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Patient Views on Social Media Communication with Their Health Care Providers

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This is to certify that the doctoral dissertation by

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Abstract

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by

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MSN/MHA, University of Phoenix, 2009

BSN, MedCentral College of Nursing, 2005

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Communication between patients and health care providers at hospital discharge is a critical factor that determines whether a patient understands their treatment plan and self-care instructions. Lack of effective health management after hospital discharge can decrease the quality of life for a patient and increase the likelihood of costly hospital readmission. The purpose of this phenomenological study was to explore factors affecting the receptivity of patients using social media as a platform for post discharge, provider-client communication, and assessment. This was explored using social presence theory. Twenty patients between 45 to 65 years of age, who received care from hospitals in Northeast Ohio, were interviewed for the study. The data was transcribed and analyzed through open coding to create themes and clusters. The themes that emerged from this study were ease of use, privacy, and convenience as well as reasons why participants may access health-related social media being specifically linked to cohesive factors of ownership of their data. The personal relationship established between patient and provider influenced communication methods. Social connections were also deeply-rooted themes in the study as the influence of other people or the need to access data were among reasons for choosing to use social media. Ease of access, importance of confidentiality, quick response time from providers, and ability to see personal medical information was important to the participants in social media communications with providers. The positive social change implications of this study are that communication issues at discharge could be mitigated if patients would accept using social media for communication with their health care providers once they are at home.

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Chapter 1: Introduction to the Study

Introduction

Communication methods are effective if they lead to improved understanding, knowledgeable decision making, and achieve intended outcomes; however, in health care, it is challenging to ensure healthcare provider-to-patient communication serves the purpose for which it is intended (Adeoye & Pineo, 2014; Evanoff et al., 2015; Khan, Hassali, & Al-Haddad, 2011; King & Hoppe, 2013; Lawn, Delany, Sweet, Battersby, & Skinner, 2015). Providers may believe they are providing adequate hospital discharge information so that patients can effectively care for their disease once they are discharged, but a patient's perspective of the same interaction may leave him or her feeling unsure later about how to manage his or her illness (Chou, Hunt, Beckjord, Moser, & Hesse, 2009; Khan et al., 2011; Simon et al., 2013). Patients may be challenged when they attempt to understand the plan of care surrounding their diagnosis and self-care instructions once in the home environment. Prior to discharge from an acute care facility, interventions are needed to ensure each patient fully understands their transitional care, in order to forestall misunderstandings and subsequent adverse effects (Rennke et al., 2013).

Hospital readmission due to lack of communication or understanding, or lack of adequate information at discharge, can decrease the quality of life of the discharged patient due to the physical and emotional toll he or she experiences if he or she does not understand or follow aftercare instructions (Adeoye & Pineo, 2014, Bayati et al., 2014; Kirsch, Kothari, Ausloos, Gundrum, & Kallies, 2015; Press et al., 2013). As well,

readmission incurs a financial burden on patients as a result of new hospital bills coupled with decreased reimbursements from government or insurance agencies if the readmission occurs within 30 days of discharge (Elfstrom et al., 2012; Garrison, Mansukhani, & Bohn, 2013; Healthcare Cost and Utilization Project [HCUP], 2010; Kirsch et al., 2015; Rice, 2015). This study focused on factors affecting the receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication. There can be a variety of factors that limit patients' ability to follow-up with their providers at discharge that may stem from miscommunication, lack of resources, or lack of intuition from the patient. If patients are receptive to using social media for communication of required information, their diseases could be kept under control between visits or the patients could be maintained out of the hospital (Adeoye & Pineo, 2014). This has the potential to be a cost-saving option for the patients as the anticipated increased compliance may decrease the costs associated with complications of copays and readmissions. The decreased costs may also be experienced by health care organizations if penalties for readmissions are decreased or the population health of their communities are increased due to better disease management of more fluent communication between patient and provider (Elfstrom et al., 2012; Garrison, Mansukhani, & Bohn, 2013; [HCUP], 2010; Kirsch et al., 2015; Rice, 2015). This qualitative study explored factors affecting the receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication; the results could then allow providers to invest or not invest resources into enhancing social media communications with their patients.

This chapter will present a comprehensive description of the background of the completed qualitative study as well as the problem statement. Correspondingly, the purpose statement, research questions, theoretical framework, and nature of the study will follow. Operational definitions of key terms and phrases that are considered critical to understanding the study will be furnished to avoid confusion and provide necessary clarity. Assumptions, scope and delimitations, along with limitations relating to the phenomenological research design that are significant to the understanding of the study will be examined. Additionally, the significance of whether patients are receptive to using social media at discharge for communication with their health care providers as it relates to potential benefits will be discussed. The section concludes with a summary of the key points followed by a transition to Chapter 2.

Background

Federal dollars have been recently allocated to expand communication with patients after discharge by building their self-care skills and abilities to find resources with which to prevent hospital readmission (Evans, 2015). Specifically, in southeastern Ohio, the Area Council on Aging will spend $300 million over five years on transition programs to partner with agencies that target reducing readmissions to hospitals and focus on improving the health of the population (Evans, 2015). Using a social media platform to assist in post discharge follow-up care can be implemented as a transition program for patients to prevent their readmission. Social media sites such as Facebook© and Twitter® have been tested by many health systems to disperse general health information (Griffis et al., 2014; Harris, Mueller, & Snider, 2013; Henderson & Dahnke,

2015; Knight, Werstine, Rasmussen-Pennington, Fitzsimmons, & Petrella, 2015; Saleh et al., 2012; Wylie, 2014). Researchers have found that patients can benefit from social media communication; however, to be successful, the patient must be receptive to actively participating in this method of interaction (Knight et al., 2015; Saleh et al., 2012). Social media interaction could be an inexpensive way for patients and providers to communicate. If successful, the concept could have a positive impact on society by increasing communication at discharge and reducing readmissions to the hospitals.

Patient/Provider Communication

Communication between patients and providers is a necessary, but complex process that continues to be a challenge in health care delivery (Block, Morgan-Gouveia, Levine, & Cayea, 2014; Lawn, et al., 2015). Researchers have focused on how patients are prepared for discharge and communication post discharge because of the rising costs of patient readmission to hospitals within 30 days of the initial discharge (Adeoye & Pineo, 2014; Jackson, Shahsahebi, Wedlake, & DuBard, 2015; Layton et al., 2014; Rice, 2015; Snyderman, Salzman, Mills, Hersh, & Parks, 2014). Snyderman et al. (2014) contended that outpatient follow-up and improved communication between patients and providers can potentially reduce rehospitalizations of once discharged patients.

Outpatient Follow-Up

Various recommendations have been suggested for how outpatient follow-up should be structured and when office visits should be scheduled (Elfstrom et al., 2012; Garrison, Mansukhani, & Bohn, 2013; Nuckols, 2015). Most of the recommendations about early outpatient follow-up have been based on opinions instead of research, which

opens the door for further study involving interventions that can involve patient perspectives (Adeoye & Pineo, 2014; Jackson, et al., 2015; Snyderman et al., 2014).

Jackson et al. (2015) conducted a study involving seven clinical risk patient types and found that patient adherence to follow-up is inconsistent. High-risk readmission patients only followed up 51% of the time within 14 days, and low-risk patients only followed up 50% of the time in 14 days (Jackson et al., 2015). Low-risk patients who followed up within 14 days had a 1.5% reduction in readmission, and high-risk patients who followed up in 14 days had a 19.1% readmission reduction (Jackson et al., 2015). This provides a foundation for further research that can focus on alternative strategies for outpatient follow-up that will provide additional avenues of support to the patients other than what is currently available to them (Jackson et al., 2015). Alternative strategies for outpatient support should be manageable and proven from both a provider and patient perspective in order to effectively improve communication (Adeoye & Pineo, 2014; Jackson, et al., 2015; Snyderman et al., 2014).

Social Media

Chou et al. (2009) conducted a cross-sectional survey study of 5,078 respondents and found that, when analyzing Internet communication; social media networking sites attracted the most users and had the highest potential for impacting health communication. Recognizing that communication efforts for health care are widespread, Chou et al. found that education, race, or health care access does not impact social media use.

Curry, Li, Nguyen, and Matzkin (2014) evaluated current social media orthopedic patient use to maximize recruitment and pre-surgery communication strategies for a large academic medical center. The results from 752 respondents included that that 51% of the patients used social media sites, either Facebook© or Twitter®, and patients that lived between 120 and 180 miles from the hospital used it more frequently, p= 0.06, 95% CI [0.96, 17.29] (Curry et al., 2014). Curry et al. (2014) did not ask about the influence or perceptions of the social media sites and did not explore patients' perceptions in rural settings; hence, further inquiry into these sites among rural populations could be beneficial. Social media may be a venue for improved communication between patients and health care providers to prevent readmission as it allows for more innovative ways for people to share and explore information (Chou, et al., 2009; Lomborg, 2012; Moorehead et al., 2013; Wylie, 2014). There have been some physicians who have begun to use Facebook© for real-time reminders, opening the door between patients and physicians to use this platform (Haupt, 2011).

Age Related Preferences

Communication preferences, such as social media between provider and patient may change with the age of the patient. Although different age groups often have similar communication preferences (Kalmus, Masso, & Lauristin, 2013; Richter et al., 2015), few researchers have focused on middle aged populations. Previous research of social media preferences for learning or communication by age has focused on young adults or older adults, leaving a gap in recognizing the preferences of the middle age groups (Campanella, Hocheol, & Gary, 2015; Chou et al., 2009; Hutto et al., 2015; Kalmus, et

al., 2013; Tu & McIssac, 2002; So & Brush, 2008; Swan, 2002; Vincent, & Velkoff, 2010; Werner, 2011). Eliciting the perspective of adults ages 45- 65 years old may determine if this age group's communication preferences are different than other ages of patients who have used social media.

Problem Statement

Communication between patients and health care providers is a critical component in determining whether patients understand their diagnosis, treatment plan, and self-care instructions when they are not present in the office or in the hospital (Gill & Cowdery, 2014; Khan et al., 2011; Spehar et al., 2015). The communication to patients regarding their medication instructions at home have shown to be inaccurate 25% to 70% of the time (Thompson-Moore & Liebl, 2012). Previous research has found that miscommunication causes the patient to be at risk for not understanding their medications or expectations of care once they are home and this could lead to a readmission to the hospital (Adeoye & Pineo, 2014; Hvalvik & Reierson, 2015; Kirsch, et al., 2015). The HCUP data in 2010 found that between one in three patients for fewer common procedures were readmitted and one in five were readmitted for more common diagnosis (HCUP Statistical Brief, 2010). This is costly to both the patient and the organization from which the patient was discharged. The cost of readmission for various illnesses can range, on average, from $7,100 to $20,800 for each episode (Rizzo, 2013). In 2015, the readmission penalty, which is when a patient is readmitted to a hospital within 30days, increased from 0.35% to 3% for Medicare payments (Rice, 2015).

Improved care transitions from the hospital to home and timely follow-up after discharge through communication between health care providers and patients can reduce readmission (Jackson, et al., 2015). Social media may offer an opportunity to improve communication between patients and health care providers to prevent readmission as it is allowing for more innovative ways for people to share and explore information (Chou et al., 2009; Lomborg, 2012; Moorehead et al., 2013; Wylie, 2014). There have been physicians who have begun to use Facebook© for real time reminders, opening the door between patients and physicians to utilize this communication (Haupt, 2011). A United States survey of 1,060 adults found that 90% of individuals ages 18 to 24 and 56% of adults ages 45 to 64 would engage in health activities or trust information on social media (Health Research Institute, 2012). Using this knowledge of acceptance of social media and the communication issues at discharge, it would be valuable to determine if patients would accept using social media for communications with their health care providers. Limited research has explored the opportunities that exist for using social media for patient education. There is a gap in understanding of how social media can be used to effectively improve communications between patients and health care providers (Moorehead et al., 2013).

Purpose of the Study

The purpose of this qualitative transcendental phenomenological study was to explore factors affecting the receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication and assessment. Understanding the lived experiences patients have had with social media for recreational

purposes searching social media for health information will allow a deeper understanding of the benefits and challenges associated with its use. Exploration of the receptiveness of using a social media platform upon discharge is needed to address the current research gap for improving communication with social media for patients when they are not in a health care setting.

Research Questions

RQ1: How do factors associated with intimacy in communication mediums influence client and physician perceptions of social media as the platform for engaging in post-discharge assessment and communication?

RQ2: How do factors associated with immediate access to information influence client perceptions of social media of social media as the platform for engaging in post-discharge assessment?

RQ3: How do factors associated with interactive communications influence client use and experience with social media platforms?

RQ4: How do factors associated with cohesive communications influence client use and experience with social media platforms?

Theoretical Framework

The social presence theory will be used as the theoretical framework for this study. The social presence theory was originally created in 1976, by Short, Williams, and Christie and later evolved by Gunawardena (1995) to include the concept of a real person in online interactions. Components of the social presence theory include affective, interactive, and cohesive indicators (Annamalai & Tan, 2014). The concepts of intimacy

(Argyle & Dean, 1965) and immediacy (Wiener & Mehrabian, 1968) are important to the learner as they create a more dynamic and interactive presence during learning (Greenleaf, 2011). These indicators and concepts that create the framework of the social presence theory are more thoroughly explained in Chapter 2.

Previous studies have used this framework when looking at online interactions and used the theory to assume that online communities could be built by the interactions on social media (Smith & Tirumala, 2012). The social media site Facebook© has also been reviewed to evaluate the components of the social present theory of interpersonal communications and belonging (Öztürk, 2015). Studies have been conducted to evaluate online learning environments and the social presence theory. Findings indicate that learning preference is impacted by the level of social presence that participants feel (So & Brush, 2008; Tu & McIssac, 2002).

The evolved framework of the social presence theory from 1976 to 1995 was appropriate for this study to determine if patients could build a community between them and health care providers. It would also guide how effective the education component of the utilization of social media for patients as this theory is being evolved to apply to the method of online learning (Elwood, McCaleb, Fernandez, & Keengwe, 2014). Since there is a link in prior research working with the social presence theory for evaluating online relationships and communications, it is believed that the theory provided a workable framework to lead the study and evaluate the data collected from the interviews. These connections are supported in further detail in Chapter 2.

Nature of the Study

The purpose of this qualitative phenomenological study was to explore factors affecting receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication and assessment. A qualitative method of research was deemed appropriate because participants described their perceptions, attitudes, and lived experiences about what factors they encounter that add to or detract from understanding instructions given by health care providers. Participants were encouraged to provide data useful for generating this under researched area (Pistrang & Barker, 2012). Once a qualitative methodology was determined, the design of the study was researched, and a decision was made that phenomenology would be appropriate because it allowed participants to explore the driving constructs behind the phenomenon that is the target of the study (see Pringle, Hendry, & McLafferty, 2011).

Phenomenology specifically offers a deeper understanding of phenomena, through the words of the study subjects from previously lived experiences (Chou et al. 2009; Curry, et al., 2014; Patton, 2002; Sheehan, 2014). Phenomenology, an explorative form of qualitative research, encompasses a process to capture the essence of lived experience with which the researcher was able to categorize and interpret the human experiences related to social media from the testimonies of the participants (Yin, 2014).

Data was collected from the participants as they revealed personal experiences during semi structured interviews with open-ended questions that I asked. I transcribed the interviews were audio recorded and transcribed by the within 48 hours from the conclusion of the encounter. The interviews were then assessed for significance through

theme analysis to answer questions about who says what, why, to whom, how, and with what effect. The themes of each interview were summarized to create codes that determined what information was discovered. The coded data formed clusters that were organized for further analysis.

Another source of data was my observations of the participants. My manual transcription was used to transcribe the audio recordings into print. Each transcript was then be coded for themes with software NVivo17® (NVivo17®, 2017). NVivo17® is software that allows researchers to upload audio files into a program that codes the words and phrases and creates lists of themes and patterns in the language (NVivo17®, 2017). . Inductive reasoning, the final step in analysis (Yin, 2014), allowed me to understand and interpret the results.

Definitions

Client: The term client is used interchangeably with patient to describe a person receiving health care (Deber, Kraetschmer, Urowitz, & Sharpe, 2005). The term client was adopted as a more universal term for patient by the American Nurses Association Code for Nurses in the 1970s (Davis & Davis, 1992). For the purpose of this study, client may be used as a substitute for the term *patient* throughout the paper.

Discharge instructions: Discharge instructions are *w*ritten and verbal information given to patients that they are to follow when leaving the hospital (Wibe, Ekstedt, & Hellesø, 2015). These instructions contain crucial information for how patients should manage their care at home and the proper use of these instructions impact the clients' outcomes at home (Zeng-Treitler, Kim, & Hunter, 2008).

Health care providers (HCP): Health care providers are considered doctors of medicine or osteopathy authorized to practice by their state along with others in the state licensed to provide services that include podiatrists, dentists, clinical psychologists, chiropractors, nurse practitioners, nurse-midwives, and physician assistants, who are practicing under their scope established by the state law (#29 Code of Federal Regulations § Section 825.125, 2014). HCP are also educators to the patients they treat by supplying the clients with the essential knowledge to manage their condition and be active participants in care with shared-decision making (AARC & Respiratory Care Journal, 1996).

