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The Relationship Between Allied Health Therapy Leaders in Hospitals and Patient Satisfaction

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Walden University
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Abstract

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Care Administration

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Abstract

Although allied health professions account for 60% of the health care workforce, funding to support training and leadership in the allied health fields remains nominal. The purpose of this quantitative study was to investigate whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. The Donabedian model was used as the theoretical framework, as it made it possible to conceptualize the underlying parts and processes that may contribute to poor quality of care for patients receiving healthcare. A quantitative methodology with a cross-sectional design was used to provide quantifiable information to ascertain whether the results were random and to develop a description and understanding of relationships between allied health therapy leaders and patient satisfaction. The validated tool for the study was Van Hala's Foundational Healthcare Leadership Self-Assessment. The data were generated, gathered, and recorded from allied health therapy leaders (N=87) who worked at a hospital in the United States using a formally structured Likert Scale questionnaire and analyzed using the Exploratory data analysis, chi-square test, and one-way multivariate analysis of variance (MANOVA) to test whether a linear combination of predictors affected patient satisfaction. Findings show that accountability, communication, team management, and self-management were negatively related to patient satisfaction, but collaboration affected patient satisfaction significantly. A longitudinal design with multiple measures of leadership is recommended in future research to compare those who have had leadership training with those who have not. The findings suggest a potential for positive social change in healthcare by understanding allied health therapy leaders' performance with improved developments in the infrastructure and process of patient care in hospitals.

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Dedication

I am thankful to my wonderful wife, who believed in me, sacrificed for me, and gave me the strength to go on this amazing journey. Standing by my side, you helped me achieve a lifelong goal and gave me the confidence to succeed. Thank you for your support with our children over the years and for making this a manageable process. I am honored and grateful to be your husband. I owe my gratitude to my sons and daughter, who provided unwavering support and affection as I worked on my dissertation. I am also grateful to my brothers and sisters and friends who patiently listened to me and supported me as I worked on my dissertation. Finally, I would like to express my gratitude to my heavenly parents, who have always loved me unconditionally.

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Finally, I want to express my gratitude to all of the allied health therapy leaders who took part in my research. Thank you for taking the time to complete my survey despite your busy schedule. Your participation was extremely valuable. This dissertation would not have been possible without your help.

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Chapter 1: Introduction to the Study

The Donabedian model was used for the current quantitative study to examine whether there was a relationship between allied health therapy leaders in hospitals and patient satisfaction. As shown in the literature review, the evolution of leadership theories has been explored from a historical standpoint. Studies have been performed on different types of leadership styles, characteristics, and competencies to reveal how leaders motivate followers to accomplish goals and tasks in a variety of settings to achieve patient satisfaction (Guerrero et al., 2017). The literature is limited, however, in regard to why allied health therapy leaders may or may not impact patient satisfaction in hospitals (Aredestani et al., 2016). The question remained unanswered prior to the publication of this study. The positive social change implications of this study include a better understanding of allied health therapy leaders' performance with improved developments in the infrastructure and process of patient care in hospitals. Useful knowledge in research findings and observations on how allied health therapy leaders positively impact patients will increase patient satisfaction through the delivery of effective, efficient, and quality care to patients in hospitals to improve patient satisfaction outcomes.

In Chapter 1, I generate the groundwork for the research that was performed during the course of the study by providing background information on leadership, allied health therapy leaders, and patient satisfaction. Moreover, I present the statement of the problem, purpose of the study, research questions, theoretical framework, nature of the study, and terms and definitions related to the research. This is followed by a presentation of the scope and delimitations of the study, the limitations of the research, and the significance of the study for allied health therapy leaders.

Background

Leadership in health care settings promotes patient safety and high-quality care (Mianda & Voce, 2018) and is a crucial element of implementing evidence-based practices, facilitating motivation, meeting the demands of an ever-changing market, and effecting change progressively in allied health care settings (Aarons et al., 2015). Leadership positions that exist in hospitals are found in some of the following departments: emergency room, acute care, intensive care, radiology, cardiology, gastroenterology, laboratory, respiratory, rehabilitation, human resources, and administration, to name a few (Disabled World, 2013). These different departments in hospital sites provide allied health care professionals (AHCPs) with an opportunity to hold leadership positions.

According to the U.S. Bureau of Labor Statistics (2020), nurses make up the largest occupational group in hospitals, accounting for 30% of total hospital employment. The U.S. Bureau of Labor Statistics (2018), on the other hand, reported that allied health care workers make up 56.42% of the total number of hospital employees (Hospitals, 2020). By the year 2029, according to the U.S. Bureau of Labor Statistics (2020), health care jobs are expected to grow by 15%. Despite the growing number of allied health workers in hospitals, the number of allied health therapy leaders in hospitals has not grown (Slade et al., 2018; Wenke & Mickan, 2016). Nurses, on the other hand, outnumber allied health therapy leaders in leadership positions in hospitals (Dyess et al., 2016).

Markham (2015) noted that, presently, allied health leaders are in a position to lead the health care system and effect change. Allied health therapy leaders continue to

be underrepresented, however, due to a lack of structural and organizational procedures (Bradd et al., 2018). These leaders continue to progress and set the standard for leadership practice in current health care systems to motivate followers to work on common goals set by the hospital systems. Allied health leaders are charged with managing an array of allied health care teams but do not have processes in place and are missing defined paths and support services (Boyce, 2006).

An allied health leader needs to govern in a collaborative, multifaceted, and dynamic process to be able to gain positive outcomes and meet patient satisfaction in hospitals (Sfantou et al., 2017). Gifford et al. (2018) also noted that an understanding of leadership behaviors is required to help move the use of research on managerial leadership in AHCPs and nurses forward, thus rendering it essential to be able to create interventions that improve the delivery of healthcare and impact patient outcomes. Pertinent literature has not been thoroughly produced, however, for allied health professionals and nurses to support their research use (Gifford et al., 2018). In addition, Ang et al. (2016) noted that instruments assessing allied health leaders' competencies are nonexistent. There is a gap in current research that compromises leaders' ability to support and train future allied health therapy leaders to deliver quality clinical care and impact patient satisfaction.

The use of evidence-based clinical research regarding the leadership qualities of allied health therapy leaders has been able to advance outcomes in health care settings away from erratic practices that yield inconsistent results and toward clarifying roles, monitoring performance, and using resources efficiently to effect positive change (Gifford et al., 2018). Frontline allied health therapy leaders are in a position to observe

work inefficiencies, inadequate policies and procedures, and weak organizational structures so that they may develop initiatives to correct these deficiencies and motivate workers to meet goals and improve outcomes (Mianda & Voce, 2018). Aarons et al. (2015) reported that first-level allied health leaders are in the best position to provide evidence-based practice as they are in a position to develop organizational structures and processes. Other studies have shown that middle managers, such as department heads, team managers, and directors, play a crucial role within hospitals to improve clinical outcomes (Ardestani et al., 2016; Gifford et al., 2018). Evidence-based research, however, continues to be limited and lacking in studying the effects that allied health leaders have on the quality of services in health care settings (Gifford et al., 2018).

Some scholars believe that leaders have a legal and moral responsibility to meet the needs of patients and to improve care (Parand et al., 2014). Other scholars have found reports from various organizations and government agencies commenting on the importance of effective clinical leadership through clinical engagement and clinical leadership to be able to achieve and maintain quality of care and patient satisfaction (Daly et al., 2014). Findings from scholars have shown that leadership held by allied health practitioners is essential for strengthening the quality and integration of care as it yields high productivity, which leads to improving patient satisfaction in hospitals (Sfantou et al., 2017). There is limited research, however, regarding allied health leaders and the development of the role (Bradd et al., 2017).

Allied health leader programs are in place to develop stronger competencies and skills in leaders (Bradd et al., 2018). Although allied health professions account for 60% of the health care workforce, funding to support training, leadership programs, and

research in the allied health fields remains nominal compared to the financial support provided for physician and nursing professions (Demo et al., 2015). Gifford et al. (2018) also reported that published findings on leadership development programs in allied health remain scarce. The lack of allied health programs leads to poor preparation for leadership roles, which can limit outcome measures and patient satisfaction (Daly et al., 2014). Further research is necessary to discover what aspects of leadership from allied health therapy leaders may help to validate the existence and development of future programs.

Statement of the Problem

Patient satisfaction has gained much public attention and has become essential for identifying gaps in the service delivery of patient care (Al-Abri & Al-Balushi, 2014). Prakash (2010) noted that patient satisfaction is an essential and universal indicator for measuring the quality of healthcare in hospitals. The results from patient satisfaction surveys have helped in assessing the quality of services that patients receive so that healthcare organizations may continually develop action plans to meet the needs of patients. Therefore, most healthcare organizations invest in achieving and maintaining the best possible patient satisfaction scores. Bradd et al. (2017) noted that allied healthcare leaders are educated health professionals who play a fundamental role in the health care system to improve clinical outcomes for patients. With high patient satisfaction scores, patients are more likely to return if they had a positive experience (Shirley & Sanders, 2013).

Allied health therapists are crucial as well for increasing patient satisfaction in hospitals (Ellis-Jacobs, 2011; Gifford et al., 2018). Grimmer et al. (2014) described allied health therapy as a mixture of disciplines that provide therapy (occupational therapy,

physical therapy, and speech pathology) to patients in hospitals, which are led by an allied health therapy leader. These allied health therapists provide services to enhance and maintain patients' functioning in hopes of improving their satisfaction with services rendered. However, there is a gap in the literature, as there are only a few published studies reporting on how the leadership skills of allied health therapy leaders impact patient satisfaction (Brand et al., 2012).

Leadership within the allied health field, which in a hospital consists of occupational and physical therapists and speech pathologists, facilitates, coordinates, and guides the activities of allied health therapists to affect patient satisfaction (Babiker et al., 2014; Slade et al., 2018). Leaders in hospitals build trust and confidence so that the allied health therapist may take a positive approach and feel inspired, encouraged, or motivated to meet the needs of the patients that they serve (Daly et al., 2014). McRae (2017) noted that there is an association between leadership styles partnered with employees' mutual goals and better patient satisfaction outcomes. There is a gap in the current limited scientific literature examining how allied health therapy leaders influence patient satisfaction (Bradd et al., 2017). Therefore, the aim of the current study was to address these gaps by examining whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction.

Purpose of the Study

The purpose of this quantitative study was to investigate whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. A quantitative nonexperimental, cross-sectional study approach was used to address this gap (Sousa et al., 2007). The literature review served to examine the relationship between

allied health therapy leaders in hospitals and patient satisfaction. A survey questionnaire through a 5-point Likert scale aided in developing an understanding of the impact of allied health therapy leaders and patient satisfaction in hospitals.

Research Question and Hypotheses

RQ1: Is there a relationship between allied health therapy leaders in hospitals and patient satisfaction?

H_o1: There is no statistically significant relationship between allied health therapy leaders in hospitals and patient satisfaction.

H_A1: There is a statistically significant relationship between allied health therapy leaders in hospitals and patient satisfaction.

Theoretical Framework

The Donabedian model was used as the theoretical framework for this research. It was the foundation for the topic because it is widely used and allows both researchers and policymakers to conceptualize the underlying parts or processes that may contribute to poor quality of care for patients receiving healthcare (Donabedian, 1988; Sfantou et al., 2017). The Donabedian model is a conceptual model that provides a framework for examining health services and evaluating the quality of health care (McDonald et al., 2007). According to the model, information about the quality of care can be drawn from three categories: “structure,” “process,” and “outcomes” (Donabedian, 1988). Moreover, the “structure-process-outcome” framework described by Donabedian has been used effectively by other researchers to assess the quality of care for patients in a hospital (Sfantou et al., 2017). The three-part approach makes quality assessment possible,

assuming that structure (e.g., attributes of material or human resources and organizational structure) influences process (e.g., what they are doing in giving and receiving care), which influences the outcome (e.g., health status; Donabedian, 1988).

In the dissertation, the first category, structure, consists of places where medical care takes place and the instrumentalities of each product that may include the feature of the system, the allied health therapist, or the patient. The structure can encompass the physical setting in which the care takes place, the organization of care, and the qualifications of the care providers (Donabedian, 1966), which entail describing the context of care to patient care delivery, which includes equipment, financing, staff, and the hospital building itself. The second category, process, represents the activities that take place between the allied health therapy leader and the therapist and between allied health therapists and patients throughout the delivery of healthcare, including technical and interpersonal aspects. The third category, outcomes, includes clinical outcomes, quality of life, and satisfaction with the care given to the patient by the allied health therapist. In other words, this category refers to the impact that healthcare has on the patient's health status. These outcomes are motivated or influenced by the allied health therapy leader. Table 1 shows how the Donabedian matrix helps to put into perspective the technical management of the patient, the management of interpersonal relationships, access to care, and the continuity of care provided by allied health therapy leaders in hospitals (Donabedian, 1980).

Table 1

Donabedian's Matrix for the Classification of Quality Measures Applied to Hospitals

	Structure	Process	Outcome
Accessibility	Hours of operation of hospitals; location of hospitals	Waiting time for patient care	Satisfaction with various aspects of accessibility
Technical management	Level of experience of allied health therapists; availability of various pieces of up-to-date equipment	The systematic use of evidence-based practices	Positive outcomes
Management of interpersonal relationships	Leaders and allied health therapists trained in cultural competency techniques	Involving the patient in treatment decision	Patient satisfaction with whether they were able to participate in treatment decisions
Continuity	Presence of an experienced allied health therapy leader	Number of contacts per patient with the allied health therapy leader	Patient satisfaction with continuity of care

Note. From *Explorations in Quality Assessment And Monitoring, Vol. 1: The Definition of Quality and Approaches to Its Assessment* (p. 95-99), by A. Donabedian, 1980, Health Administration Press.

Nature of the Study

The aim of the current research was to investigate whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. According to the U.S. Bureau of Labor and Statistics (2020), medical and health service managers have fewer than 5 years of experience. For the purpose of this research, participants had served as allied health therapy leaders in a hospital for at least at least 1 year. Therefore, the study population consisted of allied health therapy leaders from the United States who

had served as allied health therapy leaders in a hospital for more than 1 year. Allied health therapy leader participants comprised a diversified population in regard to gender, race, ethnicity, and other aspects of their backgrounds (Sargeant, 2012). The participants consisted of team leaders, therapy managers, directors, rehabilitation leaders, chief operations officers (COOs), and chief executive officers (CEOs) working on a full-time or part-time basis effecting change in a hospital (Sargeant, 2012).

My role as researcher was to define the research concept and design, which also entailed protecting the rights and welfare of the participants by ensuring anonymity, confidentiality, informed consent, and awareness of the impact that the research could have on the participants (Resnik & Ness, 2012; Sanjari et al., 2014). It was essential for me to submit credible and reliable data that other researchers can duplicate or use for further study. A survey in a quantitative study may be mailed in paper form, emailed electronically, or administered through an internet-based program such as Survey Monkey to a larger sample group (Ponto, 2015). Obtaining the primary data required using a survey questionnaire with a 5-point Likert scale. The responses helped to develop an understanding of the role of allied health therapy leaders and patient satisfaction in hospitals (Cheng & Phillips, 2014). Secondary data were collected through a literature review to examine the relationship between patient satisfaction and the use of allied health therapy leaders (Cheng & Phillips, 2014). A larger sample group helped to increase the accuracy of responses in relation to the hypothesis under study. The characteristics of the participants were clearly defined and represented the population under study to increase validity.

