, Zimbro, and Woolwine (2015) argued that leadership interactions and accountability should become the focal point of a program to ensure consistent patient care without variation. Keith et al. intended to confirm staff accountability for individual interactions that involved patient experience measures through leadership coaching and development of action plans for individuals who did not meet the standard set forth by the organization. Keith et al.'s assessment was comparable to Manary et al.'s assessment of the need for leadership's involvement with strategies that align with patient experience feedback, thereby confirming the connection with patient experience scores.

A leader's role in influencing staff could help health care organizations with improvements in patient experience scores. Leadership should consider acting as servant leaders to make the connection with staff so the desire to improve is prevalent, thereby aiding in improving patient experience scores (McCann, Graves, & Cox, 2014). However, McCann et al. (2014) concluded that extrinsic organizational factors had a more profound impact on employee satisfaction and HCAHPS scores than intrinsic factors, indicating the influence of leadership on organizational outcomes, as suggested by Manary et al. (2014) and Keith et al. (2015). To evaluate the outcomes of care

measures, Schulingkamp and Latham (2015) compared the Healthcare Criteria for Performance Excellence Framework standards to CMS HCAHPS standards in recipients of the Malcolm Baldrige National Quality Award. Schulingkamp and Latham concluded that when leadership takes a whole systems approach to managing the patient experience, performance excellence is likely to occur. Schulingkamp and Latham's findings supported financial and organizational sustainability, including the impact of patient experience scores on health care organizations, a similar concept revealed in McCann et al.'s study.

Other studies did not confirm the connection between patient experience scores and comments to scoring improvements. Some researchers discovered that the HCAHPS surveys could not be used to improve patient experiences because of the connection between patient experience comments and numerical data, an opposite discovery from Schulingkamp and Latham (2015) and McCann et al. (2014). Patient comments have an increased impact on organizational improvements, just like the impact from other goods and services offered to consumers (Huppertz & Smith, 2014). In a two-hospital study, Huppertz and Smith (2014) found that adverse comments on HCAHPS surveys had a profound impact on patients' overall hospital ratings on HCAHPS surveys, whereas positive comments had no impact on patients' overall hospital ratings. Another study revealed that in two nonprofit hospitals in a large health care system, specific measures within the HCAHPS had an impact on the overall patient experiences of the hospitals (Westbrook, Babakus, & Grant, 2014). Many of the patient experience domains in the HCAHPS surveys in both hospitals impacted the scores from patients, whereas

communication from nurses and effective pain management significantly impacted overall patient experiences, thereby challenging the validity and reliability of HCAHPS scoring (Westbrook et al., 2014). My literature research supported the need for further investigation to determine whether differences occur in large versus small hospitals with patient and staff and physician communication regarding patient experience scores.

Value-Based Purchasing Program

Patient experience is a part of the value-based purchasing program (VBP). The VBP is a quality program initiated through the Centers for Medicare and Medicaid Services (CMS) and stems from the Affordable Care Act (ACA) to promote value over volume (CMS, 2015). The VBP provides financial incentive to health care organizations for meeting specific quality standards on predefined domains determined by CMS (Blumenthal & Anupam, 2013; CMS, 2015; Department of Health and Human Services [DHHS], 2015). The VBP program is a program stemming from the ACA that rewards health care providers for promoting change that shifts the current health care delivery models to models that are lean, cost-effective, and focused on health outcomes (Aroh et al., 2015). The intention of the VBP program is to encourage health care providers to move toward preventive care to aid in population health improvements by measuring outcomes of various domains (Aroh et al., 2015; Damberg et al., 2014). The measured domains could be used to help guide health care providers in developing process improvements, including communication and patient experience scores.

The VBP program has multiple *domains*, and a portion of the program focuses on patient experience to provide monetary incentives to healthcare organizations through

CMS. Healthcare leaders should concentrate on strategies to improve patient experience scores, lower healthcare costs, and ensure full reimbursement for hospitals (Damberg, 2014). The connection with VBP and previous initiatives are quality driven and intended to lower costs (Blumenthal & Anupam, 2013). CMS allotted $647.6 million reimbursement funds in 2015, all funded through a 1% reduction of diagnostic related group payments to all participating hospitals in the VBP program, thereby further demonstrating the impact on healthcare costs (Bae, 2016; Blumenthal & Anupam, 2013). CMS allocates funds in the VBP program for participating hospitals that meet eligibility requirements (Blumenthal & Anupam, 2013). Funding for the VBP program comes from a 1% reduction for *diagnostic-related groups* reimbursed to hospitals, thereby allocating reimbursement to hospitals that show improvements in the measured domains (Blumenthal & Anupam, 2013). Thereby, Blumenthal and Anupam and Aroh et al. (2015) align with supporting the explanations of VBP and the fundamentals of the CMS and DHHS programs.

Aroh et al.'s (2015) description of the connection between VBP, lean methodologies, and cost-effectiveness, may guide healthcare organizations to consider finding strategic ways to connect VBP's *domains* to process improvements and patient experiences. Aroh et al.'s connection of the VBP *domains* with process improvements and patient experiences displayed support with Blumenthal and Anupam's (2013) explanation of the importance of connecting VBP to organizational revenue. According to Blumenthal and Anupam, VBP may influence income generation through increased quality and decreased costs. The income generation from increased quality and cost

reduction are associated with a reduction of malpractice claims and liability costs, and through an increase in investment costs as the VBP program matures (Blumenthal & Anupam, 2013). Conversely, Werner and Dudley (2012) mentioned previous P4P programs to distinguish the differences between P4P programs and value-based care, and the uncertain impact on quality and cost. Werner and Dudley (2012) concluded that VBP may have a small impact on revenue that might impact performance improvement. In contrast, Manary et al. (2015) deduced that motivation to recover the initial investment in the VBP program may be enough for leaders to promote improvements and to improve patient experience scores because there is an instinct in business not to lose invested income. Manary et al.'s assessments challenges Werner and Dudley's explanation of VBP's decreased impact on organizational revenue, thereby

supporting a secondary data analysis on the impact of communication on patient experience scores.

Value-based purchasing domains. The impact of hospital reimbursement relies on VBP. The VBP program includes various measures of care to patients, referred to as *domains* (CMS, 2015). CMS divided the VBP *domains* into four categories. The four categories include clinical processes, patient experience, outcomes, and efficiency (DHHS, 2015). CMS distributed the implementation of the four *domains* over the fiscal years of 2013 through 2015 to allow healthcare organizations time to develop processes to meet the requirements of the VBP program. The *domains* began with two defined areas in 2013 (clinical and patient experience) and continued to add the additional *domains* (outcomes and efficiency) in 2015. The four *domains* are used to determine a hospital's

reimbursement percentage (DHHS, 2015). The patient experience percentage of reimbursement through VBP is 25% (DHHS, 2015). The other remaining portions of reimbursement include clinical care experience, clinical outcomes, and efficiency and cost reduction (DHHS, 2015). DHHS also provided an overview of how hospitals are scored to determine the level of payment. One-on-one communication with healthcare personnel, responsiveness to care, hospital comfort and hygiene, thoroughness of discharge information received, and a hospital's overall satisfaction rating are included in the determination of full reimbursement for the patient experience domain (Aroh et al., 2015; CMS, 2014a). The VBP program evaluates hospitals for performance through benchmarking and compares the total performance score (Aroh et al., 2015; DHHS, 2015). Because this literature review focuses on business impacts and patient experiences, I did not include an explanation of the clinical domains.

Existing literature supports the impact of VBP on hospital reimbursement and patient experience scores. Aroh et al. (2015) assessed a support program to determine if the group illustrated efforts to meet patient needs and promote value-based initiatives. The support program assessed by Aroh et al. included nurse practitioner competencies, collaborative efforts with other healthcare organizations, and the use of lean six sigma guidelines. Aroh et al. deduced that the group was able to improve effectiveness and efficiency of processes related to VBP guidelines and reduced costs, thereby supporting VBP initiatives. Zhao, Haley, Spaulding, and Balogh (2015) also performed an analysis of 2,849 hospitals to evaluate the impact of VBP. The analysis revealed that smaller hospitals with reduced efficiency displayed lower patient experience scores. Zhao et al.

also determined that if the hospitals were large and system-owned, patient experience scores decreased. The analysis from Zhao et al. (2015) additionally revealed that government-owned hospitals scored higher in-patient experience than for-profit and not for profit hospitals. Aroh et al.'s and Zhao et al.'s assessments both support the need for healthcare leaders to focus on process improvements and organizational initiatives to assist healthcare organizations in becoming value-based, and to focus on improving patient experience scores, both which may lead to increased reimbursement from the VBP program. The previous analyses conducted by Aroh et al. and Zhao et al. support the need for a quantitative data analysis to determine the impact on patient experience scores from staff and provider communication in large versus smaller hospitals.

Value-based purchasing scoring. The scoring system for VBP may help leaders with understanding the impact of VBP on organizational performance and patient experience. The VBP scoring is used by CMS to determine the percentage of reimbursement hospitals receive for participating in the program (CMS, 2015; DHHS, 2015; McHugh, 2013; Raso, 2013). The VBP program conforms to CMS's objectives to purchase value for healthcare rather than paying for volume, thereby supporting value-based pay for performance versus fee for service healthcare (Raso, 2013). The reward or penalty derived from VBP could affect a hospital's financial performance (Raso, 2013). Leaderships active involvement with strategic measures is imperative to ensure positive patient outcomes and experiences (Raso, 2013). A focus on VBP scoring through the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores may increase a hospital's return on investment, thereby supporting Raso's (2013)

perception of the impact of VBP on hospital financial performance (McHugh, 2013). Multiple variables impact hospital scores through HCAHPS, which includes staff and provider communications with patients.

DHHS (2015) provided specific information on how a hospital achieves the total performance score (TPS) by attaining points for reimbursement through the VBP program. The TPS scores for reimbursement include three levels of analysis. The three levels of analysis are a comparison of all hospitals registered in the program's baseline and performance periods (achievement points), a comparison of baseline and performance rates of a hospital (improvement points), and a comparison of a hospital's baseline satisfaction to the performance periods satisfaction scores (DHHS, 2015). DHHS did not supply calculations for reimbursement that may be useful for healthcare leaders to know and understand. The scoring process and reimbursement levels of the VBP program includes baseline periods, a comparison to *national floor thresholds*, *benchmarking*, *achievement range*, *improvement range*, and *consistency range* (Raso, 2013).

The *national floor* is the minimum percentage an indicator of a domain must meet to qualify for reimbursement (Raso, 2013). The VBP program's threshold designates a 50^{th} percentile value of all the reporting hospitals that a hospital must exceed to receive compensation (Raso, 2013). *Benchmarking* is the level a hospital must meet to incur maximum points for each measure (Raso, 2013). The points earned by each participating hospital derive from 0-10 for the *achievement range*, 0-10 for the *improvement range*, and 0-20 points for the *consistency range* (Raso, 2013). The total score for each domain is then multiplied by the *weighted value measure* (predetermined through CMS) and then

added together to determine the final percentage for determination of reimbursement (Raso, 2013). Higher scoring hospitals receive bonus payments when thresholds exceed the benchmark; and lower scoring hospitals receive a reduction in compensation, thereby indicating a loss of contribution dollars from the hospitals to participate in the program (McHugh et al., 2013). If a hospital chooses to forego developing processes supporting cost-effective care, a reduction of reimbursement may occur (Zhao et al., 2015).