Assumptions

It was assumed, for the purpose of this study, that participants provided open, thick, and rich descriptions during the interview process (see Patton, 2002). It is assumed they based their responses on their experiences with social media communications as this is important to the understanding of the phenomena. This assumption is also important to the context of the study because it allowed for a deeper understanding of the benefits and challenges associated with social media that were experienced by participants in previous usage of this communication medium. Furthermore, this rationale supports the postulation that those who have lived through an experience or phenomenon are more apt to accurately explain it.

I also assumed that one should not be preoccupied with method and the traditional concerns of reliability, generalizability, or validity thus, allowing the exploration of the phenomenon through data supplied by the participants. It was assumed that interviews

were an accurate reflection of each participant's point of view. The assumption is that participant accurately recalled experiences after their discharge from hospitals, and it is assumed that they provided candid and straightforward replies regarding that experience. This assumption is essential or else it places the study at risk for respondent bias.

Scope and Delimitations

Communication is a known barrier to effective health management (Adeoye & Pineo, 2014; Baldwin, 2013; Thompson-Moore & Liebel, 2012) and improvements in this area has opportunities to benefit both patients and providers. Understanding the benefits and challenges associated with social media use may allow for guidance in creating cost effective opportunities for providers and patients to communicate easily. In this study, I explored if middle-aged patients were receptive to using social media as a platform for post discharge provider-client communication and assessment. This information will allow providers to determine if resources such as time should be devoted to enhancing social media communications within their practice.

The study took place in Northeast Ohio, due to convenience for me, and engaged male or female patients. Patients younger than 45 years old or older than 65 years old were excluded from the study since the focus of the study was middle-aged patients. Also, patients who are unable to speak, read, or write English were omitted from the study since I only used this language in study materials and during interviews. The interviews were conducted in English, and all written material pertaining to the study was distributed in English only. Therefore, only English speaking and literate patients were asked to participate. The participants may have identified themselves as male, female, or

transgender. They may also have identified themselves as part of any ethnic and/or religious group. The participants must have had previously lived experiences with social media communications for any purpose. Exclusion for the study occurred if participants were unable to express their thoughts and experiences to the researcher due to a learning difficulty or mental health problem.

The learning theory of connectivism was considered for this study as it relates to online education and social media. This theory is relevant as it was developed as a learning theory specifically for online, technological environments (Flynn, Jalali, & Moreau, 2015), which is the setting in which this study focuses on. The theory of connectivism evolved from expanding on the theories of behaviorism, cognitivism, and constructivism to include learning experienced by a person through technology or within organizations (Siemens, 2005). This theory could be used in online teaching environments where the learning took place between the student and their online community of peers and teachers (Siemens, 2005); however, this theory was not chosen as it still is relatively new and has not been widely used in other research studies in comparison to the social presence theory that was chosen for the study. The theory of connectivism also faces many critics due to concerns if it is an individual theory or a combination of others (Duke, Harper, & Johnston, 2013). Another reason for not choosing the learning theory of connectivism was due to the lack of it producing results exhibiting that using the framework was successful to learning caused some to view it as a tool for learning rather than an established theory (Duke, Harper, & Johnston, 2013).

Rogers' theory of diffusion of innovation was also considered as a framework for the study due to its influencing properties of accepting innovations (Blumberg, 2016), in this case, social media as a means of communication. Rogers' theory describes internal characteristics of the learner and how they adapt to change on a bell curve split into five categories from the few innovators to the final laggards (Rogers, 2003). Rogers' theory has been applied in studies to examine the adoption of information technologies into healthcare organizations carefully looking at it the length of time it took employees to move through this type bell curve (Liebe, Husers, & Hubner, 2016). This awareness is beneficial to leaders as they examine how they plan future implementations of such a system. This framework may allow for a discovery of how patients adapt more quickly or later to using social media for communications, but it will not answer the research questions about their receptivity of using it for post discharge interaction with their providers', therefore, it was not chosen for the study.

The study methodology may be replicated for other similar studies that are intended as explorations of the receptivity of a population by previous lived experiences. The same study method and design may also be transferred to other age groups such as adults older than 65 to address their receptivity to using social media as a platform for post discharge provider-client communication and assessment. However, transferability of the results may not be like other age groups due to differences in availability of social media, particularly in rural areas where electronic communications are limited.

Limitations

The qualitative phenomenological research design poses specific limitations that develop from the study when using this approach. Creditability and dependability are heavily determined by the style of the researcher and their ability to manage bias (Miles, Huberman, & Saldana, 2014). There are different forms of researcher bias that need to be considered and evaluated to prevent corruption of findings, which includes elite bias or overweighting of data, personal bias based solely on intrinsic feelings of the researcher, and lastly, a native basis when a researcher loses his or her perspective and converts to the participants' (Miles et al., 2014). These biases were addressed through proven phenomenological analysis methods such as epoche, bracketing, and member checks. Using epoche assists in determining viewpoints or assumptions about the phenomenon prior to every interview will enable consideration with unpolluted and open perceptions (Rubin & Babbie, 2014). I completed this step by journaling their viewpoints, assumptions, and experiences enable use as a reflection in the future if needed.

Open-ended questions were presented throughout the interview process that enabled the participants to express their receptivity to using social media as a platform for post-discharge provider-client communication and assessment. Bracketing was also a method applied to reduce potential limitations of the study as an ongoing tool. Bracketing, in this sense, occurred by removing the phenomenon from irrelevant factors that allow it to be interpreted and studied (Patton, 2002). This occurred throughout the study by locating key statements or phrases spoken by the participant regarding the phenomena of social media as a platform for post discharge provider-client

communication and assessment, interpret the meaning, inspect the meaning, and offer a narrative regarding the receptivity of the phenomena supported by the inspected meaning (Patton, 2002). Methods of reflexive thinking such as self-awareness and self-flection before beginning the data collection to acknowledge the limitations that may be present when a literature review was conducted prior to bracketing in phenomenology were also used (Chan, Fung, & Chien, 2013). In an ideal state, the literature review would not have occurred until after bracketing; however, this was not possible to verify the need for the study.

I used member checks to ensure that the information obtained from the participants was accurately capturing the intended meaning of the phenomena through the participants' eyes. Member checks allow the researcher an opportunity to follow up with the participants who were interviewed during the study to validate the findings that were concluded in the analysis (Patton, 2002). Using this strategy strengthened my credibility within the study because it allowed the participants chances to approve, explain, and/or debate any of the findings made by the researcher from the encounter (see Lincoln & Guba, 1985).

Social response bias may also be a conceivable limitation within the study. I followed a strict interview protocol to prevent intentionally misleading the participant into answering their experiences based on the interviewer's views on social media (Patton, 2002). The transcripts were also reviewed after the interview to acknowledge any leading questions or statements that may have occurred during the interview that would reflect any leading potential bias.

Data quality is a potential limitation that could occur in the study. This was addressed through checking for representativeness and triangulation of the data and the researcher (see Miles et al., 2014). I followed strict methodology and kept accurate written and audio records for validation. I enlisted the services of an independent researcher to check the themes of the research to ensure themes do not develop without explained in the study findings (see Hamill & Sinclair, 2010). It was expected that they followed the same protocols I developed and used to confirm that an established percentage of agreement was found.

Significance of the Study

Results from the study may reduce communication barriers between providers and middle-aged patients by uniquely looking at their receptivity for using a social media platform at discharge for interactions. The study could uniquely address post discharge miscommunication between middle-aged clients and their providers by qualitatively examining the participants' receptivity to the usage of social media as a medium for client-provider communication. The results of this study may guide organizations in creating effective social media pages to communicate with patients quickly and efficiently. This could lead to increased patient compliance and improved population health as communication is a known barrier to effective health management (see Adeoye & Pineo, 2014; Baldwin, 2013; Thompson-Moore & Liebl, 2012).

Despite the growing use of social media in society, a search of the literature revealed little research has been undertaken to explore patient receptivity to using this medium as a forum for post discharge communication with providers. Currently, in

Southeast Ohio, the Council on Aging will spend up to $300 million for community agencies to assist patients in finding resources to prevent hospital readmissions (Evans, 2015). Assuming that social media could be effectively designed and implemented in a manner that meets the needs and expectations of patients, it could possibly result in a more cost-effective mode of client-provider communication outside of the tertiary care setting. This could lead to potentially positive social change by reducing existing communication barriers between patients and providers, improving timely access to healthcare professionals, better coordination of care, and lower incremental healthcare costs. Recent studies of a smartphone application use with patients found that what was primarily approved were stretching and exercise videos, educational information, and medication reminders (Layton et al., 2014). A social media platform could have these capabilities and could improve follow-up care compliance.

Summary

A patient's discharge from the hospital can be complicated by the number of instructions he or she receives when leaving. If they do not understand the instructions, it puts them at risk for adverse effects and readmissions to the hospital, which would be costly both to the patients and the hospital from which they were discharged. The importance of timely follow-up and clear communication between providers and patients has been established. The growing popularity of social media makes it a possible solution that could be implemented as supplement or substitute for traditional methods. It has been used effectively as a means of communication for other reasons, and like online learning, has the potential for providing important education to patients; hence, the completed

study about the receptiveness of patients for utilizing social media as a method of communication between them and their providers.

In this chapter, I illustrated the problem of concern and provided an explanation of the background of influential factors that motivated the proposed qualitative study. The purpose of the study was clearly stated; along with the specific research questions that drove the methodology of the study. The social presence theory was identified in this chapter as the theoretical framework, and the proposed nature of the study followed a phenomenological research design. Definitions and detailed assumptions were presented. The justification for conducting the study was described in the significance of the study after acknowledging potential limitations could have occurred within the research design. The chapter concluded by identifying potential opportunities for social change created by the outcomes of the study.

In Chapter 2, I will construct a literature review that begins with a description of the search strategy to allow for replication of findings. It will include a synthesis of how limited or inadequate communication at discharge can cause adverse effects for both patients and health care providers, the current use of social media by patients and health care providers, and a discussion about the lack of communication or miscommunication that has been identified to be a factor in readmission to hospitals after discharge (Adeoye & Pineo, 2014; Baldwin, 2013; Khan et al., 2011; Singh, Lin, Kuo, Nattinger, & Goodwin, 2013). The chapter will also elaborate on the social presence theory, as the theoretical framework of the study.

Chapter 2: Literature Review

Introduction

The purpose of the study was to explore the receptivity of adults aged 45 to 65 years old to using social media as a platform for post discharge provider-client communication and assessment. It has been established that social media is easily accessible due to access from computers, tablets, and smartphones, which could create an opportunity for positive and open communication between patients and healthcare providers as long as the information shared is accurate and maintains patient confidentiality (Amrita, Rajendra, & Biswas, 2013; Bordolol, Gazo, Paranjpe, Clausen, & Fierra, 2011; Cobb & Graham, 2012; Griffis et al., 2014; Henderson & Dahnke, 2015; Moorhead et al., 2013; Wylie, 2014). Providers and patients need to interact after discharge because miscommunication causes the patient to be at risk for not understanding his or her medications or expectations of care once he or she is home; this could lead to a readmission to the hospital (Adeoye & Pineo, 2014; Hvalvik & Reierson, 2015; Kirsch et al., 2015).

Patients who experience a readmission often have difficulties such as medication-related problems, delayed medical treatment, infection, falls, and abnormal laboratory results that may or may not have been prevented with clearer communication at discharge (Davis, Devoe, Kansagara, Nicolaidis, & Englander, 2012; Elfstorm et al., 2012; Fischer et al., 2014; Okoniewska et al., 2015; Romagnoli, Handler, Ligons, & Hochheiser, 2013). There is also a financial risk to the organization and patient as the cost of readmission can range from $7,100 to $20,800 for each episode of readmission (Rizzo, 2013). This causes

many health care organizations and leaders to look for ways to reduce readmission to provide a higher quality of care to patients and reduce financial burdens on the hospital (Fischer et al., 2014; Herrin et al., 2015; Nuckols, 2015). In Southeast Ohio, up to $300 million is spent by the Council on Aging to work with agencies to reduce readmissions to hospitals (Evans, 2015). Communication through social media platforms may provide an opportunity to positively influence society by providing an inexpensive way for patients and providers to interact and possibly prevent readmissions to the hospital based on the results of the study.

The literature review begins with a description of the search strategy that was used to locate relevant empirical studies about the topic of the study. The social presence theory is reviewed in terms of its origins and role in similar research, which is intended to establish how it supports the study. A description of how limited or inadequate communication at discharge can cause adverse effects for both the patients and the health care providers follows. Research that was conducted to examine the purpose of communication and age-related preferences to accessing information is presented with a focus on current utilization of social media by patients and health care providers. Social media has been found to have multiple uses from advertising to peer-support groups that actively seek out patients with specific diseases (Bugshan, Hajli, Lin, Featherman, & Cohen, 2013; Curry, et al., 2014; Greene, Choudhry, Kilabuk, & Shrank, 2011).

The communication preferences of different age groups and social media preferences of adults are reviewed as represented in empirical research studies. Information is also presented about the challenges of communication between patients

and providers including the lack of physician knowledge relating to their patients' desires for more information regarding their disease (Khan et al., 2011). Lack of communication or miscommunication has been found to be a factor in readmission to hospitals after discharge (Adeoye & Pineo, 2014; Baldwin, 2013; Singh et al., 2013), which is reviewed based on available literature. Readmissions have found to be costly to patients and health care organizations (HCUP Statistical Brief, 2010; Jencks, Williams, & Coleman, 2009; Rice, 2015).

Literature Search Strategy

The review of the literature was conducted through multiple searches using several online research databases focusing on empirical research articles published in the last 5 years. The databases that were used included Medline, CINAHL Plus, Thoreau Multi-Database Search, PubMed, Ovid Nursing Journals, SAGE Premier, Cochrane Database of Systemic Reviews, ProQuest Central, Academic Search Complete, and Science Direct from the Walden Online Library. Google Scholar was accessed through the Walden Online Library to search specific article titles found in reference sections of articles previously read. The specific components of the social presence theory were retrieved through Google Scholar and studied. Health care magazines published in the last 3 years were also used to identify current studies that could be found in the appropriate peer-reviewed sources. The Cleveland Clinic Library, Medicare.gov, the Health Research Institute, and the Agency for Healthcare Research and Quality were used as trusted sources of raw data about the current state of medicine in the U.S. with

statistics pertaining to the study. The review included early research efforts regarding the social presence theory framework suggested for the study.

The search terms *patient, ages 45-65, middle aged, senior citizens, elderly, provider, physician, nurses, social media, discharge, barriers, hospitals, health care, readmission,* and *communication* were used as inquiries in all databases. Google Scholar yielded large results with *patient perception communication barriers* at 16,400, *hospital discharge communication barriers patients providers* found 16,900 articles, and *patient perception communication hospital discharge readmission* found 7,450 items. Academic Search Complete retrieved 1,233 articles with the term *patient provider communication*, 2,125 articles with the terms *patient* and *communication,* and *barriers.* The results were more manageable with the terms *patient perception of communication* with 636 results from Academic Search Complete. The Medline, CINAHL Plus, Thoreau Multi-Database Search, PubMed, and ProQuest Central databases also provided similar results numbers when done in the same order. Articles were then reviewed by year of publication, relevance to the study, or similar research questions. These database searches also included *nurse communication barriers* that still yielded large results of 615 and adding the filter *hospital* the results slimmed down to 92. These were then sifted through to only include the last 5 years and there were 33 articles retrieved in Academic Search Complete.

Social media in health care yielded 55 results and *social media and senior citizens* achieved only 10 articles. Saturation was achieved through journals when the same articles began to show up in searches from all databases. When reviewing sources

from articles reviewed the same journals with relevance to the last 5 years were found. The theoretical framework literature search also began with the terms *social learning theory* and *patient* with 2,077 results. *Communication* was added to the filters then *physician* or *nurse* for a total of 34 results that were reviewed. Looking at framework research was the only time that articles older than 5 years were reviewed, and the majority of articles reviewed were in the last 3 years as social media has become more accessible and widely-used in the last few years.

The Thoreau Multi-Database Search was searched for specific information about middle aged adults using the search terms *middle aged adults* and *social media* with 13 results that were not related to the topic. This search was used in ProQuest with *middle aged adult* and *communication* and returned 3,193 results that filtered down to include *social media* found similar results to the Thoreau Multi-Database Search. Google Scholar returned many of the same articles but did produce five that were relevant to the study.

The articles that were retrieved from the searches provided reference lists that were also used to find primary sources of information using Google Scholar. All articles retrieved were peer reviewed and full text. There was no research found that directly addressed patient's perceptions about utilizing social media for communication with providers after they were discharged from hospitals. Most of the research focused on implications or possibilities of social media communication and communication barriers between patients and providers.