Analysis of the collected data was quantitative and cross-sectional (Sousa et al., 2007). Using a quantitative method allowed for the mathematical examination of the hypotheses through statistical analysis regarding the relationship between allied health therapy leaders and patient satisfaction in hospitals by evaluating the relationship (Wisdom et al., 2011). Further, the results were analyzed using the Donabedian model, which offered a useful framework for evaluating health care quality and examining health care services (McDonald et al., 2007).

Definition of Terms

Allied health care professionals (AHCPs): AHCPs are university qualified practitioners in a wide range of multidisciplinary health care team positions who provide support for different patient needs consisting of occupational therapy, physical therapy, and speech-language therapy and excluding those in the medical and dental profession (Gifford et al., 2018; Paans et al., 2013; U.S. Bureau of Labor Statistics, 2021).

Allied health therapy leaders: Allied health therapy leaders, also known as *health services managers*, have at least a bachelor's degree before entering the field to be able to work at different levels to help to facilitate, coordinate, and guide the activities of allied health therapists and followers to affect patient satisfaction (Babiker et al., 2014; U.S. Bureau of Labor Statistics, 2021).

Healthcare teams: Healthcare teams consist of two or more people working as a collaborative group toward common goals, objectives, or visions who are given a task to accomplish (Babiker et al., 2014).

Hospital: According to Scarborough and Piercey (2012), a hospital is an institution that is built, staffed, and equipped for the diagnosis of disease; for the

treatment, both medical and surgical, of the sick and the injured; and for patient housing during this process. Further, the modern hospital often serves as a center for investigation and teaching.

Patient satisfaction: Patient satisfaction is defined by the U.S. Centers for Medicare and Medicaid Services (CMS) as the patient's perspective of care, which can be objective and meaningful to create a comparison of hospitals and other healthcare organizations (Kruse et al., 2017). It is the extent to which an individual's experience of their perception of ideal care versus real care received matches their expectations in a hospital or health care setting (Al-Abri & Al-Balushi, 2014; Buda et al., 2013).

Team-based healthcare: Team-based health care is the provision of health services to individuals, families, and/or their communities by at least two health providers who work collaboratively with patients and their caregivers to accomplish shared goals within and across settings to achieve coordinated, high-quality care (Babiker et al., 2014).

Assumptions

One of the assumptions underlying this study is that allied health therapy leaders impact patient satisfaction in hospitals. The literature is limited in supporting this assumption, yet it is important to establish the groundwork for the research. The expectation, however, is that by merging the Donabedian model, the assumptions that allied health therapy leaders impact patient satisfaction in hospitals may be proven.

Another assumption is that participants in the study answered all questions in the survey honestly and truthfully. Use of a 5-point Likert scale increased the reliability of the results, as all participants were provided the same questions and answers from which

to choose. Further, validity was increased through the process conducted, which could be repeated under similar conditions by other researchers.

Scope and Delimitations

The aim of the current study was to examine whether a relationship existed between allied health therapy leaders and patient satisfaction in hospitals. Further research could be conducted to examine whether allied health therapy leaders and patient satisfaction exist in other settings. The study also examined the leaders' self-perception of the relationship between allied health therapy leaders and patient satisfaction.

Limitations

There may be limitations in a study that make it challenging to obtain firm conclusions. A limitation of the current study was that I was a novice researcher. It is important for a researcher to understand the full scope of what is required to identify the gap in the literature; justify the reason for a study; construct a working research question; choose between a qualitative, quantitative, or mixed study; select a theoretical framework; run the research; analyze the research; and report the findings. Researchers who lack experience may not generate findings to support a study.

The limited number of research articles and publications on allied health therapy leaders may impact the relevance and justification of the review. Although the survey was conducted using a Likert scale, the study relied on the patients' perceptions of the questions.

Another limitation is the number of participants in the study. Due to the lack of growing allied health therapy leaders in hospitals and limited studies, generalization may be difficult. Recruiting participants was problematic due to the limited number of allied

health therapy leaders in hospitals. Additionally, the distinction between the different positions of allied health therapy leaders and the level they held in a hospital was difficult to discern.

Significance of the Study

The significance of this study lay in the development of a foundation on which to provide evidence to highlight allied health therapy leaders' distinctive contributions to the care processes needed to meet patient satisfaction (Leland et al., 2015). The research filled the gap by focusing on improving patient satisfaction outcomes by allied health therapy leaders in hospitals. The project was unique because it addressed an area in hospital leadership that requires more research regarding how it can provide a positive outcome within patient satisfaction by utilizing the skills of allied health therapy leaders. The study may be beneficial to hospital administrators and healthcare systems, as it may enhance knowledge of the effectiveness of using allied health therapy leaders to increase patient satisfaction, which may lead to improved value-based service delivery (Leland et al., 2015). To future researchers, this study may provide baseline information on the status of allied health therapy leaders in hospitals and the impact that they are making to increase patient satisfaction.

Summary

The literature review revealed that there is no one definition of leadership in existence due to the complexities and multidimensional concepts. Because of this, the concept of leadership continues to evolve. A leader can influence the behavior of others to accomplish a task. Initially, scholars believed that certain individuals were born to be leaders, while others believed that certain people have traits to become leaders. Each

leader possesses specific values, traits, behaviors, and characteristics that they use to encourage others to work individually or as a team to participate in and complete a task. Today, an individual who chooses to take on a leadership role can learn to become a leader. There is a vast number of resources for leaders to choose from to be able to influence an individual to perform a task and accomplish it.

Leaders are also able to choose from a range of management styles to influence followers in engaging in and completing a task. In some leadership styles, leaders make all the decisions and do not allow followers to have any input, while other types of leaders allow followers to make all the decisions. In the third type of leadership style, the leader works in conjunction with followers in the decision-making process, allowing followers to voice their concerns, opinions, and suggestions, which has been proven to increase job satisfaction. Jennings (2008) also noted that multiple styles of leadership might be operationalized simultaneously.

Allied health therapy leaders are at the frontline of efforts to improve the delivery of care in hospitals. It remains critical to have the presence of an allied health therapy leader for growth and development in the health care system. Allied health therapy leaders need to possess certain skills and knowledge regarding the work environment, policies, employee performance, and work activities to be able to monitor and make changes accordingly to improve patient satisfaction. Further, the literature review revealed five core competencies that help to understand the relationship between an allied health therapy leader and patient satisfaction. Today, there is a need for evidence-based practice that allied health therapy leaders can use to implement and participate in research. There is a gap in the current limited scientific literature, however, examining

how allied health therapy leaders in hospitals impact patient satisfaction (Bradd et al., 2017). Through research, allied health therapy leaders can fill in the gap by using proven techniques to impact patient satisfaction to gain better outcomes.

In summary, Chapter 1 included a presentation of the rationale for performing a quantitative study with the use of the Donabedian model to examine whether allied health therapy leaders may impact patient satisfaction in a hospital. Markham (2015) noted that, presently, allied health therapy leaders are in a position to lead the health care system and effect change. There is a gap in the literature, however, as there have been only a few published studies reporting how allied health care leaders impact patient satisfaction (Brand et al., 2012; Gifford et al., 2018). The current quantitative study examined whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. The Donabedian model was most appropriate for exploring the patient's technical management, the management of interpersonal relationships, access to care, and the continuity of care provided by allied health therapy leaders in hospitals to impact patient satisfaction (Donabedian, 1980). In Chapter 2, the literature review is introduced and shows the association with the problem statement and research questions addressing (a) the research related to content; (b) theoretical framework; (c) traits, behaviors, and values of leaders; (d) leadership theories; (e) leadership styles; (f) allied health therapy leaders; (g) barriers to allied health therapy leaders; (h) the need to enhance healthcare and quality of leadership for the patient; and (i) using research to improve patient satisfaction.

Chapter 2: Literature Review

The purpose of this quantitative study was to investigate whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. In conducting the literature review, I aimed to examine existent research findings on allied health therapy leaders, patient satisfaction, and other elements of health care settings that were relevant to the current study. Leadership is a multidimensional and complex concept (Scully, 2015). For this study, the following literature provided an overview of the definition of leadership found in various articles, leadership trends, and the characteristics of leadership practiced by allied health therapy leaders.

A guide was developed using keywords affiliated with the research topic (see Appendix A) to obtain research articles correlated with leadership, health care, and patient satisfaction. The search for relevant literature was limited to articles on allied health therapy leaders in hospitals, and the primary focus was on allied health therapy leaders and patient satisfaction in hospitals. The articles were searched to explore the leadership, quality of care, and patient satisfaction in hospitals. The literature review was also used to assist in answering the research question that guided the current study. The aim was to study and understand what leadership traits, styles, or values of allied health therapy leaders impact patient satisfaction in hospitals.

For the dissertation, the literature review provided for comparison and contrast of issues related to the lack of studies in patient satisfaction impacted by allied health therapy leaders in hospitals. Preliminary searches specific to allied health therapy leaders (i.e., occupational therapists, physical therapists, and speech-language therapists) led to limited results. Allied health therapy leader qualities involved studying the characteristics

of allied health therapy leaders that impact and yield positive outcomes with improved patient satisfaction in a hospital.

The databases used in this research included CINAHL Plus with Full Text, Google, Google Scholar, Kaiser Family Foundation, Ovid EMBASE, Ovid MEDLINE, ProQuest Central, Pub Med, SAGE Journals, and Walden University Library. The search consisted of the following keywords and terminology: *leaders*, *leadership styles*, and combinations of *leadership and quality*, *patient perceptions*, *experiences in hospitals*, *satisfaction*, and *rehabilitation*. The goal was to obtain relevant articles regarding the topic of interest and research questions. A wide-ranging search of several databases from January 1963 to October 2021 was conducted on the issue associated with leadership and patient satisfaction in hospitals. The databases that were used for this literature review comprised a relational database with keywords that are found in Tables 1-3 in the appendices section.

In the proceeding section, details regarding the theoretical framework of the study are provided. Subsequently, leadership as a concept is defined. Prominent leadership theories are then explored, followed by the topic of leadership styles. A discussion of allied health therapy leaders follows which is proceeded by a discussion of barriers to producing allied health therapy leaders. The need to enhance healthcare is then examined, followed by a discussion of the quality of leadership for patients in hospitals. Means of using research to improve patient satisfaction are then discussed. A summary concludes the chapter.

Theoretical Framework

The theoretical framework for this research was the Donabedian model. The Donabedian model is a useful tool used by researchers and policymakers alike to dissect the factors and processes that impact the quality of care for patients in healthcare settings (Donabedian, 1988; Sfantou et al., 2017). As a conceptual model, it can serve as a framework for evaluating health care quality and analyzing health care services (McDonald et al., 2007). According to Donabedian (1988), the model addresses quality of care based on (a) structure, (b) process, and (c) outcomes. Quality assessment is made possible through the assumption that structure (i.e., organizational structure and organizational policies) influences processes (i.e., how care is provided and received), which then influences care outcomes (i.e., health status; Donabedian, 1988).

Numerous researchers have recently used the Donabedian model to assess the quality of patient care across numerous healthcare contexts. Martinez et al. (2018) recently used the Donabedian model as a guide to assess and improve the organization, visibility, and flow of patients and patient metrics at the Johns Hopkins Hospital. Likewise, Nasser et al. (2020) recently analyzed quality measures associated with postmastectomy breast reconstruction. The researchers used the Donabedian model to identify the quality of care metrics that needed improvement. Vizvari et al. (2018) opted for a more targeted approach and solely focused on the structural component of the model within the context of prenatal care provided in health centers located in Iran. These studies highlighted the utility of the Donabedian model as a guide for addressing organizational weaknesses associated with the quality of patient care in healthcare settings. Within the current study, allied health therapy leaders' abilities were the factor

that was examined to address and improve aspects of patient care and patient satisfaction. Through this study, all three elements of the Donabedian model were examined within the specified research context and setting. The structural component addressed facets of the organizational structure at the research site such as policies, size of the organization, organizational values, physical healthcare setting, organization of care, staff, financing, equipment, and qualifications of the care providers (Donabedian, 1966*)*. The process component addressed interactions and activities that take place between allied health therapy leaders and therapists and between allied health therapists and patients. The processes component included the technical aspects of care delivery and interpersonal aspects of interactions. The final component, outcomes, addressed clinical health outcomes and postcare quality of life in addition to subjective patient outcomes such as patient satisfaction. By addressing all three components of the Donabedian model, this study lent new and significant insight into the relationship between allied health therapy leaders and patient satisfaction, the degree of patient satisfaction associated with allied health therapy therapists' delivery of care, and the perceived significance of the relationship between allied health therapy leaders and patient satisfaction.

Review of the Literature

Leadership Defined

Leadership has evolved throughout history and has been explored by many scholars. The literature search conducted by Landis et al. (2014) revealed that great leaders were influential in the development of civilized societies. In Chinese history, under the leadership of Confucius, a moral example was set (Dimovski, 2012). Terradellas et al. (2016) found in their literature search that Plato expressed the idea that

the leader was the most critical person in government as they implemented policies that aligned with a mission, a vision, and values. Aristotle stated that leaders possess the art of inspiring employees to create complex social networks that enable employees to educate themselves and each other (Beck, 2018). Researchers have noted that scholars such as Machiavelli have cited the need for leaders to be firm and steady, uprooting corruption and establishing the rule of law (Cosas & Reina, 2018). One of the most profound concepts in early leadership perspectives originated with the work of Hegel (1930/1971), who, in developing his philosophy of mind, asserted that leaders must first learn how to follow before they can lead.

In the 6th century BC, Sun Tzu wrote *The Art of War*, which is believed to be the first book on leadership, specifically leadership in war (Hudzikovski, 2015). According to Fernandez (2004), it related to time in Chinese history known as the Warring States (475-221 BC). In his writings, Sun Tzu did not contend that all great leaders were born, suggesting instead that great leadership could be developed through personal effort (Fernandez, 2004). The book was written to manage armies and conduct wars through a unity of command and by coordinating different parts of an army (Dimovski et al., 2012; Fernandez, 2004). As has been observed in other leadership theories, Sun Tzu's premise was that great leaders need to have in common with their followers a common purpose and must have a framework in place to prevent internal conflicts, enforce order and discipline, and ensure that leaders serve as role models (Fernandez, 2004). A leader following the philosophy and teachings found in *The Art of War* must be able to bring together individuals from different backgrounds with different points of view, ideas, opinions, and values to work together to achieve a common purpose with favorable

outcomes (Fernandez, 2004). In *The Art of War*, a separation in current beliefs of the times can also be observed, as Lo (2012) pointed out that a leader may win a battle of the highest level through wits, which means that some battles may be won by strategy and not by a forceful attack.

Dimovski et al. (2012) reported that, within the field of business, *The Art of War* has been applied to many areas of management such as strategic management, project management, security management, innovation management, patent management, quality management, change management, human resource management, organizational behavior, marketing, e-commerce, management education, leadership, negotiation, international business, and the newly emerging discipline of systems engineering. Here it is also apparent that the size of the army will determine the organization of establishing layers of control and communication (Dimovski et al., 2012). In the business environment, the size of the organization determines the hierarchy of leadership, the number of leaders within the organization, and the manner of disseminating information for successful goal attainment. As noted earlier, Dimovski et al. noted that Sun Tzu's leadership structure calls for not only cross-cultural relationship building, but also a consideration of external and internal environments, system-level adaptation, and collective identification (Fernandez, 2004). Finally, *The Art of War* demonstrated an application of leadership research and practices as organizations become more complex, dynamic, and global (Dimovski et al., 2012).

