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Bedside Nurses' Perception of Their Role Managing Elderly Patient's Polypharmacy

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Walden University
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Abstract

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MSN, Nova Southeastern University, 2012

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Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Polypharmacy is described as having six or more prescription medications that are consumed concurrently and affects citizens worldwide. Polypharmacy may negatively affect patient care in hospitalized patients because nurses may lack the time to provide adequate care because they are overworked and/or understaffed, leading to problems such as medication errors. The purpose of this qualitative descriptive phenomenological study, guided by role theory, was to explore bedside nurses' perceptions of their role regarding patient polypharmacy. Twelve bedside nurses were interviewed on their roles in polypharmacy and medication management for elderly patients. The interviews were analyzed and revealed three distinct themes and eight subthemes related to the experiences of bedside nurses in managing the polypharmacy of geriatric patients. Themes included that polypharmacy is a significant issue that impacts the nurses' role in geriatric care, polypharmacy affects the care the nurses provide to elderly patients, and training and education being vital to effective polypharmacy management. For the practice of bedside nursing for geriatric patients, the current work may provide the grounds for organizational changes in the role definitions for nurses, though additional research is required to support a change. The recommendations for future research include the exploration of specific factors that contribute to polypharmacy management error and the pressures on nurses which may contribute to such errors. Minimizing errors resulting from polypharmacy and improving the operations of healthcare organizations with a history of medication errors would bring about positive social change.

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Dedication

I want to extend a heartfelt thank you to my friends Teresa Passione and Nicole Jackson for ensuring that I never felt alone while traveling to all my PhD Residencies. They accompanied me to every PhD Residency from Tampa to Virginia to Atlanta, they were by my side supporting me every step of the way.

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Chapter 1: Introduction

Introduction

Polypharmacy is described as having six or more prescription medications that are consumed concurrently (Kojima et al., 2012) and affects citizens worldwide. As the population ages, polypharmacy becomes more common and significant. If not managed appropriately, polypharmacy can create major complications for patients such as numerous hospitalizations, hospital readmissions, falls with serious injuries, and adverse medication events because the elderly person taking multiple medications may not take them as prescribed and become confused (Wimmwer et al., 2014; Vandermause et al., 2016). The Joint Commission (JC) places great emphasis on the nurse's role in medication safety and preventing adverse outcomes in the geriatric population (Cima & Clark, 2012). Little is known, however, about the perceptions of bedside nurses of their role in managing polypharmacy. For the purposes of this paper, bedside nurses are those nurses working with patients who are hospitalized and who, for medical or physical reasons, are to remain in bed to receive treatment. The potential social implications include the development of an improved understanding of polypharmacy complications and the basis for nurses to develop improved care techniques for patients who take multiple medications.

Background

Polypharmacy is the consumption of multiple prescription medications taken concurrently. Polypharmacy can complicate the self-medication process and the assisted medication process. While polypharmacy has been found to be a significant factor for

poor medication adherence in patients who self-medicate at home (Zelko, Klemenc-Ketis, & Tusek-Bunc, 2016), there is also evidence that nursing assistance does not reliably alleviate poor medication adherence (Yap, Thirumoorthy, & Kwan, 2016). Polypharmacy may negatively affect patient care because nurses may be overworked and/or understaffed, leading to problems such as medication errors (Fulton & Riley, 2005; Rajeev et al., 2018). This is especially a concern in hospitalized patients, including bedbound patients, as such patients may have difficulties properly taking their medications (Yap, Thirumoorthy, & Kwan, 2016). Theoretical questions remain about the role of the nurse in preventing polypharmacy-related problems. Nurses may promote certain mediating factors, such as education of the patient, that help prevent polypharmacy-related problems. It is important, therefore, to develop a better understanding of the approaches that can be taken by bedside nurses in preventing polypharmacy-related problems.

Efforts have been made to study these concerns, as well as the perceptions of polypharmacy patients in relation to their care (McKillop & Joy, 2013). For example, McKillop and Joy (2013) interviewed 10 patients about their attitudes towards taking multiple medications at one time and the reasons why they may feel inclined to be non-compliant. However, all studies focus on the impact on the patient (Vandermause et al., 2016; Wimmwer et al., 2014: Yap et al., 2016; Zelko et al., 2016) and none, to date, focus on the nurses and their experiences with and perceptions regarding polypharmacy patients. Therefore, there is a discernible gap in the literature at the nexus of polypharmacy patient care and the perception of nurses. The current study is intended to

provide research findings that can help fill the gap concerning the experiences and perceptions of bedside nurses who work with polypharmacy patients. The importance of addressing the identified research gap is that it may provide information useful for identifying the factors that contribute to poor adherence and worsened health outcomes for patients with polypharmacy needs.