Theoretical Foundation

Communication theory began to emerge in the 1970s with the exploration of how people perceive and prefer intimacy regarding face-to-face, telephone, or televised communications (Short, 1974; Short et al., 1976; Williams, 1975, 1977, 1778). Researchers focused on elements of communication and how they were received by the study participants. Short (1974) explored negotiations and found that persons arguing a case they agreed with did better in person or televised, while those negotiating a case did not agree with did better with telephone negotiations. Williams (1975) found that sensitive or confrontational needs to communicate, considered high-intimacy, were most preferred to be done on the telephone versus in person. The social presence theory, created by Short, Williams, and Christie in 1976, was founded on the interpretation of how two individuals interact through mediums such as visual or audio communications (Short et al., 1976). The quality of the intimacy of the interaction was found to be dependent on the quality of the medium as intimacy is determined through verbal and non-verbal cues (Short et al., 1976).

The primary social presence theory was a consideration of characteristics and levels of intimacy between television and telephone communications (Short et al., 1976). Short et al. (1976) asserted that both mediums created immediacy, but that television allowed for greater feelings of intimacy because the nonverbal cues of communication were stronger (Gunawardena, 1995). The theory was expanded upon in 1995 by Gunawardena who encompassed online interactions with the concept of a real person. The original theory did not include online environments as a medium for communication

because they did not exist in that time period. The opportunity to use the Internet as a medium for communication became known as a *computer learning environment* and created an opportunity to re-evaluate the social presence theory to include online interactions (Gunawardena, 1995).

Gunawardena (1995) explored computer mediated conferencing in relationship to the social presence theory after the Internet became increasingly popular and widespread. Gunawardena found it was possible to create a strong sense of social presence as long as the computer mediated environment held a strong sense of community from a group uniting under a common goal. The social presence theory is comprised of affective, interactive, and cohesive indicators (Annamalai & Tan, 2014; Short et al., 1976), which continue to be evaluated to the present day. The social interactions that occurred in computer mediated conferencing in Gunawardena's study contained indicators earlier studied with the social presence theory. The evolution of the theory is valuable as technology continues to expand.

Affective indicators

Affective indicators in relationship to social media or text interactions are comprised of expressions of emotion by punctuation, capitalization, characters or emoticons; the use of humor; and displaying vulnerability to the receiver (Rourke, Anderson, Garrison, & Archer, 2007). The understanding of these forms of communications may be challenging for patients who are unfamiliar with social media usage and assessing them was important for this study since they are a large part of communication through social media. A study regarding students in an online learning

environment found that, of 235 postings on social media, there were 663 affective communications (Swan, 2002). It was theorized that students were using these means to compensate for not having the ability to use nonverbal communications (Swan, 2002). This was consistent with the finding of Gunawardena and Zittle (1997) in their evaluation of online learning environments. These studies highlight that expressions of emotion are a component of communication. If it is perceived that component is absent, it may increase other indicators in social presence (Gunawardena &Zittle, 1997; Swan 2002).

Interactive indicators

The interactive indicators are the responses the readers have after someone starts a thread or states a comment to continue the conversation by quoting, referencing, asking a question, agreeing with, or complimenting the original message (Rourke et al., 2007). Interactive indicators are important to create a true social presence in an online teaching environment as the ongoing communication between teacher and learner creates engagement and builds understanding of the messages being exchanged (Cui, Lockee, & Meng, 2013; Dunlap & Lowenthal, 2009; Mykota & Duncan, 2007). Teachers in an online learning environment have a critical role in facilitating interactivity as their participation levels positively correlate to those of their students (Richardson & Swan, 2003). Interactive indicators is the continued interaction between members of the conversation, whether in person or online. A presence is created by members of the conversation as they interact through continued conversation (Richardson & Swan, 2003; Rouke et al., 2007)

Cohesive indicators

Cohesive indicators are a personalization or giving ownership to a person or the group in a response (Rouke et al., 2007). This would include addressing someone who posted by name, referring to the group as *we* or *our*, and opening the conversation in the group with a greeting to all (Rourke et al., 2007). It was found that over time in an online learning environment the number of affective indicators will decrease as the groups cohesive indicators increase (Akyol & Garrison, 2014). The interactivity that online groups have with the use of these indicators is not realized by all with access to online learning. Others have been able to experience the positive effects of being part of an online learning community (Gunawardena & Zittler, 1997). Social presence is also influenced in the online environment by the level of satisfaction of students (Gunawardena & Zittler, 1997). Researchers have shown strong positive correlations between social presence, student satisfaction, instructor satisfaction, and perceived learning (Gunawardena & Zittler, 1997; Richardson & Swan, 2003).

No study was found concerning the receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication and assessment; therefore, the social presence theory constructs of affective, interactive, and cohesive indicators were used to evaluate if factors associated with intimacy are perceived by clients in the online social media environment to engage in post discharge assessment and communication. The use of these indicators helped me determine if social media can provide an opportunity to create the same level of intimacy that the framework has shown in other forms of communication.

Historically, the social presence theory has been used to evaluate telephone and television perceived intimacy and therefore is an appropriate framework to examine if intimacy is created through social media (Short, 1974; Short et al., 1976; Williams, 1975, 1977, 1978). Because the purpose of the study involves receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication and assessment, social presence theory provided the foundation upon which to determine if the immediate access to information influences patient perceptions. Immediacy has been found in studies in both television and telephone communications (Cui, et al., 2013; Dunlap & Lowenthal, 2009; Mykota & Duncan, 2007). The interactive indicators for communication in the theory were included in the study to explore if patients are influenced by their current experiences with social media. These indicators have been found to be influential in creating social presence in the online environment (Cui, et al., 2013; Dunlap & Lowenthal, 2009; Mykota & Duncan, 2007). Exploring perceptions of use is critical to the success of the implementation of social media communication between patients and providers since it requires interaction between both parties. Finally, the social presence theory was used to help determine if factors associated with cohesive communications have influenced patient use and experience with social media.

The concept of connecting patients and providers in this type of online environment will be more successful if the patients are able to feel connected through cohesive indicators to encourage continued communication following discharge. The social presence theory concepts of intimacy, immediacy, interactive indicators, and

cohesive communication was used to focus responses from the patients that appear to be interested, or disinterested, in using social media to connect with providers once discharged from the hospital. No study was found regarding these elements of communication between discharged patient and their medical practitioners.

Social Presence Theory in Online Learning Environments

Researchers investigated the social presence surrounding online learning environments effectiveness (Kreijns, Kirschner, & Jochem, 2003; Kreijns, Kirschner, & Vermalen, 2013; So & Brush, 2008; Tu & McIssac, 2002). Learning preferences were cited by So and Brush (2008) who found a correlation that students who preferred individual work perceived lower levels of social presence, $r = -.39$, $p < .01$, in comparison to those who preferred group learning and perceived higher levels of social presence , $r = .41$, $p < .01$. There were limited studies about middle aged populations; many were conducted with participants of a mean age in their twenties (Ozturk, 2015; Smith & Tirumala, 2012; So & Brush, 2008). The social theory framework is still useful because the number of adults using social media has continued to increase over the last 6 years (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015; Perrin, 2015). The Pew Research Center began to collect data from 2009 and found that, since then, the number of American adults using social networking sites has increased by 58% (Perrin, 2015). Add summary and synthesis to fully develop and then conclude the paragraph.

Social Presence Theory in Social Media

Smith and Tirumala (2012) used the social presence theory to determine if the social media application, Twitter®, was being used as a supplemental learning activity

for undergraduate students. The study was based on previous researchers who found that an online social presence by instructors enhances social presence, belonging, and satisfaction of students (Gunawardena, 1995; Richardson & Swan, 2003; Rovai, 2002). Study results showed the experimental group had a higher level of social presence in comparison to the control group (Smith & Tirumala, 2012). Other researchers also looked at social presence and student comfort levels of communication in social media outlets such as Twitter®, Facebook©, and Myspace and determined higher levels of interaction increased theory indicators (Gunawardena et al., 2009; Moody, 2010; Tu, 2000; Tu & McIssac, 2002).

The application of the social presence theory used by Ozturk (2015) was as an element of a study being done to determine if Facebook© groups predicted academic success and motivation. The justification for using the theory was that the social media site, Facebook©, facilitates social presence through communication and interaction (Ozturk, 2015). For the study, 198 students in an educational philosophy course were divided into six Facebook© groups for online learning in addition to face-to-face learning (Ozturk, 2015). The Pearson correlation coefficient was used to determine the relationship between social, cognitive, and teaching presence; the relationship was evaluated through logistic regression analysis (Ozturk, 2015). The results of the study compared small and large groups and found the following for small groups with an n of 81: cognitive presence, (mean) $M = 3.3683$, standard deviation (SD) = 0.42550, social presence, $M = 3.2099$, $SD = 0.49504$, and teaching presence, $M = 3.5774$, $SD = 0.33200$ (Ozturk, 2015). Large groups with an n of 73 demonstrated cognitive presence, $M =$

2.9945, *SD* = 0.52552, social presence, *M* = 2.7778, *SD* = 0.5644, and the teaching presence, *M* = 3.33, *SD* = 0.51499 (Ozturk, 2015). These findings suggested that Facebook© is an adequate setting for online discussion and learning as teaching, social, and cognitive presence were found to have a high-level positive relationship, but held higher positive relationships in small groups compared to larger groups (Ozturk, 2015).

The social presence theory has shown that online learning environments can be used for individual and group education and has been proven to be an effective media for education (Gunawardena et al., 2009; Moody, 2010; Ozturk, 2015; Smith & Tirumala, 2012; Tu, 2000; Tu & McIssac, 2002). Social media platforms have potential to become a useful tool for providers to use as an online learning environment for their patients. Still unknown is the potential receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication and assessment. Patient education is a critical component of the discharge process; it continues once the patient arrives home and becomes dependent on teaching they learned while in the hospital pertaining to their illness. There may be other frameworks that address social media communication between patients and providers, but the social presence theory will tie directly into the social media component of the study where others, such as the human-centered design theory, would not during this initial study. Those participants that are more familiar with the language of online interactions through affective indicators may or may not be more receptive to utilizing a tool, but the comfort level may be present in the findings.

The objective of the study was to assess the receptivity of interactions in an online social media group after discharge by middle-aged adults and their comfort with the indicators outlined in the social presence theory, which will hypothetically guide their responses. This was completed by using the indicators present in the theory to guide the research questions cited in Chapter 1 that were focused on intimacy, immediacy, instructiveness, and cohesiveness of social media. The focus of the research was assessing how factors associated with intimacy in social media communications influenced patient perceptions, how factors associated with immediate access to information were perceived and how interactive and cohesive communications influenced patient views on social media. Previous researchers have used the same theory when exploring online learning environments and communications (Elwood et al., 2014; Ozturk, 2015; Smith & Tirumala, 2012), but no study was found that was an exploration of the receptivity of middle-aged patients toward social media as a medium of information and instruction post discharge from a medical facility.

Communication

Communication can be divided into two purposes: rhetorical, which is focused on persuading one party to agree with the other, or relational, in which both parties build a mutual satisfaction of understanding (Shepard, 1992). The purpose of the communication can also influence the preferred method with which the message is communicated. If formal communication is intended by the presenter, a text or e-mail is more preferred than face-to-face or social media communication (Robinson & Stubberud, 2012). Robinson and Stubberud (2012) found that face-to-face or social media communication is

the more accepted for informal communication from presenters instead of a text or email (Robinson &Stubberud, 2012). No studies were found during the review of the literature that compared the same type of communication preferences specifically for middle-aged adults.

Different age groups or populations tend to have similar communication preferences; therefore, it is important to understand these preferences when addressing an audience (Kalmus et al., 2013; Richter et al., 2015). It is also important to understand what methods of media an audience uses to receive general communication. Kalmus et al. (2013) studied methods of news communication and found, when comparing the mean above the average, it was statistically significant that older adults ages 60-74 preferred print media ($F(5,13.0) = 2.23, p \leq .0005$) while those ages 15-29 were found not to be statistically significant with results of ($F(5,13.0) = 1.57, p \leq .0005$) for print media. However, individuals ages 15-29 were statistically significant ($F(4,70.6) = 2.14, p \leq .0005$) for online media while the age group 60-74 found online media ([$F(4,70.6) = 1.77, p \leq .0005$] (Kalmus et al., 2013). Even though older adults prefer print media, they have been found to not oppose social media, and in fact are increasing their utilization of it as this age population grows (Campanella et al., 2015; Hutto et al., 2015; Vincent & Velkoff, 2010; Werner, 2011). The results of the literature search failed to find statistical significance for the middle-age group of 45-65.

Researchers have begun to focus on the communication preferences of adults with social media (Campanella et al., 2015; Chou, et al., 2009; Duggan & Brenner, 2013; Hutto et al., 2015; Werner, 2011). Hutto et al. (2015) showed that, of 141 respondents, *M*

= 71.7 years, S*D* = 10.69, 41.11% respondents utilize the social media site Facebook©. The Facebook© group had a *M* = 66.06 years, *SD* = 9.03 and their preferred communication on the site was to post to friends' pages (68.5%) or to send private messages (44.8%) due to the ease of use and quick response time (Hutto et al., 2015). This research supports the framework of immediacy in social presence as the quickness of social media allows for intimacy when information is exchanged on the platform. This may also allow for more immediate access to information as compared to older patients calling a physician office to ask questions when they may have to choose a numbered option and wait for someone to be available.

Health Care Communication

Effective communication between physicians and patients is important in improving the health of patients and preventing readmission to the hospital (Adeoye & Pineo, 2014; Hvalvik & Reierson, 2015; Khan et al., 2011, Kirsch, et al., 2015). Khan et al (2011), in a cross-sectional study in Malaysia, used a 17-item tool to examine patient perceptions of barriers when interacting with their physicians. The survey had 69 responses and 87% of the participants reported wanting more information regarding their disease from their physicians (Khan et al., 2011). This failure by physicians to realize that patients want more information can create a barrier that can hinder effective, two-way communication between patients and providers (Khan et al., 2011).

Henselmans et al. (2012) conducted a study in the U.S. and found similar concerns with comments being related to unfriendly or hasty behavior by health care providers when offering information; the patients want more information about

postoperative care but feel unskilled to be able to ask (Henselmans et al., 2012). Researchers who examined cancer patients' perceptions of communication between themselves and providers showed that these patients also experienced a lack of procedural or medical information from their physicians (Simon et al., 2013; Sloan & Knowles, 2013). This also influenced patient follow-up care due to dissatisfaction with the provider communication; participants skipped follow-up care (Simon et al., 2013).

The same concerns about providers being open with patients in relationship to the diagnosis and treatment to elicit trust were echoed in a study of adolescent cancer patients (Zwaanswijk et al., 2007). Other researchers, utilizing different populations, found that patients preferred less procedural information in the discussion with providers and wanted explanations to be rendered in common terms non-medical personal would understand (Shrank et al., 2005). Research has also been completed showing that even when the provider views the communication as positive with the patients, the patients might perceive it differently (Atwal, 2014; Block et al., 2014). Positive perceptions of the provider regarding their communication can vary from observation (Chou et al. (2009). Chou et al. (2009) videotaped interactions to demonstrate this point. The Roter Interaction Analysis System (RIAS) was used for observation. The ratings of the students and the ratings of the RIAS, in some cases, were opposite. For example, the students rated the communication style high while the RIAS rated it low (Chou et al., 2009).

Because there can be opportunities to improve communication at discharge, Block et al. (2014) examined medical student perspectives on what could have been done to promote better understanding for patients. 78 students in their second and third year at

Johns Hopkins University School of Medicine were asked to write about a hospital discharges that were not optimal. Qualitative themes were developed from the responses (Block et al., 2014). A total of eight themes were created and three of those (gaps in patient understanding, lack of communication, and lack of care coordination) were directly impacted by communication from provider to patient at different stages of care (Block et al., 2014). Similar to these themes, Lawn, et al. (2015) found that fragmented communication was identified as a barrier by health care workers and patients. Khan et al. (2011) found 20.3% of 25 respondents did not understand what the physician was trying to communicate.

Communication Issues in Health Care

Patients need to be able to effectively care for themselves when they leave the hospital, but unclear communication between patients and providers can cause this to be a challenge (Block et al., 2014; Evanoff et al., 2015; Gill &Cowdery, 2014; Hesse et al., 2005; Khan, et al., 2011; Lawn, et al., 2015; Sloan & Knowles, 2013). For communication from providers to patients to be understood, and understanding of discharge instructions and care to be achieved, interactions need to be patient-centered (Epstein & Street, 2007; King & Hoppe, 2013), and transmission of information needs to support patients outside of the hospital setting (Boutwell et al., 2011; Snyderman et al., 2014). Patients who are not adequately prepared with knowledge and resources for discharge during and post hospital stay are vulnerable to readmission to the hospital (Adeoye & Pineo, 2014; Baldwin, 2013; Singh et al., 2013).