Meeting the minimum requirements through the VBP program may help to shift the focus to improve patient experience scores that might impact reimbursement. A sizable portion of the VBP program's reimbursement incentives expounds on patient experiences (CMS, 2015). Patient experiences may have a profound impact on the result of reimbursement and might contribute to the return on investment (ROI) for healthcare organizations.

Patient Satisfaction

Patient satisfaction, a term often interchanged with patient experience, has many characteristics of customer satisfaction. Patient satisfaction requires understanding and communication of patient knowledge and improving experiences (Capko, 2014). The importance of taking a patient-centered approach that involves communication and patient interaction can influence patient experiences (Capko, 2014). Patient-centered care and satisfaction link to quality services (Zimlichman, Rosenblum, & Milleson 2013). Capko's (2014) and Zimlichman et al's. (2013) assessments align with patient experience because of expectations patients may have with receiving quality services. If patients

have a perception of poor-quality service, patient satisfaction might decrease, thereby having a potential negative impact on patient experience scores.

Patient satisfaction was described by Murti, Deshpane, and Srivastava (2013) as the overall feelings and perceptions of patients after receiving health care services. Dhawan (2014) suggested three steps to help improve patient satisfaction. Dhawan's suggested steps included knowing the patients and what each patient population requires, making patients the center of attention, and continuously analyzing patient experiences. The importance of differentiating services and providing suggestions for distinguishing services from other competitors is imperative, which consist of personalizing the experience and understanding patient populations (Dhawan, 2014). Supporting Dhawan's three-step assessment, Luallin (2014) suggested accentuating the *C.L.E.A.R approach* to guide organizations to improve patient experiences. The *C.L.E.A.R approach* involves connecting, listening, explaining, asking, and reconnecting with patients about services received (Luallin, 2014). Six actions can help to improve patient experiences. The first three suggestions included the use of mystery patients, the use of leadership meetings to compare organizational to competitor results, and the use of scripted behaviors (Luallin, 2014). Additional suggestions from Luallin included the use of specified performance expectations, the use of performance tracking tools, and rewarding personal contributions to wanted behaviors. Dhawan's and Luallin's suggestions may help hospital leaders embrace the importance of understanding competitors approaches and building a personalized experience for patients that could improve patient experience scores. Using resources to monitor and track patient experience scores might display areas for

improvement, thereby guiding leaders to find innovative ways to improve patients' perceptions of services rendered.

One shared component with patient satisfaction included how positive perceptions could lead to patient loyalty, thereby influencing healthcare organization revenue (Al-Abri & Al-Balushi, 2013; Murti, Deshpande, & Srivastava, 2013). Patient satisfaction can impact organizational improvements and performance, while perceptions on the quality of service can influence consumer choices when determining healthcare providers (Murti, Deshpande, & Srivastava 2013; Pefoyo and Wodchis 2013). Pulling the two concepts together may help leaders with determining how to better manage patient satisfaction. Patient satisfaction management requires understanding and knowing the needs of patients to drive quality service delivery (Pefoyo & Wodchis, 2013; Perrott, 2013). Patient experience surveys are a way to understand patient knowledge (Al-Abri & Al-Balushi, 2013). The standardization of patient experience surveys, shared decision making, and the use of technology might promote positive patient experience feedback (Zimlichman, Rozenblum, & Millenson 2013).Al-Abri and Al-Balushi (2013) determined that courtesy, respect, listening, and access are the leading patient satisfaction indicators. By promoting patient feedback, leaders may exhibit they are willing to listen to patient concerns (Al-Abri & Al-Balushi, 2013). Trust also impacts patient satisfaction, a concept stemming from the perception of service quality (Chang, Chen, & Lan, 2013). To aid leaders in assessing patient care experiences, HCAHPS surveys are available for review (Zimlichman et al., 2013). The use of patient experience surveys in health care may aid in enhancing patient experiences and help leaders determine strategies to improve

communication between staff and patients (Al-Abri & Al-Balushi, 2013). The above concepts tie into interpersonal relationships and interactions with patients on an ongoing basis, which might improve positive patient experiences.

Improving interpersonal interactions and attitudes towards patient satisfaction may benefit healthcare organizations, given that trust and perceptions have a profound impact on patient experiences (Capko, 2014; Chang et al., 2013; Pefoyo & Wodchis, 2013; Perrott, 2013). When staff display a commitment to personal interactions with patients, trustful relationships might develop. Leadership commitment is required to develop and promote programs that support positive patient experiences for efficient planning and efficient communication efforts in health care organizations, a suggestion like Al-Abri and Balushi's assessment (Pefoyo & Wodchis, 2014). The need for leadership to empower staff to commit to patient satisfaction while maintaining a positive organizational culture is critical to improving patient perceptions and experiences (Capko, 2014). Leadership roles in developing innovative strategies to support organizational change are critical in driving behaviors that enhance improved patient experiences (Al-Abri & Balushi, 2013). When leaders increase the focus on improving interpersonal skills and attitudes from staff regarding patient experiences, healthcare organizations may see increased loyalty from patients and enhance the patient experience, thereby increasing revenue (Chang, Chen, & Lan 2013). The literature available patient experience is abundant. The literature I discovered pointed to one main characteristic of a positive patient experience, which is the willingness of staff and leaders to commit to improving patient experiences through personal interaction and effective communication.

Patient and staff communication. Staff and physician communication may have a profound impact on patient experience scores. According to Boissy (2017), *unconscious incompetence* to *conscious competence* helps to improve communication. When individuals are unwilling to learn and understand areas that need improvement and then realize what needs to be worked on, *unconscious incompetence* to *conscious competence* occurs (Boissy, 2017). The use of communication training for individuals providing patient care might help alleviate gaps in communication with patients (Boissy, 2017). Pytel, Fielden, Myer, and Albert (2009) mentioned that the Joint Commission, a regulatory agency for health care, considers communication a key factor in the outcome of patient care and safety and may impact a patient's experience, thereby, the importance of staff and provider communication with patients might impact patient experience scores.

Multiple researchers conducted studies on the impact of effective communication on patient satisfaction. Pytel et al. (2009) researched the perceptions of nurses, visitors, and patients regarding communication in an emergency department. T Pytel et al.'s research discovered that 62% of the time, patient expectations of communicating with nurses occurred, thereby implying that communication training is a relevant factor that may help to improve a patient's experience. Turner, Payne, and O'Brien (2011), found that physicians were less likely to support effective communication training, whereas supporting staff were more likely to support the training. According to Turner et al. (2011) contributing factors for physicians' negative responses to effective communication training included lack of awareness of the relevance of training and the

length of time for training. A third study conducted by Hogg, Hanley, and Smith (2018) analyzed 50 patient complaints in a Scotland healthcare setting. Lack of sensitivity from staff, rudeness and unprofessionalism of staff, and lack of introductions were the main contributors of patient dissatisfaction (Hogg et al., 2018). Hogg et al. suggested communication training for medical staff involving emotional support that might help patients feel better about medical services received in health care organizations. Given the research on the impact of communication on patient satisfaction, suggestions for improving communication may help healthcare organizations with improving patient experience scores.

Training programs may help individual health care providers with improving communication skills. Seiler et al. (2017) researched a simulation training program with a focus on improving physician communication. Seiler et al.'s research included over 5,000 HCAHPS patient surveys and 1990 specific provider surveys based on physician etiquette. Seiler et al. discovered that communication training was effective short term and later results displayed a decrease in patient experience scores due to the lack of ongoing training to reinforce the importance of effective communication. Karkowsky and Chazotte (2013) provided an assessment of simulation training for physicians and the effectiveness on communication with patients. Karkowsky and Chazotte found that after medical school, little to no training occurred for physicians to improve communication skills. Karkowsky and Chazotte expressed concerns that physicians lack communication training that focuses on effective communication and empathy towards patients and suggested the need for further research. Supporting Karkowsky and Chazotte's

assessment of the lack of communication training after medical school, Carvalho et al. (2011) deduced that other skills after medical school improve from gaining technical experience, but communication skills decrease, thereby ongoing communication helps to improve awareness of communication and interactions and increases self-confidence in medical professionals . Each group of researchers concluded there is an ongoing need for follow-up communication training in the medical professions and that effective communication with medical staff is essential to improving patient experiences.

Effective communication from medical staff may play a role in improving patient experiences. Gordon and Gerber (2010) deduced when physicians and patients have honest communication, better relationships develop. Communication between physicians, support staff, and patients should involve assessing, empathizing, understanding, trust, and for patients, active participation (Gordon & Gerber, 2010). Drossman (2013) supported the claims that excellent communication impacts information exchanges between patients and medical staff, reduces stress, and helps with patient commitments to active involvement with medical needs. Gordon and Gerber (2010) cautioned that some barriers may impact effective communication. The three barriers included language, stereotypes, and cultural beliefs, all which should be incorporated in communication training (Gordon & Gerber, 2010). If barriers exist with effective interactions between medical staff and patients, health care organizations might want to consider additional training to help guide medical staff on proper techniques and methods to help improve interactions with patients, thereby improving patient experience scores.

Patient expectations may influence communication. Sari, Prabandari, and Claramita (2016) conducted 18 interviews in a primary care physician practice and concluded that details, humor, initial greetings, and nonverbal communication were the leading attributes for patients. Sari et al. suggested the use of greet, invite, and discuss to help physicians improve communication with patients. Carvalho et al. (2011) discussed the Clinical Communication Skills (CCS) training offered through the University of Porto. The CCS training displayed an increase in communication competency directly after training and then a slight decline of communication competency afterward (Carvalho et al., 2011). Carvalho et al.'s assessment also showed an increase in communication competency after s second session of training concluded. Howell, Nielsen, Turner, Curtis, and Engelberg (2014) suggested the use of communication facilitators to help with improving interactions between medical staff and patients. Howell et al. (2014) conducted interviews with medical staff in a health care center to determine if communication facilitators' interventions were helpful with medical staff and patient communication. The interviews conducted by Howell et al. revealed that communication facilitators provided (a) interactive engagement between medical staff and patients, (b) helped to identify specific patient needs, and (c) provided emotional support for medical staff and patients. The communication facilitators also helped to build trustful relationships between medical staff and patients (Howell et al., 2014). Given the suggested solutions to improve communication with patients, one may conclude that ongoing communication training in medical careers might help to maintain

consistency and improve interactions with patients, thereby improving patient experience scores.

Customer Service

Understanding the impacts on organizational performance from customer service may help leaders develop strategies to improve services. Customer service begins with a first impression, often delivered by frontline staff (Dagger, Danaher, Sweeney, & McColl-Kennedy, 2013). The halo effect, as explained by Dagger et al. (2013) is how frontline staff interactions with customers which might lead to perceptions of other customer experiences. In conjunction with the halo effect, the incident laddering technique connects a customer's emotional response to before and after interactions with staff (Juttner et al., 2013). A customer's personality trait may have a profound impact on communications and preferences, a different perspective from the halo effect and the incident laddering technique (Streukens & Andreassen 2013). Leaders who understand the importance of customer interactions with staff may be able to help promote a positive experience for customers which might lead to improved organizational outcomes.