Problem Statement

Polypharmacy is a serious health disparity that afflicts people of all ages. However, older people are at a higher risk of being affected by polypharmacy because of the occurrence of comorbidities and frailty (Kojima et al., 2016; Santos et al., 2016). Polypharmacy can contribute to confusion about medication management which leads to a lack of adherence to the medication schedule which can compound medical conditions of elderly patients (Wang et al., 2018). Bedside nurses are often placed in a difficult ethical position regarding patient safety where they know the benefits of the medications to the elderly clients, while understanding the complexities involved with polypharmacy and the risks associated with administered multiple medications daily. The risk of overmedication is high in elderly patients who have been prescribed multiple medications (Wang et al., 2018), and nurses tend to be aware of this risk. Nurses are the primary line of care and often have primary responsibility for administering medications. While much is known from the perspective of the patient regarding polypharmacy (Vandermause et al., 2016; Wimmwer et al., 2014; Yap et al., 2016; Zelko et al., 2016), there is little known regarding the perspective of the nurse regarding polypharmacy and how standards of care are impacted by the problems that accompany polypharmacy.

Purpose

The purpose of this qualitative descriptive phenomenological study was to explore bedside nurses' perceptions of their role regarding patient polypharmacy. I described the lived experiences of the nurses managing hospitalized geriatric patients who are taking six or more prescription medications concurrently.

Research Questions

1. How do bedside nurses perceive their role in managing polypharmacy to hospitalized elderly patients?
2. What are the lived experiences of bedside nurses in managing polypharmacy in elderly patients in the acute care community?

The intent of the current study was to develop an understanding of the perceptions of bedside nurses who manage polypharmacy in elderly patients in an acute care community hospital. The development of such an understanding was intended to provide an account of the perceived roles, role characteristics, and lived experiences of the bedside nurses in the targeted healthcare setting.

Theoretical Framework for the Study

I chose role theory as my theoretical approach, which includes the concepts of role conflict, role strain, and role ambiguity. Role theory has been discussed in early and current nursing literature. It can be traced back to the early 1900s and became common in the 1930s (Brooke, Davidson, Daly, & Halcom, 2007). The creation and development of role theory is not attributed to any one theorist but is a combination of concepts borrowed

from psychological and sociological constructs and premises. Conway's (1988) description of the seminal development of role theory included three major perspectives: (a) social structuralism, (b) symbolic interactionism, and (c) the dramaturgical perspective. Given the renewed emphasis placed on teamwork and role expansion in contemporary health systems, using role theory may be useful for gaining insight into the perceptions of nurses (Brooke, Davidson, Daly, & Halcom, 2007).

I chose this theoretical approach because I explored the nurses' role and experiences in managing the care of the patients experiencing polypharmacy. Role conflicts ensue when the role occupant (nurse) is conflicted with the demands of other role expectations. Role strain occurs when there is too much to do within a given time frame, and role ambiguity occurs when there is a lack of clarity in the content of the role. In contemporary nursing, nurses are expected to assume many different roles at the same time along with added time constraint. The problem is not that bedside nurses are not able to comprehend the role requirements or to manage multiple tasks simultaneously, but rather, the potential lack in capacity due to role stressors, ambiguity, and conflicts. (Brooke, Davidson, Daly, & Halcom, 2007). Role theory provided a framework to explore hidden perceptions about polypharmacy that are embedded into nurses' experiences. Additionally, by allowing nurses to tell their stories, more information was contributed to existing literature regarding polypharmacy, role conflict that may come with too many polypharmacy patients, and perceptions regarding lived experiences while caring for elderly polypharmacy patients. More detail on role theory is presented in Chapter 2.

Nature of the Study

The nature of this study was a qualitative design of descriptive phenomenology. I chose this approach because it allowed me to gain an understanding of how nurses perceive their role and experiences in managing elderly patient's polypharmacy. Husserl and Schultz were renowned philosophers who influenced phenomenological sociology (Bogdan & Biklen, 2007). Creswell (2009) posited that scientists elect a phenomenological approach when they seek to identify human lived experiences related to specific phenomenon experienced by the participants. Sadala and Adorno (2002) speculated that recently, nurses have seen phenomenology as integral to their understanding. The phenomenological approach is appropriate because it focuses on listening to the nurse's stories as they re-live their experiences caring for the geriatric patients' polypharmacy. I used the phenomenological approach to understand the bedside nurses' role in managing polypharmacy. This method helped me understand the bedside nurses' perception of their day to day experience and overall role and responsibilities in managing polypharmacy. The design and approach aligned with the theoretical framework because I focused on how the functions and perception of the nurses' role inform their ability to provide care and manage daily multiple medication administration concurrently. This created new knowledge that may be incorporated into practice and policy. Bedside nurses who work in an acute care hospital setting with patients with polypharmacy needs were interviewed for the study. I used the findings to understand the perceived roles and lived experiences of the nurses concerning their management of polypharmacy.