Hargett et al. (2017) and Mathews (2016) described leadership as a behavior elicited by an individual when influencing the activity of a group toward a desired shared goal. Hackman and Johnson (2018) reported that leadership is defined as the ability to

influence the attitudes and behaviors of others to achieve a goal or outcome. Yammarino (2013) defined leadership as a multilevel leader-follower interaction process that occurs in a situation where a leader and follower share a purpose and jointly work toward accomplishing the task willingly. The central point of leadership is influencing others to perform an action and possessing the power to encourage compliance to meet an objective. The leader can influence the behavior of accomplishing a common goal to affect an outcome (Mathews, 2016). Another aspect of leadership identified by Khoshhal and Guraya (2016) in their study involves the critical leadership roles that create a vision and solidarity to inspire others to accomplish a task. Harding et al. (2014) further stated that leadership is a desirable and necessary organizational function.

According to research performed by Jennings (2008), leadership is expected regardless of where care is delivered—inpatient units, clinics, settings for ambulatory procedures, long-term care facilities, or the home setting. Leaders are accountable for their actions as well as those of their followers. Leadership requires a structure to manage workflow, accountability, and authority. In leadership, there must be a top-down approach with a narrow top that widens at the lower levels (McKinney & Waite, 2016). Decisions, orders, and direction from a leader will trickle down to the lower ranks for a leader to achieve the mission. According to Maslanka (2004), having a structure in leadership in an organization provides higher quality and more efficient goods and services. Amongst a group, leadership provides unity, personal development, and a higher level of satisfaction among the workers. Yammarino (2013) added a fourth element to the definition of leadership, which is the situation. An allied health therapy leader's ability to motivate and inspire followers' behavior toward accomplishing a task

is based on a situation or occurrence in which the leader and follower will work together to accomplish the task (Yammarino, 2013).

Leadership Traits

Traits are qualities that some people possess and are necessary for a leader to achieve goals and positive outcomes (Heinen, 2019). Traits are made up of behaviors, physical abilities, power relationships, or elements of a given situation, which contribute to a leader's ability to influence others to accomplish a task or achieve a goal (Casimir & Waldman, 2007). Examples of traits are skills, honesty, integrity, inspiration, courage, being forward-looking, and being inspiring, which are repetitive and constant within a person (Marshall, 2020). At times, these traits cast the leader into the leadership role because they can see the pattern and perceive the situation to respond accordingly (Zaccaro et al., 2004). Khoshhal and Guraya (2016) noted that leaders will empower members of the group, share information, and delegate authority instead of making decisions indiscriminately.

Stogdill (1948) conducted 124 trait studies and found that leadership traits varied from situation to situation. Mann (1959) conducted a study with 1,400 findings of personality and leadership groups and found that personality traits can be discerned between leaders and nonleaders. In 1986, Lord et al. reexamined Mann's earlier findings and concluded that traits such as intelligence, masculinity, and dominance were related to how other individuals perceive leadership. Kirkpatrick and Locke (1991) found that there are essential leadership traits that will aid a leader in acquiring the necessary skills to formulate a vision and a practical plan for influencing others in accomplishing a task

(Khoshhal & Guraya, 2016). Zaccaro et al. (2004) revealed that leader traits remain unchanged regardless of the situation or environment.

Leadership Behaviors

Numerous researchers have studied behaviors associated with leadership and how leadership behaviors impact followers. Literature reviews written by Al-Sawai (2013), Stetler et al. (2014), and Sonnino (2016) described different types of leadership behaviors such as vertical leadership behaviors, shared behaviors, strategic leadership behaviors, and functional leadership behaviors. Vertical leadership has to do with a top-down and bureaucratic decision-making process in which leadership is viewed as a hierarchy from leaders to followers to the organization (Park, 2012).

Supervisors and leaders are the principal players whose vision, encouragement, and motivation will promote organizational performance and success. Shared leadership behavior is a bottom-up process wherein leadership is shared with employees, and a team context such as collaboration is used (Al-Sawai, 2013). The collective values in shared leadership are teamwork, cooperation, and sharing of responsibilities. Leadership of this form involves providing day-to-day guidance, advice, and direction in projects (Al-Sawai, 2013).

Strategic behaviors deal with the processes of planning-organizing-aligning, which demonstrate systems-oriented thinking (Stetler et al., 2014). Stetler et al. (2014) noted that a strategic plan consists of goal-focused, multifaceted, considered actions addressed over time, and addressed organizational factors affecting both project-level success and changes in the organizational context for ongoing evidence-based practice. According to Stetler et al., functional leadership behaviors are practical behaviors that are

essential to routine operationalization of the strategic plan. The behaviors make the vision of evidence-based practice the norm, which requires both to manage and maintain subordinates' focus on evidence-based practice and to maintain a related evidence-based-practice-supportive environment.

The literature review performed by Sonnino (2016) disclosed two leadership behaviors that allied health leaders should possess if they are to affect patient satisfaction in hospitals, which are task behaviors and relationship behaviors. Task behaviors allow allied health leaders to accomplish their goals and empower them to guide others in achieving their objectives (Sonnino, 2016). Relationship behaviors involve allied health leaders and followers feeling comfortable and interacting with each other to accomplish their goals collaboratively (Sonnino, 2016). Based on the situation, an allied health therapy leader may decide to be task-oriented or relationship-oriented to be able to impact patient satisfaction in hospitals.

Leadership Values

Leaders hold their own values and are tasked, in many instances, with promoting values that contribute to organizational success (Zydziunaite, 2018). Values are ideals and motivations that are specific for every person and company (Jimenez et al., 2017). Values help to screen information that leaders need to make crucial decisions for the organization and their followers (Carter & Greer, 2013). Core values found in a leader include respect, integrity, quality, commitment, and accountability (Marshall, 2020). Respect entails behaving in a manner that honors oneself and others and accepting others for who they are (Taylor & Keighron, 2004). Integrity involves being honest and truthful, no matter the consequences (Taylor & Keighron, 2004). There comes a time when

leaders need to evaluate the skills and proficiency of their followers, and it is the leader's responsibility to offer constructive criticism that will help the follower grow to offer patient satisfaction. Quality is taking pride in one's work and offering service excellence by meeting the patient's expectations (Taylor & Keighron, 2004). Being able to offer quality services means always looking for ways to improve performance, promote desired health outcomes, and deliver healthcare that is safe, timely, efficient, effective, and equitable (Taylor & Keighron, 2004). Commitment deals with a leader's responsibility to their work and personal development toward the organization, mission, and vision, as well as implanting that behavior in followers (Taylor & Keighron, 2004). A leader must be committed to making sure that followers learn and grow and meet the needs of the hospital and assure patient satisfaction. Accountability is the ability of the leader to follow through with the goal, and regardless of the outcome, hold themselves accountable to their performance and outcome.

For an allied health therapy leader to be successful and able to ensure patient satisfaction in a hospital, the leader needs to share the organizational values and ensure that followers understand them to be able to work in conjunction with the organization. Also, a leader should act as a role model by following the organizational values so that they may improve the follower's awareness of the similarities between the person and the organization (Hoffman et al., 2011). Doing so will assure that the followers are pursuing the vision and mission of the organization, which will allow them to meet patient satisfaction.

Leadership Theories

Scholars have expressed that past, present, and future leadership theories are created to try and explain the intricacies in leadership, why some people make better leaders than others, and how people can work towards attaining a leadership position. Theories tend to focus on individuals' skills, beliefs, values, and characteristics (Al-Sawai, 2013). Moreover, the different situations that leaders encounter are also explored because they bring out the attributes in a leader that will be needed for them to be able to accomplish a goal or task (Hargett et al., 2017). In the following sections, some trends in leadership theories that have been used throughout history are described.

Great Man Theory

In the early 1900s, the great man theory became immensely popular. Great men were depicted as "great" leaders who were heroic, fearless, mythical, and destined to rise to a leadership position when necessary (Hall, 2013; Malos, 2012). According to Spector (2016), Thomas Carlyle is credited to having a significant influence on the great man theory as he stated that "effective leaders are those who are gifted with divine inspiration and the right characteristics to lead." The premise was that all great leaders possess natural leadership qualities, skills, traits, and values that sanction them for a top position in leadership (Borgatta et al., 1963). Even today, people often note that influential or famous leaders do possess the right qualities or traits to hold a leadership position. They are often told that they hold the innate qualities and skills within them to lead and be effective in their position.

During this era, leadership positions were male-dominated and originated from military leadership, where the theory was developed methodically by analyzing the

behaviors of military figures. It was believed that leaders were not made but were born with inherited qualities, especially in the upper class (Malos, 2011). The leaders included rulers who achieved leadership positions through birthright. Men who were said to be born with these leadership qualities and held authoritative positions would pass their leadership positions from father to son. Those men of lesser social status had limited opportunities to practice leadership roles which, in turn, lead to the idea that leadership is an inherent ability (Hall, 2013). Moreover, when the opportunity to lead presented itself, women were not given a chance because it was a male-dominated period (Hall, 2013).

Trait Theory

In the 1940s and 1950s, the trait theory was introduced, which explicitly looked at the traits of leaders. Unlike the great man theory, Malos (2011) did not believe that leaders inherited the traits, but that those leader traits are different from nonleaders. Colbert et al. (2012) noted that personality traits influence leader emergence and effectiveness. These traits encompass intelligence, values, and appearance, which are said to be stable over time, consistent throughout certain situations or circumstances, may differ in individuals, and influence behaviors in their followers (Gehring, 2007; Lievens et al., 2018). Lievens (2017) noted that traits and behaviors vary between individuals, but at the same time observed that the person is changeable within different circumstances and situations. Marshall (2020) noted that the importance of identifying these traits impacts the effectiveness of improving productivity, increasing satisfaction within the group of patients, and being promoted to higher positions within the company.

Benoliel and Somech (2014) discussed the “Big Five Personality Traits,” which encompass what many scholars believe to be the five core personality traits that are

associated with many work-related behaviors and outcomes which influence resource availability, rendering it practical and useful. These traits are openness, conscientiousness, extraversion, agreeableness, and neuroticism (Malos, 2011). A person who possesses the openness trait is one with imagination and insight who tends to be more adventurous and creative as well as eager to learn and experience new things. A conscientiousness individual possesses thoughtfulness and is goal-directed, organized, and focuses their actions. The leader will put a plan together and observe what role they play and how it will affect others before acting. The personality behaviors associated with extraversion are active, outgoing, and tends to be highly energized when around others (Li & Xu, 2020). Agreeableness deals with trust, kindness, affection, and cooperation (Curseu et al., 2019). Neuroticism personality behaviors are emotional, moody, and depressed, which is seen in people with mood swings, anxiety, and irritability (Hao et al., 2019).

Contingency Theories and Situational Leadership

In the 1960s and 1970s, "contingency theories" emerged. The theory focuses on the styles and situations that will match up the leader to the situation. Leader success is reliant on many possibilities related to the task, followers, and group variables. Waters (2013) noted that the contingency theory explains that as environmental factors and situations change, so should the leadership approach of the leader. As trends change, the leader needs to make changes to fit the need if they are to continue to prosper and yield positive outcomes.

The situational theory is a form of contingency theory. The situational theory was developed in 1979 by Paul Hershey and Ken Blanchard, who believed that each situation

necessitates a response from a leader but that the response should be based on the preparedness and capabilities of the followers to accomplish the task (Wright, 2017). Bosse et al. (2017) also noted that the situational theory focuses on the behaviors that leaders and followers show based on the situational context. In contrast to the great man theory, which posits that leaders are believed to be born with leadership traits, leaders can acquire the traits, behaviors, and skills according to the situational theory. Bedford and Gehlert (2013) noted that situational leadership is a prevalent theory for for-profit and nonprofit organizations due to its flexibility as it is based on three factors: the amount of direction that is given by the leaders, the amount of support that the leader provides, and the level of competence of the followers (Bedford & Gehlert, 2013).

Another aspect of the situational theory is the four primary leadership styles that can be used in a variety of ways which are applicable based on the level of competence of the follower. These are telling (S1) is high-directive and low-supportive, selling (S2) is high directive and high supportive, participating (S3) is low directive and high supportive, and Delegating (S4) is low directive and low supportive (Zigarmi & Roberts, 2017). Regarding S1, the leader directs the follower on what to do and how to do it (Strek, 2018). The S1 type of leadership style is most appropriate at the beginning of a project or for a new employee (Salehzadeh et al., 2015). S2 entails the leader trying to "sell" their idea to the followers in hopes that they buy into the process and work on the job or mission (Salehzadeh et al., 2015). A leader and follower will share a mutual relationship in S2 in which the leader coaches the follower and offers feedback and can monitor the activities of the follower (Strek, 2018). In S3, the leader provides the followers with less direction while allowing group members to come up with their ideas

and make their own choices (Salehzadeh et al., 2015). The role of the leader is to be cooperative and not offer instructions. The leader needs to reassure the followers that they are right for the task at hand and do not need the leader's approval (Strek, 2017). S4 requires followers to take on more responsibilities and decision-making, while the leader uses a hands-off approach (Salehzadeh et al., 2015). At this point, the follower is acting on their behalf, making decisions, and acting on them (Strek, 2017). The leader will delegate the task, and the follower(s) will plan, implement, and modify the task based on the results. Although these primary leadership styles seem straightforward, a leader must determine which leadership style each follower or group requires to accomplish the task and generate positive outcomes. Also, there are times when a leader may start with one style of leadership, and as the follower progresses or digresses, the leader needs to be able to step in and render assistance if needed.

Transformational Theory

James McGregor Burns introduced transformational theory in 1978, from the concept of transforming political leaders to inspire and motivate followers (Giddens, 2018). Burns stated that in order to develop effective leadership, leaders need to focus on their followers' needs so that followers will be motivated to align their values with those of the organization (Parolini et al., 2009; Poghosyan & Bernhardt, 2018). Brewer et al. (2016) delineated transformational theory as a form of leadership which is intended to motivate and inspire their followers to pursue higher-order goals through the "transformation" of a followers' attitudes, beliefs, values, and behaviors (Giddens, 2018). Schaubroeck et al. (2016) supported this definition and stated that those leaders would inspire followers to surpass their expectations of themselves in ways that made

them accomplish challenging objectives. Weiß (2015) stated that the core idea is that a leader who leads in a visionary, inspiring, creative, mindful, and "morally uplifting" way can motivate and stimulate employees to go beyond their self-interest for the good of the group and achieve more than they ever thought was possible. Parolini et al. (2016) pointed out that by aligning the interests of the follower with those of the group, followers will be persuaded towards interdependence with the mission of the leader and the organization.

A transformational leader is attentive to the needs of the follower in order to help them achieve their full potential which, at times, exceeds their expectations (Weiß, 2015). A transformation leader serves the followers as a coach, role model, and charismatic leader to build confidence, trust, admiration, respect, and optimism in followers in hopes of changing the behaviors of followers into doing better and becoming more accomplished in their future endeavors (Giddens, 2018). The transformational leader will listen to their needs, help them try their approach, problem-solve, and show them how pleased they are when they accomplish their goal or task (Weiß, 2015). In the workplace, transformational leaders look to inspire co-workers to follow customer service behaviors to improve quality service that may lead to improved quality outcomes for the patient as well as the facility (Schaubroeck et al., 2016).

Transactional Theory

In the 1980s and 1990s, researchers including Bernard M. Bass, Jane Howell, and Bruce Avolio defined the dimensions of transactional leadership. Bass (2005) explicated that the transactional theory focuses on the role of supervision, organization, and group performance. Within this theory, the leader encourages follower compliance through a

series of rewards and punishments based on their work (Bass, 2005). The leader seeks to maximize their influence on the follower's commitment to a project (Lamm et al., 2016). Jensen et al. (2019) noted that the transactional theory refers to behaviors such as rewarding employees for high effort and excellent performance or sanctioning and punishing them for unsatisfactory work (Smith, 2015).