Service excellence is exceeding consumer expectations to provide exemplary services which includes business and service excellence models, thereby supporting Dagger et al.'s (2013) explanation of frontline staff involvement to provide a positive customer experience (Asif & Gouthier, 2014). Business excellence models (BEMs), like the European Foundation for Quality Management (EFQM) and the Baldrige Criteria for Performance Excellence (BCPE), focus on structured approaches to ensure leaders create processes that provide excellent customer service (Asif & Gouthier, 2014). In contrast,

service excellence models (SEMs) lack structure but rely on active customer involvement with minimal product focus to ensure customer satisfaction is the focal point of service delivery (Asif & Gouthier, 2014). A combined model of both BEMs and SEMs may help leaders with developing processes to improve customer service and communication, thereby leading to customer loyalty and increased satisfaction. Merlo, Eisingerich, and Auh (2014) conducted a multiple senior management analysis of organizational strategies related to customer service. Merlo et al. revealed when consumers participated in feedback and provided improvement suggestions, customer loyalty remained. The findings from Merlo et al. linked customer satisfaction to increased revenue. Merlo et al.'s, provided support of the need for satisfaction and experience measures in service delivery organizations, thereby supporting Asif and Gouthier's (2014) suggestion that leadership plays a significant role in the relationship with consumers.

Customer Relationship Management

Customer Relationship Management (CRM) is a series of internal systems that an organization may use to monitor and track information about service communications (Carter, 2014). CRM allows a team to have the ability to follow trends and changes in customer relations to aid in improving customer satisfaction (Carter, 2014). Tao (2014) defined CRM as the utilization of leadership strategies in multiple internal business systems that might increase customer satisfaction, improve customer relations, and establish loyalty; an assessment consistent with Carter's (2014) explanation of CRM. Organizations need to recognize and understand consumer needs through established protocols that focus on customized services to provide individual attention that may lead

to customer retention and devotion to an organization (Carter, 2014; Tao, 2014). Both Carter's and Tao's descriptions of CRM might help leaders in the development of training programs for process improvements. Four elements of effective CRM include knowing the customer, knowing the structure, involving customers, and having a robust collection of available services and products (Carter, 2014). Tao also explained a similar set of elements needed for effective CRM. Tao;s explanation included providing *mind satisfaction* (product or service), providing *behavior satisfaction* (rules of transactions), and including *vision behavior* (organizational image/ brand). By following Carter's and Tao's varied elements of CRM, organizations may want to use various dynamics of CRM to improve communication between patients, providers, and staff to improve customer experiences .

Business leaders who know customers may have more influence over business outcomes. The use of customer knowledge is essential to influence the internal corporate information that drives members to have the conviction to provide excellent customer service (Srisamran & Ractham, 2014). A model of people, processes, and technology might help to develop and implement a CRM system, thereby dividing knowledge into two different categories: *tacit* and *explicit* (Srisamran & Ractham, 2014). *Tacit* knowledge is knowledge that is personalized and challenging to communicate; whereas, *explicit* knowledge is knowledge that is less personal and more natural to communicate (Srisamran & Ractham, 2014). Srisamran and Racctham (2014) suggested the use of the SECI model which may help leaders to integrate both types of knowledge in an organization. The SECI model consists of socialization (knowing the customer),

externalization (understanding the customer), combination (combining socialization and externalization), and internalization (knowing and understanding the internal structure) to create a knowledge model that supports CRM (Srisamran & Ractham, 2014). Combining tacit and explicit knowledge with the SECI model might lead to a better understanding of the importance of improving communication with patients, thereby helping to improve patient experience scores. The SECI model supports Carter's elements of CRM by exemplifying the need for continued knowledge of customer service and communication. Tseng and Wu (2014) conducted a study with senior managers from multiple companies in Taiwan that supported Srisamran and Ractham's analogy that displayed the need for knowledgeable and creative personnel to sell a product or service and to promote the quality of the product or service to customers to support CRM. Tseng ad Wu deduced that by growing internal knowledge through CRM, customer knowledge may also improve.

Enhancing customer relationships may help to support market growth and aid in service improvement, thereby triangulating customer knowledge, CRM, and service quality to improve customer experiences and satisfaction (Tseng & Wu, 2014). Cheng and Yang (2013) stressed a five-phase process to enhance the importance of customer service knowledge. The process included internal system knowledge, empowerment of staff from leadership, the perception of customers on quality and price, customers' perceived values, and customer loyalty and retention, like Tseng and Wu's (2014) process. Cheng and Yang conducted a study with senior managers in eight Taiwan firms and revealed that most CRM programs are developed through internal systems and self-

development over a 3 to 5-year span. Cheng and Yang determined that health care had the lowest implementation levels with the five phases of enhancing customer service knowledge. The importance of knowing and understanding an organization's culture and resources before implementing a CRM system implies that the dynamics of CRM may affect how successful or unsuccessful a CRM system will be for an organization (Nguyen & Waring, 2014). An efficient CRM system requires a leader's commitment to CRM and an understanding of how to implement CRM in an organization (Nguyen & Waring, 2014). Cheng and Yang's and Tseng and Wu's analysis may suggest the need for increased leadership involvement when implementing CRM systems in service organizations.

Acceptance of CRM activities may improve customer and employee satisfaction, increase customer loyalty, and increase return on investments (Law, Ennew, & Mitussis, 2013).Increased acceptance of CRM activity might also improve gratification and performance, both driven by management acceptance and attitude and by market orientation (Law, Ennew, & Mitussis, 2013). Leaderships' attitude, market orientation, innovative orientation, organizational cultures, commitment for improved relationships, the size of a corporation, suitability of information technology, and the varied levels of competition was researched by Law et al. (2013) in eight Hong Kong corporations. The highest correlations discovered for levels of adopting and engaging in CRM activity were between managements' attitudes and market orientation (Law et al., 2013). The relationship between CRM implementation, organizational physiognomies, and leadership support implies that innovative concepts may enhance the CRM experience

while stressing the importance of leadership characteristics, employee characteristics, and corporate characteristics on CRM adoption (Newby, Nguyen, & Waring, 2014). Newby et al. (2014) further deduced that CRM might impact customer loyalty and organizational revenue, thereby supporting the need to acknowledge leadership, employee, and corporate characteristics. The close connection between customer service and patient experience emphasizes the importance of noting that the proposed study focuses on patient experiences and satisfaction, thereby justifying the need to include customer service and CRM in the literature review. A leader's influence on improving patient experience scores may help to maintain sustainability in health care organizations and support improved patient experience scores.

Impact of Leadership's Influence on Improving Patient Experience Scores

Healthcare leaders' influences may impact patient experience scores. Healthcare process improvements play a significant role in leadership strategies that aid in adaption to healthcare changes needed to drive sustainability (Delmatoff & Lazarus, 2014). When leaders focus solely on hard issues rather than taking the time to focus on vision and employee, employees exhibit resistance to change and the internal dynamics of an organization shifts (Lozano, 2013). Delmatoff and Lazarus (2014) suggested the importance of the need for leaders to understand the emotional and behavioral leadership styles to empower staff to want to participate in healthcare changes. Lozano's (2013) suggested that organizations focus on change management that supports staff participation while leaders focus on planning and implementing change management strategies. Lozano also suggested the need for leaders to recognize barriers and change

management when establishing procedures to avoid roadblocks to organizational sustainability. Moore (2014) concluded that through *facilitative leadership*, leaders listen to various ideas and suggestions and empower employees, thereby forming cohesive teams that are productive and engaged in an organization's strategies, which might lead to sustainability; thereby aiding in improving patient experience scores.

The use of business rules management is needed to drive changes in healthcare delivery (Nelson & Sen, 2014). Business rules are perspectives derived from competition, industry norms, and regulatory and legislative compliance (Nelson & Sen, 2014). Nelson and Sen (2014) studied 108 organizations to understand the impact of business rules on day-to-day operations. Nelson and Sen discovered when organizations embrace the use of business rules; cost reduction occurs, internal operations improve, and leaders maintain alignment with strategies needed to uphold sustainability (Nelson & Sen, 2014). Focusing on customer expectations, customer standards, customers' perceptions of performance, and customers' perceptions of communication may drive improved quality and reputation, thereby influencing increased revenue generation (Sharabi, 2014). Sharabi (2014) also suggested that successful organizations need to develop strategies that focus on customers, use preventative methods to maintain quality, make continuous improvement to work practices, and encourage leaders to support employee involvement with organizational decisions. Sharabi's (2014) standards of communication and the focus on customer expectations are in alignment with Nelson and Sen's concept of business rules and Delmatoff and Lazarus's (2014) encouragement of leaders to support employee involvement with change. House's (1996) path-goal theory and supportive

leadership behavior help to illuminate the need for leadership involvement that embraces organizational strategies that may lead to market stability. The shared focus on leadership strategies and behaviors to influence sustainability from Delmatoff and Lazarus, Lozano, Nelson and Sen, and Sharabi thereby supports House's path-goal theory. The connection between leadership strategies for sustainability and improvements, and the focus on consumer expectations support the need for further analysis on the impact of staff and physician communication with patients that may lead to improved patient experience scores.

Transition

In Section 1, I provided an overview of the subject of leadership strategies that could influence the patient experience and government reimbursement rates for health care organizations. I included a discussion of the general and specific business problem, the nature of the study, definitions of key terms, the potential business and social implications. A contextual literature review was also provided to support the foundations for the study.

Section 2: Project Design and Process

In Section 2, I provide details of the method and design that I used for this quantitative secondary data analysis. I begin with a brief review of my purpose statement, research question, and hypotheses. A description of the method and design and advantages and disadvantages of the method and design follows. Additional items I include in Section 2 are discussions of the data set, variables used in the quantitative secondary data analysis, reliability, validity, and missing data. I also describe the statistical test used for the quantitative secondary data analysis and include data analysis assumptions. I include the implications of violations and the corrective measures used should violations occur. To support the method and design chosen, I include an overview of the sampling procedure, including advantages and disadvantages of the sampling procedure used for the quantitative secondary data analysis. Lastly, I discuss ethical consideration, the storage of data, and how I protected the identity of organizations used for the analysis.

Method and Design

Method

The purpose of this correlational quantitative secondary data analysis was to examine the relationship between (a) the size of a hospital, (b) staff communication, and (c) physician communication and patient experience scores in large hospitals with more than 200 beds and smaller hospitals with 200 beds or fewer. The research question addressed whether differences exist regarding the impact of staff communication and physician communication on patient experience scores in hospitals with zero to 149 beds,

hospitals with 150 to 249 beds, and hospitals with 250 beds or more in Northeastern Ohio. The research question and null and alternative hypotheses for this quantitative analysis were as follows:

What is the relationship between (a) the size of a hospital, (b) staff communication, (c) physician communication, and patient experience scores?

Null Hypotheses (H_0): There is not a statistically significant relationship between (a) the size of a hospital, (b) staff communication, (c) physician communication, and patient experience scores

Alternative Hypotheses (H_1): There is a statistically significant relationship between (a) the size of a hospital, (b) staff communication, (c) physician communication, and patient experience scores.

Quantitative methodology can provide multiple avenues for researchers when the data needed for research are numerical. Quantitative researchers use numerical data to predict and measure causes of a phenomenon by determining the relationship between variables through large volumes of data (Malagon-Maldonado, 2014; Rutberg & Bouikidis, 2018). According to Masue, Swai, and Anasel (2013), quantitative research is a systematic and one-dimensional method used when a researcher wants to conduct controlled research by using clear and concise research questions. The systematic approach in quantitative research includes statistical and mathematical models to support generalizations, whereas qualitative researchers use narrative and first-person descriptions to answer the research question (Denzin & Lincoln, 2008). Quantitative researchers use measurement whereas qualitative researchers rely on participants'

perceptions (Denzin & Lincoln, 2008). Trafimow (2014) pointed out differences between quantitative and qualitative research. Quantitative researchers argue that qualitative researchers lack the ability to perform statistical analysis, whereas qualitative researchers suggest that quantitative researchers do not include descriptive materials to expound on the research (Trafimow, 2014). Unlike quantitative and qualitative research, mixed-methods researchers combine qualitative and quantitative methods and use constructivism and post positivism to lead to a progressive analysis (Fetters, 2016; Masue et al., 2013). Jacques (2014) determined that research methodology is dependent on how a researcher conveys the information to readers. Supporting Jacques's claim, Goertzen (2017) suggested that providing a clear objective for the targeted audience is critical to add worth to a quantitative study, which supports the quantitative secondary data analysis for my research. I used the quantitative method because I performed a secondary analysis to compare the relationship between small and large hospitals' staff and physician communication with patients and the impact of the communication on patient experience scores.