Understanding medications is a large component of being prepared with knowledge when patients are not in the direct contact with physicians (Baldwin, 2013; Heisler et al., 2002; Kirsch et al., 2015). Medication instructions that are not properly followed can place patients at risk for readmissions (Jencks et al., 2009; Kirsch et al., 2015; Press et al., 2013). Zullig et.al. (2015) examined medication adherence in post myocardial infarction patients and found that 78% of patients reported having details well explained in provider communications, while only 65% of noncompliant patients reported the same. A meta-analysis of 127 studies and interventions found strong correlations between medication non-adherences when patient providers were poor communicators (Zolnierek & DiMatteo, 2009). These patients had a 19% higher incidence of non-adherence ([r = .19, 95% CI = .16, .21]; Zolnierek & DiMatteo, 2009). Overall, health is improved in patients who are able to communicate with their providers as they are also able to understand and participate in treatment options, change their behavior through physician recommendations, and follow the prescribed medication regime correctly (Chou et al., 2011; Heisler et al., 2002; Khan, et al., 2011).

Health Care Cost of Miscommunication

Readmissions of Medicare patients to the hospital alone cost about $17 billion (HCUP Statistical Brief, 2010). Medicare and Medicaid patients have the highest rate of readmissions in comparison to privately insured and uninsured payers (HCUP Statistical Brief, 2010; Rice, 2015). Starting in 2015, it was estimated that healthcare organizations will lose 3% of revenue in penalties related to readmissions (HCUP Statistical Brief, 2010; Jencks et al., 2009; Rice, 2015). The distress that the patient endures from

readmission includes poorer quality of life from inadequate preparation and education for discharge (Adeoye & Pineo, 2014; Bayati et al., 2014; Kirsch, et al., 2015; Press et al., 2013; Stefan et al., 2012). Shorter length of stays (LOS) in the hospital are more common, which causes outpatient follow-up to be more pertinent and critical (Adeoye & Pineo, 2014; Bayati et al., 2014; Kirsch et al., 2015; Press et al., 2013; Stefan et al., 2012). These factors create a large interest in the reduction of readmission for many stakeholders including patients, hospital leaders, and political leaders (Adeoye & Pineo, 2014; Fischer et al., 2014; Herrin et al., 2015; Press et al., 2013).

Readmission rates can be reduced with timely outpatient follow-up from the hospital because early follow-up allows for an open line of communication and patients are able to have questions answered about their treatment that they may encounter after discharge from the hospital (Atwal, 2014; Baldwin, 2013; Forster, Murff, Peterson, Gandhi, & Bates, 2013; Jackson, et al., 2015). A heart failure patient study found that with bundling pre-discharge education, an outpatient follow-up visit within seven days, and coordination of care with community providers from 2009 to 2011 readmissions to the hospital were decreased by 30% for 398 patients with the frequency of seven day follow-up visits increasing by 36.3% during that time period (Quevedo et al., 2014). Donaldson, Fallows, and Morris (2014) focused on text message communication as an intervention to promote instant feedback to patients. Donaldson et al. (2014) found patients in the intervention group had a body mass drop of 2.3 (kg) (p =0.006) and a BMI drop of 1.5(kg_m^{-2}) (p =0.03) compared to the control group with the intervention group. The demographics of this study focused on middle aged adults with a mean age 58.3, *SD*

= 12.1 years and control group mean age 59.1, *SD* = 9.5 years (Donaldson et al., 2014). This type of immediate follow-up communication with patients and providers is similar to what this study is proposing utilizing a social media platform instead of text based communication, but no empirical studies were found that contained an analysis of the receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication and assessment.

Social Media Usage and Health Care Communication

Social media has evolved quickly with the introduction of smartphones and the accessibility to immediate information at the fingertips of many people in all age and socioeconomic groups. Social media has been responsible for changing the way that people communicate with one another as they are able to quickly share information with large groups through public posts, private threads, or individual messages (see Wylie, 2014). The opportunities for health care providers to capitalize on the possibility of easily reaching patients using social media exist at minimal cost to the provider and the patient (see Margolin, 2013). Results of several studies included discussions of the possibilities of social media for health care, and some studies were explorations of the marketing usefulness social media has for healthcare or disease-specific support (Amrita et al., 2013; Curry, et al., 2014; Fast, Sorenson, Helmut, & Suggs, 2015; Gagnon & Sabus, 2015; Knight et al., 2015).

Current Social Media Use

Chou et al. (2009) evaluated data from the 2007 Health Information National Trends Survey (HINTS) to evaluate socioeconomic and health factors of social media

users in the US. They found 68.54% (*N*=5078) were Internet users. Chou et al. (2009) compared them and found social media user percentages in ages 18-24 were 76.4%; 25-34 were 57.3%; 35-44 were 35.5%; 45-54 were 22.4%; 55-64 were 13.1%, and 65+ years were 8% of Internet users (Chou et al., 2009). Similar results found 51% of 752 respondents used social media with 91% of those not using social media being over the age of 40 (Curry, et al., 2014). Bugshan et al. (2013) found that of 40 respondents to their study, 100% of them were social media users and ranged in age from 24 to 56 years old. Chou et al. (2009) found that 47.6% of social media users did not have a regular health care provider and this could imply that this mode of communication could be potentially useful for this population, though no research could be found reflecting this approach. The study was limited in that the data retrieved from respondents did not target health-related social media usage, indicating that further research is needed on various age groups along with qualitative perspectives. This is important as many researchers have implied the endless possibilities that health care can be utilized for communication and education with patients and providers, but it has been slow to evolve this way and little research has been dedicated to the receptiveness of patients with this communication (Curry et al., 2014; Moorhead et al., 2013; Richter, Muhlestein, & Wilks, 2014; Saleh et al., 2012; Wylie, 2014). The potential for reducing isolation between patients and providers is there, but it is important to consider that being a new communication tool, social media lacks guidelines and regulations along with the awareness of patients that all information provided may not be relevant to them based on their individual medical history (Saleh et al., 2012). More research is needed to determine patient preferences with

social media use as it will be a patient-guided decision as to how effective social media has the potential to be in the future (Saleh et al., 2012).

A systematic review of 98 research studies related to the growth of social media provided a detailed assessment of its use. Six encompassing mutual benefits were identified: (a) An increase in the number of interactions; (b) more real time data and communications; (c) more accessibility to all types of citizens regardless of class, valuable peer, social, and emotional support; (d) more open dialogue between patients and healthcare professionals; (e) aid in health behavior changes; and (f) low cost (Moorhead et al., 2013). Characteristics of the review found that women accessed social media more than men, that all ages utilized it, and that socioeconomic class did not hinder usage as those in lower classes had a higher usage percent in comparison than higher socioeconomic classes (Moorhead et al., 2013). This is promising information though it does not evaluate the receptivity of middle-aged patients to using social media as a platform for post-discharge provider-client communication and assessment.

Amrita and Biswas (2013), in a study based in India, focused on the semi-urban and rural population's receptiveness to using social media sites for health information. Amrita and Biswas found positive influences surrounding utilizing social media for (a) soliciting opinions from experienced people, (b) accessing free health camp information, (c) collaborating with insurance companies and hospitals, and (d) receiving training for how to use the site. Negative influences included (a) patient and physician communication unnecessary, (b) patients expectation of not getting advice from doctors, and (d) inability to see insurance comparisons (Amrita & Biswas, 2013). This study was

limited in the population sampled as it was a small age group. As a survey study, the environmental variables are not known.

Social Media Use for Advertising and Awareness by Health Care Organizations

Research has also been focused on the use of social media for advertisements and community awareness of services by specific types of organizations (Curry, et al., 2014; Griffis et al., 2014; Harris, Mueller, & Snider, 2013; Knight et al., 2014; Richter et al., 2014; Thackeray, Neiger, Smith, & Van Wagenen, 2012). Griffis et al. (2014) sought to review what types of health care organizations were exploring this method of communication to reach out to their consumers. The cross-sectional review found that out of 3,371 U.S. hospitals the most widely used social media platforms were Facebook© (94.41%), Yelp (99.15%), Foursquare (99.41%), and Twitter® (50.82%) (Griffis et al., 2014). The study did not go into detail regarding the number of posts or interactions between patients and healthcare facilities but recognized the potential for such interactions. The opportunities for real time communication and open feedback to services through patient reviews on these sites could prove to be more beneficial than traditional survey methods but requires future data collection to examine specific relationships (Griffis et al., 2014).

Social Media Communication Specific to Patients

Patients have also used social media networking sites to communicate with each other for support and to seek more information about their diagnosis or treatment for family members (Bartlett et al., 2012; Greene et al., 2011; Knight et al., 2014; Yost & Fan, 2014). A qualitative review of 10 large diabetes discussion groups on Facebook©

used wall posts and discussion topics to aggregate data into a database for evaluation of content and activity. The activity on the sites consisted of 9,289 participants, but the sample for the study was contained to 690 individual wall posts that divided the content into five separate categories for coding (Greene et al., 2011). The results were that 65.7% of the posts were related to providing information, and the second highest was 28.8% of members providing support to fellow diabetes patients (Green et al., 2011). This could prove to be a promising method of communication for chronic condition patients, but the study also highlighted some considerations for public pages to be utilized by patients. Another concern is that there is no verification of credentials for those posting information, and advice from users may not be proven medical advice (Greene et al., 2011) similar to the concerns founded by Saleh et al. (2012).

Bartlett et al. (2012) conducted a three-part study that allowed participants to assist in building a website for cancer patient follow-up, then analyzed internet usage, and finally tracked participant usage. The premise for allowing users to help create the website should have increased usage, but they found that those who were not already internet users were not interested in being so for this type of follow-up (Bartlett et al., 2012). The study did find that some participants were apprehensive about the use of an internet site for fear that it could replace face-to-face follow-up visits (Bartlett et al., 2012). The authors also acknowledged that the results may be much different in later studies as many mobile devices allow for internet access and these were not available during the time of the study (Bartlett et al., 2012).

Mobile devices are allowing faster access to the internet and communication methods are shifting as more patients are using the internet to communicate instead of the telephone (Curry et al., 2014). Challenges need to also be considered alongside the opportunities for social media communication with patients. These can include creating guidelines for adherence to privacy, managing misinformation, supplying resources such as personnel and time to manage sites, and demonstrating a return on investment (Bugshan et al., 2013).

Summary and Conclusions

The review of literature established that a lack of effective health management after discharge can have adverse effects on patient and provider by decreasing the quality of life for the patient and increasing the likelihood of a costly hospital readmission (Adeoye & Pineo, 2014; Baldwin, 2013; Elfstorm et al., 2012; Hvalvik & Reierson, 2015; Kirsch, et al., 2015; Rizzo, 2013; Thompson-Moore & Liebl, 2012). The lack of communication between patients and health care providers at discharge and in-home care afterward is a critical factor that determines whether or not a patient understands the diagnosis, treatment plan, and self-care instructions (Adeoye & Pineo, 2014; Gill & Cowdery, 2014; Khan et al., 2011; Spehar et al., 2015). Indeed, communication with patients regarding their medication instructions at home after hospitalization has shown to be inaccurate 25%-70% of the time (Thompson-Moore & Liebl, 2012).

The review of literature contained cited researchers who have found that a lack of effective communication causes the patient to be at risk for not understanding their medications or expectations of care once they are home, which can lead to readmission to

the hospital (Adeoye & Pineo, 2014; Hvalvik & Reierson, 2015; Kirsch et al., 2015). The HCUP data in 2010 showed that one in three patients are readmitted for a common procedure, and one in five is readmitted for a common diagnosis (HCUP Statistical Brief, 2010). In summary, a lack of communication has been identified as a primary factor affecting discharge and subsequent readmission. A gap in the empirical literature was identified pertaining to how social media could be used to improve communications between patients and health care providers.

Readmission to the hospital is not an ideal outcome of care for patients or organizations; understanding what causes readmission and looking at ways to prevent it is a key component to improving population health. The opportunity for using social media at discharge to prevent readmission is there because it could provide immediate access to information and communication and create a strong social presence between patients and providers. Social media platforms are also easy to budget for providers because they run on minimal cost. Further research is needed to determine what methods or information would be most useful for patients on such platforms; how receptive patients would be to use them should also be explored.

A lack of effective health management after discharge can have adverse effects on patient and provider by decreasing the quality of life for the patient and increasing the likelihood of a costly hospital readmission. The same lack of communication between patients and health care providers at discharge and in-home care afterward is a critical factor that determines whether or not a patient understands the diagnosis, treatment plan, and self-care instructions. Researchers have not studied the lack of effective

communication that causes patients 45 to 65 years of age to be at risk for not understanding their medications or expectations of care once they are home, which can lead to readmission to the hospital. In sum, a lack of communication has been identified as a primary factor affecting discharge and subsequent readmission.

Chapter 3 will be focused on the research design and role of the researcher. How the study was conducted including the inclusion and exclusion criteria for participants will be described as well as how the participants were identified and recruited. The data collection methods will be specifically explained including how data was collected, who was involved, and how it was analyzed and stored. It will also include how the participants were managed to retain confidentiality and how ethical concerns related to the data or participants were ensured. Chapter 3 discussions will also include validity and reliability strategies.

Chapter 3: Research Method

Introduction

The purpose of the study was to explore factors affecting receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication and assessment. Using knowledge of acceptance of social media information may indicate that communication issues at discharge could be mitigated if patients would accept using social media for communication with their health care providers once they are at home. The perceived intimacy, immediacy, instructiveness, and cohesiveness of social media when used to enhance hospital and doctor recommendations for post discharge care was assessed, in particular among a middle-aged rural population that may or may not be comfortable with electronic modalities. The method of the research was qualitative, and the design was phenomenological. Exploring the receptiveness of patients for using a social media platform for support upon discharge was investigated. Patients, male or female, who have received care from hospitals in northeast Ohio and who are between 45 and 65 years old were included in the study to determine what factors associated with social media they find pertinent to its use after discharge for support and information.

This chapter contains an explanation of the research design and the rationale for the chosen methodology; in addition, the research questions that were used to guide the study are cited. Following, the role of the researcher will be thoroughly explained, and any conflict of interest or potential bias clearly identified. The methodology, including participant selection, instrumentation, procedures for recruitment, participation, data

collection, and the data analysis plan, are stated. Lastly, issues of trustworthiness and ethical procedures are outlined. A summation of the key elements in the chapter completes the discussion.

Research Design and Rationale

The focus of the study was to gain an understanding from the lived experiences of the participants if they would be receptive to using social media at discharge from the hospital to communicate with their health care provider. In order to specifically address this overarching question, the social presence theory was used as a theoretical framework and the following research questions guided the methodological design of the study:

RQ1. How do factors associated with intimacy in communication mediums influence client and physician perceptions of social media as the platform for engaging in post discharge assessment and communication?

RQ2. How do factors associated with immediate access to information influence client perceptions of social media as the platform for engaging in post discharge assessment?

RQ3. How do factors associated with interactive communications influence client use and experience with social media platforms?

RQ4. How do factors associated with cohesive communications influence client use and experience with social media platforms?

To further elaborate, the phenomena being studied is focused on middle-aged patients' previous communications and experiences using social media for their own recreational purposes. I employed phenomenology, an explorative form of qualitative

research, to depict the essence of lived experiences to categorize and interpret the human experiences related to social media from the statements of the participants (see Moustakas, 1994; Patton, 2002). The entire process is intentional and acknowledging that there in an interpretative form from the perception of the experience by that participants that was explored using this technique (Patton, 2002). Specifically, it allowed me to see how the experience of using social media for personal use has influenced the perception of the participants for using it for the purpose of the research questions, therefore rationalizing the reason for using phenomenology (see Moustakas, 1994; Patton, 2002). This allowed for understanding of positive or negative outcomes, barriers, and challenges that influenced the participants desire to use social media as a tool for communication once discharged from the hospital. The outcomes of the study ranged from miniscule to sizable barriers, as the perceptions of convenience in reaching a provider outweigh any confidentiality concerns from the participant standpoint to the thought of communicating with a smartphone instead of a telephone seemed appalling to others. The steps outlined in phenomenology model that include epoche, phenomenological reduction, imaginative variation, and synthesis of texture and structure (Patton, 2002) aided in achieving the results that discovered if these concerns are present or absent within this population of participants.

Role of the Researcher

The role of the researcher was to participate in interviews with the participants and ask open-ended questions in an unbiased manner. The relationship between the researcher and the participants was that of a participant observer. I was experienced with

the hospital setting where the research was conducted, which may have assisted in achieving insider views (see Creswell, 2013). I work for the health system in which the research was conducted, but I was not conducting any research during my professional time with the organization. I also did not have power over or direct involvement in the care of the participants; therefore, the data collection was not compromised by my relationship with the organization.

The potential for personal bias would be if I impressed my opinion of social media on the participant. This was reduced by audio recording the conversations to review after the interview (see Creswell, 2013). The opportunity was there for perception of implied power due to my relationship with the health care system; however, I took precautions to mitigate these perceptions. The location of where the research was conducted was not my primary work location. I did not have supervisory power over the employees who were caring for these clients, and I identified myself as a student during the research process.

There may be ethical concerns for conducting research in an organizational building for the health care system that I serve; however, since it is not my primary work location the risks were minimized. The impact of this was also reduced as I followed general requirements for informed consent along with any imposed by the Walden Institutional Review Board (IRB). There was also no supervisory relationship in the facility where research was conducted between me and administration, me and staff, or me and the participants. My role was solely as a student conducting research in the facility. The organization also assigned a research mentor from the organization who is

assigned to a project passed through the institutional review board to monitor the research to ensure there were no ethical breaches during the research process. The research mentor had no participation in the research process other than to monitor the research being conducted. The plan to address any issues was to follow the requirements stated in the informed consent form to the participants and the research plan provided to the IRB.