The transactional theory is based on the here-and-now and not on what the future holds for the organization; thus, a leader is concerned with the day-to-day tasks. The role of the leader is to actively monitor the followers' actions to ensure that the projects are realized and issue corrective actions if needed (Tysen et al., 2014). Lamm et al. (2016) also noted that the theory is rooted in rewards and punishments that are distributed through positions of authority.

Tysen et al. (2014) stated that the focus of transactional leadership is based on the task-related exchange of actions and rewards between followers and leaders which, at times, necessitates the hierarchy of authority to be presented. Furthermore, the transactional theory influences followers through compliance and is dependent on behavior, which is why leaders motivate followers to perform highly and punish them when they fail to perform as expected (Lamm et al., 2016). In an organization, the primary objective of the transactional theory is to achieve both high efficiency in the use of resources and high consistency in the organizational operations, products, and services (Tysen et al., 2014).

Process Leadership Theory (Servant Theory)

Greenleaf introduced servant leadership theory in the 1970s, but the theory resurfaced in the 1990s. For Greenleaf, "the servant-leader is servant first," and is a

person who takes care “to make sure that other people’s highest priority needs are being served” (DeRue & Ashford, 2010). Irving and Berndt (2017) defined the servant theory as an evolution toward an approach that is oriented to creating development opportunities for employees, highlighting the ideal service in the leader-follower relationship, and emphasizing the importance of communication. The theory represents a significant move from the leader to the follower as the followers become the primary agents by which the organizational goals are met (Irving & Berndt, 2017). The move from a leader-center model to a follower-conscious model places the focus on the needs and development of followers and the achievement of the organizational objectives (Barbuto et al., 2014; Irving & Berndt, 2017). Barbuto et al. (2014) expressed the importance of a leader’s profoundly rooted yearning to serve subordinates and others and foster a sense of trust and fairness in the work setting (Otero-Neira et al., 2016). Great importance is placed on appreciating the valuing of people, listening, and mentoring followers (Otero-Neira et al., 2016). Barbuto et al. (2014) also pointed out an essential component of servant leadership, which is the ability to be aware of the current environment and anticipate what is going to happen within and outside of the environment. Servant theory and transformation theory share some resemblance in which both emphasize the orientation of people and the importance of valuing, listening, and empowering followers (Otero-Neira et al., 2016).

A precursor to the development of the servant theory was emotional intelligence. Emotional intelligence is the ability of the leader to monitor their own beliefs, views, and internal state as well as those of their followers and to use that information to guide their thinking and actions (Specchia, 2021). Moreover, Barbuto et

al. (2014) mentioned five dimensions of servant leadership: altruistic, emotional healing, wisdom, persuasive mapping, and organizational stewardship. Altruism is a desire to make a positive difference in followers, and emotional healing deals with the leader's obligation to nurture spiritual recovery as needed when the followers suffer from hardship or trauma (Barbuto et al., 2014). Wisdom is the leader's awareness of the environment and their ability to anticipate consequences, which will allow them to be more proficient in cues present in the environment and to understand their inference (Barbuto et al., 2014). Concerning persuasive mapping, the leader uses the ability of sound reasoning to act, whereas organizational stewardship is the leader's need for the organization to make a positive contribution to society through sound business practices (Barbuto et al., 2014). The association of servant leadership to the commitment of the growth, awareness, stewardship, persuasion, and foresight of the follower are vital to this theory (Irving & Berdt, 2017).

Leadership Styles

Joshi (2019) stated that hospitals are struggling to find leadership styles that are beneficial and suitable to handle the demands and challenges being placed on them. Walters (2012) described leadership styles as being task-motivated or relationship-driven. Those leaders who are focused on reaching a goal are task-motived, whereas those leaders who are interested in establishing relationships with individuals or organizations are relationship-driven (Walters, 2012). A hands-on leadership style refers to working on developing new plans and approaches at the top and then spending time on daily application throughout the company (Meyer et al., 2018). Another form of leadership style is the functional result-oriented style, which implies that a leader relies

on traits attributable to a team, which helps them to achieve their team goal (Al-Touby, 2012). Because there is an assortment of leadership styles, Joshi implied that there is a possibility of adopting a combination of multiple leadership styles to strengthen the overall output and meeting patient satisfaction. In the following sections, some examples of the most popular leadership styles are presented.

Democratic Leadership

Klinker (2006) noted that democracy is based on the principle that no one in the group is above other members. Therefore, democratic leaders will allow other members of the group to take a stronger participative role and encourage members to share their thoughts, ideas, and decision-making process (Choi, 2007; Starrat, 2001). As a democratic leader, one is expected to be a good listener, knowledgeable, influential, stimulating, encouraging, guiding, respectful, and situation centered. Leaders must allow members to offer their suggestions, help to develop the plan, and choose the best course of action to advance the project. Starrat (2001) added that democratic leadership is focused on providing a progressive setting that supports openness, flexibility, compassion, participating, and sharing of ideas. By allowing members to be more active, researchers have noted increased commitment and morale from the group members, which has led to higher productivity (Choi, 2007).

Delegative Leadership

Faraci et al. (2013) stated that a delegative leader meets with team members to provide them with essential information, expectations, and objectives to accomplish a task. Leaders will follow the group's decision-making process and not intervene unless they are asked for assistance from the team (Taplay et al., 2014). Taplay et al. (2014)

reported that delegative leaders assign tasks, instruct followers, and give them the freedom to develop their approach and goals. Team members who are given autonomy take the initiative to put together a plan and commit to its success (Oshagbemi, 2008).

The delegation of tasks allows team members to develop their skills and expertise in hopes of becoming leaders (Zhang, 2019). Zhang et al. (2019) stated that employees who are given more freedom to work independently experience positive outcomes, such as increased job satisfaction, improved commitment, and higher task performance.

Bureaucratic Leadership

A bureaucratic leader works under a hierarchy of authority and applies a system of rules and protocols in the decision-making process and management of the team (Nass, 1986). Spangler et al. (2014) noted that bureaucratic leadership includes the same principles of rules, regulations, hierarchy of authority, and limited individual options. The members of the team follow the instructions and decisions of the leader based on the leadership position that they hold (Nass, 1986).

The bureaucratic leader is more effective in an organization that thrives on behavioral rules and technical rules as they prefer rules, laws, and regulations which are highly structured and goal-oriented (Yeo, 2006). The leaders in these types of organizations have milestones to accomplish, and team members must follow every step without taking any shortcuts or detours (Yeo, 2006). Moreover, bureaucratic leaders have horizontal relationships with peers in other organizations, which is why they require inhibited associations (Spangler et al., 2014). The ability to work in a structured set of rules and regulations permits for growth and learning.

Autocratic Leadership

Rast et al. (2013) defined an autocratic leader as a firm director who makes all critical decisions that are primarily concerned with task accomplishment but keeps a social distance from followers and motivates employees through punishment or threats. Akor (2018) explained that an autocratic leader is driven by a decided performance for centralized decision-making power in the leader and unwillingness to share position, power, and authority with others. An autocratic leader is known for being arbitrary, controlling, power-oriented, intimidating, corrective, and close-minded (Lopez & Ensari, 2014; Rast et al., 2013). They are also regulative, manipulative, decision and production-centered, goal-oriented, distant, and formal (Lopez & Ensari, 2014; Rast et al., 2013).

Harms et al. (2018) noted that when it comes to the other members of the group, an autocratic leader is a central authority who structures the work for their employees. The autocratic leader takes responsibility for decisions and will take responsibility for their followers' performance (Harms et al., 2018). Akor (2018) reported that autocratic leaders determine group policy, give step-by-step directions, and dictate tasks without consideration of their followers. Tidikis (2105) stated that an autocratic leader is controlling, nonfriendly, and suppresses participation and discouraging members of the group.

Charismatic Leadership

Lopez and Ensari (2014) postulated that charismatic leaders have behavioral characteristics such as being environmentally sensitive while having an idealized vision. Charismatic leaders articulate when communicating with others, are trustworthy, and are

likable with well-developed expertise (LePine et al., 2015). Brown and Treviño (2009) stated that charismatic leaders are effective value-based leaders who infuse work with values that give it meaning.

Charismatic leaders are good communicators who have the potential to build a group of followers due to the hopeful and inspiring nature of their messages and goals (Griffith, 2015). A charismatic leader will impact members of the group by making the followers' value depends on the collective vision and mission that they share with the group who pursues collective goals and interests (Lopez & Ensari, 2014; Vergauwe et al., 2018). LePine et al. (2015) noted that a charismatic leader provides motivational resources that help followers cope with challenging demands that are placed by the task at hand to achieve the desired outcomes. Vergauwe et al. (2018) expressed that charismatic leaders may inspire followers toward higher levels of performance and instill deep levels of commitment, trust, and satisfaction.

Allied Health Therapy Leaders

There are approximately 200 specialty areas that are made up of allied health professionals (Miller & Kontos, 2012). Grimmer et al. (2014) revealed that allied health is an umbrella term used to describe a wide range of health disciplines and ancillary services that provide therapy, organization, and scientific services. The Association of Schools of Allied Health Professions (2018) described allied health professionals as concerned with the identification, diagnostic evaluation, treatment of acute and chronic diseases and disorders, and leader for the overall care of a patient. Allied health professionals provide nutrition services, rehabilitation services, and the management and operation of health systems (allied health services, 1989).

Regarding allied health leaders, the literature review published by McClain and McClain (2007) reported that allied health leaders include professionals who are graduates from at least a 4- year preparation program who require state licensure in an allied health field such as dietetics, occupational therapy, physical therapy, radiology, respiratory therapy, and speech-language pathology and audiology (Grimmer et al., 2014). The focus of this dissertation was placed on allied health therapy leaders in occupational therapy, physical therapy, and speech-language pathology who gravitate towards leadership positions. It has been noted that the characteristics of allied health therapy leaders is most commonly characterized in regard to extending in scope, engaging in relationship exchange, co-produced, collective, vision-driven, value-driven, skill-driven, and situation (Daly et al., 2014). In their literature review, Sonnino et al. (2016) found that leadership has moved from a top-down, paternalistic model that has to do with the leader being in control to a collaborative approach in which the leader shares a vision and allows the team to achieve the goals.

Moreover, Mannix et al. (2013) determined that clinical leaders reflect positive attitudes toward their profession, are willing to challenge the status quo, take on quality issues, and ensure patient satisfaction. Allied health leaders can envision management as a collaborative, multifaceted, and dynamic process to promote positive outcomes in patient satisfaction (Sfantou et al., 2017). Zilembo and Monterosso (2008) also pointed out that leaders' typical attributes are geared towards being supportive, approaching, motivating, and being an effective communicator. These are important attributes to affect a positive outcome with the goals and vision of the organization. Services delivered by allied health leaders are done through the application of scientific principles and

evidence-based practices to optimize functional capacity and quality of life throughout the lifespan (Grimmer et al., 2014).

According to the Institute of Medicine (IOM), the relationship between quality care and patient safety is essential to meeting goals and attaining patient satisfaction, but there is a need for further studies to examine the relationship between leadership and patient satisfaction (Jennings, 2008). With regard to the degree of patient satisfaction with allied health therapists' delivery of care, Ndambuki (2013) noted that a high degree of professionalism and skill in the care of patients allows for the attainment of the highest quality of patient care. An allied health leader must ensure that the needs and expectations of the patient are being met, as that is their perception of patient satisfaction (Ndambuki, 2013).

Barriers to Allied Health Therapy Leaders' Leadership Development

The literature review by Ellis-Jacobs (2011) revealed that allied health leaders play a key role in improving patient satisfaction and improving the quality of life which allows the allied health department to generate 75-80% of hospital revenue. However, there are barriers to producing allied health therapy leaders that limit the success of allied health therapy leaders in increasing patient satisfaction in hospitals. Some of the barriers include poor preparation of leadership roles, inadequate resourcing of development programs, lack of vision and commitment at higher levels of leadership, poor interdisciplinary relationships, role conflict, resistance to change, poor teamwork, and limited outcomes measures in current allied health therapy leaders and leadership programs (Daly et al., 2014).

The hierarchy levels have impacted allied health therapy leaders. At times, allied health therapy leaders experience what Gerard et al. (2011) called "positional marginalization," in which they feel unprepared, isolated in their role as leaders, and excluded from key decision-making. When an allied health therapy leader makes a decision or a change, they must be supported by the administration so that followers will work as a team and follow-through. Allied health therapy leaders also experience inadequate representation, lack of commitment or support from supervisors, voicing their opinions or suggestions, and lack of credibility at the decision-making table (Gerard et al., 2011; Peltzer et al., 2015). It is important for allied health therapy leaders to be viewed as authority figures who can make the necessary changes to make a difference in the delivery of care to impact patient satisfaction in hospitals.

Another barrier is the lack of reports and data analysis which show the relationship between allied health therapy leaders in hospitals and patient satisfaction. Allied health leaders and professionals are expected to show how they have benefited patients, but many departments do not report routine outcome measurements in practices (Duncan & Murray, 2012). Ang et al. (2016) also discovered through their research that no instruments exist to assess leadership competency in current and emerging allied health professional leaders.

The Need to Enhance Healthcare

Researchers have concluded that there is a need to enhance the role of allied health therapy leaders to deliver high-quality healthcare to manage the complexities of the healthcare system and keep up with the changes encountered in healthcare (Daly et al., 2014). Goodman and Leyden (1991) noted that allied health leaders' familiarity with

the workplace configuration, employee performance, and work activities impacts their delivery of care. Therefore, allied health leaders need to be present for them to be up to date with problems taking place, which will allow them to inspect and intervene with systematic solutions or recommendations (Page, 2004). In turn, workers may feel more secure in reporting both errors and problems to enhance and improve system performance in healthcare resulting in improved patient satisfaction (Page, 2004). When Allied health leaders serve as role models and listen to their followers by acting, it improves employee satisfaction and improves the delivery of care. Bradd et al. (2018) reported that enhanced employee performance and productivity has led to research on leadership styles and outcomes of leadership in the healthcare system, but more must be done to recognize the self-perception of leadership between allied health therapy leaders and patient satisfaction.

Quality of Leadership for Patients

The Institute of Medicine (2001) defined the quality of care as the degree of possibility of achieving the projected health outcomes with patient care delivery, which is a crucial component for attaining high productivity levels with healthcare organizations. To strengthen quality in the delivery of care and to achieve patient satisfaction, effective leadership qualities of allied health therapy leaders among healthcare professionals is required (Sfantou et al., 2017). According to McKinley (2016), obtaining favorable outcomes of health care quality also depends on variables such as the complexities of leadership styles and approaches, which are driven by the contribution of supervisors, caregivers, patients, and family members. Further, evidence-based practice is essential for developing effective healthcare organizations of high productivity and quality of care

(Sfantou et al., 2017). The results of the literature review conducted by Sfantou et al. (2017) also revealed different leadership styles that lead to improved quality care as they can act as managers making changes with employees, leaders making the decisions for their followers without their input, or leaders who do not make decisions and allow their followers to make their own decisions. Based on the need or the situation, an allied health leader chooses how to lead to impact quality of care. Babiker et al. (2014) also noted that effective leadership is a key characteristic in offering quality care services to patients and improving patient satisfaction through teamwork. Leggat (2007) stated that, although many studies have identified teamwork as a requirement for high-quality care within health care, there is a limited understanding of how allied health professionals and leaders contribute to effective teamwork.

Competent Leadership and Patient Satisfaction

The literature has supported that "skilled" allied health therapy leaders can improve patient satisfaction in hospitals. Sonnino's (2016) literature research revealed that, although some allied health professionals are born leaders with good instincts, some formal training for allied health therapy leaders is needed in areas such as rules, laws, governance, or personal competencies that are not characteristic in all so that they can affect patient satisfaction. Moreover, researchers have stated that competent allied health leaders have been characterized as possessing advocacy skills and the ability to affect change in the delivery of care in hospitals (Daly et al., 2014).