Advantages and Disadvantages of the Quantitative Method

Each type of research method has advantages and disadvantages. I conducted research using quantitative secondary data. One advantage of the quantitative method is the representation of numerical data that could help display trends in the research (Savela, 2018). According to Savela (2018), quantitative methods also minimalize generalizations. Other advantages of the quantitative method include an explicit set of commonalities, copious quantities of information about the specific population, and data sharing when

applicable (Goertzen, 2017). Rahman (2017) described the research used in quantitative methods as a positivist approach, an approach based on evidence that focuses on an entire population or a portion of a population. Time is also an advantage of using a quantitative method for research, possibly making the method more appealing to researchers (Rahman, 2017). Additionally, quantitative methods use closed questions that displays uninfluenced results, allowing for an easier comparison of information and data (Basias & Pollalis, 2018). Many of the advantages with quantitative methodology apply to my research. The data I used were specific to a geographic population, and the variables chosen were supportive across the categories. The data represented a positivist approach, as described by Rahman, and were obtained directly from the geographic populations.

Although many advantages exist with using a quantitative approach in research, some disadvantages exist. According to Savela (2018), quantitative methods are less detailed and descriptive, and the information provided is specific to the categories and variables used. Supporting Savela's analysis of quantitative research, Rahman (2017) deduced that the method does not go as deep with exploration of the meaning behind the data, thereby leaving social aspects unaccounted for when using the quantitative method. Another disadvantage of using the quantitative method is when the research fails to address the stated hypotheses, thereby making deduction more difficult, which could lead to reduced validity of the research (Basias & Pollalis, 2018). Another disadvantage of quantitative research is the limitations of causal mechanisms that can provide a stronger explanation of the cause that led to the research question (Basias & Pollalis, 2018). Limited deduction may confuse the reader and might reduce the reliability of the

research. When limitations exist, readers might question the validity of the data and research, leading researchers to lean toward a different approach for the research.

Design

I used an ex post facto design to examine the relationship between patient experience scores and staff and provider communication in hospital settings. The ex post facto design, or secondary data design, includes real data that are not manipulated and allows the researcher to ensure the data depict findings that relate to the research question (Giuffre, 1997; Silva, 2010). Additionally, the ex post facto design is used to examine facts to determine a cause or relationship between variables (Silva, 2010). In ex post facto research, researchers need to ensure the data sets under examination are related to the research question and that the variables included in the data are the variables needed to provide a clear explanation of the intended research. The ex post facto design is a nonexperimental approach to research that is classified into three categories. Descriptive ex post facto research is used to explain the specific disposition of the phenomenon. The disposition of the phenomenon is explained in a way that reflects and expounds on the specific research question (Johnson, 2001). A second category of ex post facto design is predictive and is geared toward predicting the future of the intended research as it relates to the specific research question; the third category, explanatory, focuses on the behaviors (causal factors) that can change the outcome of the research (Johnson, 2001). To validate Johnson's categories, H. Cheng and Phillips (2014) suggested that ex post facto designs can provide assessments of existing data that may lead to additional research. Regardless of the category a researcher chooses, a dimension of time is relevant to the research. A

cross-sectional dimension defines a specific time for all participants, whereas a longitudinal dimension includes more than one time for data collection; conversely, the retrospective time dimension involves collecting data backward in time (Johnson, 2001). Whether a researcher chooses to use a variety of times of data collection or one time for data collection, ensuring the data are related to the research question is crucial to valid research (Giuffre, 1997). Because my research included collected data from multiple hospitals, my ex post facto design was explanatory and longitudinal and retrospective in time. Although the ex post facto design may seem straightforward, the approach has advantages and disadvantages.

Advantages and Disadvantages of Ex Post Facto Design

Although the ex post facto design may be a good approach for researchers, the design has advantages and disadvantages. One advantage of the ex post facto design is that no manipulation occurs with the data because the date used in ex post facto research preexists and can be validated (Johnson, 2001; Silva, 2010). When researchers use preexisting data, the data are used to drive the research question; therefore, no manipulation is required. Additionally, ex post facto research is low-cost research that is frequently conducted online where data are abundantly available (H. Cheng & Phillips, 2014; Doolan & Froelicher, 2009). A third advantage of ex post facto research is the access to codebooks and variables used in the data sets, often in large volumes, which allows the researcher to examine the information prior to determining whether the data and variables are relevant to the research question (Pienta, O'Rourke, & Franks, 2011). One additional advantage of ex post facto research is the low risk for participants (Doolan

& Froelicher, 2009; Silva, 2010). Participant information is protected because the participant information is not shared in the data set available for researchers. The data set I used for this study did not include participant information, and the clean data were available through a government website. Although the dataset I used met the criteria for ex post facto research, the design does have some disadvantages.

Ex post facto research is not without disadvantages. H. Cheng and Phillips (2014) deduced that ex post facto designs are less persuasive, and the researcher has no control over independent variables. Doolan and Froelicher (2009) stated the reason for ex post facto being less persuasive is because the researcher has no control over the preexisting data, which sometimes requires manipulation of the original research question to match the available data. Another disadvantage of ex post facto research is the potential for lack of internal validity. Internal validity determines how much control the researcher has over the study and design (Slack & Draugalios, 2001). Additional variables added to the data can interfere with the outcomes of the research, thereby placing the research at risk for decreased internal validity (Giuffre, 1997; Silva, 2010). When researchers manipulate data sets to show a correlation that does not exist, internal validity is impacted, and the research becomes useless, which supports Silva's (2010) and H. Cheng and Phillips's explanation of persuasion. The data sets I used for my research contained the necessary variables for the research question and were not be manipulated in any way to force a correlation.

The data set I used for this study included information from the Medicare.gov Hospital Compare data archive, a federal government website managed by the Centers of

Medicare and Medicaid Services. The data set from the Medicare.gov Hospital Compare website was archived HCAHPS surveys for patient experience and satisfaction surveys from Northeastern Ohio hospitals, which included data from the years 2016 and 2017. Additionally, I used the cost report from the Medicare.gov Hospital Compare website to determine the size of the hospitals in Northeastern Ohio and to provide an avenue of comparison and correlation of results for the different sizes of hospitals in the geographical area. The data under examination included all questions from the surveys associated with staff and physician communications with patients that may impact the patient experience scores. The data under analysis included the star rating from patients on a scale from 1 to 5, with 1 being the lowest on the scale and 5 being the highest. The purpose of the data analysis was to examine the relationship between patient experience scores and (a) the size of a hospital, (b) staff communication, and (c) physician communication. The independent variables for the analysis were staff communication, physician communication, and size of the hospital. The dependent variable was patient experience scores. I merged the two data sets in Excel to ensure alignment with the hospital ID in the HCAHPS surveys and the ID in the cost report. Additionally, I used histograms and frequency tables in the SPSS software to check for errors in the data entry. Barchard and Verenikina (2013) conducted a study to determine which data check is most accurate with manual coding and entries in research and found that read aloud and visual checking displayed 20 times more errors than the double entry method. Barchard and Verenikina deduced that because double entry does not rely on attention, as compared to read aloud and visual checking, it is the best choice for researchers when

using manual coding with quantitative data. Although I used two different data sets to examine the relationship between the size of the hospitals and communication between staff, physicians, and patients, the scale of measurements for both data sets were ordinal and provided actual number values for comparison and correlation. However, the quality of any research relies on the validity and reliability of data.

Reliability and Validity of the Data Sets

Rigor, or the ability of a researcher to prove the findings of the research, is often associated with reliability and validity of data. Laher (2016) described rigor as the quality control of the research process. In other words, rigor refers to whether the research produced quality results. Reliability helps to enhance the validity of research. Reliability of data is associated with the consistency of the results measured at different intervals (Roberts, Priest, & Traynor, 2006). Both Devon et al. (2007) and Heale and Twycross (2015) deemed reliability as not only associated with the consistency of the results but also the consistency of the measurement. In other words, the type of measurement and scale chosen can impact the reliability and stability of research, thereby affecting the validity.

Stability and equivalence of research are important aspects of reliability. Stability of the research relates to the retesting of results to display similarities of timed responses to prove reliability (Heale & Twycross, 2015). In contrast, equivalence refers to the fit of the data with the theoretical framework chosen to represent the research through consistent results from different measuring instruments (Devon et al., 2007). Stability and equivalence help with the alignment of the results of the research with the framework of

the study. Although reliability represents the stability and equivalence of research data, reliability also aids in the validity of research.

Validity is the cornerstone of research. Without validity, the results of research lack rigor and may be associated with errors in measurement, the lack of the use of nonrandom sampling, the loss of samples or participants, and the deterioration of quality (Slack & Draugalis, 2001). Roberts et al. (2006) described validity as having three different types that complement the research question: (a) content validity, (b) construct validity, and (c) criterion validity. Content validity supports the relevance of the research question, whereas construct validity determines how the variables complement the theory (Roberts et al., 2006). Criterion validity, perhaps one of the most difficult aspects of validity to demonstrate, is how the research compares to other research findings with similar research questions (Roberts et al., 2006). Supporting Roberts et al.'s explanations of the different types of validity, Devon et al., (2007) provided further clarification of the terms. According to Devon et al., construct validity supports the hypotheses through factor analysis, and the criterion validity of research represents strong correlations within the analyzed data. Furthermore, once construct and criterion validity are determined, content validity then requires further evaluation from experts in the field (Devon et al., 2007). Reliability and validity are dependent on theory, measurements, and findings, all which must support the intended research question. Ensuring all data are captured and explained (including any missing data or flaws) is imperative to the reliability and validity of research.

Researchers may want to ask if the research is original, and if there any known errors in the research Missing data are something researchers might want to consider when analyzing data sets. Missing data and the lack of responses from participants need to be examined and explained to support the reliability and validity of research (Laher, 2016). Researchers may want to review data missing values and check for the randomness of chosen measures and participants to support the findings of the research. In conjunction with missing data, the sample size might impact the validity of the research.

Sample size is an important consideration in quantitative research (Laeddher, 2016). The sample size must be adequate to support and represent the research question otherwise the research may be considered invalid (Laeddher, 2006). The sample size I used for my research encompasses data collected from HCAHPS surveys for the years 2016 and 2017. The research included an analysis of patient experience responses from patients' perceptions of communication in Northeastern Ohio hospitals. Given the amount of hospitals under consideration, and the large data files supplied through Medicare.gov, the sample size was adequate to support and represent my research. Because the sample size of the data was large, it was imperative to choose the right type of statistical testing method and sampling procedures to perform the research.

The method I used for analyzing the data in my research was multiple regression analysis. Multiple regression analysis is often used to understand the relationship between variables (Rubinfeld, 2011; McDonald, 2014). Multiple regression testing may help to determine if the chosen variables used can predict the outcome of the research (Pallant,

2016). When using multiple regression analysis, the size of the data set might impact the statistical significance of the findings (Rubinfeld, 2011). Multiple regression testing requires a minimum of three variables, which includes the dependent variable (McDonald, 2014). For my research, the dependent variable was patient experience scores and the independent variables included (a) staff communication, (b) physician communication, and (c) hospital size. Because of the number of the variables I used for research and because of the size of the data sets, multiple regression analysis was the choice for my research. Data assumptions were also a consideration in the multiple regression analysis.