Methodology

Participant Selection Logic

The population was inclusive of adults aged 45 to 65 who have used social media applications for personal use. The criterion sampling strategy was used when all participants have experienced the same phenomena (Creswell, 2014) and was appropriate to this study since it identified only those who have experience utilizing social media. The participant selection criteria included age, language, orientation, previous hospital treatment, and prior experience with social media for personal use. There were no specific social media applications that the participants needed to have previously used for inclusion of the study; it is how they identify themselves with social media that was the focus of the research questions. Their perceptions of their experience using social media rather than any specific social media application are what were important to the study. The amount of time that they have been using social media was also not an inclusion or exclusion factor, although it was asked in the demographic questionnaire along with their frequency of usage. The participants needed to be English speaking since I asked the questions in English. Also, the participants needed to be able to read English to participate in the demographic questionnaire as it was only provided in a written form of

this language. The participants were also adults from the United States between the ages of 45 and 65 years of age. A United States' survey of 1,060 adults found 56% of adults' ages 45-64 would engage in health activities or trust information on social media (Health Research Institute, 2012). This prompted me to determine if a similar population would also be receptive to using it for communication with their provider. Also, persons of all ethnicity groups and gender were able to take part in the study given that all previous research has not excluded any ethnic or gender groups, and this study is looking to examine a comparable population. I screened and confirmed that the participants match all of the criteria necessary for inclusion prior to the beginning of the interview.

Once approval was granted by the institution's IRB and a letter was obtained, the recruitment process began. Physician offices and designated hospital areas had flyers on hand that describe the study for prospective participants. This allowed potential participants to be aware of the study and could volunteer for the study by contacting the researcher from the information on the flier, if they chose, prior to hospitalization. The process was designed to minimize the disruption of care of a participant since they were not actively admitted to the hospital at this time. I was also on site at the physician offices during predetermined times to conduct criterion sampling by offering an invitation to participate for potential participants if they meet the criteria once they finished with their appointments. The patients who choose to participate in the study were screened for inclusion to the study. The screening consisted of ensuring that the inclusion criteria was met by the participant such as age and language fluency, also that they do not have any eliminating factors that would cause them to be ineligible for the study.

Once patients met the requirements for the study, then the informed consent discussion was conducted by me prior to the start of the interview. I emphasized to patients that their participation was voluntary, and they could withdraw for any reason at any time. I also gave them a copy of the consent form that they were asked to sign prior to the beginning of the interview. I asked them again if they had any questions they would like clarified from the informed consent prior to beginning the interview. The informed consent was signed prior to the interview and time allowed for clarification. Once the participant came in for his or her scheduled interview, there was a review of the consent and an opportunity again for any clarifying questions to be asked prior to the start of the interview. An exception occurred if there was a patient who was able to participate in the informed consent, met inclusion criteria, and was ready for the interview process on the same day of being screened. Then, the interview appointment was expedited to accommodate the participant and a telephone call was not necessary.

The sample size for the study was 20 based on previous recommendations for saturation of qualitative research. Qualitative research is focused on the richness of detail in the study and allows for information to be thoroughly obtained from small sample sizes in comparison to large quantitative studies (Miles et al., 2014; Patton, 2002). This was an appropriate number of participants based on a phenomenological study which typically has five to 25 participants and focuses more on detail from each individual instead of a large sample size (Creswell, 2014). The participant number of 20 was also suitable based on the findings of an intensive look at qualitative study saturation sample subject counts that included 25 phenomenological studies (Mason, 2010). The results

concluded that out of the 25 studies reviewed the median number of participants were 20 (Mason, 2010). This is a strong number as qualitative research is based more on saturation of the richness of detail, and saturation was reached prior to the number of 20. It was known when coding took place during the research process and no new themes emerged from the coding, instead the same codes continued to emerge from interviews of different participants (see Bowen, 2008).

Instrumentation

For the study, the instrumentation was comprised of an interview protocol, demographic survey, interview questions, field notes, and an audio recorder. The interview protocol (Appendix A) was created by me focusing on three areas to follow in order to maintain consistency with each participant and to guide the efforts of the independent researcher. First, the interview protocol lists notes for the interviewer to prepare the setting for the interview, tape-recording the conversation once permission was granted, using a neutral space, approximate length of time for interview, and interview methodology. The demographic survey (Appendix B) was also created by the researcher and the information on was logged on a master spreadsheet. The demographic survey included nine questions that allowed the researcher to determine how often the participants accessed social media, how long they have been using it, along with general demographics to determine how diverse the group is when the results were analyzed.

The interview questions were produced by me to answer the research inquiry of the phenomena being studied. There were 16 interview questions in total, four pertaining to each research question. The interview protocol details the components of the interview

included the introduction, direction to review confidentiality and consent form, time to allow for questions, the purpose of the study, and permission to record prior to beginning the interview questions. I also openly coded the data for themes after the interview is complete. Once permission was granted, the Dictopro x100- HD digital voice recorder was used so I was able to focus on the responses of the participants after the interview for transcription within 48 hours of the interview.

Procedures for Recruitment, Participation, and Data Collection

Once the organizational and institutional IRB gave permission for the study to occur, the following actions were completed to recruit and apprise study participants, gather and evaluate data, and adhere to follow-up procedures. The department managers and supervisors in areas that fliers were available for patient recruitment were contacted by telephone or in person to be given information about the study from the researcher. The letter of permission to conduct the study was obtained from the institution involved in the care of potential patient participants (Appendix C). Next, institutional review board approval from the organization was obtained and then institutional review board approval from Walden University to do research was completed. After approvals were obtained, a letter of invitation to participate describing the nature of the study was distributed to potential participants (Appendix D). Addresses or other location and contact information was obtained from the participants if they agreed to follow-up post interview so that the researcher was able to contact them to validate information from the interview. I completed screening and obtained informed consent with the participant at this time. After informed consent was obtained, I contacted the participant to schedule an interview

and collect data. The data for this study was collected at a place convenient to the patient and may have been in person, or, if unable to meet in person, it will have been done using FaceTime, and if that is unavailable, it would have been done over the telephone. The study commenced with a review of the purpose and intent of the study orally by the me, and then a demographic survey (Appendix B) was distributed to the partaker to manually complete, which was intended to provide a picture of the participant pool. I then orally applied the interview protocol that was based on the research questions (Appendix A). The participants were thanked for their time at the end of the study and given an opportunity to add anything extra that they may have thought of during the interview. The interview commenced with me notifying the participant that I would be in touch within the next week for member checking of the data. The data from the interviews was handwritten on printed sheets of the interview protocol by me and through a Dictopro x100- HD digital voice recorder with double microphone placed directly between the participant and researcher or next to the computer or phone if competed remotely. Audiotapes were transcribed verbatim and analyzed within 48 hours of the interview.

The participants were thanked for the time as the interview concluded. They were informed of the intended time for data collection and that they should be expected to be contacted by me once the information from their interview was coded to hear the results of how their perceptions were coded. They were also reminded of my contact information if they had any questions at any time. If it was conducted in person, they were escorted out of the interview room. If it took place over the telephone, the same conversations regarding conclusion and follow-up occurred.

The data collection occurred as frequently as participants become available for the study and did not exceed more than three in one day. The data collection continued for duration of approximately three months, in which the number of intended participants was reached. This allowed for ample time to find voluntary participants that met the study criteria. If recruitment resulted in less than 20 participants, then the duration of the study would have been extended until the intended number of study participants was reached.

Data Analysis Plan

The data collection consisted of taped interviews between the researcher and the participant. Each transcript was then openly coded for themes and categories with software NVivo17® (NVivo17®, 2017). NVivo17® allowed me to upload the audio files into a program that coded the words and phrases and created lists of ideas and patterns in the language. Another source of data was observations I recorded. Inductive reasoning, the final step in analysis (Yin, 2014), allowed me to understand and interpret the results.

In this study specifically, the analysis focused on extracting data surrounding the previous experiences of social media with the participants and their receptiveness to utilizing it in the future for discharge communication with their providers. This took place though open coding of the data to determine emerging themes. Qualitative research is often analyzed in themes from several codes forming a common idea, and more specifically, phenomenology can use the themes from open coding to establish the lived phenomena from the participants (see Creswell, 2013). The process of open coding began by examining the interview transcripts.

The interview transcripts contained raw data that required structuring in order to be categorized into usable themes for the purpose of the study. In order to accomplish this, I first indexed themes by summarizing the content of each interview by assigning codes that concisely state what the information is about (Glaser & Laudel, 2013). The coded text was used to create clusters of data that was organized by the researcher to be quickly pulled out for data analysis into themes (Miles et al., 2014). The themes that were extracted from the interviews were looked at with equal value or horizontally and clustered to form meaningful data (Patton, 2002). Data collected from interviews formed an essence of the experiences and provided significant statements to be grouped into meanings (Creswell, 2014). To clearly see the connection between the data and the research questions, a data analysis matrix was used (Maxwell, 2013). There can be a variety of forms of a matrix used in analysis for this study; I used a structural analysis grid as explained by Lindseth and Norberg (2004) to seek to recognize and create themes. In order to create the analysis grid, the transcribed data from each interview was read and divided into meaning units, which may have been of any interval as long as it expressed the same connotation (see Lindseth & Norberg, 2004). The next step and column was condensing the meaning units into short, basic concepts (see Lindseth & Norberg, 2004). The following columns then consisted of a subtheme that emerged from the condensation line followed by a final themed row of the data (see Lindseth & Norberg, 2004). Any data that had discrepancies was eliminated from the study and disclosed in the manuscript.

Issues of Trustworthiness

Confirmability

Phenomenological inquiry is naturally subjective as the researcher is the primary decision-maker in establishing themes and can be considered to be based on assumptions (Maxwell, 2013; Patton, 2002; Vagle, 2014). To establish internal validity of this study, all interviews were tape-recorded for future use or verification. I employed epoche, a self-awareness method to remove or acknowledge any predisposed prejudices or assumptions, to conduct the research with an open viewpoint and focus on the described lived experiences of the participants (Patton, 2002).

Epoche or bracketing was completed through a multiple step process by me based on what I was feeling (see Hamill & Sinclair, 2010; Patton, 2002; Chan et al., 2013). The steps to bracketing that I employed in the process included: (a) wrote down my thoughts and perceptions on the topic bringing them into awareness prior to completing interviews with participants; (b) kept an introspective journal to record my personal opinions and perceptions in order to recognize any emerging themes; and kept detailed records to allow for credibility and transferability checks (Guba & Lincoln, 2005; Hamill & Sinclair, 2010). Other steps for bracketing that were completed was having an independent researcher check the themes of the research, member checks when agreeable after the interviews, peer review of the transcript from another researcher, and finally a review of the literature in chapter two to ensure those themes do not emerge without justification in the study findings (Hamill & Sinclair, 2010). I also clarified any bias of

participants own past experiences or views that could have impacted the study for internal validity (Creswell, 2014).

I also had an independent qualitative researcher code and theme the transcripts from the interviews of the participants. The percentage of agreement between the independent researcher and me was determined by the intercoder reliability (ICR), which was automatically calculated by the NVivo17® software. Since the ICR was adequate, it increased trustworthiness and rigor within the study (MacPhail, Khoza, Abler, & Ranganathan, 2016).

Credibility

Triangulation was completed by comparing written notes of non-verbal observation of participants during interviews, written notes of verbal responses of participants while interviewing, along with the recorded data collected during the interview process (Patton, 2002). To further establish validity, during the screening process participants were asked if they may be contacted after their interview for the researcher to conduct member checks. Member checks strengthen credibility within the study because it allowed the participants opportunities to confirm, clarify, elaborate, and/or challenge any of the findings made by the researcher from the interview (Lincoln & Guba, 1985). Those participants who did not wish to be included in the member checking process were not made to participate.

Dependability

I established dependability by ensuring consistency of methods and describing clearly the steps in the process (Miles et al., 2014). The interview questions were asked in

the same manner to all participants and this was verified by reviewing the audio-recordings of the interview. There were also data quality checks completed by me for any bias that may have appeared during the bracketing process. Bias was also addressed in the study through a discussion of my lived experiences and how these have shaped the phenomenon for the researcher (Creswell, 2014).

Transferability

I also used thick, rich descriptions to establish a theme and describe an interview to allow for transferability of the findings (Creswell, 2014). This included describing the place that the interviews took place and the timing of the interviews for the participants in relation to their daily routines. Internal generalizability was also established by describing any variations among the participants when discussing results and avoiding excluding any participants that met the criteria for the study within the sample population (Maxwell, 2013).

Ethical Procedures

Institutional review board approval was obtained from the organization and Walden University. There was little to no risk to the patients that participated in the study in accordance with U.S. Department of Health and Human Services Code of Federal Regulations, 45 CFR § 46.10**2**(2009). There were no ethical concerns related to the recruitment of patients. If the patients met the criteria for inclusion and were willing to participate, they were consented. After consent was provided, the participants were interviewed. The risk of ethical concerns in a clinical setting was also diminished since the participants were recruited prior to being admitted to the hospital. There were no

concerns to data collection or intervention activities since the interview was the only required time commitment for the participant. If the participant refused to participate, the interview did not occur. If the patient decided to stop during the interview, it would have been disclosed in the study and bracketing would have only occurred on the consented and answered questions.

All data information sheets and audio-recordings are kept in a locked file that only I have the key to unlock. The patients interviewed were not documented by name on any notes from interview or on audio-tape to preserve confidentiality. The computers in which the analysis was completed on are password protected and data will be retained for a period of five years.

Summary

The phenomenological research plan was outlined in this chapter after an explanation of why this methodology was chosen to explore the research questions. The participant's interviews allowed me to understand through the participant's previous experiences how receptive they are to using social media at discharge for communication. The criteria that the participants met to be considered for the study were also outlined, along with how they were selected. Peer review, rich descriptions, triangulation, bracketing, and reflexivity were all incorporated into the study to establish internal and external validity. Ethical procedures to protect the rights of the participants were also discussed in this chapter. Chapter 4 is a presentation of findings from the study.

Chapter 4: Results

Introduction

The purpose of this qualitative phenomenological study was to explore the factors affecting receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication and assessment from their lived experiences. The information from this study provided a deeper understanding of the challenges and benefits correlated with the use of social media for this demographic group based on their previous exposure. The investigation of the receptiveness of employing a social media platform upon discharge from a hospital is necessitated to address the current research gap for improving communication for patients when they are not being seen in a health care setting. Currently, as addressed in the problem statement, previous research has found that miscommunication such as not understanding expectations of care or medication instructions can negatively impact patient outcomes at home and facilitate a possible readmission to the hospital (Adeoye & Pineo, 2014; Hvalvik & Reierson, 2015; Kirsch et al., 2015).

The following research questions guided this study:

RQ1: How do factors associated with intimacy in communication mediums influence client and physician perceptions of social media as the platform for engaging in post discharge assessment and communication?

RQ2: How do factors associated with immediate access to information influence client perceptions of social media as the platform for engaging in post discharge assessment?

RQ3: How do factors associated with interactive communication influence client use and experience with social media platforms?

RQ4: How do factors associated with cohesive communication influence client use and experience with social media platforms?

The data that was collected through the interview questions and observations will be presented in this chapter. First, the chapter will begin with a description of the research setting, followed by a report of the participant demographics. It will then discuss in detail the data collection method, the data analysis process, and the achieved results from the data. The chapter will also include actions taken to improve trustworthiness that includes credibility, transferability, dependability, and conformability. The chapter will end with a summary of the answers to the research questions.

Study Setting

The recruitment for the study took place at Cleveland Clinic Akron General Center for Family Medicine. Fliers were placed at the office for patients to view when they checked out following their appointment. I also spent time at the office to be available for interested participants so that the study could be explained and consent obtained. Thirteen of the 20 interviews took place in private conference rooms or offices in the Cleveland Clinic Akron General Family Medicine area, two took place in other offices on the Cleveland Clinic Akron General campus, and five took place in the participants' home setting for convenience of the participants. The organization, in which the study was conducted, has been undergoing full integration with a larger health system

since 2015. This environmental condition may or may not have influenced the participants in the study.

Demographics

The demographics of the participant pool were determined by the first twenty patients who met criteria for study inclusion and volunteered to take part in the study. The twenty participants identified as 65% female and 35% male. Participants were 80% Caucasian and 20% African American. Their ages ranged between 45 to 50 years old (40%), between 51-55 years old (15%), between 56-60 years old (25%), and 20% between the ages of 61-65 years old. Their educational background was diverse as 10% were high school graduates, 35% had taken some college, 35% graduated from a technical school or achieved an associate degree, 5% held a bachelor's degree, and 15% held a master's degree. The frequency of how often participants used social media was measured and found that 60% used it more than 10 times per week, 30% used it six to 10 times per week, 5% used it three to five times per week, and 5% used it less than three times per week.