Greiner et al. (2004) identified in their literature research the five core competencies that help to understand the relationship between allied health therapy leaders in hospitals and patient satisfaction, which are patient-centered care, work in

interdisciplinary teams, employment of evidence-based practice, application of quality improvement, and utilization of informatics. Patient-centered care entails being respectful, caring, identifying their needs, and sharing decision-making (Greiner et al., 2004). Working in interdisciplinary teams allows for continuous and reliable care for the patient (Greiner et al., 2004). Evidence-based practice refers to integrating best research with clinical expertise and patient values in the delivery of care to reach ideal outcomes (Greiner et al., 2004). The application of quality improvements relates to identifying errors early on, continually understanding, and measuring quality of care in terms of structure process and outcomes in relation to the needs of the patient (Greiner et al., 2004). The utilization of informatics relies on information technology to communicate, lessen errors, and support decision-making for improving patient satisfaction (Greiner et al., 2004).

Using Research to Improve Patient Satisfaction

The research conducted by Bradd et al. (2018) showed that fundamental leadership characteristics from allied health therapy leaders are required at all levels to improve the delivery of healthcare services, enhance clinical teamwork, and advance safety to improve patient satisfaction. There are many benefits to having allied health therapists and leaders participate in research. To do so, data must be collected and analyzed so that researchers may observe what is working for health care leaders and what changes need to be made to provide effective, efficient, quality care to patients in hospitals to improve patient satisfaction outcomes. It has been reported that the use of research evidence in the care of patients in hospitals has progressed healthcare delivery from patient care that was unproven to care which is based on rigorous research evidence

with improved outcomes, which has led to better patient satisfaction (Gifford at el., 2018).

When considering the different areas which may be impacted by an allied health therapy leader, the literature review revealed that allied health therapy leaders can improve patient satisfaction in hospitals by evaluating patient satisfaction and subsequently making changes based on the evaluation results. Beattie et al. (2015) revealed that even though there is a combination of tools required to obtain the complexity of hospital care, surveys remain the core method for measuring patient satisfaction. The use of surveys helps to obtain a large amount of standardized data (Beattie et al., 2015). Mazurenko et al. (2017) conducted a study and described how surveys are essential if the patient perspective is to be equally represented alongside other aspects to quantify.

At the clinical level, the move is towards evidence-based practice to improve the quality of care being given to patients and patient outcomes (Wenke et al., 2017). At the organizational or team level, Wenke et al. (2017) reported that allied health professionals and leadership participation in research might result in positive impacts in healthcare performance with improved developments in the infrastructure and process of patient care in hospitals. At the societal level, continued research in clinical practice can help allied health leaders take research findings and observe how they positively impact society and lead to increased patient satisfaction (Wenke et al., 2017). By having allied health therapy leaders at the forefront, they can oversee the advances of quality care services to improve patient satisfaction in hospitals.

Summary

The literature review conducted revealed that there is no one definition of leadership in existence due to the complexities and multidimensional concepts. The concept of leadership continues to evolve over the years. A leader can influence the behavior of others to accomplish a task. Initially, scholars believed that certain individuals were born to be leaders, while others believed that certain people have traits to become leaders. Each possesses certain values, traits, behaviors, and characteristics which a leader uses to encourage others to work individually or as a team to participate and complete a task. Today, an individual who chooses to take on a leadership role can learn to become a leader. There are a vast majority of leadership resources to choose from to be able to influence an individual to perform and accomplish a task.

Leaders are also able to choose from a variety of leadership styles to influence followers in engaging and completing a task. Some of the leadership styles make all the decisions and do not allow followers to have any input, while other leadership styles allow followers to make all the decisions. The third type of leadership style works in conjunction with followers in the decision-making process, allowing followers to voice their concerns, opinions, and suggestions, which has been proven to increase job satisfaction. Jennings (2008) also noted that multiple styles of leadership might be operationalized simultaneously.

Allied health therapy leaders are at the frontline for improving the delivery of care in hospitals. It remains critical to have the presence of an allied health therapy leader for growth and development in the health care system. Allied health therapy leaders need to possess certain skills and knowledge regarding the work environment, policies, employee

performance, and work activities to be able to monitor and make changes accordingly to improve patient satisfaction. Also, the literature review revealed five core competencies that help to understand the relationship between an allied health therapy leader and patient satisfaction. Today, there is also a need for evidence-based practice that allied health therapy leaders need to implement and for them to participate in research. Markham (2015) noted that, presently, allied health therapy leaders are in a position to lead the health care system and affect change. There is a gap in the literature, however, as there are only a few published studies reporting how allied health care leaders impact patient satisfaction (Brand et al., 2012; Gifford et al., 2018). The current quantitative study examined whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction.

Conclusion

The leadership qualities of allied health therapy leaders are a function of the allied health therapy leader's ability to influence and motivate followers and to ensure that health care delivery is effectively provided to impact patient satisfaction to a higher degree. The literature search on the leadership traits of allied health therapy leaders, however, yielded a limited number of articles identifying whether there is a relationship between allied health therapy leaders and patient satisfaction. Daly et al. (2014) also reported limited outcomes measures in the current leadership skills of allied health therapy leaders. Therefore, it is challenging to see to what degree allied health therapy leaders are delivering care in hospitals to be able to impact patient satisfaction in hospitals.

In today's ever-changing and complex healthcare system, allied health therapy leaders who have the skills and knowledge to meet the needs of patients in hospitals are essential. However, there are barriers to developing leadership skills for allied health therapy leaders that limit their success of increasing patient satisfaction in hospitals. Sonnino (2016) found that many allied health leaders have suggested that formal training in the multifaceted components of leadership is necessary and should begin at an early career stage, yet, even today, the number of comprehensive leadership training opportunities at any career level is limited. Due to the limited amount of allied health therapy leader development programs, leaders have restricted awareness of their leadership abilities and ability to meet patient satisfaction.

The gap in the literature revealed that more studies are necessary to clarify how allied health care therapy leaders impact patient satisfaction. The goal of this research was to gain a better understanding of the relationship that exists between allied health therapy leaders in hospitals and patient satisfaction and how allied health therapy leaders in hospitals impact patient satisfaction. The Donabedian Framework was used in the study, as it allows researchers to conceptualize the underlying parts or processes that may contribute to the quality of care for patients receiving healthcare (Donabedian, 1988). In Chapter 3, methodology is presented and the research questions, research design and rationale, population and sampling procedures, procedures for recruitment, participation, and data collection, instrumentation, quantitative analysis, the role of the researcher, trustworthiness covering reliability, internal validity, external validity, and ethical concerns are discussed.

Chapter 3: Method

Introduction

The aim of Chapter 3 is to introduce the research methodology for this quantitative study. It was necessary to use the Donabedian model to study whether a relationship exists between allied health therapy leaders in hospitals and patient satisfaction. The approach allowed for a more profound awareness concerning whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. In this chapter, the applicability of performing quantitative research with the Donabedian approach as well as the research plan, methodology, validated tool, Likert scale, researcher, study participants, procedures, data analysis, coding, and trustworthiness are discussed.

One of the roles of a researcher is finding the most suitable process for a study. The best method of research for the current study was a quantitative method. Using the collection of quantitative data and comparative study design allowed for the examination of the variables chosen for the dissertation (Abdelhafiz & Alloubani, 2015). The Donabedian model, a framework evaluating health care quality and examining health care services, was used (John et al., 2015).

The focus of this quantitative study was investigating whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. The study aimed to answer the following question:

RQ1: Is there a relationship between allied health therapy leaders in hospitals and patient satisfaction?

H_o1: There is no statistically significant relationship between allied health therapy leaders in hospitals and patient satisfaction.

H_A1: There is a statistically significant relationship between allied health therapy leaders in hospitals and patient satisfaction.

Research Design and Rationale

The research design that was used for this study was the cross-sectional design. Cross-sectional studies are a form of descriptive research that is completed when the aim is to describe or understand phenomena, populations, or relationships; cross-sectional research cannot be used to prove causation (Levin, 2006). Further, Levin (2006) noted that a cross-sectional design can be used "to find the prevalence of the outcome of interest, for the population or subgroups within the population at a given time point" (p. 24). Cross-sectional research produces a "snapshot" of the central phenomenon or research population at the time of the study, as cross-sectional studies are not longitudinal. During the current study, a cross-sectional design was used to develop a description and understanding of relationships between allied health therapy leaders in hospitals and patients, and associations between allied health therapy leaders and patient satisfaction. Survey data served as the basis for cross-sectional analysis.

Methodology

Quantitative Methodology

Because the purpose of this study was to examine whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction, a quantitative approach was the most appropriate choice for the study, as it allowed me to understand the relationship between these variables (Creswell, 2003). Quantitative methods are

appropriate when the goal of a study is to determine the degree or extent to which a phenomenon exists or to numerically describe a phenomenon's nature. Generating descriptive statistics helps a researcher analyze the characteristics of a group or situation, as well as the frequency with which a phenomenon occurs using statistics to describe and summarize the data (Ingham-Broomfield, 2014). The methodology was used to examine the leadership characteristics of allied health therapy leaders in hospitals and their input in patient satisfaction. Quantitative data provide quantifiable information that is analyzed using a statistical test to ascertain whether the results happened by chance or there is a correlation (Paans et al., 2013).

Population and Sampling Procedures

For this dissertation, the sample was drawn from a population of men and women allied health therapy leaders who have served in a leadership role for more than 1 year in hospitals in the United States (Martinez et al., 2018). The subjects were allied health therapy leaders with a college degree in occupational therapy, physical therapy, or speech-language therapy working in a hospital (Paans et al., 2013). These participants were employed on a full-time or part-time basis with no age limit at the time of the study. Leadership roles in a hospital included but were not limited to team leader, clinical manager, director of rehabilitation, rehabilitation leader, COO, and CEO. These are allied health therapy leaders who help facilitate, coordinate, and guide allied health therapists' activities to affect patient satisfaction (Babiker et al., 2014).

During the consent phase, my role as researcher was to inform the participants regarding their duties (Axson et al., 2017). Researchers also divulge their obligations during a study, as well as the benefits and risks of participation (Yip et al., 2016). Allied

health therapy leaders in the study were expected to meet their obligations once they had made an informed decision (Resnik & Ness, 2012). Should they have chosen to stop participating in the study, however, they were able to do so at any time.

The required number in the sample was determined through a prior power analysis. Power analysis is conducted through G*Power Software. This sample size computation is based on different factors, including the type of statistical analysis, Cohen's effect size, level of significance, and the statistical power or the probability of rejecting a false null hypothesis. For this study, the statistical analysis to be conducted was a multiple linear regression analysis to determine the relationship between allied health therapy leaders in hospitals and patient satisfaction. The dependent variable in the regression analysis was patient satisfaction. The independent variable in the regression analysis was allied health therapy leaders, which had five different accountability measures, collaboration, communication, team management, and self-management, based on the five areas of the Foundational Healthcare Leadership Self-Assessment (FHLS).

An a priori power analysis was conducted with the following factors: (a) statistical test of multiple linear regression, a fixed model, single regression coefficient with five predictors, as there are five different measures of the independent variable of the leadership characteristics of allied health therapy leaders; (b) two-tailed test; (c) medium effect size of 0.15 for a regression; (d) level of significance of 0.5; and (e) statistical power of 0.80, which is normally used in quantitative studies (Faul et al., 2009; Frankfort-Nachmias et al., 2016). The effect size is the measure of the strength of the relationship between independent and dependent variables (Cohen, 1988). Effect size is normally categorized into small, medium, and large. Medium effect size is commonly

used for quantitative studies, as it strikes a balance between being too strict and too lenient in estimating the degree of relationship between the variables (Berger et al., 2013). For the purpose of this study, a medium effect size was employed to ensure that the analysis was not too strict or lenient in identifying significant relationships or differences. The significance level involves the confidence that the statistical result is true (Cozby, 2009). For the study, a 5% significance level was employed. The power of the analysis was set at 80%, as it is the standard considered in most research studies (Brysbaert, 2019). The computation yielded a number of 55 participants (see Appendix B). This means that there should be at least 55 participants for this study to achieve the required statistical power for a quantitative study of 80% using the statistical analysis of multiple linear regression. Thus, this study's target sample size, as based on a priori power analysis, was 55 men and women allied health therapy leaders who had served in a leadership role for more than 1 year in a hospital in the United States.

Procedures for Recruitment, Participation, and Data Collection

Recruitment of participants occurred through current professional networks, the Hospital Corporation of America (HCA), and Universal Health Services organization. Leaders of the participating organizations were contacted via email or were asked for leads on participants who fit this study's criteria. I also contacted the American Association of Healthcare Administrative Management (AAHAM), the American College of Healthcare Executives (ACHE), the American Health Care Association (AHCA), the Health Care Administrators Association (HCAA), the National Institute for Healthcare Leadership (NIHL), and the National Center for Healthcare Leadership (NCHL). These organizations have a longstanding relationship with allied health therapy

leaders and were asked for assistance in recruiting participants for this study by posting on their website or blog an email to potential participants asking for their cooperation to serve as subjects. No affiliation existed between any of the organizations mentioned above and myself, nor was I in league with any of the organizations mentioned above.

Sutton and Austin (2015) stated that no matter what method of data collection one uses, it will entail using a process to gather, record, analyze, report, and store considerable amounts of information for current and future use. The aim of data collection was to quantify the attitudes, opinions, and behaviors of allied health leaders and their impact on patient satisfaction in hospitals (Ponto, 2015). The main source of data for the study was a collection of focus group responses to questions prepared by me (see Appendix B; McGuirk & O'Neill, 2016). The focus group consisted of allied health therapy leaders who had impacted patient satisfaction in hospitals in the United States.

Based on the size of the population in the study and the limited availability of resources, the data collection mode consisted of a computer-assisted questionnaire that was made available through the internet or web-based questionnaire (Sinkowitz-Cochran, 2015). Administering the survey in a hospital reduced discrimination against participants without access to a computer or the internet, as most hospital systems provide access to computers and the internet to staff. A deadline of 1 month to respond to the survey ensured that allied health therapy leaders participated and that they had ample time to complete the survey (Sinkowitz-Cochran, 2015). Based on the sample size calculation, at least 55 participants were recruited to respond to the survey.

The data were generated, gathered, and recorded using a formally structured questionnaire with numerically rated items using closed-ended questions (McGuirk &

O'Neill, 2016). A 5-point Likert scale, an ordinal psychometric measurement of attitudes, beliefs, and opinion, was used to measure attitudes and to collect data regarding to what extent participants agreed or disagreed with a statement (Sullivan & Artino, 2013). Using the Likert scale allowed me to quantify the participants' opinions and perceived effectiveness in meeting a patient's satisfaction in hospitals (Bishop & Herron, 2015). The questionnaire design consisted of a user-friendly format by starting with simple and more relevant questions to entice allied health therapy leaders to complete the survey (Sinkowitz-Cochran, 2015). Appendix C consists of the questions that participants answered throughout the survey (permission was granted by the originator to use the questionnaire).

Instrumentation

The recommended validated tool for the study was the Foundational Healthcare Leadership Self-Assessment (FHLS). The use of this tool helped in answering whether allied health therapy leaders impact patient satisfaction in hospitals (Linkage, 2019). Moreover, it allowed me to recognize leaders' perceptions concerning their impact on patient satisfaction in hospitals. The Hospital Consumer Assessment of Health Providers and Systems (HCAHPS) was used to obtain Quality Assurance patient satisfaction scores in hospital settings.