Data assumptions occur in multiple regression analysis. Data assumptions in multiple regression analysis include normality, consistency, linearity with variables, and constant variances (Williams, Grajales & Kurkiewicz, 2013). Data assumptions assume that each variable used in the research has equal importance and supports the research question (Casson & Farmer, 2014). Checking for outliers, ensuring relationships occur among the variables, and ensuring equal distribution with variables are all examples of data assumptions (Pallant, 2016). Various types of statistical testing software can aid researchers with testing assumptions and are abundantly available. I used SPSS software and multiple regression analysis for my research.

A variety of sampling methods are available to researchers. One sampling method used in quantitative analysis is purposive probalistic convenience sampling (Etikan, Musa, & Alkassim, 2016). Purposive probalistic convenience sampling is random sampling that provides each participant with an equal chance to participate, meets

specific criteria, and is deliberate for the research (Etikan, Musa, & Alkassim, 2016). Sharma (2017) described some advantages of probalistic sampling which included population representation, ease of sampling, and decreased bias. Conversely, a disadvantage of probalistic sampling is the risk of ensuring the sampling population is up-to-date and representative of the population (Sharma, 2017). The research I conducted contained data from a government website that provided random sampling to ensure equal opportunities for participants, therefore, was representative for using multiple regression with probalistic convenience sampling.

Ethics

When conducting research, researchers may want to consider reviewing ethical standards. Researchers assume the responsibility of using ethical standards, ensuring confidentiality, and protecting participants (Morse & Coulehan, 2015). Remaining aware of exceptional circumstances and sensitive situations with research participants might aid in ethical awareness (Yardley, Watts, Pearson, & Richardson, 2014). Ethical committees help to ensure that asymmetrical power of research does not interrupt the relationship between researchers and participants (Juritzen, Griman, & Heggen, 2011). The Internal Review Board (IRB) is a committee that oversees and regulates research and helps to ensure ethical conduct occurs.

Ethical conduct during research is important to ensure the protection and trust of participants. The crossover between *bureaucratization* (self-regulation to rule-based ethics) to *subjugation* (combination of self-regulation, self-discipline, and rule-based ethics) positions IRBs as protectors of research activity and participation (Juritzen,

Griman, & Heggen, 2011). The Department of Health helps to assist and guide IRBs and researchers with ethical conduct in research. The Department of Health, Education, and Welfare (1979) shared that The Belmont Report sets expectations of ethical conduct which includes respect, altruism, and justice. The Belmont Report reviews the elements of voluntary participation in research studies and includes coercion and influence, which includes inappropriate *or improper rewards* (The Department of Health, Education, and Welfare, 1979). Supporting The Belmont Report, Yin (2014) expressed the importance of confidentiality and written consent when conducting research. The informed consent is an important aspect of conducting research to ensure the confidentiality of participants and may help develop a trustful relationship between researchers and participants (Yin, 2014).

The informed consent process may be one of the most critical components of conducting research. Informed consents offer information to research participants that includes the purpose of the research, the risks and benefits of participation, the opportunity to ask questions at any time, and the opportunity to withdraw at any time from the research (Department of Health and Human Services [DHHS], 1979). Purcaru, Preda, Popa, Moga, and Rogozea (2014) explained that the use of informed consents should be ongoing throughout the research process and should not be used as a tool for gaining access to participants. Informed consent discussions should be specific to each individual participant to ensure clarity and to meet individual needs of participants (Lentz et al., 2016). Building trust with participants might also help strengthen the relationship with the researcher. McDermid et. al (2014) stressed the importance of building trust with

research participants. McDermid et. Al suggested that researchers do not induce persuasion, ensure participation is voluntary, and ensure withdrawal can occur at any time during the data collection process. In my research, informed consents were not used because I used secondary data sets. I also considered confidentiality to protect participants.

I used safeguards to protect the confidentiality of the organizations included in my quantitative research and analysis. For my research I used an alphanumerical system with unique identifiers for the organization identification. The information I collected was solely used for research purposes. Yin (2014) stressed the importance of protecting participants from harm and avoiding deception throughout the research. The use of participant identification codes has does not display participant identifiers, thereby providing confidentiality for participants (Morse & Coulehan, 2015). I stored the data used for my research on a password protected jump drive and will house the data in a fireproof lockbox for 5 years. I did not reveal the names of the organizations at any time throughout my research. No incentives were supplied to any organizations during my research. Because the data I used for research is found online and free for public use, research agreement documents were not necessary for my study. The final doctoral manuscript includes the Walden IRB approval number.

Transition and Summary

In Section 2, I provided an overview of secondary data analysis and the advantages and disadvantages of using this approach for my research. Additionally, I provided an overview of the research method, design, and the testing method I used for

my research. I included the specific dependent and independent variables I used to support the research question. I also included a discussion about data assumptions, sample size, and the sampling method used for the research.

In Section 3, I provide a presentation of the quantitative secondary data research, which includes graphs and figures needed to support the research question. I provide specific results of the findings, recommendations for future actions, and the social change impact from my research.

Section 3: The Deliverable

Executive Summary

Patient experience scores have become a fundamental aspect of hospital reimbursement since the inception of the Affordable Care Act. To become eligible for reimbursement through the Centers for Medicare and Medicaid, hospitals are required to report patient experience feedback through the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) reporting system (Aroh et al., 2015; Figueroa et al., 2016). The results of HCAHPS surveys are accessible to the public; therefore, patients may choose to address their individual health care needs based on those results (Elliot et al., 2016). Thirty percent of reimbursement through the Centers for Medicare and Medicaid is related to patient experiences; therefore, understanding the impact of communication on patient experience scores may help leaders develop methods to motivate employees to improve interactions with patients to improve patient experience scores (Aroh et al., 2015; Blumenthal & Anupam, 2013; Elliot et al., 2016). Health care leaders should consider finding ways to influence employees to improve communications with patients and families seeking care in health care organizations (Delmatoff & Lazarus, 2014). House's (1996 path-goal theory provides specific reference to the importance of employee motivation and was the theoretical basis for this study.

House (1996) developed path-goal theory to show the impact that leaders may have on employee motivation and organizational effectiveness. According to House's path-goal theory, when a leader can influence and motivate individuals, performance improvement occurs. Leaders who have the skills to motivate staff to improve

communication with patients could aid in the improvement of organizational goals and outcomes (Almatrooshi et al., 2016). Improving communication between staff and patients could assist with improving patient experience scores. In the current study, path-goal theory was used to assess the impact that leaders have on employee motivation and organizational effectiveness.

Communication between staff, physicians, and patients may impact the overall patient experience scores for reporting hospitals. In this study, an analysis and evaluation of the impact of staff and physician communication on patient experience scores was conducted. I used multiple regression analysis to examine the relationship between the overall patient experience scores and staff communication, physician communication, and the size of the reporting hospitals for all reporting hospitals in Northeast Ohio.

I used archived HCAHPS survey data from the Medicare.gov database to perform a multiple regression analysis. The data were from the 2016 and 2017 performance years through the HCAHPS surveys for all reporting Northeast Ohio hospitals. The results of the multiple regression analysis revealed that staff and physician communication with patients impacted the overall patient experience scores. The results of the multiple regression analysis also revealed a relationship between the size of the reporting hospitals and patient experiences scores. The regression analysis indicated that patient experience scores were significantly influenced by physician communication and staff communication, F (5, 144) = 56.822, p <.001, adj. R^2 = .652. However, the number of beds in the reporting hospitals was not significantly associated with patient experience scores in the reporting hospitals. Although the results of the multiple regression analysis

did not reveal that the size of the hospitals had an impact on patient experience scores, the impact of physician and staff communication on patient experience scores affirmed the importance of improving communication with patients.

The findings in the study indicated a significant relationship between communication and patient experience scores. The lack of significant findings regarding the relationship between hospital size and patient experience scores indicates the need for further research regarding the impact of hospital size on the overall patient experience scores. The results of the study also suggest that further research regarding a comparison of communication impacts and clinical impacts on patient experiences in hospitals is needed. Further studies may address whether future communication training or customer service training is needed and whether there is a difference in how smaller versus larger size hospitals approach implementing training of staff and physicians to improve patient perceptions. Recommendations for further studies include the use of interviews or questionnaires and a more extensive range of data collection to support a larger field of service industries. The results of my study could benefit business leaders and practitioners who can influence organizational outcomes. The results of the study could also benefit scholars who are conducting similar studies involving patient or customer service experiences. In addition, the findings of the study may provide health care leaders with a variety of leadership approaches to communicate with staff on how to improve patient experiences.

Purpose of the Program

The purpose of this correlational quantitative secondary data study was to examine the relationship between patient experience scores and (a) the size of a hospital, (b) staff communication, and (c) physician communication. Understanding the impact of patient experience scores on patient and organizational outcomes may help health care leaders to ensure staff is communicating effectively with patients to improve patient experience scores. Improving patients' experiences when receiving health care might lead to improved patient outcomes by ensuring each patient's experience is a priority for health care organizations. Additionally, improving communication between physicians, nurses, staff, and patients could improve health care organizations' patient experience scores. The results from this study could give hospital health care leaders insight into how improving patient experience scores may improve overall engagement among patients and hospital employees. The results from this study could also influence and motivate health care leaders to become more aware of the importance of developing strategies to motivate staff and physicians to learn how to better communicate with patients, thereby aiding in improving patient experience scores and increasing government reimbursement for health care organizations.

Goals and Objectives

The goals and objectives of this secondary data analysis were to help health care leaders understand the relevance of patient experiences scores and the impact on patient outcomes and organizational outcomes. By providing an overview of communication's impact on health care organizations, I strove to encourage health care organizational

leaders to consider what strategies are currently being used to improve communication between physicians, nurses, staff, and patients, and to consider implementing different strategies to improve communication between physicians, nurses, staff, and patients. Once strategies are considered and implemented, health care leaders could begin to see improvements in patient experience scores, which may impact organizational performance.

Overview of Findings

I used archived HCAHPS survey data from the Medicare.gov database. The original archived data sets contained data from all reporting hospitals throughout the United States. The data included in my analysis were the 2016 and 2017 performance years from all reporting Northeast Ohio hospitals. After uploading each data set, I condensed the reports to the state of Ohio and filtered down to the hospitals in each county in Northeast Ohio. A list of the counties in Northeast Ohio is included in the Appendix. The data sets contained multiple categories, some of which were not relevant to my study; therefore, I condensed the data sets down to the data needed for my multiple regression analysis.

Condensing the data sets down to the categories needed for my analysis was required to ensure the appropriate information was captured to answer my research question. The data chosen for the analysis included the identification number for each reporting hospital, the county of the reporting hospitals, all patient scores for physician communication and staff communication, the bed size of the reporting hospitals, and the overall patient experience score for each reporting hospital. By choosing these categories

for the analysis, I was able to determine whether there was a relationship between patient experience scores and (a) the size of a hospital, (b) staff communication, and (c) physician communication.

The data collected for the study allowed me to analyze the association between the independent variables (physician communication, staff communication, and bed sizes) and the dependent variable (patient experience scores). The data used for the independent variables in the analysis included all responses for physician communication and staff communication, as well as the number of beds in each reporting hospital in Northeast Ohio. The data used for the dependent variable was the overall patient star rating, otherwise known as the patient experience score for each reporting hospital in Northeast Ohio.