Definitions

The definitions for the proposed study were as follows:

Bedside nurses - those nurses who are working with patients who are required for medical or physical reasons to remain in bed for much of the day and when receiving treatment (Mullen-Fortino, et al., 2012). *Bedside nurse* refers to a registered nurse who provides direct frontline care to the hospitalized elderly population (Mullen-Fortino et al., 2012).

Bedbound patients - patients who are required for medical or physical reasons to remain in bed for much of the day and when receiving treatment (based on the bedside nurse definition from Mullen-Fortino et al., 2012). For the purposes of this paper, bedside patients are those patients of bedside nurses.

Polypharmacy - six or more prescription medications taken concurrently (Zelko et al., 2016).

Role conflict - any significant incongruency or problem caused by perceived or actual differences among an individual's various professional and personal roles (Masters, 2018).

Role strain - psychological stress or anxiety caused by having to complete one's duties in a specific role or from role conflict, as defined above (Masters, 2018).

Role ambiguity - the psychological state of being unable to define one's role or the duties required of such a role (Masters, 2018).

Assumptions

For this study, I assumed that bedside nurses desire to provide quality care and education to older people who are on many medications. It was also assumed that the nurses in the study provided accurate and honest responses to questions regarding their perceived roles.

Scope and Delimitations

I conducted a qualitative study because I sought to obtain rich, in-depth data about bedside nurses' role perception. The study focused on registered nurses and their lived experiences in managing the complexity of polypharmacy in the population of patients with bedside nurses. Perceptions of bedside nurses would be difficult to measure using a quantitative study because of the number of participants required for such an analysis. Therefore, a quantitative study cannot elicit the description that can be derived from a qualitative study. It was more beneficial to focus on a qualitative study so that the perceptions could be analyzed. While different types of data could be obtained using a quantitative method, a qualitative study allowed me to extract findings to understand the 'why' behind the responses given (Creswell, 2013). For the proposed study, bedside nurses were recruited because of their intimate knowledge of bedside care. Nurses who did not provide direct care at the bedside were excluded because their information would not add value or assist in answering the research questions. I did not recruit participants who do not work in acute care setting or nurses who do not work at a patient's bedside.

Other theories that may have been applied in the current study included the theory of planned behavior. However, this theory was not relevant for the present study because

the medication adherence is also up to patients, and this specific study focused solely on nurses. Nevertheless, given that the perceived roles of nurses may be significantly associated with patient outcomes for patients with polypharmacy needs, role theory was chosen as the theoretical foundation for the current study.

Limitations

A limitation of the study was that the sample population was recruited from a single healthcare setting. This may limit the transferability of the results of the study, as focusing exclusively on an individual setting limits the transferability of the results to similar settings (Creswell, 2009). The second limitation was the potential for respondents to be dishonest about their perspectives. This potential limitation was minimized by ensuring confidentiality. Because I collected and interpreting the data, my bias could have affected the results.

Significance

I sought to explore bedside nurses' perceived role in polypharmacy and medication management by determining the perceptions of bedside nurses regarding their role conflicts, role strain, and role ambiguity. My research produced findings that contributed to existing literature regarding the impact of polypharmacy in relation to the elderly population. The results of this research study will add to the current body of knowledge and heighten the awareness of bedside nurses supporting patients afflicted by polypharmacy. Based on previous research, the results of my study provided insight into the perceptions of nurses' roles in relation to polypharmacy in the elderly population and the problems that exist in handling these cases. Since polypharmacy is a global problem

in healthcare, research on polypharmacy supports the elderly population and potentially effects positive social change (Zelko et al., 2016).

Social Change

Role understanding may increase bedside nurses' proficiency to educate elderly patients about managing polypharmacy (Conway, 1988). Therefore, assisting in creating a better quality of life for the elderly population may affect positive social change.

The Gap in Research Knowledge

Polypharmacy is the consumption of multiple prescription medications taken concurrently. This is especially a concern in the hospitalized geriatric patients. Prior research exposes a gap in the literature in addressing the problem of polypharmacy, specifically the nurse's role in managing polypharmacy and addressing resources needed to educate patients and coordinate care (Conway, 1988; Zelko et al., 2016). The selected research articles related to polypharmacy, medication management, and the geriatric population describe the justification for embarking upon a qualitative research on polypharmacy (Fulton & Riley, 2005; McKillop & Joy, 2013) by explaining how these factors are related and how polypharmacy is most influential to this population. Moreover, bedside nurses work actively with patients and provide the transference of medication to patients. They are responsible for admission medication reconciliation, medication administration, discharge teaching, and discharge medication reconciliation while handling many other tasks at the same time. This multitasking creates opportunities

for role conflict, role strain, and role ambiguity. All the articles that were researched (Conway, 1988; Fulton & Riley, 2005; McKillop & Joy, 2013) referenced other healthcare professionals' role, but none explicitly address the perceptions of nurses in providing care daily to the elderly population. Therefore, a gap existed in understanding bedside nurses' role in managing polypharmacy.