Foundational Healthcare Leadership Self-Assessment

The FHLS is a 21-item self-assessment of foundational leadership skills (Van Hala et al., 2018; see Appendix C). The FHLS consists of five areas: accountability, collaboration, communication, team management, and self-management, which were

vital in this study. According to Van Hala et al. (2018), the FHLS takes less than 5 minutes to administer and helps to quantify skills in these five domains.

The FHLS allowed me to determine key foundational leadership skills that an allied health therapy leader may possess to be an effective leader to help determine how they impact patient satisfaction (Van Hala et al., 2018). The FHLS also helped in acknowledging the degree to which allied health therapy leaders deliver patient satisfaction in hospitals, as it assesses the collaboration, communication, and team management components necessary for meeting patient satisfaction (Van Hala et al., 2018). Finally, the FHLS promoted insight into the relationship between allied health therapy leaders in hospitals and patient satisfaction.

Data collection took place using a Likert scale questionnaire, which uses a balanced format with disagreement on one side, agreement options on the other side, and a neutral option in the middle, by having allied health therapy leaders reply to preplanned questions. Researcher bias decreased as the results' reliability increased due to all participants having the same questions and answers from which to choose. Additionally, validity was increased through the process conducted, which can be repeated under similar conditions by other researchers.

The Hospital Consumer Assessment of Health Providers and Systems

The HCAHPS is a standardized and publicly publicized survey that collects data on patients' perceptions of their hospital experience (Kamal, 2019). The HCAHPS is made up of 27 parts, with 18 key items covering essential aspects of the patient experience, four items skipping patients to pertinent questions, three items adjusting for patient mix among hospitals, and two items supporting congressionally mandated

reporting (HCAHPS Quality Assurance, 2020). HCAHPS scores are available to the public by region and state and are collected into star ratings for individual hospitals on the CMS Hospital Compare website (CMS, 2021; Kurian et al., 2021). CMS created the HCAHPS Star Ratings to allow consumers to assess the patient experience of care information provided on the Hospital Compare website more quickly and easily (Kurian et al., 2021).

Quantitative Analysis

Quantitative analysis may produce insights pertaining to whether allied health therapy leaders can impact patient satisfaction in a hospital. A self-assessment survey in a quantitative study can be administered by asking questions such as how much influence an allied health therapy leader can have on meeting patient needs, how often the allied health therapy leader spends with a patient, and other questions. The quantitative research allowed me to use objective numerical data and observations to describe or explain the uniqueness of the variables of interest in the study (Ingham-Broomfield, 2014). Using a quantitative method allowed for examining the hypotheses regarding the relationship between variables by calculating the relationship mathematically through statistical analysis (Wisdom et al., 2011). The goal was to show the correlation and causation that allied health therapy leaders have on patient satisfaction in hospitals (Ingham-Broomfield, 2014). To collect the data, a Likert scale, which uses a balanced format with disagreement on one side, agreement options on the other side, and a neutral option in the middle, was used (Chyung, 2018).

Clear and precise guidelines in this quantitative study regarding allied health therapy leaders and patient satisfaction in hospitals were provided so that future studies

can be repeated as many times as needed to expand the knowledge of the leadership of allied health therapy leaders and their impact on patient satisfaction (McCusker & Gunaydin, 2014). Moreover, the repetition of these findings can be conducted in any location with more abundant and multiple samples under similar conditions yielding comparable results (Eyisi, 2016). The study utilized scientific data collection methods and analysis to allow for generalization (Eyisi, 2016). Doing so eliminated the presumption that the results can be obtained by chance or by accident. The study took place in hospitals in Texas. Providing comprehensive guidelines and formulas when using a quantitative approach allowed for the possible replication of the study in other states in hospitals (McCusker & Gunaydin, 2014).

Furthermore, when administering the quantitative analysis, closed-ended questions were used through a survey or questionnaire administered via email or online, allowing for a broader audience from a larger geographical area (Ingham-Broomfield, 2014). The use of quantitative analysis was more feasible than qualitative analysis due to the population, objective numerical data, and observations in the study.

Researcher bias is probable when performing verbal or written interviews (Bakitas et al., 2006). Leung (2015) stated that human emotions and perspectives from researchers and participants are biases that muddle the results in research. Performing a quantitative study significantly lessens the possibility of researcher bias when using a Likert scale due to allied health therapy leaders replying to preplanned questions based on the level of agreement or disagreement (Chyung, 2018).

Statistics are an arrangement of mathematical findings that help explain the collection of information from variables that are under study (Simpson, 2015). According

to Ali and Bhaskar (2016), statistics draw on the organization, collection, and analysis from samples representative of the whole population under study. To be able to perform a precise analysis, it is essential to develop a well-thought-out design, define what will be studied, perform a literature review, obtain a good quality sample from the group in the study, choose a suitable test, and obtain the research methodologies used to collect the data. Missing or omitting any of these steps may lead to inaccurate conclusions and invalidate the study (Kang, 2013).

The quantitative study contained a set of standard terms and concepts (Cook et al., 2013). In a quantitative study, a variable refers to the object or item of information that takes on different values and intensities collected in the study (Flannelly et al., 2014). Each variable has groups or categories that help describe the makeup or characteristics of the variable under study. For example, the variable allied health therapy leader includes the values of occupational therapists, physical therapists, and speech therapists.

Leadership is a nominal or categorical variable as it can be used separately from other variables (Marateb et al., 2014). An ordinal variable is one that can occur in a meaningful order, such as patient satisfaction, which can be measured as "constantly, every so often, rarely, or not at all" (Marateb et al., 2014). A nominal variable may also be identified as a ratio variable if the ratio between variables has meaning (Simpson, 2015). For example, an allied health therapy leader working in a hospital for 5 years has half the experience of an allied health therapy leader who has worked in a hospital for 10 years (Simpson, 2015). The study identified the relationship between the two variables of allied health therapy leaders and patient satisfaction in hospitals.

At the first level of coding, consideration for distinct concepts and categories in the data were noted as it will form the basic units of analysis (Sutton & Austin, 2015). As a researcher, it is essential to look at the information that will be gathered and broken down into different categories to form the primary components of the data analysis (Paradis et al., 2016). In other words, the classification of data consisted of first-level concepts, or master headings, and second-level categories, or subheadings. These headings and sub-level categories were present in the surveys and validated tools that were completed by the participants in the study and interpreted in the research.

Role of the Researcher

My role was to define the concept and design. It was my job to protect the rights and welfare of the participants (Resnik and Ness, 2012). I am an occupational therapist with 19 years of experience in the health care field. I hold a Bachelor of Science in Occupational Therapy and a Master of Arts in Blind Rehabilitation. I have held leadership roles as a department supervisor for four allied health care facilities as a team leader for one allied health care facility, a director of community outings in one allied health care facility, an assistant administrator for an allied health care facility, an inpatient rehabilitation clinical coordinator in a hospital, and a director of rehabilitation in a hospital. There is an ethical challenge in all stages of the study. The challenges are from design to application to reporting the findings, which may include anonymity, confidentiality, informed consent, and the impact that I can have on the participants (Sanjari et al., 2014). During the study, no participant had direct contact with me. No conflict of interest was present during the contract, taking of survey, data gathering, or interpretation of the study that would convey researcher bias (Bakitas et al., 2006).

I received guidance and training in carrying out the designed study. I participated in data gathering, analysis of results, and interpretation of the results in his career. Continuous mentoring by the department chair and committee member increased my ability to carry out my duties in the study. I had taken three courses at Walden University in research theory, design, and methods; quantitative reasoning and analysis; and advanced quantitative. Since 2000, I have held different leadership roles in different organizations in allied health care facilities supporting internal activities with followers and generating external awareness to the patients' needs for increased patient satisfaction.

Trustworthiness

Findings in the study may unavoidably contain my political and ethical views and methodology used in the research, which is why trustworthiness is essential (Winter, 2000). Trustworthiness confirms that the data collected is well-founded and reproducible and that the outcomes are precise. In quantitative research, trustworthiness is referred to as reliability and validity, as it uses instruments with established metrics (Grossoehme, 2014). These metrics are essential within reliability and validity because it is necessary to establish credibility and transferability. Data must be dependable and able to be verified by other researchers. Therefore, I must develop and find the right validated tool to establish reliability and validity.

Reliability

Reliability is used to examine the consistency of the measuring instruments or a group of measurements in the study. Reliability deals with how the instrument used measures the same way each time under the same conditions with the same participants (Strech, 2010). Establishing reliability involved using the Likert Survey scale with

predetermined questions. The survey questions were administered to allied health therapy leaders in hospitals throughout the United States from an organization. The survey took place from June 2021, and August 2021.

Internal Validity

Possible threats in a study can occur when gathering history, participant selection, maturation, pretesting, instrumentation, replication, participant attrition, statistical regression, experiment effects, and participant effects. Internal validity measured whether a causal relationship existed between allied health therapy leaders in hospitals and patient satisfaction (Cor, 2016). The data were analyzed using statistical measures. The aim of the study design was to accredit the cause of the relationship between allied health therapy leaders in hospitals and patient satisfaction (Cor, 2016).

External Validity

With quantitative research, transferability is established through external validity by generalizing the sample size to the broader population. The use of external validity allowed me to observe the extent to which the results can be generalized from the research setting to actual patient satisfaction in hospitals by allied health therapy leaders (Schalock et al., 2017). Observation focused on whether patient satisfaction by allied health therapy leaders can be widespread in other hospitals (Steckler & McLeroy, 2011).

Ethical Concerns

Scrutinizing of the research helped assess compliance with the scientific community. The research conducted possessed ethical and reasoning skills to be able to uphold and promote professional and ethical standards of research (Rossouw et al., 2014). Conducting an ethical study leads to better scientific research and gains more

attention to the analysis, techniques, data collection, interpretation of results, and credibility of the research (Rossouw et al., 2014). Moreover, maintaining ethical standards leads to better collaboration between researchers should they wish to duplicate the study or use it as a platform to start their own research.

According to Walden University, approval may be obtained from the Office of Student Research Administration (OSRA) once the proposal and materials submitted to the Institutional Review Board (IRB) are accepted. Gaining approval allowed for sending out a survey email invitation via the internet to start the process of conducting the survey (see Appendix D). IRB approval number is 05-17-21-0542360. As a researcher, obtaining approval from the ethics committee was vital before starting the research outlining how informed consent would be obtained and ensuring the participants' rights and anonymity would be protected (Denzin & Lincoln, 2011; Yip et al., 2016). During the study, it was vital to disclose to participants what they were to expect during the research process and to assure them that there was no risk of harm and that they could stop participating at any time without repercussions (Yip et al., 2016). The aim was to keep the participants informed as much as possible and answer any questions that may come up prior to beginning the research (Garg, 2016).

The methodology was dependent on the group under study. The methodology and methods aligned to understand whether there is a correlation between allied health therapy leaders in hospitals and patient satisfaction and the nature of the research questions (Kornhaber et al., 2015). It was also vital to choose the best method for data collection to ensure validity and reliability. The Donabedian model was a great model for the current study, as it used a structure-process-outcome method to assess the quality of

health care (Glenn et al., 2014; Liu et al., 2011). The FHLS tool was also the right choice for the study as it assessed the five areas of accountability, collaboration, communication, team management, and self-management of leaders to be able to affect patient satisfaction in hospitals (Van Hala et al., 2018).

It was essential to make sure that all the data collected was kept confidential and anonymous. Participants were aware of how the information would be collected, used, and analyzed, as well as who would have access to the information. During the collecting of information, it was essential to avoid convenience sampling due to the ease of patient accessibility (Bornstein et al., 2013). Instead, participants were chosen based on the data collected and their ability to answer the questions that the research aimed to evaluate.

As stated earlier, trustworthiness means that the data that are collected, analyzed, and interpreted are found to be truthful, reliable, and reproducible by other researchers. One concern to be aware of is observer subjectivity as it affects the reliability and validity of the research. To safeguard against observer subjectivity and ensure the validity of the study, the Likert Scale measured participant responses. According to Bishop and Herron (2015), an ethical concern that may arise when using a Likert Scale is whether the responses are ordinal or interval, which may affect reliability. Therefore, if the data were ordinal, a nonparametric statistical analysis was used. On the other hand, if the data were interval, a parametric statistical analysis was utilized (Bishop & Herron, 2015).

Summary

The primary objective of this chapter was to define the research method that was applied to answer the research questions. The information provided above pertains to the procedure, study participants, data collection methods, interview questions, manner of

conducting the study, and how safeguards were put into place to ensure the validity and reliability of the study.

The objective of the study was to evaluate whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. Data collection was used to analyze the degree of patient satisfaction associated with allied health therapists' delivery of care to report the findings to be able to improve the clinical practice and patient satisfaction in hospitals (Yip et al., 2016). The goal of this research was to gain a better understanding of the relationship that exists between allied health therapy leaders and patient satisfaction as well as how allied health therapy leaders impact patient satisfaction in hospitals. It was prudent to convey the aim of the study and to perform a thorough background on the existing literature, or lack of existing literature, pertaining to allied health therapy leaders in a hospital to support executing the study. A group of participants was representative of the population under study. These participants were kept abreast regarding the study, process, assurance of anonymity, and keeping them free from harm. The Donabedian model was a vital framework that helped examine and evaluate health services and the quality of health care in hospitals delivered by allied health therapy leaders. In turn, the Purposeful Leadership Assessment examined five core areas that leaders must have to impact followers and stakeholders in meeting the needs of patients in hospitals. In Chapter 4, I will provide the study results and demonstrate that I had followed the methodology described in Chapter 3.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to investigate whether there was a relationship between allied health therapy leaders in hospitals and patient satisfaction. Exploratory data analysis was performed to present the demographic characteristics. The reliability analysis was conducted to address the integrity of the survey. The multinomial logistic regression analysis was implemented to assess the research question. The assumptions of logistic regression were tested for validity. A chi-square test of independence and one-way multivariate analysis of variance (MANOVA) were performed as supplementary research.

Research Question and Null Hypothesis

The research question directing this study was as follows:

RQ1: Is there a relationship between allied health therapy leaders in hospitals and patient satisfaction?

H_A1: There is no statistically significant relationship between allied health therapy leaders in hospitals and patient satisfaction.

H_A1: There is a statistically significant relationship between allied health therapy leaders in hospitals and patient satisfaction.

The setting of this study, demographics of the participants, and data gathering process are all described in Chapter 4. The chapter also includes an overview of data analysis methodologies and information on the methods used to ensure the survey's reliability and integrity. The chapter concludes with a detailed explanation of the results and a final summary.

Setting

Participants who were previously or currently working in a hospital setting in the United States as an allied health therapy leader for over 1 year were invited to participate. Participants were recruited through the Walden University participant pool, current professional networks, and health service organizations by posting flyers. Flyers were posted through social media, such as Facebook and LinkedIn, and recruiting occurred through professional networks. No affiliation existed between any of the organizations mentioned in Chapter 3 and me prior to the research, nor was I in league with any of the aforementioned organizations. Upon agreeing to participate in the study, participants were asked to participate in a 36-question survey offered online through Survey Monkey. The survey took approximately 15 to 20 minutes to complete. The survey was strictly confidential and anonymous to protect the participants' privacy within the limits of the law.