Prior to performing the analysis, I determined which type of software to use. I used SPSS Version 25 to address the research question and hypotheses. I ran a linear multiple regression analysis after receiving the IRB approval on January 23, 2019. The IRB approval number is 01-23-19-0362710. The results of my findings are described in the following subsections.

Presentation of the Findings

A multiple regression analysis was conducted to determine whether a relationship exists between the independent variables (physician communication, staff communication, and bed size) and the dependent variable (patient experience scores). In this study, the regression analysis was used to test whether the independent variables had an impact on the dependent variable associated with the overall hospital ratings (patient

experience scores). The statistical analysis addressed the following research question and hypotheses:

RQ: What is the relationship between (a) the size of a hospital, (b) staff communication, (c) physician communication, and patient experience scores?

H_0: There is not a statistically significant relationship between (a) the size of a hospital, (b) staff communication, (c) physician communication, and patient experience scores

H_1: There is a statistically significant relationship between (a) the size of a hospital, (b) staff communication, (c) physician communication, and patient experience scores.

Descriptive Statistics

I collected data from the HCAHPS surveys from the CMS that included the years 2016 and 2017 for the 18 Northeast Ohio counties used for my research. I merged two data sets, the HCAHPS survey data for the years 2016 and 2017, and the 2014 Cost Report, both which were found in the archived CMS data from the Medicare.gov database. The 2014 Cost Report data set provided identification information for the counties in Northeast Ohio that were represented in the HCAHPS survey data. Merging the two data sets provided alignment of identification of the counties to ensure the appropriate data were evaluated from the HCAHPS surveys.

Multiple cases were eliminated that were not required for the analysis because the patient responses were not associated with the independent variables used in my study. I used 150 total cases for the overall hospital rating (patient experience score) and staff

communication, and 151 total cases for doctor communication in the analysis, all which represented the 18 counties and hospitals within the 18 counties that reported HCAHPS information through the CMS. Table 1 displays the frequencies of each variable and the number of missing cases for each variable.

Table 1

Frequencies of Data

		StaffComm	*DocComm*	*CountyName*	*Bedsize*
N	Valid	150	151	2554	23
	Missing	2404	2403	0	2531

Table 2 provides the descriptive statistics for the continuous variables used in the analysis. The analysis included the dependent variable of all reporting hospitals in Northeast Ohio: mean 3.45 and standard deviation .807. The analysis also included rates for staff communication (mean 3.81 and standard deviation .745) and doctor communication (mean 3.19 and standard deviation .778).

Table 2

Descriptive Statistics

	n	Mean	*SD*
StaffComm	150	3.81	.745
DocComm	151	3.19	.778
Overallhospitalrating	150	3.45	.807
Valid N (listwise)	150		

Testing of Assumptions

Testing assumptions prior to running a multiple regression analysis is needed to ensure the data being used are appropriate for a multiple regression analysis. According to Laerd Statistics (2015), researchers should consider eight assumptions for a multiple regression analysis. I used SPSS for the software's ability to provide the data analysis tools needed to complete the multiple regression and to provide information to describe the results and the possible relationship found in the variables. Eight assumptions were verified prior to beginning the analysis. The first two assumptions included ensuring the dependent variable was continuous and the independent variables were nominal and categorical to perform a multiple regression analysis (Laerd Statistics, 2015). The final six assumptions included checking for process outliers, normality, linearity, homoscedasticity, independence of residuals, and that multilinearity did not occur. After checking the assumptions, I conducted an analysis of the descriptive outcomes and the inferential statistics.

Outliers, Normality, Linearity, Homoscedasticity, and Independence of Residuals

To determine whether there were any outliers, I examined the histogram and the scatterplot of the standardized residuals and the Cook's Distance results. Outliers in regression analysis are values that lie outside of the expected range (Williams et al., 2013). Furthermore, the outcome of the study may be altered if the values are associated with measurement or coding errors (Williams et al., 2013). The first examination I completed was on the scatterplot of the standardized residuals.

Reviewing the histogram and the scatterplot of standardized residuals can help researchers determine whether the variables used in the research are normally distributed. Performing a visual inspection of the scatterplot for standardized residuals to ensure a linear line is present ensures that the data used have normal distribution and lessens the likelihood of inaccurate relationships between the variables (Osborne & Waters, 2002). After reviewing the histogram and scatterplot of the standardized residuals, I determined the distribution of the data points displayed normal distribution and a linear line, indicating there were no violations. The histogram and scatterplot of the standardized residuals indicated that the assumptions were met, as shown in Figure 1 and Figure 2. Additionally, Figure 3 displays the Q-Q plot of studentized residual, which also indicated normality. After reviewing the standardized residuals scatterplot, I determined that there were outliers that may have influenced the outcome through examining the Cook's Distance results.

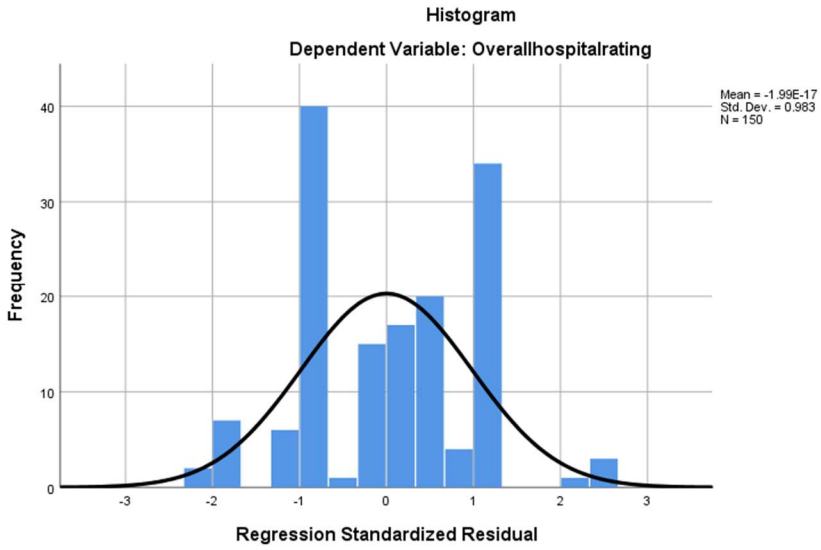

Figure1. Histogram displaying equal distribution and normality.

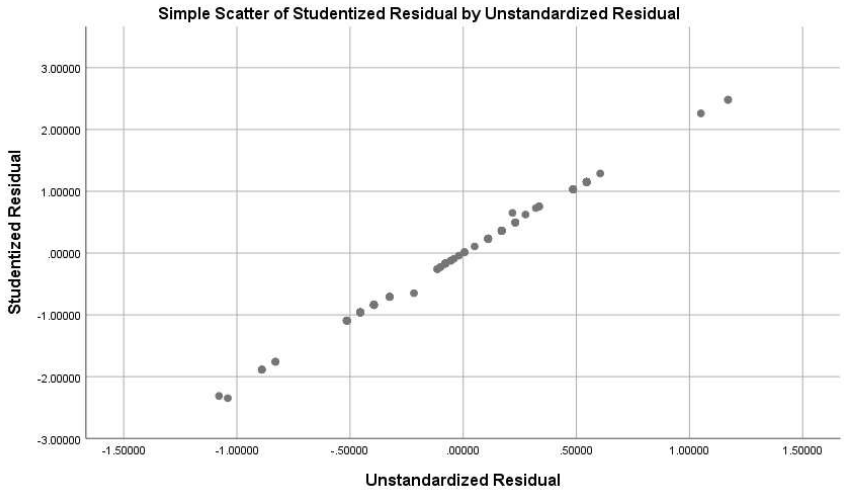

Figure 2. Scatterplot of studentized versus unstandardized residuals displaying normality.

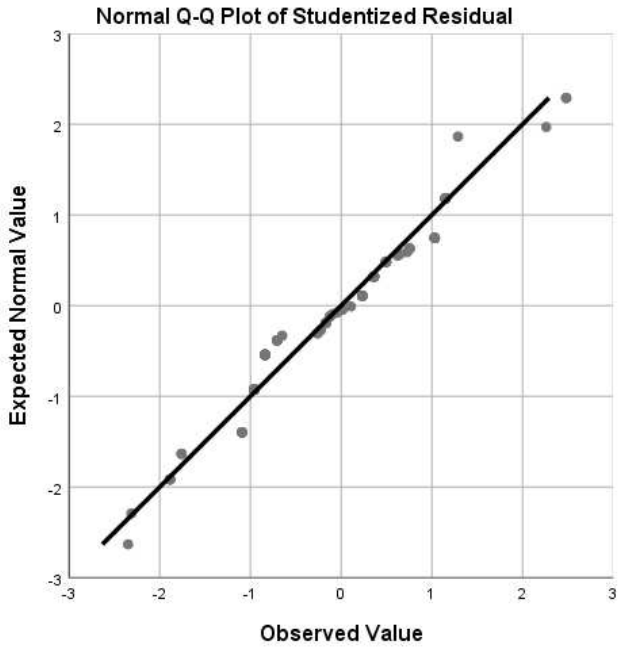

Figure3. Q-Q plot of standardized residual displaying normality.

Examining the Cook's distance results helps with determining if any outliers are influencing results (Laerd Statistics, 2015). Cook's Distance results should not be higher than one, and if the result is higher than one, the data should be removed, and the analysis reran to remove the influential data point (Jayakumar & Sultan, 2015). The Cook's

distance values did not exceed one, therefore, no data points were removed from the analysis, see Table 3. After checking for violations in the scatterplot and reviewing the Cook's distance results, I determined if there were independence of residuals by examining the Durbin -Watson results.

Table 3

Residuals Statistics

	Min	*Max*	*Mean*	*SD*	*n*
Predicted Value	2.82	4.90	3.78	.697	18
Std. Predicted Value	-1.375	1.614	.000	1.000	18
Standard Error of Predicted Value	.086	.159	.115	.022	18
Adjusted Predicted Value	2.69	4.87	3.77	.702	18
Residual	-.861	.180	.000	.225	18
Std. Residual	-3.472	.728	.000	.907	18
Stud. Residual	-3.742	.947	.015	.992	18
Deleted Residual	-1.000	.306	.009	.270	18
Stud. Deleted Residual	-.404	.943	.230	.329	17
Mahal. Distance	1.085	6.022	2.833	1.423	18
Cook's Distance	.000	.566	.048	.134	18
Centered Leverage Value	.064	.354	.167	.084	18

Note. Dependent Variable: Overall hospital rating

To determine if there was independence of residuals, I ran the Durbin-Watson test. The Durbin -Watson test determines if a variable is independent of other variables and can stand alone with little to no impact on other variables (Fields, 2009). A positive Durbin -Watson test of less than two indicates a positive correlation, whereas a negative Durbin -Watson of greater than two indicates a negative correlation (Fields, 2009). In

regression analysis, a Durbin-Watson test of near two indicates no positive or negative correlation and determines that the variable can stand alone with little or no impact on other variables. The results of the Durbin -Watson in this regression analysis was 1.147, thereby indicating independence of the variables did not occur, see the Model Summary in Table 6. The Durbin -Watson results revealed there may be an independent variable impacting another variable. After reviewing the Durbin -Watson results, I examined the scatterplots for the dependent variable, patient experience scores, and independent variables to determine if linear relationships were present.