Summary

In this study, I explored the elements of polypharmacy and descriptions of nurses' perception of their role in polypharmacy as part of providing bedside care to elderly patients. The problem bedside nurses experience managing polypharmacy relate to role conflict, role ambiguity, and role strain. The need to identify issues related to the perceived role of nurses, including role ambiguity and role strain, was established in this chapter. Role understanding may assist bedside nurses in mitigating and managing multiple medication administration and creating a better quality of life for the elderly population. I will present a synthesis of relevant literature and explanation of the theoretical foundation for the proposed study in Chapter 2.

Chapter 2: Literature Review

Introduction

The purpose of this qualitative descriptive phenomenological study was to explore bedside nurses' perceptions of their role regarding patient polypharmacy. The development of such an understanding was intended to provide an account of the perceived roles, role characteristics, and lived experiences of the bedside nurses in the targeted healthcare setting. Most of the studies involved patients as the sample population, while only a few investigated health professionals, such as Sinnige et al. (2016), Namara et al. (2017), and Reeve et al. (2018). The role of health professionals in managing the polypharmacy of patients and barriers that arise among elderly patient is concentrated at medication management (McIntosh et al., 2018; Stewart et al., 2017). Research shows that various interventions such as de-prescribing medications are common, while others involve policies covering several initiatives shown to be effective polypharmacy management structures including the management of roles, conflicting responsibilities, and workload pressures for nurses (McIntosh et al., 2018; Stewart et al., 2017). The research presents a significant gap concerning the perceptions of nurses regarding their roles in the management of polypharmacy among older patients. Information is presented regarding the polypharmacy of the elderly population and the role of bedside nurses.

Literature Search Strategy

I searched the following databases: MEDLINE, CINAHL, PLoS ONE, EBSCOhost, PsycINFO, and Cochrane Library. The search terms I applied in the

literature search were: *medication geriatric; medication bedside; medication bed side; medication bed-side; medication issues; medication problems; medication cases; pharmacological geriatric; pharmacological bedside; pharmacological bed side; pharmacological bed-side; pharmacological issues; pharmacological problems; pharmacological cases; multiple medication geriatric; multiple medication bedside; multiple medication bed side; multiple medication bed-side; multiple medication issues; multiple medication problems; multiple medication cases; polypharmacy geriatric; polypharmacy bedside; polypharmacy bed side; polypharmacy bed-side; polypharmacy issues; polypharmacy problems; polypharmacy cases; pharmacy geriatric; pharmacy bedside; pharmacy bed side; pharmacy bed-side; pharmacy issues; pharmacy problems; pharmacy cases; polypharmacological geriatric; polypharmacological bedside; polypharmacological bed side; polypharmacological bed-side; polypharmacological issues; polypharmacological problems; polypharmacological cases; prescription geriatric; prescription bedside; prescription bed side; prescription bed-side; prescription issues; prescription problems; prescription cases; prescription medication geriatric; prescription medication bedside; prescription medication bed side; prescription medication bed-side; prescription medication issues; prescription medication problems;* and *prescription medication cases*. To obtain sufficient related papers, I used the "all text" provision on EBSCO host. Using the terms outlined above, numerous articles were discovered. For the purpose of the current review, studies that were published between 2000 and 2018 were selected, leaving a total of 123 papers. More recent articles were given preference in the considerations for inclusion in the literature review. Previous

qualitative or quantitative research, as well as systematic reviews that examined polypharmacy management in geriatric populations, interventions, and perspectives of practitioners such as nurses, were also included.

Theoretical Framework

Grant and Osanloo (2014) emphasized that a theoretical framework is the underlying structure that guides a research study and should be mentioned explicitly within the dissertation. I chose role theory as my theoretical approach because my aim was to explore bedside nurses' perception of their role in managing polypharmacy and to gain a deeper understanding of their day-to-day experiences in coordinating and managing care of elderly patients with polypharmacy. According to Biddle (2013), role theory is the theoretical perspective that individual behavior is partially dictated by the roles that nurses believe that they are supposed to fulfill and have been assigned to. The various roles (such as those in care taking) that nurses believe that they are fulfilling have major impacts on their behavior (Frydman, 2016).