Demographics

The sample size consisted of a population of men and women allied health therapy leaders who had previously or currently served in a leadership role for more than 1 year in a hospital setting in the United States. The participants were allied health therapy leaders with a college degree in occupational therapy, physical therapy, or speech-language therapy (Gribble et al., 2019; LaFrance et al., 2019; Nichols & Block, 2021). These participants were employed on a full-time or part-time basis and were 18 years or older at the time of the study. Leadership roles in a hospital included but were not limited to team leader, clinical manager, director of rehabilitation, rehabilitation leader, COO, and CEO. These allied health therapy leaders helped facilitate, coordinate,

and guide allied health therapists' activities to affect patient satisfaction (Sheehan et al., 2021).

Data Collection

The Walden University participant pool, current professional networks, healthcare organizations, and social media were used to recruit participants for this study by posting flyers and invitations (see Appendix C). The information was gathered between June 8, 2021, and August 1, 2021. There were 94 participants in the original dataset. The final data set contained 87 participants as measured by the FHLS and related patient satisfaction as measured by the HCAHPS after missing values and incomplete cases were removed.

Following IRB approval, participants were recruited and invited to participate in the online survey through Survey Monkey, which is an online program and hosting site that allowed me to create and distribute the survey to participants via the internet. Participants were provided a URL to access the survey by clicking on the link. They were allowed to review the requirements and process prior to agreeing to participate in the online study. Participants consented to participate in the survey by clicking "NEXT" if they agreed to take the survey. The survey could be closed at any time by participants who did not want to participate or consent to it.

Three groups of satisfaction were created: below national average (N = 6; 6.9%), the national average (N = 47; 54.0%), and above national average (N = 34; 38.1%). There were 50 females and 36 males in the sample. The majority of participants were Caucasians (67.8%) between 35 and 49 years old (54.0%) with income in the range of $100,000–$200,000 (63.2%). For education, the largest group of participants held a

master's degree (54.0%), followed by a PhD (32.2%) or a bachelor's degree (12.6%). The most frequent allied health discipline among the participants was occupational therapist (50.6%), followed by physical therapist (39.1%) and speech therapist (10.3%). The majority of the participants had received leadership training (78.2%) and had at least 5 years of prior experience (49.4%; see Table 2).

Table 2

Sociodemographic Characteristics of Participants

		N	%
Gender			
	Male	36	41.4%
	Female	50	57.5%
Age			
	25–34	9	10.3%
	35–49	47	54.0%
	50–64	30	34.5%
	65+	1	1.1%
Ethnicity			
	Caucasian	59	67.8%
	African American	5	5.7%
	Latino or Hispanic	12	13.8%
	Asian	9	10.3%
	Other	2	2.3%
Education			
	Bachelor's degree	11	12.6%
	Master's degree	47	54.0%
	PhD or higher	28	32.2%
Employment			
	Full time	84	96.6%
	Part time	1	1.1%
	Contract	1	1.1%
Income			
	$25,000–$50,000	1	1.1%
	$50,000–$100,000	26	29.9%
	$100,000–$200,000	55	63.2%
	More than $200,000	2	2.3%
Allied health discipline			
	Occupational therapist	44	50.6%
	Physical therapist	34	39.1%
	Speech therapist	9	10.3%
Leadership position			
	Therapy manager	25	28.7%
	Rehabilitation leader/director	47	54.0%
	Regional director	9	10.3%
	Administrator	6	6.9%
Prior experience			
	1 year	14	16.1%
	1–3 years	13	14.9%
	3–5 years	15	17.2%
	5–10 years	20	23.0%
	10+ years	23	26.4%
Leadership training			
	Yes	68	78.2%
	No	18	20.7%

Reliability Analysis

The composite scores of the responses to the survey questions measuring accountability, collaboration, communication, team management, and self-management were created to perform the regression analysis. A Cronbach's analysis was conducted to address the reliability of data. The alpha level for the composite scores was greater than .662, indicating that the variables had an adequate level of reliability and internal consistency in measuring the constructs of the study (see Table 3).

Table 3

Reliability Analysis

Composite score	Cronbach's alpha
Accountability	.830
Collaboration	.686
Communication	.822
Team management	.795
Self-management	.662

Results

The research question guiding this study was as follows: Is there a relationship between allied health therapy leaders in hospitals and patient satisfaction? The hope was that conducting this study would help address the gap in the literature regarding the need for future research to address an area in hospital leadership and patient satisfaction. A suggestion for future research would be to broaden the study's scope to include how to use allied health therapy leaders to achieve a positive outcome within patient satisfaction.

Assumption Tests

The data were planned to be analyzed using ordinal regression. Ordinal regression involved four assumptions about the underlying data: (a) the response variable is ordinal with three or more categories, and the dependent variable satisfaction was measured by three categories: below average, the national average, and above average; (b) the explanatory variables are continuous or categorical, and the independent variables accountability, collaboration, communication, team management, and self-management were measured on a continuous scale; (c) the absence of multicollinearity, meaning the data exhibited a strong positive correlation among independent variables (r (85) > .73, p < .001), indicates a potential violation of this assumption; and (d) the odds are proportional, meaning that this assumption was assessed by the likelihood ratio test of the fitted regression model ($\chi^2(5) = 10.795$, $p = .056$). Because there was a risk of violation of this assumption, multinomial logistic regression was performed instead to estimate the effect of predictor variables on patient satisfaction (Kang et al., 2019).

Hypothesis

$H_0$1: The multinomial logistic regression model explained almost 17% of the variability in patient satisfaction (Nagelkerke's R^2 (85) = .169). The overall summary for the model returned nonsignificant results for the predictor variables (LR $\chi^2(10) = 13.1$, p = .22). Nonsignificant results from Pearson's chi-square test ($\chi^2(160) = 141.02$, $p = .86$) and the deviance test ($\chi^2(160) = 137.98$, $p = .89$) indicated an adequate model fit. The categories in the response variable were unevenly distributed (see Table 4).

Table 4

Categorical Variable Information

	N	%
Below average	6	6.9%
Average	47	54.0%
Above average	34	39.1%
Total	87	100.0%

It was found that collaboration significantly affected the likelihood of presence in average and above-average groups compared to the below-average group (LR $\chi^2(2) = 6.40$, $p = .04$). Those participants who scored higher on collaboration were significantly more likely to satisfy the patients. Higher scores on accountability, team management, and self-management were negatively related to the likelihood of patient satisfaction; however, the results were not statistically significant in the sample (see Table 5).

Table 5

Parameter Estimates

Satisfaction group	B	Std. Err	Wald (df = 1)	Sig.	Exp(B)
Average					
Intercept	4.5	4.5	1.0	.32	
Accountability	-2.4	1.6	2.3	.13	0.087
Collaboration	3.4	1.5	5.1	**.02**	30.935
Communication	1.0	1.5	0.4	.50	2.644
Team management	-1.5	1.7	0.8	.38	0.22
Self-management	-0.9	1.1	0.7	.41	0.395
Above average					
Intercept	3.6	4.6	0.6	.44	
Accountability	-1.1	1.6	0.5	.48	0.322
Collaboration	3.2	1.5	4.4	**.04**	25.202
Communication	-0.4	1.4	0.1	.80	0.691
Team management	-1.2	1.7	0.5	.47	0.287
Self-management	-0.8	1.1	0.5	.48	0.447

Note. The reference category is below average.

Supplementary Findings

A chi-square test of independence was performed to determine whether demographic characteristics were significantly related to patient satisfaction. It was found that patient satisfaction was not dependent on the demographic characteristics of participants. It was also found that leadership characteristics such as leadership position, leadership training, and prior experience were not significantly related to patient satisfaction (Table 6).

Table 6

Chi-Square Tests of Independence With Patient Satisfaction

Variable	Pearson chi-square	*df*	*p*-value
Age	5.24	6	.51
Gender	5.56	2	.06
Ethnicity	5.44	8	.71
Education	1.69	4	.79
Employment	2.36	4	.67
Salary	5.39	6	.50
Applied health discipline	6.65	4	.16
Leadership position	2.60	6	.86
Prior experience	8.69	8	.37
Leadership training	1.40	2	.50

A one-way MANOVA was performed to test whether a linear combination of predictors affected patient satisfaction (Green & Salkind, 2017). The Box's test resulted

in a statistically nonsignificant result (M = 55.27, F (30, 631) = 1.36, p =.097), showing that the assumption of equal covariance matrices was met (Friendly & Sigal, 2020). The effect of patient satisfaction on the set of dependent variables was statistically nonsignificant, Wilks's lambda = .859, F (10, 160) = 1.26, p = .26 (see Table 7; Featherstone, 2017).

Table 7

Multivariate Analysis of Variance Results

Dependent variable	Type III SS	*df*	Mean square	*F*	*p*
Accountability	0.51	2	0.26	0.79	.46
Collaboration	0.38	2	0.19	0.52	.60
Communication	0.17	2	0.08	0.24	.79
Team management	0.10	2	0.05	0.17	.85
Self-management	0.08	2	0.04	0.09	.92

Summary

The purpose of this quantitative study was to investigate whether there was a relationship between allied health therapy leaders in hospitals and patient satisfaction. The multinomial logistic regression analysis was implemented to test if accountability, collaboration, communication, team management, and self-management contributed to patient satisfaction. It was found that the main effects of the predictor variables were nonsignificant for this model (LR $\chi^2(10) = 13.1$, $p = .22$). Collaboration (LR $\chi 2(2) = 6.40$, $p = .04$), however, was found to affect patient satisfaction significantly, showing that those participants who scored higher on this variable were more likely to be in

average or above-average satisfaction groups compared to below-average group. It was also found that accountability, team management, and self-management were negatively related to the likelihood of patient satisfaction; however, the effects were statistically nonsignificant in the sample. The null hypothesis was rejected, and it was concluded that Collaboration was statistically significantly related to patient satisfaction. The reliability analysis showed the integrity of the survey. The assumptions of multinomial logistic regression were met.

As supplementary research, a Chi-Square Test of independence was performed to determine whether patient satisfaction was dependent on demographic and leadership characteristics. It was found that these characteristics were not significantly related to patient satisfaction in this sample ($\chi^2(2\text{-}8) < 6.65$, $p > .06$). It was also found that the linear combination of predictor variables was not related to patient satisfaction. The results from MANOVA test were statistically nonsignificant (Wilks' Lambda = .859, F (10, 160) = 1.26, p = .26).

In Chapter 5, I provide an overview of the study, a conclusion of the results, and an interpretation of the findings. I also discuss the limitations of the study, social change implications, and recommendations for future research. Lastly, Chapter 5 contains a summary and conclusion of the research study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

High-quality leadership skills from allied health therapy leaders are needed to meet patient satisfaction in hospitals (Sfantou et al., 2017). The current literature, however, is limited in examining how allied health therapy leaders influence patient satisfaction (Bradd et al., 2017; Gifford et al., 2018). Though the impact of allied health therapists on patient satisfaction has been examined (Slade et al., 2018), few studies have examined the impact of allied health therapy leaders on patient satisfaction (Gifford et al., 2018). Much of the research on allied health therapy leaders has focused on how leadership supports allied health therapists in their work. Therefore, the purpose of this quantitative study was to investigate whether there was a relationship between allied health therapy leaders in hospitals and patient satisfaction.

For the study, a quantitative design was used to explore the research question, which was centered on examining whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. The sample was drawn from a population of men and women allied health therapy leaders who had previously or currently served in a leadership role for more than 1 year in a hospital setting in the United States. The participants were allied health therapy leaders with a college degree in occupational therapy, physical therapy, or speech-language therapy (U.S. Bureau of Labor Statistics, 2021). These participants were employed on a full-time or part-time basis and were 18 years or older at the time of the study. Leadership roles in a hospital included but were not limited to team leader, clinical manager, director of rehabilitation, rehabilitation leader, COO, and CEO.

The focus of the study was gaining an understanding of whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. I used a quantitative approach that included a quantitative nonexperimental, cross-sectional study approach (Chew, 2019; Sousa et al., 2007). The data were generated, gathered, and recorded using a formally structured questionnaire with numerically rated items using closed-ended questions (Lionello et al., 2021). A 5-point Likert scale was used to measure attitudes on a 5-point ordinal scale to collect data regarding to what extent participants agreed or disagreed with a statement (Lionello et al., 2021). The participants in the research answered questions on an online survey. The questions used in the online survey were derived from the FHLS, which is a validated tool that consists of 21-item self-assessment of foundational leadership skills in five domains: accountability, collaboration, communication, team management, and self-management (Van Hala et al., 2018).

Ninety-four allied health care leaders reported on their leadership through an online survey, and data on patient satisfaction were gathered from the HCAHPS. Collaboration was shown to be the only leadership domain that was significantly associated with patient satisfaction in the current study. The other four leadership domains (i.e., communication, accountability, team management, and self-management) were not associated with patient satisfaction. Hospital executives may use the findings of the current study to improve service delivery and patient satisfaction scores. In the following sections, the current study's findings are discussed within the context of the current literature. Additionally, recommendations for future research and implications for practice are provided.

Interpretation of the Findings

The current study addressed a critical gap in the current literature. Although the quality of allied health care service delivery is associated with patient satisfaction (Slade et al., 2018), few studies have examined how allied health therapy leaders impact patient satisfaction (Bradd et al., 2017; Gifford et al., 2018). Allied health therapy leaders influence allied health therapists in meeting the needs of patients (McRae, 2017), but it was unknown if allied health therapy leaders are directly associated with patient satisfaction. Collaboration was demonstrated to be the leadership domain that was significantly linked with patient satisfaction in the current study. It is possible that allied health therapy leaders are not directly associated with patient satisfaction but that the association is mediated by factors related to individual allied health therapists or overall allied health team dynamics. Specific findings are discussed in the context of the current literature in the following section.

RQ1: Is There a Relationship Between Allied Health Therapy Leaders in Hospitals and Patient Satisfaction?

In the current study, collaboration was significantly associated with patient satisfaction. More collaboration among allied health therapy leaders was associated with greater patient satisfaction. Though previous research has not examined the direct link between allied health therapy leaders' collaboration and patient satisfaction, collaboration among health care providers has been shown to increase patient satisfaction in previous studies (Maghsoudi et al., 2020; Rosen et al., 2018). Allied health is a collaborative, dynamic, and multifaced care system, and it is the management of allied health therapy leaders that is responsible for coordinating and facilitating the activities of allied health

therapists (Sfantou et al., 2017; Slade et al., 2018). Therefore, effective, high-quality collaboration appears to be a necessary skill for allied health therapy leaders. When allied health therapy leaders are more collaborative, they may be better able to work in a collaborative environment and better support their staff in working in a joint health care environment (Guerrero et al., 2017).

The other four leadership domains (i.e., communication, accountability, team management, and self-management) were not associated with patient outcomes in the current study. Though previous research has not examined the direct association between the leadership qualities of allied health therapy leaders in these domains and patient satisfaction, previous studies have shown that these domains are associated with patient satisfaction (Bach et al., 2017). There are reasons why allied health therapy leaders' leadership in these domains may not be associated with patient satisfaction.

First, the studies noted above did not examine allied health therapy leaders specifically. Instead, several studies examining the association between leadership domains and patient satisfaction have focused on other hospital leaders such as physicians (Singh, 2020), nurses (Hansen, 2019; Wei et al., 2020), and hospital leaders in general (Littleton et al., 2019; Rosen et al., 2018). Unlike other health care leaders in hospital settings, allied health therapy leaders are tasked with managing diverse teams that collaborate across specialties and departments (Sfantou et al., 2017). The impact of the leadership style of allied health therapy leaders may be different from that of other healthcare leaders due to the emphasis being on rehabilitation and not just medical care.