Table 4

Model Summary

Model	*R*	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.815[a]	.664	.652	.476	1.147

Note. a. Predictors: (Constant), bedsize greater than or equal to 250, bedsize 150 to 249, Doc Communication, Bedsize zero to149, Staff Communication.
b. Dependent Variable: Overall hospital rating

Linearity between dependent variables and independent variables informs researchers if a straight-line relationship exists between variables (Laerd Statistics, 2015). Upon examination of the partial regression plots and a plot of studentized residuals, I determined that linearity existed for staff communication and physician communication with the dependent variable; see Figure 4 and Figure 5. Linearity did not exist for the varied bed sizes of the hospitals and the dependent variable see Figure 6, Figure 7, and Figure 8. After reviewing the scatterplots for linearity, I assessed if homoscedasticity was present.

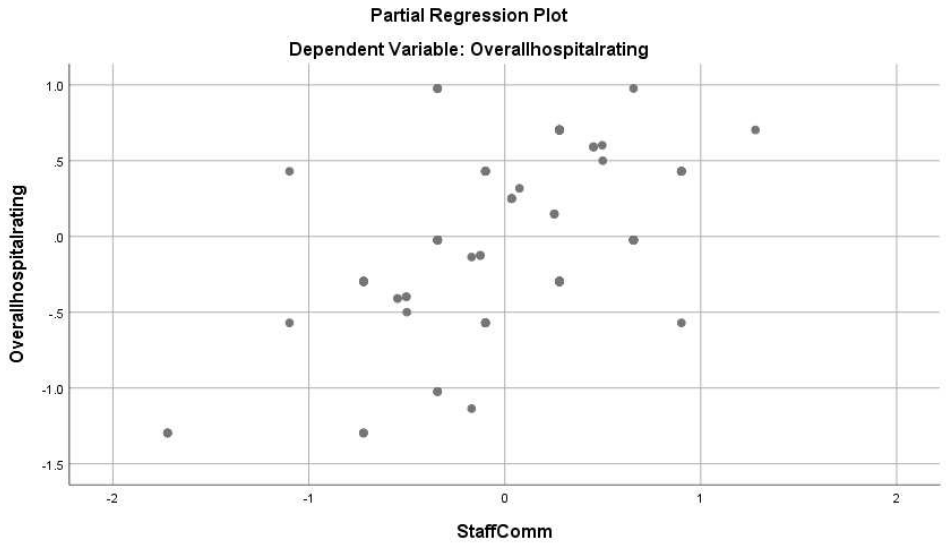

Figure 4. Staff communication and the linear relationship with the overall hospital rating (patient experience scores).

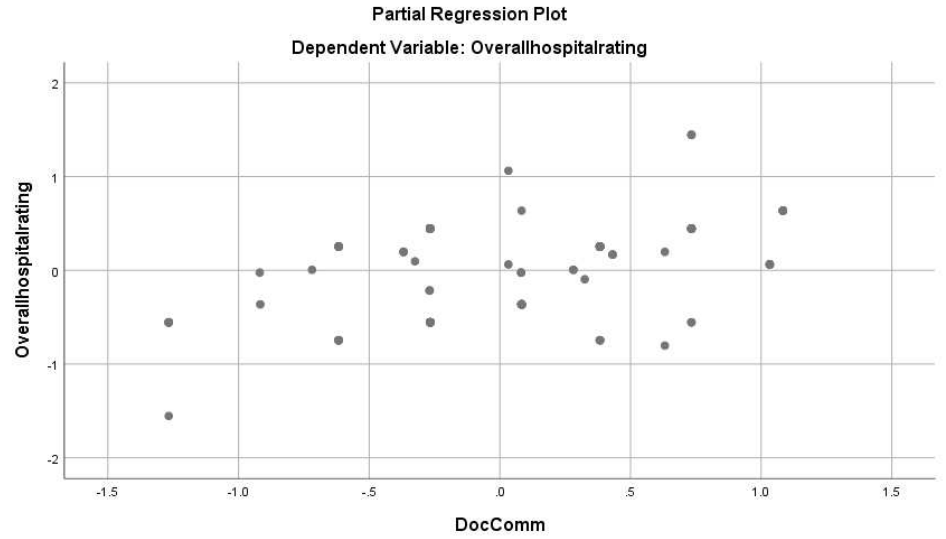

Figure 5. Physician communication and the linear relationship with the overall hospital rating (patient experience scores).

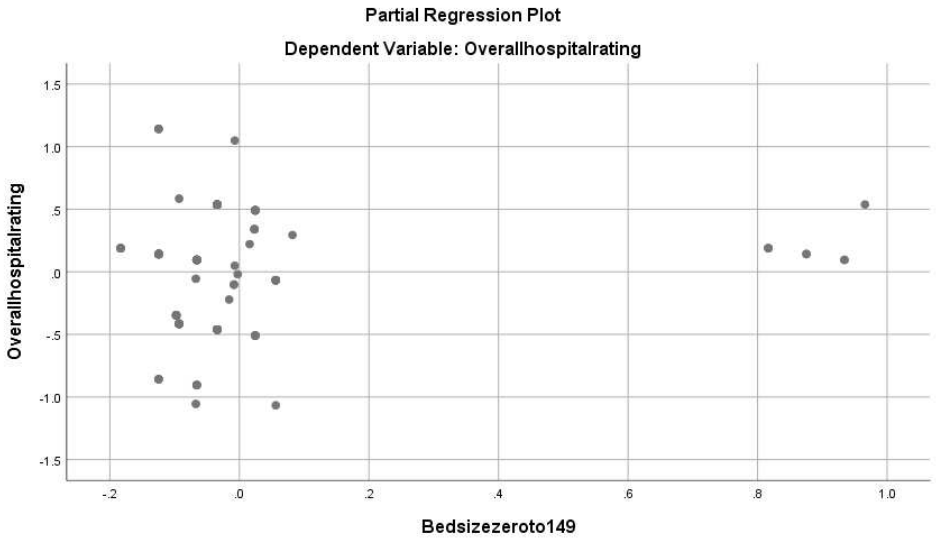

Figure 6. Bed size 0-149 and the non-linear relationship with the overall hospital rating (patient experience scores).

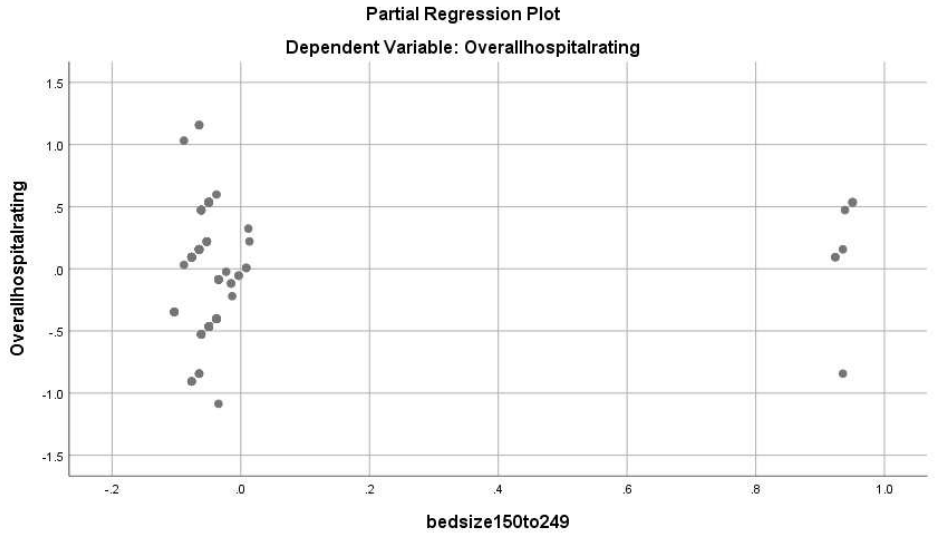

Figure 7. Bed size 150-249 and the non-linear relationship with the overall hospital rating (patient experience scores).

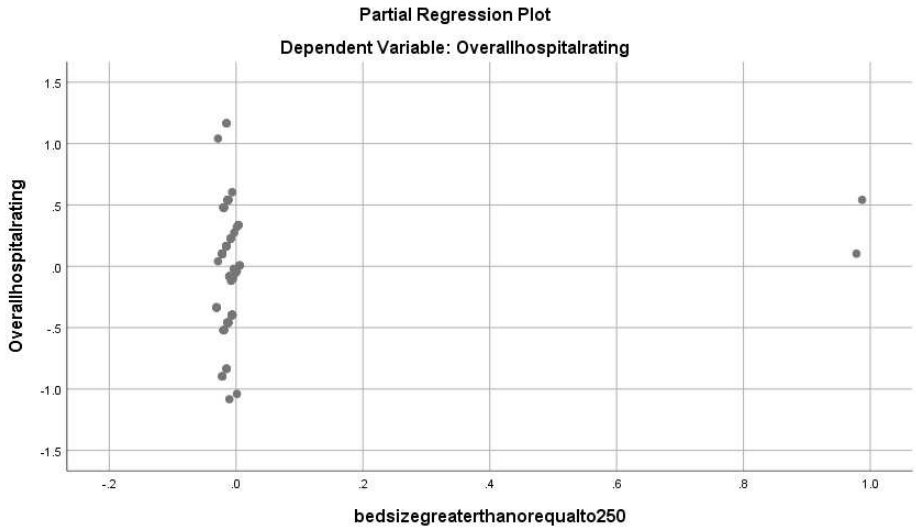

Figure 8. Bed size greater than or equal to 250 and the non-linear relationship with the overall hospital rating (patient experience scores).

Homoscedasticity determines if the differences in errors are consistent with the independent variables (Osborne & Waters, 2002). Homoscedasticity is noted by observing the scatter plot of the standardized residuals and predicted values of the independent variables (Laerd Statistics, 2015). The data points of the independent variables should distribute evenly and show no patterns (Laerd, 2015). Homoscedasticity was evident in the independent variables' physician communication and staff communication, see Figure 4 and Figure 5. Homoscedasticity was not evident for the different bed sizes of the hospitals, see Figure 6, Figure 7, and Figure 8. Because homoscedasticity was not evident with the hospital bed sizes, heteroscedasticity was considered. Heteroscedasticity with an independent variable displays a pattern with the data points in the scatter plot, thereby indicating unequal distribution see Figure 6, Figure 7, and Figure 8 (Osborne & Waters, 2002). After reviewing the scatterplots for linearity and homoscedasticity, the final assumption that I reviewed was multicollinearity.

Checking for multicollinearity helps to determine if there is a correlation between two or more independent variables a (Laerd Statistics,2015). Pallant (2016) described the two correlation coefficients that indicate if multicollinearity is present, Tolerance and Variance inflator factors (VIF). Multicollinearity exists if the Tolerance coefficient is less than .10 and if the VIF value is greater than 10 (Pallant, 2016). Laerd Statistics (2015) suggested that if multicollinearity exists with any independent variables, removal of one of the independent variables should occur. The analysis of coefficients and correlation for the independent variables in my research did not indicate evidence of multicollinearity for any of the independent variables, see Table 6. After reviewing and describing the results of multicollinearity for the independent variables, I described the inferential statistical results.

Inferential Results

I aimed to determine the relationship between the bed size of hospitals, physician communication, staff communication, and patient experience scores. I used SPSS software to perform a multiple regression analysis. The multiple regression concluded that the overall hospital ratings (patient experience scores) $F(5, 144) = 56.822$, $p < .001$, adj. $R^2 = .652$ were influenced by physician communication, and staff communication, see Table 5. However, the number of beds for the hospitals used in the analysis did not have any statistical significance on the patient experience scores. The R^2 for the overall model indicates how much of the variance in the analysis is explained by the independent variables (Laerd Statistics, 2015). For my research, the R^2 was 66.4%. The adjusted R^2 was 65.2%, thereby indicating a small adjustment for positive bias (Laerd, 2015).