Roles not only serve as identity characteristics, but also help to dictate behavior. Roles that tend to carry high levels of responsibility and demand may dictate behavioral patterns in such a way that promote a greater level of attention and care (Biddle, 2013). In contrast, when individuals believe that their roles are diffused in that they share a role with others in a similar position, they may not act with adequate responsibility and care. There are also different levels of dedication and accountability associated with various roles (Biddle, 2013). When individuals feel emotionally associated to an organization, cause, or other individual, dedication to fulfilling roles associated with the organization,

cause, or individual is high. Similarly, when individuals believe that they are being monitored or their performance assessed, they tend to have high levels of accountability for the particular role. High levels of dedication and accountability tend to produce the fulfillment of the duties required in particular roles. In contrast, when individuals do not understand their roles or there are ambiguities in how their roles are defined, they may show lower levels of duty fulfillment (Biddle, 2013).

Figure 1, below, depicts a theoretical account of role theory, explaining the concepts in the preceding paragraphs.

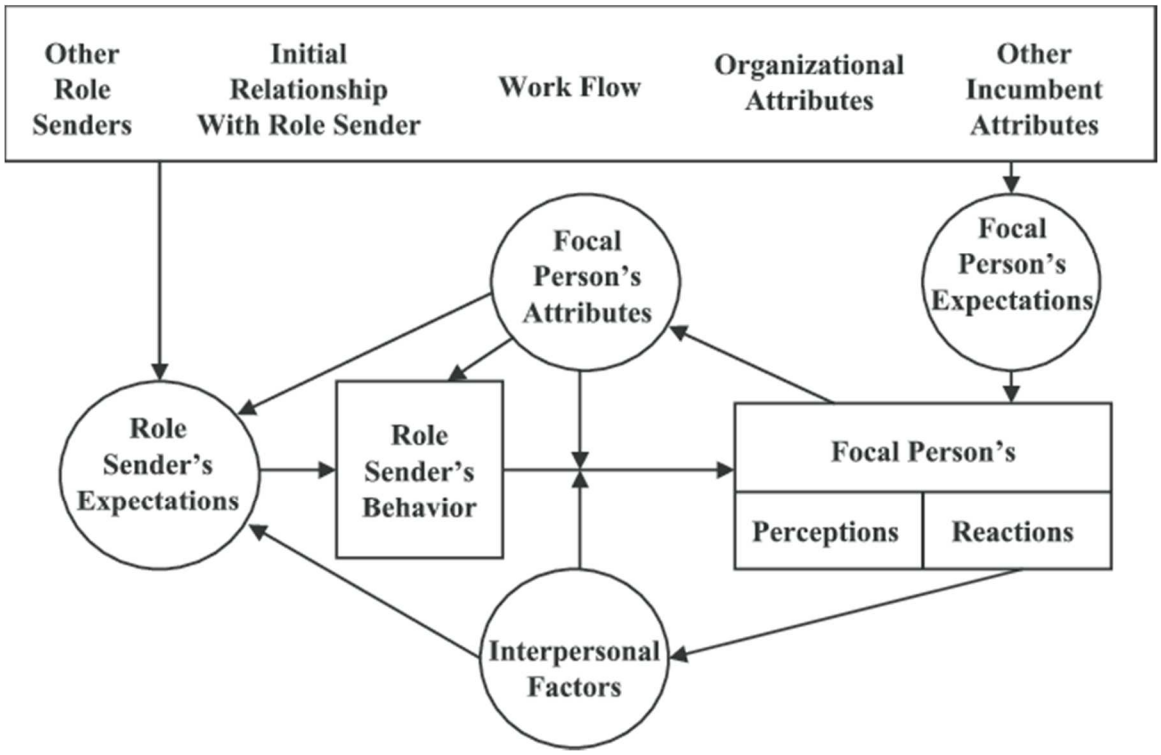

Figure 1. A framework of role theory. (Frink & Klimoski, 1998)

As shown in Figure 1, the theory relies on the expectations that the actor has about his or her role, as well as the expectations that others have about this role. Role theory has been

used to show how nurses view their roles when caring for patients (Bliss, Baltzly, Bull, Dalton, & Jones, 2017; Dreher & Uribe, 2016). Role theory has also been applied in developing an understanding of the interactions and communications between nurses (Sayers et al. 2015). However, role theory has thus far not been used in relation to polypharmacy. I used this theory to consider the role of the individual (nurse) and how it impacts their everyday actions at work. Other influencers to role theory are social norms, education, experience, and societal expectations. Any of these influencers may impact polypharmacy management and the assessment of such management.