Everyone in the study must have used social media and have been hospitalized to meet inclusion criteria for the study. The frequency of both experiences, the participants' use of social media and number of hospitalizations, was questioned in the demographic sheet. The years of experience the participants have been using social media slightly varied as 70% have been using it for 6-10 years, 20% 3-5 years, and 10% were less than 3 years' experience using social media. The number of times that the participants have been hospitalized was also measured and found that 70% were one to three times, 20% four to

10 times, and 10% had more than 10 previous hospitalizations. The participants provided rich descriptions of their perceptions from their previous experiences during the interviews which allowed themes to emerge.

Data Collection

I began to distribute fliers in the offices once I received IRB approval from the institution and then Walden University (IRB #08-17-18-0338322). Participants contacted me if they were interested in the study and at that time the letter and explanation of study was reviewed. I obtained informed consent from each participant and then screening was completed. If the participant met criteria and consent had been obtained, then an interview was scheduled with the participant at convenient times for them. Thirteen of the 20 interviews took place in private conference rooms or offices in the institution, two took place in other offices on the campus of the institution, and five took place in the participants' home setting for convenience of the participants.

The interviews were scheduled for an hour; however most were between 16-25 minutes. The participants completed the demographic survey (Appendix B) prior to the beginning of the interview after I stated the purpose of the interview. Participants were asked if the interview could be audio-recorded for dictation later and those that said yes were recorded. One participant did not allow me to tape record and during part of one interview the tape recorder malfunctioned therefore only capturing a portion of the interview. The interview protocol was followed (Appendix A) and notes were taken manually by the researcher on the form during the interview. Once the interview was completed, each participant was thanked and given their gift card for participation.

Participants who provided contact information for member checking were reminded that they would be contacted to review the information transcribed from the interview.

I manually transcribed the audio recordings. The few interviews that were not audio-recorded were transcribed from the written notes taken during the interview. Participants who could be reached from their contact information were contacted for member checking prior to data analysis. There were five participants that were left voice messages and but did not call back.

There were no variations in the data collection from the plan proposed in Chapter 3. There were no unusual circumstances encountered during data collection. I completed interviews on November 16th, 2018 after beginning recruitment on September 4th, 2018.

Data Analysis

I analyzed the data using a variety of methods to interpret the results. I first reviewed the transcripts through an open-coding process where the raw data was condensed to more manageable statements that could be organized into themes. Themes were then indexed for each question so that codes could be determined through summarizing the content (see Glaser & Laudel, 2013). Clusters were then formed by the codes created to allow for data analysis and looked at horizontally to provide significant data (see Patton, 2002). During this process, data that was irrelevant was removed leaving the precise implication of social media perceptions gathered from lived experiences of the participants. Data was determined irrelevant if it did not contribute to the participant responses to the research questions, such as comments in the transcript to build rapport or close the interview.

There was also a structural analysis grid created to search and identify themes. The grid was constructed by reviewing copies of the original transcripts and dividing the content into usable form on the spreadsheet by same connotations (Lindseth & Norberg, 2004). Three more columns were created from this data that included short, basic concepts converted to subthemes. The last column was final themes that emerged from the data (see Lindseth & Norberg, 2004).

NVivo11® software was also used to determine frequency of words through word clouds. Linear relationships between the questions and responses were also evaluated through the software by displaying the Pearson correlation coefficient with the nodes. Data entered into the program was stored for accessibility as the data analysis took place.

The word frequencies in the software were consistent with the themes that emerged from manual coding. Every participant was influenced to start using social media by someone they knew as a method to connect with family and/or friends. The level of interaction was varied based on personal beliefs of the participants from what they had experienced themselves or what they perceived from previous information regarding social media. The connection between their providers appeared to be cohesive through the positive correlations expressed through the provider questions. Immediacy of information was also prevalent with the participants as their power to get information was positively impacted by social media and its accessibility.

Figure 1. Word cloud created from NVivo11.

There was one discrepant case in the study that the responses may have been depended on the fact that this participant recently had their identity stolen. This participant's responses were not significantly different, but they did mention security as an issue with receptiveness more strongly than others. This participant did, however, say that they used the medical system's social media, MyChart©, often to interact with their provider because they felt it to be more secure than a site such as Facebook®.

Evidence of Trustworthiness

Credibility

It is important to establish that there are no predetermined results made by the researcher entering into the data collection and analysis (Patton, 2002). A couple ways to review the data to establish credibility and validity is through triangulation and member

checks (Lincoln & Guba, 1985; Patton, 2002). Triangulation was completed by comparing my written transcripts from the interviews, the recorded audio collected during interviews, and hand-written nonverbal notes created from observations made during the interview process (see Patton, 2002). Members were also asked prior to the beginning of the interview to determine if they would be willing to engage in member checks after the interviews to confirm, clarify, and/or challenge what was discovered by the researcher in the interview (Lincoln & Guba, 1985). The participants that were contacted after the data analysis confirmed that the data presented was accurate.

Transferability

Qualitative, phenomenological studies are not generalizable due to the limited number of participants in this type of study (Patton, 2012). Therefore, they require rich detail for the reader to make associations to other areas (Patton, 2012). Transferability is applied to the findings through the thick, rich descriptions of the process and the established theme from the interview (Creswell, 2014). The notes that I kept during the interviews, along with the detailed audio-recordings allowed for thick, rich descriptions of the participants' lived experiences. Internal generalizability was established through describing the participants and evading elimination of any participants if they met the standards for the study (Maxwell, 2013).

Dependability

Dependability was established in the study by adhering to the detailed outline that would summarize the steps in the process clearly to ensure uniformity of methods (Miles et al., 2014). Audio recordings of the interviews were made for all but one interview.

This was done to verify that all interview questions were asked the same way thereby creating an undeviating record of the encounter. One participant declined permission to be audio recorded. Final measures to confirm dependability were data quality checks completed to uncover any bias that may have occurred during bracketing.

Conformability

Internal validity of the study was established through audio-recordings of the interviews for future use, along with epoche. Epoche is a self-awareness method to dispel prior biases and expectations in order to perform research with an open viewpoint and focus (Patton, 2002). I began this process by writing down my thoughts in a journal prior to completing any interviews on the topic and the research questions. I also continued to write in the journal as the interviews were being completed to see if there were any themes that may have appeared, along with being able to use these records for credibility and transferability checks (Guba & Lincoln, 2005; Hamill & Sinclair, 2010). Lastly, an independent researcher worked with me in NVivo11© to determine what the Cohen's Kappa agreement was for the study. The software calculated a rate of 88.14% agreement, which indicates a substantial agreement (McHugh, 2012).

Study Results

The social presence theory was the theoretical framework used for the study. The research questions were focused on the components and concepts that were present in this framework. These included intimacy, immediacy, interactive, and cohesive communications (Annamalai & Tan, 2014; Argyle & Dean, 1965; Weiner & Mehrabian, 1968). The themes that developed from the interviews helped me to understand how

patients perceived communications between themselves and providers, themselves and social media, and if they were receptive to combining those two ideas. The results are divided by the research questions and all quotes are direct from the participant recordings.

RQ1: How do factors associated with intimacy in communication mediums influence client and physician perceptions of social media as the platform for engaging in post discharge assessment and communication?

The first research question sought to determine how factors associated in intimacy in communication influence client perception of social media as the platform for engaging in post discharge assessment and communication. The first set of interview questions asked participants about their level of comfort in reaching out to their providers. It included asking what types of communication they have previously used when they have been discharged from the hospital. The themes that emerged from this set of questions included comfort, connections, relationship, communication, privacy, feelings, self-disclosure, and access.

Most of the participants, 14 out of 20, stated that they felt comfortable or very comfortable in reaching out to their health care provider with any unexpected questions after discharge. The type of communication varied among the participants: 15 out of 20 participants would use the phone to call, four participants said that they would text or use the Internet (two specifically said MyChart®), and one said they were not sure; they had never needed to contact for any questions. Participant one said, “I am not currently setup with MyChart® but I would consider MyChart®.” Participant 12 said, “I’m getting better

with MyChart®, I emailed a question and got a response, which was pretty cool." Participant three varies her follow-up communication depending on what she needs at the time stating, "I do MyChart®, I love MyChart® for questions or refills on prescriptions, but for appointments I call the office and wait for them to call me back." The participants appeared to be receptive to using a social media application in these responses based on the openness of using the MyChart® application.

The relationships that the participants shared with their providers appeared to play a large part in the level of comfort and the connectedness that they felt with their provider. Participant 10 stated that "they know me" and participant 15 said "the old group was more personable". Participant nine who prefers to call or gets called also referenced MyChart® but it was not a first level of contact. Instead, he stated,

> I'm very comfortable as I have been with this doctor for years. I usually contact the office manager or the nurse; this time the nurse contacted me for my appointment. MyChart® is the best tool invented and it has been implemented for a long time.

MyChart® appeared in another interview where the participant said they prefer to call but, "I don't actively use MyChart® now but if I needed to I would because I know how it works." The understanding of how to use MyChart® may aid in the receptivity to this option of communication. Also the trust of the relationships between patient and provider may also increase receptivity to the use of MyChart® because there appears to be acceptance with this application.

Privacy was another theme that was apparent in many of the interviews and would affect how intimate they felt with communications in social media. All participants had an opinion on their intimacy level with social media. The responses varied with feelings of openness with self-disclosure and feeling connected on social media to people they are close to (18 out of 20 specifically referred to Facebook©) to being very uncomfortable. Some of the responses ranging from positive to negative tendencies relating to feeling of intimacy in using social media are included below:

- "Social media is the only way to get ahold of my son. I post all the time to Facebook."
- "I'm laid back I just say what's on my mind. I love to talk about me."
- "Social media makes it easier to speak to people sometimes, I probably talk more about myself that way."
- "I'm sure I talk about myself more."
- "I don't think I have different views of relationships when using social media or conversing with them, I don't have any problem talking about myself on social media but not sure they can make social media sites secure enough I would want to look at my medical things."
- "It makes you stay in contact with people you don't see on a day to day basis, you wish people happy birthday, you see families grow which is kind of cool. I used to post a lot; I have just slacked off because I think people are nosey."
- "I don't talk about myself; I just see everyone else's business."

The connectedness the participants felt between themselves and others appeared to be strong in these comments whether or not they chose to disclosure about themselves on social media. It is unclear if they would feel as comfortable using the application they use for these connections to communicate with their provider. Current concerns of privacy may hinder that same comfort level with medical information on an application like Facebook ©.

Lastly, one noticeable theme that emerged from the interviews was access to the provider or to the participants' health information. That appeared to influence whether or not they would call or use social media. Some participants viewed the phone as a faster method, Participant two said, "I get a response immediately they pick up the phone and I don't have to wait for them to be online like with social media." Other participants found the phone to take longer to reach their providers. Some of those comments were,

- "I'd rather use the internet than wait forever on the phone and get transferred back and forth."
- "When you call in you get passed around and can't just talk to a nurse."
- "I'm an observer on Facebook©; most I do is like something. MyChart® is good they always get right back; I don't post about myself on social media or have conversations on social media. I don't wish to have me out there because others see it when you get tagged."
- "I can instant message people and I like doing it that way, get through to people faster on social media than phone, I'm comfortable on private

posts, I don't like talking about my personal issues where everyone can see it."

- "I do not share private information; I'm uncomfortable using Facebook© because of security."

The research question was answered as the study found intimacy factors rooted in the comfort level of the relationship between both the provider and social media appear to influence the various communication mediums for post-discharge assessment and communication. The participants that described a long relationship with their provider described their comfort in communicating with their providers in multiple forms such as telephone, social media, email, or during a scheduled follow-up visit. Each of the participants described a connection with their provider on some level. Many participants who described calling as a preference were not opposed to social media, they instead used it as a supplement for viewing test results or refilling prescriptions in the current MyChart ® application.

The impact of how people care for themselves once they leave the hospital is dependent on the relationship providers have with their patients. The depth of the comfort level of the connection appears to be rooted in not only their relationships, but also the perception of privacy and communication. Additionally the comfort level was dependent on which the communication is with as far as providers, family, or friends. The level of intimacy in choosing to use public or private posts on social media to communicate also varied among participants and did not appear to have a strong correlation based on how

long they have been using social media. Instead, participants with positive perceptions of social media were more likely to have used it more often (Table 1).

Table 1

Social Media Communications

Participant	Positive or negative view on relationship with social media communication	Number of years using social media	Times a week they use social media
1	Positive	6-10 years	More than 10 times
2	Negative	6-10 years	More than 10 times
3	Negative Facebook© Positive MyChart®	3-5 years	6-10 times
4	Negative	3-5 years	6-10 times
5	Negative	6-10 years	6-10 times
6	Neutral	3-5 years	3-5 times
7	Positive	6-10 years	6-10 times
8	Positive	6-10 years	More than 10 times
9	Negative social media general; Positive MyChart®	6-10 years	6-10 times

(table continues)

10	Positive	6-10 years	More than 10 times
11	Positive	6-10 years	More than 10 times
12	Negative	3-5 years	6-10 times
13	Positive	6-10 years	More than 10 times
14	Neutral	6-10 years	More than 10 times
15	Positive	Less than 3 years	More than 10 times
16	Neutral	Less than 3 years	Less than 3
17	Positive	6-10 years	More than 10 times
18	Positive	6-10 years	More than 10 times
19	Positive	6-10 years	More than 10 times
20	Positive	6-10 years	More than 10 times

RQ2: How do factors associated with immediate access to information influence client perceptions of social media as the platform for engaging in post discharge assessment?

The second research question focused on exploring factors associated with immediate access to information and perceptions of the influence of social media as a method to communicate. The research question was answered as it appeared through most of the discussions with the participants that the immediacy of the availability of information on social media has become the fastest source for information. The research question included a specific focus on communication after discharge from the hospital as it was addressed through open-ended questions in the twenty interviews.

The themes that developed from the set of questions included access, connections, relationships, influence, convenience, flow of information, immediacy, and technology. All of the participants use social media to access information for various reasons. It was found, the immediacy of the information has the potential to increase knowledge after discharge based on the current usage of social media by participants. In regards to this finding, Participant eight stated, "It's very helpful, convenient, I get lab results before the doctor calls you."

Other participants use it as their only means to access current information due to the immediacy of the information. Participant eleven discussed that they see things on Facebook© instantly without having to wait for the evening news to come on. The responses from participants regarding the power of information access through social media include:

- "It's important, it's the main thing to get information."
- "I would say a decent role, the only social media site I use is Facebook; I subscribe to Washington Post, New York Times, CNN, a lot of news sites and if something interests me I click on it to go their website."
- "I don't trust that everything on social media is factual or accurate; so I do follow news sources like local news stations so if a tornado warning."
- "I like to get people's opinions and views on things."
- "Plays quite a high role, I would say I can usually catch up with friends and family through social media that don't live nearby, so it's a pretty big connection."

- "If I want answers I go on a website, it's so much easier than a library now."
- "Really without Facebook© we wouldn't know what was going on; we don't have a news station on our TV so we wouldn't know about the weather, local or current world news, or local events"
- "We don't listen to news. When I want information I can find it, I will use my phone; probably 50-60% social media and the rest would be google."

Information appears to play a large role in the interactions on social media from the participants. Those who do not choose to share information about themselves on social media still use it to access data they need or desire. The information can be clustered into five themes that would include news, reviews, relationships, hobbies, and health records. Factors that impact what type of information people use social media for include concerns of trust and accuracy of information. Specific categories that fall under

these clusters are broken out in the figure 2 below.

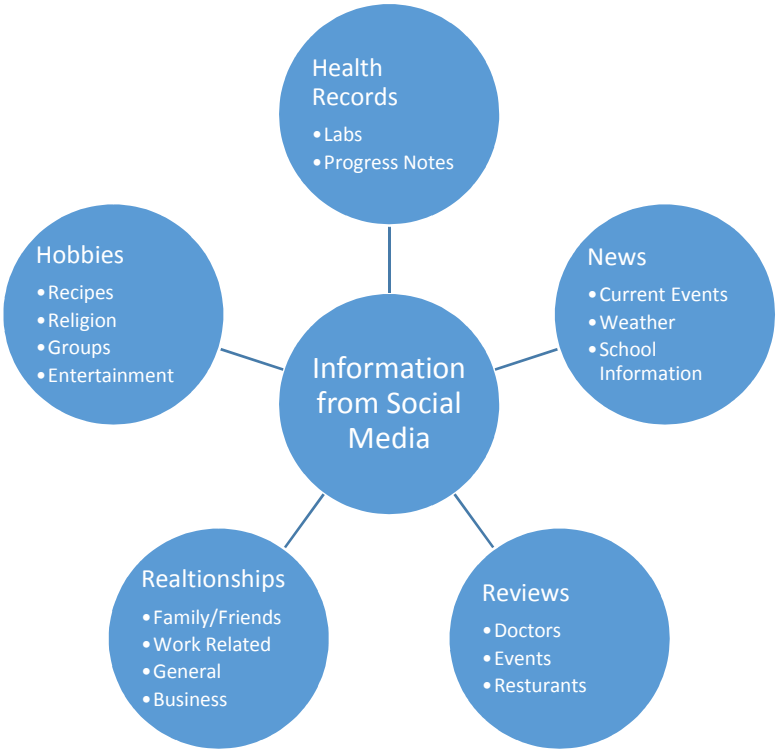

Figure 2. Information from social media

Those participants who currently use social media for their health records specifically mentioned MyChart® as their access to information. Those responses include:

- "I think it's very helpful, very convenient, you can get your lab results and stuff before the doctor calls you."
- "MyChart® I feel like I have power because it's my chart and I can see what they say and that's what I like about it."