Although the results of the analysis indicate significance, determining if the independent variables contributed to the results was important to consider.

Table 5

Anova

Model		Sum of Squares	*df*	Mean Square	*F*	*Sig.*
1	Regression	64.422	5	12.884	56.822	.000[b]
	Residual	32.652	144	.227		
	Total	97.073	149			

Note. Dependent Variable: Overall hospital rating

Determining if any independent variables contributed to the results can be seen in the coefficients table of the multiple regression analysis. Table 6 displays that staff communication significantly predicted the patient experience scores, ($\beta = .52$, $t\ (149) = 8.26$, $p < .001$). There is also 95% confidence that the true value of the slope coefficient is between .430 and .700. Doctor communication also predicted the patient experience scores ($\beta = .36$, $t\ (149) = 5.61$, $p < .001$) and displayed a 95% confidence that the true value of the slope coefficient was between .243 and .508. Conversely, none of the bed sizes for the hospitals had significant predicted values on patient experience scores. Regression coefficients can be found in Table 6. To further support the contribution of the independent variables, a Pearson's correlation was included in the analysis.

Table 6

Coefficients

Model		Unstandardized Coefficients		*Standardized Coefficients*			*95.0% Confidence Interval for B*		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	*t*	*Sig.*	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	*VIF*
1	(Constant)	.070	.210		.332	.741	-.345	.485					
	StaffComm	.565	.068	.521	8.263	.000	.430	.700	.753	.567	.399	.587	1.705
	DocComm	.375	.067	.363	5.614	.000	.243	.508	.708	.424	.271	.559	1.790
	Bedsizezeroto149	.225	.180	.063	1.251	.213	-.130	.579	.200	.104	.060	.929	1.077
	bedsize150to249	.210	.174	.059	1.211	.228	-.133	.554	.016	.100	.059	.991	1.009
	bedsizegreaterthanorequalto250	.328	.340	.047	.965	.336	-.343	.999	.008	.080	.047	.996	1.004

Note. Dependent Variable: Overall hospital rating

A Pearson's correlation was performed to determine the linear relationship between the independent variables and the dependent variable. A strong linear relationship occurs when the Pearson correlation value is closer to one, and a weaker relationship is evident when the value is closer to zero (Laerd, 2015). Staff communication and doctor communication both displayed a linear relationship with patient experience scores. The hospitals with bed sizes of 150 - 249 and greater than 249 beds exhibited no linear relationship with patient experience scores. The hospitals with bed sizes between 0-149 displayed a weak linear relationship with patient experience scores. The results of the Pearson correlations can be seen in Table 7.

Table 7

Correlations

		Overallhospitalrating	StaffComm	DocComm	bedsizegreaterthanorequalto250	bedsize150to249	Bedsizezeroto149
Overallhospitalrating	Pearson Correlation	1	.753**	.708**	.008	.016	.200*
	Sig. (2-tailed)		.000	.000	.925	.848	.014
	N	150	150	150	150	150	150
StaffComm	Pearson Correlation	.753**	1	.637**	-.049	-.060	.100
	Sig. (2-tailed)	.000		.000	.551	.464	.225
	N	150	150	150	150	150	150
DocComm	Pearson Correlation	.708**	.637**	1	-.028	-.018	.248**
	Sig. (2-tailed)	.000	.000		.736	.822	.002
	N	150	150	151	151	151	151
bedsizegreaterthanorequalto250	Pearson Correlation	.008	-.049	-.028	1	-.002	-.002
	Sig. (2-tailed)	.925	.551	.736		.918	.909
	N	150	150	151	2554	2554	2554
bedsize150to249	Pearson Correlation	.016	-.060	-.018	-.002	1	-.004
	Sig. (2-tailed)	.848	.464	.822	.918		.843
	N	150	150	151	2554	2554	2554
Bedsizezeroto149	Pearson Correlation	.200*	.100	.248**	-.002	-.004	1
	Sig. (2-tailed)	.014	.225	.002	.909	.843	
	N	150	150	151	2554	2554	2554

Note. Correlation is significant at the 0.01 level (2-tailed).
Correlation is significant at the 0.05 level (2-tailed).

Analysis Summary

The purpose of this quantitative correlational secondary data analysis was to examine the relationship between patient experience scores and (a) the size of a hospital, (b) staff communication, and (c) physician communication**.** I used multiple regression to determine if the independent variables and bed size of hospitals, staff communication, and physician communication, significantly predicted patient experience scores, F (5, 144) = *56.822*, p <.001, adj. R^2 = .652. The staff communication and physician communication measurements were significant; however, the bed sizes of the hospital were not significant. The Pearson correlation results for hospitals with bed sizes from 0-149 revealed a small correlational relationship with patient experience scores, which may indicate the need for further studies with this subgroup of hospitals. The multiple regression models were significant; however, the research question was only answered in partial, as variations in the results of the analysis did not support all hypotheses.

A review of the hypotheses and the results of the testing are as follows:

H_0: There is no statistically significant relationship between patient experience scores and (a) the size of a hospital, (b) staff communication, and (c) physician communication.

H_1: There is a statistically significant relationship between patient experience scores and (a) the size of a hospital, (b) staff communication, and (c) physician communication.

The results of the study revealed that the null hypotheses can be rejected for staff communication and physician communication, because both revealed a statistically significant relationship with patient experience scores. The null hypothesis cannot be rejected for bed sizes of the hospitals because there were no statistically significant relationships. Conversely, the alternative hypothesis was rejected for staff communication and physician communication, because both variables indicated a statistically significant relationship to patient experience scores. The alternative hypothesis was accepted for the bed sizes of the hospitals, because there were no statistically significant relationships observed.

Theoretical Findings

Path-goal theory is a way to provide leaders with different approaches with finding creative ways to address resolutions for process improvements. House (1971) deduced that *instrumental* and *social - emotional* behaviors of leaders influences followers, thereby having an impact or organizational success. The literature review in Section 2 references how path-goal theory is a reflective theory used in leadership. Dixon and Hart (2010) found that participative, supportive, and instrumental leadership had a positive impact on workgroup effectiveness, thereby displaying an influential impact on organizational outcomes. O'Boyle and Cummin's (2013) suggested the use of performance management systems to characterize employee achievements that are task oriented to influence organizational outcomes. Malik (2013) linked employee performance from various aspects of leadership which included motivation, empowerment, and rewards, Duan, Liu, and Che (2018) found that when leaders

empower staff and build trusting relationships with staff, creativity with process improvements occur. Because path-goal theory implies that leadership influence on employees impacts organizational performance, and because similar concepts among researchers is evident, I applied the path-goal theory to direct my study on the impact of communication on patient experience scores with hospitals in Northeast Ohio.

In summary, there is consistency with path-goal theory's concepts and the results of my study. The research question focused on the relationship between communication and patient experience scores. The outcomes of the analysis revealed there were relationships with communication and the patient experience scores with hospitals in Northeast Ohio, thereby indicating that leadership influence could play a critical role in how communication occurs between staff and patients, and how the communication can impact the overall patient perception of the services provided in a hospital. Since path-goal theory concentrates on leadership styles and influence, the theory is relevant to the results of my study and supports the answer to the research question.

Recommendations for Action

The explanations of the findings in my study confirmed a significant relationship with communication and patient experience scores. The limitations of the study with the bed size influence on patient experience scores are indicative of the need for further research. The results of my study suggest further research is needed with a comparison of communication impacts and clinical impacts on patient experiences in hospitals. The future studies may indicate if future customer service training is needed and if there is a difference in how smaller versus larger size hospitals approach implementing training of

staff and physicians to improve patient perceptions. Recommendations for further studies include the use of interviews or questionnaires and a more extensive range of data collection to support a larger field of service industries. The result of my study may benefit business leaders and practitioners who can influence others with organizational outcomes. The results of my study might also benefit future scholars who are embarking on similar studies involving patient or customer service experience results. The findings of my study may also provide health care leaders with a variety of leadership approaches to effectively communicate with staff on how to improve a patient's experiences.

Communication Plan

I plan to communicate the findings of this study through seeking out public conferences to help with social change in the healthcare sector. I also plan to share the findings with other health care leaders to help with encouraging leaders to seek out strategies that improve communication between staff and patients that may lead to quality outcomes. Additionally, I plan to expand on further research with local health care facilities to better understand the impact of staff communication on patient perceptions and quality of care.

Implications for Social Change

The implications for positive social change include identification of leaders who have influential roles with organizational outcomes and the impact on consumers and businesses. The results of this study support the growing need for leadership who are dedicated to positive change and the impact on health care staff and providers who serve the needs of patients. Leaders who influence positive cultural change help to achieve

organizational goals (Rijal, 2016). Celebrating organizational success with staff promotes and influences positive internal and external customer satisfaction, thereby further supporting the need for leadership influence (Dekas et al., 2013). Health care is a crucial component of everyday life, therefore, finding ways to improve patient perceptions and interactions with staff and healthcare providers is a critical constituent of healthcare leadership roles. Understanding how staff and providers interact with patients and the impact those interactions have on improving a patient's experiences can help leaders develop strategies to improve patient experience scores and to meet organizational goals. Bringing the voice of healthcare consumers into decision-making in healthcare organizations may help to improve patient relationships and improve brand loyalty, which might g increase government reimbursement rates for healthcare organizations.

Improving HCAHPS scores increases reimbursement rates through the Centers for Medicare and Medicaid Services. The additional revenue from improving patient experience scores may lead to improving the quality of care for patients, thereby having a positive social impact on communities. One-way healthcare organizations might ensure positive outcomes for patients is by embracing collaborative efforts from different community businesses that provide healthcare services. By combining efforts and having the same desire to improve the quality of care for patients, collaborating healthcare organizations may be able to focus on what is important to patients and communities, while continuing to influence positive business and community outcomes. In summary, the implications of improving patient relationships and patient experience scores include providing personalized care for patients, ensuring the best accommodations are available

to patients, helping to ensure patient safety, and providing quality care. Healthcare organization leaders who remain focused on improving patient relationships may have a profound impact on organizational and community outcomes, thereby having a positive effect on social change.

Skills and Competencies

The continuous changes in health care require leaders to obtain and adopt a set of skills and competencies that aid in positive organizational outcomes. Some skillsets that may enhance a healthcare leader's competency include customer service, employee engagement, relationship development, and technological enhancements. Hanson and Ford (2011) explored competencies for healthcare leaders that involve an intricate model of developmental skills. Some of the steps included in Hanson and Ford's (2011) explanation include balancing operational and administrative roles, encouraging a change culture, exploring opportunities, and adapting and thriving in unexpected conditions. Another skillset leaders' need is the ability to motivate and encourage staff (Kumar & Krishnaraj, 2018). Kumar and Krishnaraj (2018) found that encouraging staff to participate in decision-making leads employees to become more receptive with providing quality service. Although skills and competencies vary in different industries, having a base set of skills as a leader may lead to improved organizational outcomes. Specifically, this study's findings represent how skills and competencies with health care leaders can impact how staff interacts with patients that might lead to positive social change and improved organizational outcomes. My skills and competencies as a healthcare leader can be found at waldenu.optimalresume.com.

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Appendix: List of Northeast Ohio Counties

Ashland
Ashtabula
Columbiana
Cuyahoga
Erie
Geauga
Huron
Lake
Lorain
Mahoning
Medina
Portage
Richland
Stark
Summit
Trumbull
Tuscarawas
Wayne