Literature Review Related to Key Variables and/or Concepts

Prevalence/Incidence of Polypharmacy among Elderly Persons

Polypharmacy is prevalent among elderly hospitalized patients. Rajeev, Paul, George, and Vijayakumar (2016) investigated the prevalence of multi-dose dispensing and inappropriate drug taking among elderly patients in a geriatric clinic. The researchers used a retrospective design whereby the data were collected from January to December 2016 on patients' medications. Rajeev et al. found the prevalence of polypharmacy among the examined population of 275 persons to be 22.9%. Among these patients, 63 were taking more than five medications and 81 had taken at least one medication inappropriately. Results revealed that inappropriate medications are a problem among older patients. Rajeev et al. proposed a regular review of medication and reconciliation initiatives to address the issue. Similarly, Vrettos et al. (2017) carried out a prospective study on a population of patients who had attended a department of the general and oncological hospital. The data were collected during 2015 and 2016 on 310 patients. Data

on the reason for admission, medical history, medications, and demographics were gathered and analyzed which showed that 53.5% were in polypharmacy. Diseases associated with the condition included atrial fibrillation, dementia, coronary artery disease, heart failure, COPD, and diabetes mellitus. Cardiovascular disorders were mostly associated with patients being prescribed more than five drugs. The researchers advocated that physicians should monitor patients early to detect any drug reactions where de-prescribing is no solution. Hosseini, Zabihi, Amiri, and Bijani (2018) conducted a descriptive/analytical cross-sectional study to explore polypharmacy in elderly persons. The study was carried out on 1600 people aged 60 years and above in an Iranian city. The researchers collected data using interviews and observations of prescriptions and medications. It was found that the prevalence of polypharmacy was 23.1% in the studied population. Hosseini et al. concluded that polypharmacy was common among the elderly taking medications. The researchers also recommended that practitioners should be educated to ensure safe prescription of drugs to patients and appropriate adherence to medications.

Other studies have investigated the prevalence and incidence of polypharmacy in geriatric populations. One search research was by Morin et al. (2018), who conducted a prospective cohort study to examine the epidemiology of polypharmacy. Unlike Hosseini et al. (2018), this study involved a larger sample of over 1 million elderly persons aged 65 years and above from Sweden. The study used data that were gathered through longitudinal study that traced the consequences of the medications from 2010 to 2013. The researchers found that the prevalence of over five drugs was 44% whereas that of the

individuals that took over 10 drugs was 11%. The incidence rate of the condition among people who had no polypharmacy was 19.9 per 100 years. Older individuals aged 95 years and above were found to be more likely to be taking multiple medications than persons aged 65 to 74 years. The study also found that patients who lived in a nursing home under the monitoring of primary caregivers were less likely to take multiple medications.

The rate of polypharmacy in elderly patients and the factors that influence its prevalence and incidence has attracted the attention of researchers. Ong, Lim, Sivasampu, and Khoo (2018) carried out a retrospective study that used the data from a national longitudinal survey in Malaysia to investigate the rate of polypharmacy in elderly patients visiting private and public clinics and the relationship with practice, prescriber, and patient characteristics. The data involved over 20,000 patients aged 65 years and older. It was found that 26.7% and 11% of the patients attending public and private clinics, respectively, encountered polypharmacy. Patients who had a lower educational level, were of the female gender, and had multi-morbidity had a high risk of polypharmacy. The problem was also identified to stem from prescriber level. Ong et al. called for interventions that target prescribers to reduce adverse events associated with multi-medications prescription and administration. Based on the aggregation of research discussed here, the prevalence of polypharmacy in geriatric patients appears to be relatively high at around 20% to 30%, depending on the specific characteristics of the populations studied (Morin et al., 2018; Hosseini et al., 2018; Rajeev et al., 2016; Ong et al., 2018).

Role of Healthcare Professionals in Polypharmacy Management

Many healthcare professionals have duties to help manage the medication administration for patients with polypharmacy and multi-morbidity. Such responsibilities present new challenges in the execution of their role, especially with the increased complications that may occur due to polypharmacy and the increased time consumption. Similar to Namara et al. (2017), Sinnige et al. (2016) investigated the perspectives of general practitioners (GPs) and decision-making support needs in facilitating medication management among a heterogeneous population of elderly patients. The researchers used focus group meetings to obtain the perceptions of Dutch GPs about four clinical vignettes associated with patients with polypharmacy and multi-morbidity. The findings of Sinnige et al showed that 12 GPs explained a similar care plan for medication management that included outlining the treatment goals, examining primary goals, reviewing medications depending on the treatment effect, patient attributes and preferences. However, the GPs differed in the way they executed the strategy. The results of Sinnige et al. suggested that there may be some variance in the perceived roles of GPs which can result in role ambiguity and uncertainty. Despite these variations, there was a willingness among most practitioners to discuss the choice of prescriptions with others and to use structured reviews and other practical tools to ease their role. Role strain and role conflict may be possible among GPs in a single healthcare organization. Sinnige et al recommended for increased interdisciplinary collaboration between healthcare professionals to aid medication reviews and effective polypharmacy management.