Other participants when later asked about the convenience of social media in comparison of other ways to contact a provider after discharge shared mixed feelings though the majority perceived it as a more or most convenient method. The detailed

breakdown includes 13 out of 20 saw social media as more or most convenient, four out of 20 perceived it to be less convenient, and three out of 20 were neutral and did not see one method of contacting providers more convenient over another. Participant 13 who attempted to use the internet as a method for scheduling an appointment said:

> "I tried to book an appointment through the internet and like I went through all the questions and go it done and then they called me to ask more questions in order to get it done. So I'm not sure it was worth my time."

This example is important to note when designing an online appointment scheduler to include all the information that is needed to prevent this extra step. If the value of convenience is not perceived it may prevent future opportunities to where social media or the internet can be used for communication.

The influence between immediate access and use of social media is apparent in the interviews of those who use it. Participant seven even said: "All smartphones that you get already have the apps installed so it goes to creating an account, like Facebook © Messenger." The majority of the participants, 11 out of 20, made a specific reference to accessing social media through their smartphone. Two others discussed the ease of access in general, while three more discussed using it on computers at home. Lastly, participant 16 person was neutral in his response to the influence of access saying: "Access doesn't really make a difference." Also participant eight who uses her computer at home discussed email notifications being an influence to direct her towards using social media stating, "I'm geared to it because its setup in my email to give notifications if something affects me."

All methods that influence access that were discussed in the interviews can be seen in Figure 3.

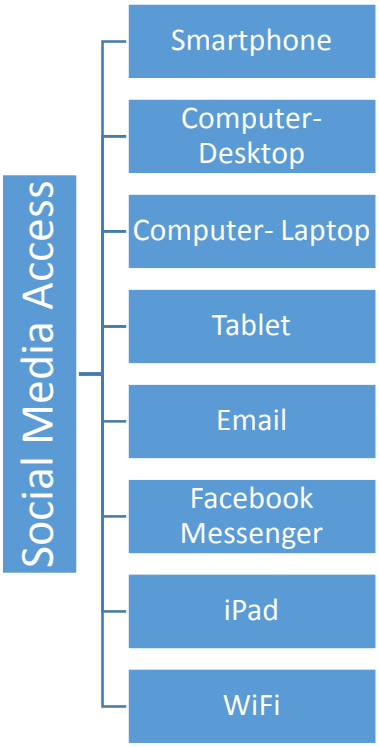

Figure 3. Social Media Access

RQ3: How do factors associated with interactive communication influence client use and experience with social media platforms?

The study found that the types of interactive communications and how participants viewed them influenced whether or not they chose to engage themselves in social media communications. The more positive they described social media, the more they appeared to interact by two-way communications. The more negatively social media was described in the study, the more often the participant would describe their interactions as one-way, such as not communicating about themselves personally, instead using it to receive information.

All participants had the opportunity to describe both positive and negative interactions. Two positive and two negative experiences or perceptions the participants have with their social media interactions were reviewed through the open ended interview style for all twenty participants. The positive themes that were established included connections and re-connecting, communication, socialization, fast, and informative. Participants articulated that they are able to stay in touch with friends, family, or acquaintances through posts and pictures in a positive way. Such as:

- "Both children in Columbus now and we can connect."
- "The ease of contacting family and friends."
- "I get to see what is going on in people's lives, family posts."
- "Facebook helps you reconnect with people you haven't seen since high school."
- "I have relatives in Arizona and Florida, this is how we communicate."
- "I like keeping in touch with people I haven't seen in a long time so catching up with old friends has been real beneficial. I like to see people's pictures."
- "Talking to people you haven't seen in twenty years; you can catch up with old friends and family across the world and state."

17 out of 20 participants made a reference to the connections they are able to keep or make through social media communications through interactions. The other dominant positive theme was the participants used it gather various sources of information for personal use. This can be seen in Figure 4.

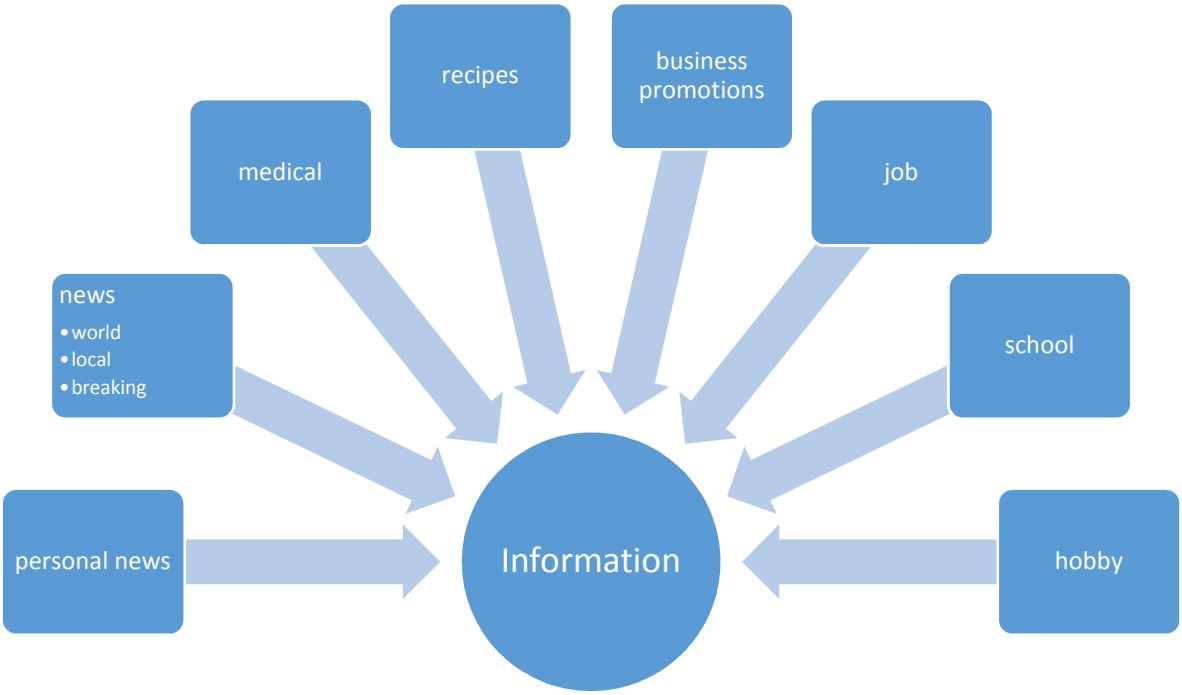

Figure 4. Positive sources of information for personal social media use.

The negative themes that were apparent from the interviews included negativity, conflict, hatred, politics, privacy invasion, inaccurate information, and consuming. These were formed from participant comments that included:

- "Lately seems like people hack things and have hacked Facebook."
- "It consumes your time and becomes addictive."
- "The fighting you see with people and I hate political posts."
- "People bothering you.""
- "Negativity, hatred, people putting others down or exploiting them; people use social media to hurt them."

- "I think we are losing the art of face to face discussion as I think things can be misunderstood or misinterpreted more easily than good old-fashion communication."
- "Scams, you have to be very careful when you are purchasing or who you are talking to."

The results align with interactive feelings and how the participants respond to the environment. The good things that were described in the interviews were concepts that would have the ability to make the participant feel good internally. The negative themes were items that even if they did not happen personally to the participants, could cause them to exhibit feelings of sadness or frustration.

The only ethical issue that was discussed in the interviews regarding interactive factors was boundary concerns. Participant 14 described it as:

> "Nurses have done a couple things such as friending patients which are against the board of nursing laws, taking pictures which can be a HIPAA violation. I think that people don't realize social media; patients will friend them and they don't want to hurt their feelings."

RQ4: How do factors associated with cohesive communication influence client use and experience with social media platforms?

The answer to this question was found to be dependent on the reasons they communicate on social media or how they were influenced to begin communications. If the participants chose to be part of the interactions, they were more likely to describe an ownership of their experience. However, if the participant was more of an observer or

only used social media for information it was less likely to hear them discuss cohesive factors. For example, participant three was very purposeful in her response of communications on MyChart ® saying, “I feel I have power because it’s my chart, I can see what they say and when I type it’s my words to them.” Participant six who uses social media does not personalize or take ownership of the interactions saying, “Rarely talk through social media, I don’t want people to contact me, not comfortable at all talking.”

The reasons why people chose to use social media in the beginning along with what is important to them regarding communications is useful to understand how they perceive the environment. The themes that evolved from these questions included communication, access, influence, ease of use/convenience, security, privacy, and connections.

Participants described being influenced by friends or family members or the desire or need to access information was how they began using social media. This

relationship can be seen below in Figure 5.

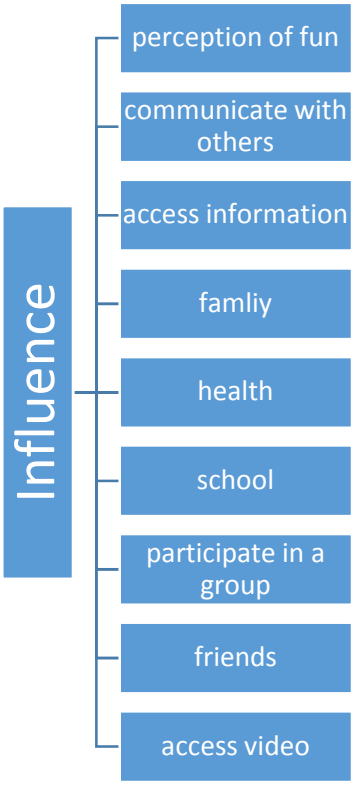

Figure 5. Influence on choice to use social media.

Participants also discussed changes they would make and what would earn their support to use social media for communication with providers. Some of them referred to current features they are now using as they take ownership in the environment, for example:

- "The ease of being able to communicate back to the physician like MyChart® and send a message or script and get a quicker response."
- "I think MyChart® is good and you don't have to get frustrated waiting on a call back from the office."
- "Having an option to do a video or voice or just text."

- "I can look at MyChart® and see my test results, MyChart® is the best thing outside of basic communication. MyChart® for test results as I get those results back before the doctor probably does in social media."
- "Can look on there at things you might not have heard doctor, see results. I like to go there after I have a test done. I feel like I can be more personable with directly what I want to say to the doctor and he takes time to answer instead of a nurse calling you back."

Reasons why they may not chose to use a social media application for communication with their provider as stated by participants included:

- "I worry about breaking HIPPA guidelines, it it's not a secure site than I should not be giving advice to patients."
- "If there are more ways to block things from certain people, there are a lot of negatives on social media."
- "I would support my healthcare provider, but I would worry that people could hack them."
- "Privacy issues, would need something in place for that due to Facebook hacking."
- "You have to know it is secure, the ease of use, with all the data breaches there is nothing more personal than your health record."
- "Need strict security for hospital communications."
- "If I would ever find out they are using my information without my consent; if they were using my information to make money."

- "Keeping the sits updated, if I go and find something ten years old, I would not want to do business with them."

The participants gave detailed accounts on what needs to be taken into consideration if designing an application to be used with patients for post discharge communications.

Summary

In analyzing the first research question, I specifically found that intimacy factors established in the comfort level of the connection between both the provider and the participants influenced how post discharge communication was practiced. Communication mediums for post discharge assessment and communication, whether telephone, social media, or follow-up appointments were influenced by the strength of their relationship with the provider. Participants' intimacy with social media communications to their providers did not appear to be affected, whether or not they chose to use the telephone or social media for after hospital communications. Instead, a contributing fact appeared to be the relationship the patient had with their provider.

For the second research question, I found that most of the participants perceived that the immediacy of the availability of information on social media has become the fastest source for information, in general. The researchers who created the social presence theory found that telephone and television mediums create immediacy (Gunawardena, 1995; Short, et al., 1976). In this study, perceptions of participants also made this true for patients who chose to call the office or use social media. The immediacy of access to their provider through social media was perceived more favorable than telephone for the

majority of the participants. Everyone did not perceive this though, as one participant who found the telephone to be more immediate.

The third research question explored how factors associated with interactive communications influence client frequency of use and experience with social media platforms. The study found that the positive or negative interactions perceived by the participants, influenced whether or not they chose to participate in social media communications. Two-way communications were more common with participants who viewed social media positively. Those participants who used more negative descriptors would indicate their social media interactions are primarily used to receive information, instead of also communicating about themselves.

For, the final research question about how factors associated with cohesive communications influence client use and experience with social media platforms, I was interested if the participants perceived ownership of their communications within the social media environment. Some participants described their social media interactions as mainly observations of others, the majority however, were interactive by communicating with distant relatives or friends. Also, those participants who do currently use social media for communications like the ownership and access to their health information. Ownership of the social media experience was more likely if the participants chose to be part of the interactions. It was less likely to hear descriptions of cohesive factors if the participant was more of an observer or only used social media for information.

The themes from the data analysis supported concepts in the social presence theory (Short, Williams, & Christie, 1976). They also aligned with the research questions

that included the components of intimacy, immediacy, interactive indicators, and cohesive indicators (Annamalai & Tan, 2014; Argyle & Dean, 1965; Wiener & Mehrabian, 1968). In Chapter 5, I describe my conclusions on the receptivity of patients utilizing social media communications to contact providers once discharged from the hospital.

Chapter 5 Discussion, Conclusions, and Recommendations

Introduction

The purpose of the study was to explore factors affecting the receptivity of middle-aged patients to using social media as a platform for post discharge provider-client communication and assessment. Miscommunication has been found in previous research to put the patient at risk for not understanding self-care at home regarding medications or expectations, which can result in a readmission to the hospital (Adeoye & Pineo, 2014; Hvalvik & Reierson, 2015; Kirsch et al., 2015). Well-timed follow-up with improved care transitions between patients and providers after discharge can reduce miscommunication and readmission (Jackson et al., 2015). Social media provides opportunities to facilitate improved communication between patients and providers if there is receptivity to using this method to share and explore follow-up information (Chou et al., 2009; Lomborg, 2012; Moorehead et al., 2013; Wylie, 2014).

Key findings of this qualitative phenomenological study included the relationship between the participants and their providers, the current usage of social media in health care, and how social media is used to connect with friends and family members.

It was discovered through the interviews conducted in the study, the comfort level of interactive communication and intimacy felt by the participants affected how they communicated to their provider after discharge. In addition, the level at which participants communicated about themselves, if any, online was influenced by their comfort level. It was learned through the interviews that the immediacy of information influenced what data the participants sought through social media. Another theme that

occurred during most of the interviews were that participants had positive experiences with re-connecting on social media. The negative interactions that social media users experienced were conflict, inaccurate information, time lost, and concerns about the privacy of their information. Lastly, information from the interviews revealed the driving force that influenced the patients desire to use social media was the influence of those they knew or the need to access the information on social networking sites. The method of communicating through social media appears, from this study, to demonstrate interactions that are present in the components outlined in the social presence theory.

In this chapter, I will provide an interpretation of the study findings, including the relationship between the results and the social presence theory in more detail and describe limitations of the study. Recommendations for future research will also be discussed within the context of the study, along with implications for positive social change.

Interpretation of the Findings

The intention of the study was to produce rich-detailed descriptions of current social media use and health care communication the participants have experienced. This was completed through tailored interview questions that followed the social presence theory framework by including the concepts of intimacy, immediacy, interactive, and cohesive communications (Annamalai & Tan, 2014; Argyle & Dean, 1965; Weiner & Mehrabian, 1968). The social presence theory had previously been applied to the online environment as the internet emerged by Gunawardena in 1995.

The limitation of studies surrounding the social media habits of middle age adults despite their increasing use of social networking sites spurred the chosen age for this study (Dugan et al., 2015; Ozturk, 2015; Perrin, 2015, Smith &Tirumala, 2012; So & Brush, 2008). This study showed similar results, despite the age differences, of other studies that used younger participants (Ozturk, 2015; Smith & Tirumala, 2012; So & Brush, 2008). The participants who used social media already more often were more likely to discuss positive interactions and had a higher social media presence themselves reinforcing previous studies of patients that have used social media networking sites to communicate (Bartlett et al., 2012; Greene et al., 2011; Knight et al., 2014; Yost & Fan, 2014).

Comfort levels of social media communications had found increased social presence theory indicators with higher levels of interaction (Gunawardena et al., 2009; Moody, 2010; Tu, 2000; Tu & McIssac, 2002). Facebook© had also been previously studied for its social, cognitive, and teaching presence and found to be a suitable setting with smaller groups more preferably than large (Ozturk, 2015). Facebook© was referenced in the current study by the participants with mixed feelings on using it for health care focused communications and education with their providers, most often privacy and confidentially being raised as concerns. Some of the participants that were opposed to Facebook© communications spoke highly of MyChart®, an interactive tool used currently between provider and patient to link the patient directly to their personal chart.