Second, it may be that the leadership style of allied health therapy leaders is not directly associated with patient satisfaction, but that the association between allied

leaders' leaders and patient satisfaction is mediated by factors related to individual allied health therapy leaders. Previous research has shown that allied health therapy leaders' behavior is associated with allied health therapists' behavior and the quality of care that they provide (McRae, 2017). Additional research has also demonstrated that the quality of allied health care provided by allied health therapists with the support and guidance of allied health therapy leaders is associated with patient satisfaction (Mickan et al., 2019). Therefore, it may be that the leadership of allied health therapy leaders is associated with patient satisfaction indirectly through the quality of care provided by allied health therapists. Future researchers may consider examining whether the association between allied health therapy leaders and patient satisfaction is mediated by factors related to individual allied health therapists.

Alternatively, the sample's characteristics in the current study may make it challenging to identify how the leadership of allied health therapy leaders' domains was associated with patient outcomes. Approximately 80% of the sample utilized in the current study had some leadership training. Researchers have noted that, compared to the financial support provided to physicians and nurses for leadership training, financial funding for allied health therapy leaders is nominal. The sample in the current study may have received greater leadership training compared to the population of allied health therapy leaders as a whole. The current sample was also older, and the overwhelming majority had at least a master's degree. As such, the current sample may have more experience leading allied healthcare teams and may have received more education on leadership in health care compared to the average allied health leader (U.S. Bureau of Labor Statistics, 2021). Taken together, the quality of the leadership provided by the

sample in the current study may be higher compared to the average allied health therapy leader, making it more difficult to identify associations between allied health therapy leaders and patient satisfaction.

Donabedian Model

The theoretical model used in the current study was the Donabedian model (Donabedian, 1966). The Donabedian model is used widely to conceptualize the underlying processes that contribute to the quality of care for patients (Sfantou et al., 2017). The current study included all three elements of the Donabedian model. Structure refers to aspects of the organizational structure such as organization of care, provider qualifications, and size of the organization. In the current study, the structure was operationalized as the employment of allied health therapy leaders. The process includes the activities that take place between the allied health therapy leader and the therapist. For the current study, the activity of interest was leadership behavior. The results include the clinical outcomes, the quality of life, and the satisfaction with the care provided to the patient by the allied health therapist. The current study focused on patient satisfaction as the outcome.

Consistent with the Donabedian model (Donabedian, 1966), the current study found that the activities performed between the allied health therapy leader and the therapist (i.e., process) are associated with patient satisfaction (i.e., patient outcomes). The current study adds to the growing body of literature providing empirical evidence of the importance of understanding the underlying processes that contribute to the quality of care (Martinez et al., 2018; Nasser et al., 2020; Vizvari et al., 2018). Additionally, the current study added to this growing body of literature by examining the impact of allied

health therapy leaders in this process. By utilizing the Donabedian model, the current study lent itself to new and significant insight into the relationship between allied health therapy leaders and patient satisfaction. The current study also provided evidence for the importance of the relationship between allied health therapy leaders and patient satisfaction.

Limitations of the Study

The findings of the current study should be considered within the context of a few limitations. First, it is possible that self-selection bias may have impacted the results of the current study. The sample in the current study may have been more motivated to provide high-quality allied health therapy leaders in allied healthcare. Therefore, they may have been more likely to seek out leadership training and more likely to be motivated to respond to a survey about leadership in allied healthcare. Alternatively, their leadership training and experience may have motivated them to respond to the current study. As such, their responses may be different from the average allied health therapy leader, and the results of this study may not be generalizable to all allied health therapy leaders. Second, although this is unlikely, responses in the current study may have been impacted by social desirability response bias (Larson, 2019). Despite assurances from me that their responses were confidential, participants may have felt some pressure to report positively about their leadership. Results indicate substantial variation in participants' responses, and the correlation between the independent variables was .73. If participants increased their responses to the questionnaire incorrectly, it would be expected that there would be less variability between responses, and a greater correlation between

independent variables. As such, the impact of any social response bias on the current study's findings was small.

Finally, the current study included only one self-report measure of the leadership characteristic of allied health therapy leaders. While the measure used in the current study was a well-validated measure used in previous research (Van Hala et al., 2018), the use of one self-report measure may have impacted the results of the study. Based on the variability in the responses in the current study, it does appear that participants responded in thoughtful and truthful ways to the measure. Future researchers, however, may consider using or developing multiple measures of allied health therapy leaders' leadership qualities. More in-depth information could also be gathered more directly through an interview process, which would stimulate in-depth discussion and allow me to uncover the deeper meanings of the participants' thoughts and views.

Recommendations

The current quantitative study aimed to understand and provide insight into allied health therapy leaders' impact on patient satisfaction in a hospital setting. I employed a quantitative approach that involved using an online survey to analyze key fundamental leadership skills that an allied health therapy leader should possess to impact and increase patient satisfaction (Van Hala et al., 2018). The HCAHPS was also used to assess patients' perceptions of their hospital experience (HCAHPS Quality Assurance, 2020). Despite the limitations mentioned above, the current study's findings can be used to inform and guide future research. Based on the findings the study, there exist opportunities for future research.

First, the current study was cross-sectional. Future researchers may consider utilizing a longitudinal association design between allied health therapy leaders' leadership behavior and patient outcomes. The use of a longitudinal design would also enable researchers and hospital leaders to better understand how changes in leadership behavior among allied health therapy leaders are associated with changes with patient satisfaction.

Second, future researchers may consider utilizing multiple measures of leadership or multiple reporters of allied health therapy leaders' leadership. The current study only utilized one measure of leadership among allied health therapy leaders. Even though the measure utilized was a validated measure used in the literature (Van Hala et al., 2018), the use of one self-report measure may have impacted the current study results. Using multiple measures or multiple metrics may reduce measurement bias and provide a holistic examination of the leadership qualities of allied health therapy leaders.

Finally, a majority of participants in the current study had some leadership training. Financial support for leadership training among allied health therapy leaders, however, is low (Shakhman et al., 2020). Future research may consider comparing the leadership behaviors of allied health therapy leaders who have had leadership training to those who have not had leadership training. Additionally, future research may consider examining whether providing leadership training to allied health therapy leaders improves patient satisfaction.

Implications for Social Change

In addition to recommendations for future research, the current study has implications for policies and practice. The findings of the current study suggest that there

is potential for positive social change in healthcare. The current study provided evidence that the leadership behavior of allied health therapy leaders is associated with patient satisfaction. The outcomes of this study can benefit hospital administrators and health care systems by enhancing their knowledge in understanding the value and significance of utilizing allied health therapy leaders in improving patient satisfaction. This increase in knowledge can play an important role and act as a guide to improving value-based service delivery in the hospital setting (Teisberg et al., 2020).

Allied healthcare in a hospital setting is collaborative, multilayered, and dynamic (Sfantou et al., 2017). Hospital administrators and allied health therapy leaders should focus on improving collaboration between allied health therapy leaders and therapists. Additionally, allied health therapy leaders need to be skilled and proficient in collaboration with other disciplines to lead these collaborative teams and improve patient satisfaction effectively. Hospital administrators should focus on providing training to allied health therapy leaders to improve their skills in collaboration. Furthermore, hospital administrators may evaluate candidates' collaborative leadership skills when filling positions for allied health therapy leaders.

Finally, hospital administrators may consider increasing access to leadership training for allied health therapy leaders. Compared to other positions, financial support for leadership training among allied health therapy leaders is nominal (Shakhman et al., 2020). It appears, however, that leadership behavior is associated with both allied health therapists' performance and patient satisfaction (McRae, 2017). By increasing access to leadership training, the leadership behavior of allied health therapy leaders should improve, and hospitals will see an increase in patient satisfaction.

Conclusions

The focus of the study was gaining an understanding of whether there is a relationship between allied health therapy leaders in hospitals and patient satisfaction. The findings for this study were obtained from participants who previously or currently worked in a hospital setting in the United States as an allied health therapy leader. The aim was to broaden the understanding of the impact that allied health therapy leaders have on patient satisfaction. Ninety-four allied health therapy leaders reported on their leadership through an online survey, and data on patient satisfaction were collected from the HCAHPS. Regression analyses were utilized to examine the association between allied health therapy leaders' leadership behavior and patient satisfaction. The current study found that collaboration was the only leadership domain that was significantly associated with patient satisfaction. The other four leadership domains (i.e., communication, accountability, team-management, and self-management) were not associated with patient satisfaction. As the leadership of allied health therapy leaders is associated with patient satisfaction, hospital administrators may consider providing leadership training for allied health therapy leaders. Improving allied health therapy leaders' leadership training will improve patient satisfaction in the hospital setting.

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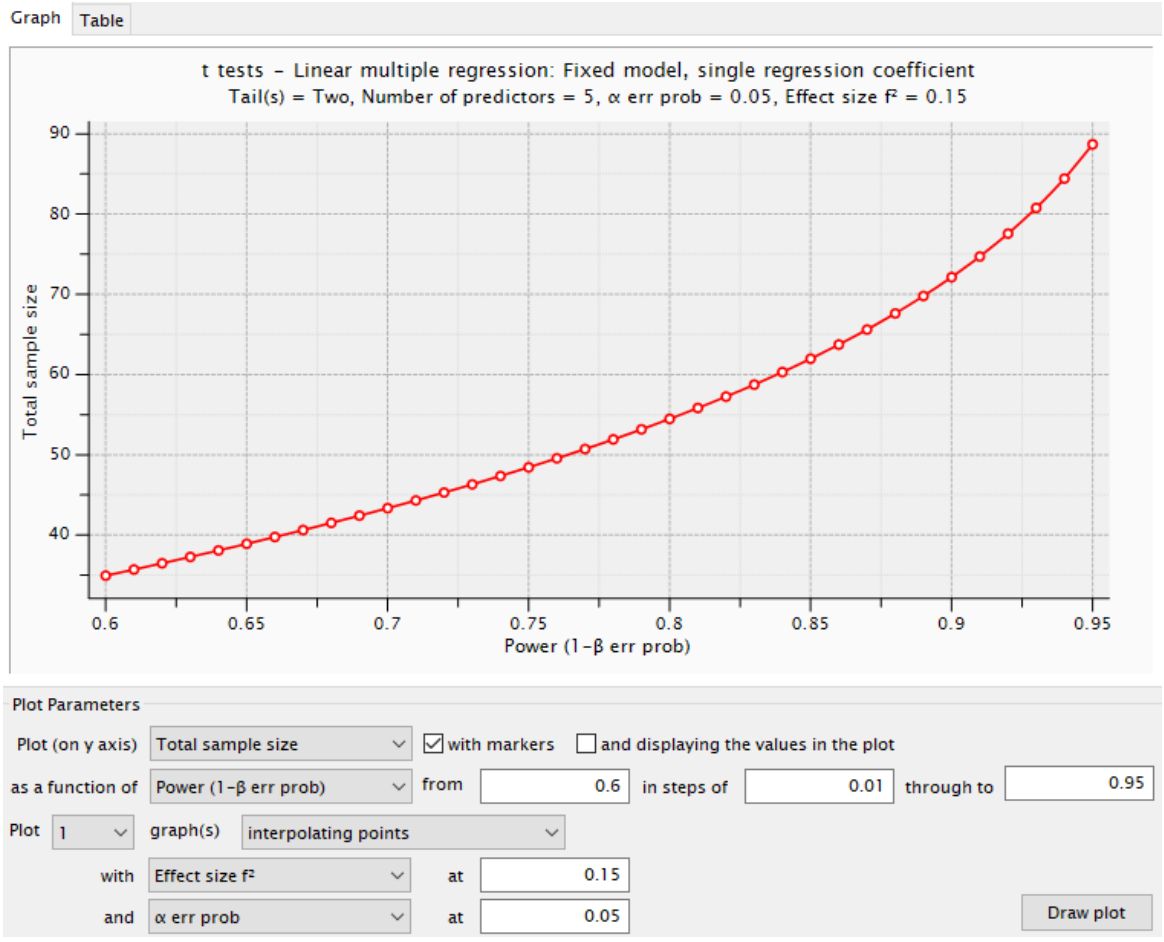
Appendix A: Keyword Searches

Table 1 - Key Word Search
Leadership + United States
Leadership + Styles + United States
Leadership + Quality + United States
Leadership + quality + metrics + United States
Leadership + quality + rehabilitation + United States
Leadership + hospital+ rehabilitation + United States

Table 2 - Key Word Search
Health care + quality + United States
Health care + quality + metrics + United States
Health care + quality + measurements + United States
Health care + quality + metrics + Rehab + United States
Health care + quality + metrics + Leadership + United States
Health care + quality + metrics + Rehab + Leadership + United States

Table 3 - Key Word Search
Patient Satisfaction + Quality
Allied Healthcare + Quality

Appendix B: Results of A Priori Power Analysis for Multiple Linear Regression



Appendix C: Foundational Healthcare Leadership Self-Assessment

Statement	Self-assessment 1=beginner, 5=expert				
1. I prioritize my activities	1	2	3	4	5
2. I engage stakeholders in the change process	1	2	3	4	5
3. I am accountable for my attitude	1	2	3	4	5
4. I cultivate a healthy personal life	1	2	3	4	5
5. I communicate in a timely manner	1	2	3	4	5
6. I approach problems in a positive and constructive manner	1	2	3	4	5
7. I hold team members accountable for their assigned work	1	2	3	4	5
8. I delegate work to the appropriate team member	1	2	3	4	5
9. I conduct effective meetings	1	2	3	4	5
10. I use active listening	1	2	3	4	5
11. I forgive others	1	2	3	4	5
12. I change my behavior based on constructive feedback	1	2	3	4	5
13. I apologize when appropriate	1	2	3	4	5
14. I effectively manage my time	1	2	3	4	5
15. I empower team members to develop solutions	1	2	3	4	5
16. I communicate in a respectful manner	1	2	3	4	5
17. I elicit input so that various opinions can be heard	1	2	3	4	5
18. I communicate clearly	1	2	3	4	5
19. I select a decision-making process based on the situation	1	2	3	4	5
20. I forgive myself	1	2	3	4	5
21. I help my team get the resources they need	1	2	3	4	5

Appendix D: Survey Email Invitation

Thank you for taking time to participate in this survey. I truly value the information you will provide. By participating in this survey, you made your voice heard and are helping shape the future of allied health therapy leaders in the medical field. I am looking to examine if there is a relationship between allied health therapy leaders in hospitals. The best way to do this is by asking you to participate in this Survey and to provide us with your responses to the questionnaire on how you are meeting the needs of patient satisfaction in your hospital setting.

This important survey is being conducted by Dickson Rodriguez, a doctoral student from Walden University. The survey will be offered through SurveyMonkey.com, an independent research organization. SurveyMonkey.com does not collect identifying information such as your name, email address, or IP address. Furthermore, SurveyMonkey.com is committed to keeping your responses strictly confidential and does NOT allow results that may identify you individually to be provided to any organization or any other third party unless permitted by you.

By participating in this survey, you will be making an important contribution helping me to improve and to serve our patients' satisfaction in hospital settings. This customer survey will run from **Monday, 7th of June until Friday, 27th of August**. Your opinion counts.

Please be sure to answer all questions as honestly and as accurately as you can. Remember, there are NO right or wrong answers. It is your honest feedback which we are seeking.

What do you have to do?

The customer survey is web-based and is set to be completed on-line. It should take around 30 minutes to complete. We encourage you to complete the survey in a secluded and quite area where you can concentrate without interruptions. The survey is set out in a few sections and every statement in each section should be responded to before moving to the next.

Please click on the link below to start the customer survey:

Survey address (URL)
https://www.surveymonkey.com/r/Alid_Hlt_Ldr-Pt_Sat-21

I would like to thank you in advance for your support and input. Should you have any concerns or questions about this survey, please feel free to contact Dickson Rodriguez from Walden University.

Dickson Rodriguez, doctoral student
Walden University