Namara et al. (2017) furthered the Sinnige et al. (2016) study and explored current interventions for managing multi-morbidity, barriers, and facilitators to polypharmacy management for patients with polypharmacy and multi-morbidity. The population of the study included 26 healthcare professionals (HPs) working in the rural and metropolitan areas of Australia. Through semi-structured interviews, healthcare professionals who included primary practitioners and prescribers gave their perspectives about polypharmacy and multi-morbidity management. The findings of Namara's et al suggested the possibility that HP scan fail to regularly apply structured strategies to include the preferences of patients in care decision making, manage conflicting prescriptions, investigate patient's adherence to medications, or prioritize improving care plans. These findings of the lack of regular application of structured strategies confirmed problems shown in the Sinnige et al. (2016) study.

Similar results were obtained by Le et al. (2016) who examined physician factors that lead to polypharmacy and patients taking potentially inappropriate medications. Most professionals either lacked the knowledge about how the approaches helped or disregarded them for being not user-friendly. Other challenges related to professional healthcare roles included poor coordination, workload burdens, and lack of clarity in individual responsibilities. The professionals, however, responded that improved hospital culture, application of electronic health records, and collaboration and engagement of nurses, pharmacists, patients, and families, all help in facilitating medication management. The researchers concluded that by promoting coordination and assigning

clear responsibilities to HPs, care can be improved, providing additional evidence to support the conclusions of Namara et al. (2017) and Sinnige et al. (2016).

In contrast, Burt et al. (2018) conducted a systematic review to identify different prescribing indicators associated with the appropriateness of polypharmacy. Content analysis was later used to allow the grouping of the indicators. The team later convened an expert panel of 10 members to further evaluate and determine their clinical significance. The panel identified 12 indicators that were clinically important related to contraindications, interactions between drugs, the practice of medication reviews, and adverse medication reactions. The researchers concluded that these indicators can be used in assessing risks and in assigning interventions for polypharmacy. However, they recommended further research to facilitate the utilization of the identified indicators in clinical practice. This study relates back to the Lee et al. (2016) study because of the challenges that were found in coordination.

All research reviewed thus far has supported coordination problems as major barriers to polypharmacy management. Page et al. (2018) identified seven attributes associated with de-prescribing (meaning fewer prescriptions per patient) including de-escalation, medications' withdrawal, expected outcomes, costs to benefit, intervention, patient-centered care, and structured review process. Antecedents of de-prescribing were health changes, changing healthcare goals, and polypharmacy while the consequences of de-prescribing were patient outcomes, compliance, cost, the propensity of adverse events occurring due to drug withdrawal, and mortality. The researchers surmised that de-

prescribing is an intervention for polypharmacy that involves the withdrawal of certain medications that could be harmful to or not needed by the patient.

Other studies have also reviewed the use of different interventions used and the reasons why such initiatives have not been implemented in various areas. McIntosh et al. (2018) collected information on polypharmacy management programs in the European Union (EU), focusing on reasons for their development or not, and how the existing interventions were created, executed, and sustained. For example, a systematic review was carried out by Stewart et al. (2017) to investigate polypharmacy policies in Scotland.

McIntosh et al. (2018) conducted case studies on polypharmacy management. The review entailed examining the policies for polypharmacy management, stakeholders in the development and implementation interviews, and focus group discussions of managers and clinicians. The results of the case study analysis by McIntosh et al suggested that structured polypharmacy policies are present in only half of the healthcare organizations examined. Where polypharmacy initiatives were not developed, there was a consensus that it was a clinical issue that needed to be addressed (McIntosh et al., 2018). In regions where the initiatives were developed, a few themes related to the development and implementation emerged such as local-based solutions, support of the organizational culture, training of the personnel, multidisciplinary team collaboration, and changes in roles, legislation and policies, and workflow changes. These themes were either considered as barriers or enablers. According to McIntosh et al, the study illustrated a gap in the implementation of polypharmacy management interventions. The researchers

recommended the application of change management models to enhance execution of the initiatives.