The literature search done prior to the study found that age groups tend to have similar communication preferences (Kalmus et al., 2013; Ritcher et al., 2015). This was also true for the group of participants in this study in relationship to how they would communicate with their provider at discharge from the hospital. Most of the study participants said calling the office or provider would be their most likely first preference of communication and they would be comfortable in doing so. Previous studies also found that despite social networking communication not being a first choice, adults older than 65 years old have been increasing their use of social media as they have not been opposed to this method of communication (Campanella et al., 2015; Hutto et al., 2015; Vincent & Velkoff, 2010; Werner, 2011). The results of the current study found that the use of social media was present, but the levels of interactive and cohesive factors were dependent on the type of social media and the positive or negative experiences the participants have had with social networking sites.

A lack of effective communication at discharge causes the patient to be at risk for readmission to the hospital (Adeoye & Pineo, 2014; Hvalvik & Reierson, 2015; Kirsch et al., 2015). The phenomenological design of the current study used interviews with the participants to find out how these patients experienced discharge communication. Misunderstanding of instructions provided from providers to patients had been identified in the research as a barrier and previous studies had sought to understand miscommunication at discharge (Block et al., 2014; Khan et al., 2011; Lawn et al., 2015). The participants in this study did not describe experiences with communication complexities regarding their treatment at discharge. The theme that emerged regarding

complications at discharge instead was more around access and scheduling; one participant tried to use online scheduling but had to be called with more information needed and another tried to schedule on the phone but was told they needed insurance information to do so. This led to frustration in access to scheduling an appointment for these participants.

Medication instructions were found to be a cause for miscommunication and readmission to the hospital once discharged (Baldwin, 2013; Heisler et al., 2002; Jencks et al., 2009; Kirsch et al., 2015; Press et al., 2013). This theme did not emerge within this population. The reference to medications was about refills of prescriptions and participants expressed comfort in using the phone or MyChart® to request these. In the discussions, there were also no barriers that impacted understanding of medication instructions by this group of participants.

The need to determine what preferences patient had with social media communication was important to determine the patient engagement potential in the future (Saleh et al., 2012). The participants were able to describe in this study what was needed to encourage social media communications at discharge with their provider. This included the ease of access, importance of confidentiality, quick response time by the providers for questions or needs, and ability to see individual information such as labs or prescriptions. The overarching theme discovered from the interviews was the importance of their information staying private. Participant nine said, “There is nothing more personal than your health record.”

Previous research has also found that patients have used social media to seek information or support from other people that have experience with a specific diagnosis or treatment the patient or a family member endures (Bartlett et al., 2012; Greene et al., 2011; Knight et al., 2014; Yost & Fan, 2014). Information seeking behavior was also a theme found in this study along with connections made by the participants individually with others or in groups. Some of the participants did not speak about exchanging information themselves through interacting with the groups. Instead, participants discussed their experiences of observing what other people were posting such as family pictures or personal updates. The participants also discussed that they would search for information for personal use such as recipes or reviews of businesses, providers, or places. The same concern about the possibility of inaccurate information on social networking sites was discussed by the participants in this study like previous studies (Greene et al., 2011; Saleh et al., 2012).

Affective indicators were not specifically discussed by the participants as being key to communications or through their experiences in communicating. A previous study by Swan (2002) theorized that students used affective communications to compensate for not having the ability to communicate nonverbally. It is not clear from the patients in the current study if they also use affective indicators in the same manner. Interactive indicators discussed in the social presence theory were present in the findings of the current study as connecting and reconnecting through social media was an emerging theme. The descriptions discussed by the participants on how they interacted with others

supported social presence through action and clear understanding of what was being communicated.

Cohesive indicators through personalization and ownership were present in the study findings as participants discussed both positive and negative issues surrounding these indicators. A concern that many patients was the ability to keep their information private. It is possible that the length of time the participants have been using social media influenced the group's tendency to use cohesive indicators over affective indicators. Akyol and Garrison (2014) found that in an online learning environment, over time the number of affective indicators decreased while the number of cohesive indicators increased. The current study found interactive and cohesive indicators to be present in social media usage of the participants. There was little discussion of the extent that affective indicators were used and potentially may be influenced by the time on social media as previous studies have found with online environments (Akyol & Garrison, 2014; Swan, 2002).

Limitations of the Study

The limitations that may be present in this study include potential for bias by the researcher through previous knowledge and experience as well as potential social response bias from the participants during the interview. I attempted to reduce these limitations through epoche, following a strict interview protocol, interview recording, and transcript review. Data quality is another possible limitation in this study. I addressed this by checking representativeness and triangulation of the data (see Miles, Huberman,

& Saldana, 2019). This limitation was reduced by enlisting the service of an independent researcher to check themes.

The study was also limited in generalizability and transferability. The small sample size of 20 participants, the sampling strategy, and the location of the study, may make it challenging to repeat in another environment (see Patton, 2012). This is a challenge with qualitative, phenomenological studies that must be taken into consideration when applying the findings to other uses.

Recommendations

Present strengths that appeared from the study include the openness of the participants to engage in the technology associated with social media. There were no comments present in the interviews that suggested this age group would shy away from the technology associated in accessing social media. Instead it was more the contrary; the participants expressed they experienced comfort in utilizing multiple resources for access. Recommendations for future research may include focusing on what receptivity MyChart® users may have in creating an online community link within the chart to others with similar disease process in a framework similar to shared medical appointments. There were participants in this study that found the concerns of privacy and confidentially of their medical information to be present if they would consider a current platform such as Facebook®. However, more private social networking sites may be received differently as suggested by one participant, who stated “they might be able to secure a different one more by building it from the ground up”

Future research recommendations may also include focusing on a disease-specific group that has been more known to have complications at discharge within this age group to find what barriers they have in communication about discharge instructions from previous experiences through a survey or questionnaire to gather more quantitative data. Research could also focus on a specific on patients who have been readmitted to the hospital and see if social media follow-up and communication would have the potential to decrease through alerts or accessibility. There are also quantitative opportunities to consider such as an experiment by splitting patients in two groups to see if one group who had access to social media communication with their providers would have different outcomes from a control group who did not. Additionally, surveying social networking activity with a patient population who has social media communication with their providers to find data related to how long they may spend communicating on social media or what information they are accessing specifically related to their care.

Implications

The potential impact for positive social change in creating a social media application or generating buy-in of a current application for communication can aid in providing information sooner to patients once discharged from the hospital. Organizations or physician offices may be able to design social media pages for availability of delivering information to current and potential consumers. The study found that participants utilize social media for information but had some concerns about the accuracy of the information. Organizations who utilize social media have the potential to

own the information that their patients are accessing about their health to ensure accuracy.

Patient engagement is critical along with improved communication methods to ensure that they receive the information they need to care for themselves at home. This study found that patients like the accessibility the MyChart® application had to house their medical records. Increasing patient understanding and utilization of this tool or a similar tool with complete online and interactive access to patients' own medical records may help to improve understanding and education of their condition. Since patients use social media as a method for gathering information MyChart® (or a similar product) with features that include links with evidence-based research about what results mean or further information about plans of care. This information could include recipes for prescribed diets, medication usage and side effects, or treatment options that may increase further utilization of this type of social media instead of patients' blindly searching the internet.

Positive social change may be impacted by patients utilizing some of these applications to improve timely access to providers. Many of the participants in the study found social media more immediate than other communication methods. Miscommunication between patient and provider also can be improved as one participant discussed that calling and leaving a message for someone else to translate is not the same as the physician seeing her exact words that she types to him in social media. Health care costs also have the potential to be lower as the cost to access social media is not high.

Most people have current access on their phone, where the cost of not following up and experiencing a complication such as readmission, is high.

Recommendations for practicing the use of social media would include ensuring that confidentiality and privacy is protected for patients. The communication will also need to be updated often. For example, a private practice Facebook© page would need current information for patients to access or a MyChart® information link would need up-to-date research attached. Participants discussed not only accuracy of data availability, but also current, updated information being important to them.

Conclusion

This qualitative, phenomenological study was focused on the receptivity of middle age adults in using social media to communicate with their providers post-hospitalization. The participants were recruited from one family medicine practice and had prior experience with using social media in order to capture how those previous experiences shaped their views in this qualitative, phenomenological study. The findings presented an understanding of the lived experiences of twenty patients who have been admitted to the hospital in the past and have used social media previously. Each participant revealed that they are comfortable in reaching out to their provider after discharge. The methods in which they reached out currently varied to include calling, emailing, using social media, going to the office, or texting. For the participants who have called, a couple expressed a concern of experiencing a delay in either getting a question answered or scheduling an appointment. Social media usage for the participants was found to be influenced on the immediate access they had to it. The participants

discussed having social networking on their smartphone, tablets, laptops, and computers with access readily available.

The results of the study revealed that ease of use, privacy, and convenience were influential in how intimate the participants felt when communicating on social media. The participants did vary in their responses on the level of intimacy they felt comfortable with regarding how much they shared on social media, with patients who had more positive experiences to be more likely to communicate about themselves on social networking sites. Convenience influenced communication as eleven out of twenty participants discussed using their smartphone to access social media because of the immediacy.

Information gathering and connecting were positive, prevailing themes in the study. Seventeen out of twenty participants made reference to connecting and reconnecting with friends or family through social media. Negative themes that emerged from the study included conflict, hatred, politics, privacy invasion, inaccurate information, and consuming. These align with concepts that may make an individual to feel personally negative or discouraged.

Lastly, the study found that participants first accessed social media due to the influence by friends or family, or the need or desire to access data. The decision to use social media for accessing their health information was driven by cohesive factors to include ownership of their data. The participants also discussed concerns of not being able to own information once it is on the internet due to privacy or hacking concerns.

Communication between provider and patient is imperative to ensure that patients are able to engage in their health care once they are discharged from the hospital. The relationship between the provider and patient has the opportunity to influence how they chose to communicate. This study was able to highlight some of the reasons why patients are choosing to use social media for post discharge communication and provide some apparent concerns based on their previous experiences. These results can be utilized to increase usage of a current social media application used by patients or to create one that would be best applicable for the patient and provider population.

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Appendix A: Interview Protocol

Part I: Notes for the Interviewer

Overview

1. Tape-record the interviews if permission is granted
2. Interview in a neutral setting.
3. Each interview lasted 40 to 60 minutes.

Interview Methodology

Interviews were implemented with a customized approach allowing for an in-depth investigation. Follow-up questions were used to stimulate interviewee memory. The interviewer used a semi-structured question design (Part III). Interview contained:

1. A predetermined set of 16 questions

2. All predetermined questions were the same for respondents

Designation of Interviewee: _____

Location of Interview: _____

Date: _____

Start Time: _____

Finish Time: _____

Part II: Components of the Interview

1. **Components of the Interview**
    a. Introduction (5-10 minutes)
    b. Review confidentiality and consent form.
    c. Create a relaxed environment

d. Dialogue

Question: Have you received my introductory correspondence explaining my research and the format that will be used?

Question: Are there any questions?

2. Explain the purpose of the interview

The purpose of this interview is to explore factors that influence your decisions. During the time we have together I would like to get an understanding of your experiences and feelings pertinent to the subject matter of the study.

3. Ask permission to record interview

With your authorization, I would like to tape-record our discussion to get an inclusive record of what is said, since the notes I take will not be as comprehensive as I will require. No one other than I will listen to anything you say to me. Only I will have access to the records. The research results will describe what you and others have said predominantly in summation. No responses will be ascribed to you by name.

The open-ended questions are intended to obtain your personal experience and perceptions. The interview time may take about 1 hour. If you agree to volunteer and participate in the research process, please sign the informed consent page and confidentially agreement.

Would you give me permission to tape the interview?

Do you have any questions before we begin?

Part III: Interview Questions

RQ1: How do factors associated with intimacy in communication mediums influence client and physician perceptions of social media as the platform for engaging in post-discharge assessment and communication?

Interview Question 1: Please describe three major elements in your level of comfort in reaching out to your health care provider once discharged from the hospital.

Interview Question 2: What are your perceptions of your personal relationships when you communicate through a social media application?

Interview Question 3: Please explain your level of comfort discussing yourself through social media applications either to public or private posts.

Interview Question 4: Please discuss any ethical issues that you may have using social media to connect with health care providers at discharge.

RQ2: How do factors associated with immediate access to information influence client perceptions of social media of social media as the platform for engaging in post-discharge assessment?

Interview Question 1: What role does social media play in your ability to obtain information?

Interview Question 2: What were your perceptions of social media applications before utilizing them? Are your perceptions still the same after using social media applications?

Interview Question 3: What role does your access to social media play in your decision to utilize it?

Interview Question 4: What are your perceptions with the convenience of social media applications in comparison with other methods of communication to health care providers?

`RQ3: How do factors associated with interactive communications influence client use and experience with social media platforms?

Interview Question 1*:* Please describe two of the successes you have had using social media applications for communications with others.

Interview Question 2: Please describe two of the challenges you have had using social media applications for communications with others.

Interview Question 3: Have you experienced any legal issues with social media application communications?

Interview Question 4: Have you experienced any ethical issues with social media application communications?

RQ4: How do factors associated with cohesive communications influence client use and experience with social media platforms?

Interview Question: What were your reasons for choosing to use a social media application?

Interview Question 2: What characteristics do you believe are important for effective social media communications?

Interview Question 3: Are there things that should be changed in social media applications to make it more effective for post-discharge communications?

Interview Question 4: Please discuss three major factors that would contribute to your decision to use or not use a social media application for communication with your health care provider at discharge.

Appendix B: Demographic Survey

This survey was designed to collect information pertaining to middle aged patient demographics. Data collected from this survey will be used for dissertation research purposes only.

Please review and complete all questions listed on the survey. Once you have completed the survey, please return to the researcher. Thank you for your help and support.

1. How many times a week do you use a social media application (such as Facebook)?

   a) Less than 3
   b) 3 to 5 times
   c) 6-10 times
   d) More than 10 times

2. How do you most often access your social media application (such as Facebook)?

   a) Personal computer
   b) Public computer
   c) Work computer
   d) Friend/relative computer
   e) Personal tablet
   f) Personal smartphone

3. How many years of experience do you have using social media?

   a) Less than three years
   b) 3 to 5 years
   c) 6-10 years

4. How many times have you been hospitalized?

   a) Never
b) 1 to 3 times
   c) 4-10 times
d) More than 10 times

5. How have you contacted your health care provider after discharge from hospital in the past?

a) I have not been hospitalized

b) I have not followed up
c) I called the hospital floor
d) I called the office
e) I waited until my follow-up appointment

6. Indicate your age range.

a) 45-50
b) 51-55
c) 56-60
d) 61-65

7. What is your race?

a) Caucasian
b) African American
c) Hispanic
d) Asian
e) American Indian
f) Other

8. What is your gender?

a) Male
b) Female

9. What is your educational background?

a) Some college
b) Associate degree or technical school completion
c) Bachelor's degree
d) Masters or Advanced degree

Appendix C: Organization Permission Letter

Brenda Welch

May 19, 2017

Organization
IRB

Re: PhD Research Project on Patient Views of Social Media Communication with their Health Care Providers

Dear Organization:

My name is Brenda Welch and I have been in health care leadership for many years. I am presently working on a PhD in Health Services through Walden University. As part of the process I am conducting a research study on the receptivity of middle-aged patients to using social media as a platform for post-discharge provider-client communication and assessment. I am seeking your assistance to enable me to pursue this study. The study will involve one-to-one interviews with patients who are invited to reflect on their personal lived experience of previously using social media and how that might influence their receptivity to using post-discharge for communication with their provider.

I am asking for your permission to interview a sample of non-hospitalized patients(s) for this study. I will need to conduct a 20 – 60-minute interview with your non-hospitalized patients at a time and place convenient and comfortable for your non-hospitalized patients. With permission from the non-hospitalized patients, the interviews will be audio recorded for accuracy of recollection and ease of transcription. Non-hospitalized patients will be asked to verify the transcripts of the interview.

In order to maintain the integrity of the study certain practices will be in place. Pseudonyms for the organization and all participants will be used. All excerpts from interviews used in public communication of any kind will have names and identity markers removed.

All documents and recorded files will be destroyed as per the Walden University's research guidelines and in the interim, kept under lock and key for five years and accessible only to the researcher. Observations and communications with one participant

will not be discussed without consent with any other participant. Participants have the right to withdraw at any point during the study.

The intended outcome of this study is to better understand the lived experience of patients' social media receptivity for the purpose of improving patient compliance and health management upon discharge from the hospital based on communication barriers that has the potential to be improved utilizing social media strategies. The information may be shared through a publication in a scholarly journal, presentation at a scholarly conference, and a PhD dissertation.

If you could please sign and return the attached form, I would greatly appreciate it. Also, please feel free to contact me if you have any questions or if you have suggestions for possible participants for this study.

I look forward to hearing from you.

Sincerely,

Brenda Welch, PhD Candidate
Health Services
Walden University