Based on the studies that have explored the development and implementation of interventions for addressing polypharmacy, healthcare professionals encounter barriers. Komagamine, Sugawara, and Hagane (2018) examined the response of patients to de-prescribing as an intervention. Similar research was performed by Tegegn et al. (2018) in patients at an Ethiopian hospital. Komagamine et al. (2018) adopted a retrospective cross-sectional study design. Records of patients 65 years and above who had reported using at least five medications when they were being admitted to the orthopedic ward between January 2015 and December 2016 and those who had been previously screened for polypharmacy were reviewed. Patients who accepted the de-prescribing intervention were regarded as the acceptance group whereas those that declined were referred to as the refusal group. The results of Komagamine et al. (2018) showed that most patients (77.2%) used potentially inappropriate drugs. This population was represented significantly in both the acceptance and refusal groups. Other factors examined during the study such as alcohol use, the number of medications taken, comorbidity, and smoking habits did not influence the refusal or acceptance of de-prescribing procedure by a patient. The researchers proposed that other initiatives should be considered to address the patients who resist de-prescribing. This has implications for primary caregivers to understand that patients are heterogeneous, and a single initiative may not apply to all individuals with polypharmacy.

Additional studies have focused on the perceptions of healthcare practitioners as they manage patients with polypharmacy. For instance, Reeve et al. (2018) conducted a study that investigated the perceptions of health professionals of barriers and facilitators to providing individually targeted prescribing. Reeve and his colleagues carried out an online survey that sought to obtain the perspectives of healthcare professionals on barriers and enablers to the execution of individually tailored prescribing (ITP) of medications. Using convenience sampling, the links to the survey questions were sent to the professionals. The respondents gave their views of four dimensions of work such as action, monitoring, engagement, and sense-making.

The results gathered by Reeve et al. (2018) were from 419 practitioners including pharmacists, nurses, and general practice professionals (GPPs). A third of them were regularly providing ITP to their patients. However, GPPs did not view the practice as significant. Overall, there was general agreement about the need to use the principles of ITP, but differences appeared in the understanding and implementation of the initiative. The researchers emphasized the need for educating the practitioners about the importance of ITP and other initiatives for polypharmacy management. There is a discernible lack of studies on the perceptions of nurses concerning the management of polypharmacy in elderly patients. Currently, research is focused heavily on those factors that contribute to the complications for patients with polypharmacy. But without a clear understanding of the perceptions of nurses on the management of polypharmacy, it may be more difficult for researchers to identify how the various characteristics of the perceived roles of nurses may impact the performance of nurses who manage polypharmacy.

Summary

I presented a review of the existing literature on polypharmacy in elderly patients, and the role of healthcare practitioners in developing and implementing initiatives for addressing the clinical issue. Out of the 15 studies, 5 were focused on the prevalence and/or incidence of polypharmacy among elderly patients (Hosseini et al., 2018, Morin et al., 2018; Ong et al., 2018; Rajeev et al., 2016; Vrettos et al., 2017).

Concerning the role of health professionals in managing polypharmacy and barriers among elderly patients, results of ten studies showed that that physicians, nurses, and pharmacists have a significant role in medication management. Some studies reviewed various interventions such as de-prescribing while other concentrated on policies covering several initiatives as well as barriers to effective polypharmacy management such as understanding of roles, conflicting responsibilities, and workload pressure (McIntosh et al., 2018; Stewart et al., 2017).

Most of the studies involved patients as the sample population while only a few investigated health professionals such as Sinnige et al. (2016), Namara et al. (2017), and Reeve et al. (2018). However, only Reeve et al examined the perceptions of healthcare professionals. This illustrates a gap in the literature about the perceptions of nurses on their role in managing polypharmacy management among older patients. A study investigating their perceptions of experiences, barriers, and well-being can inform targeting of interventions that seek to improve the nurses' polypharmacy management skills and knowledge. I will present the research design, role of the researcher, method, and issues of trustworthiness in Chapter 3.

Chapter 3: Methodology

Introduction

The purpose of this qualitative descriptive phenomenological study was to explore bedside nurses' perceptions of their role regarding patient polypharmacy, specifically their role conflict, role strain, and role ambiguity. The findings of the study may help improve understanding of bedside nurses' role in polypharmacy and enable nurses to recognize such roles and act to mitigate the effects of polypharmacy in an effective manner. The results of this research study added to the current body of knowledge regarding bedside nursing care and support for patients afflicted by polypharmacy. This chapter presents the research design and rationale, research questions, methodology, trustworthiness, and ethical procedures that were observed during the study.

Research Design and Rationale

The research questions for this study are as follows:

1. What are the lived experiences of bedside nurses in managing polypharmacy in elderly patients in the acute care community?
2. How do bedside nurses perceive their role in managing polypharmacy to hospitalized elderly patients?

The central concepts of the study are polypharmacy and the role of nurses in managing polypharmacy among the elderly patient population. Polypharmacy is described as having six or more prescription medications that are consumed concurrently

(Kojima et al., 2012). The term older people, used interchangeably with geriatric, defines people who are 65 years and older, a group that is at a higher risk of being affected by polypharmacy due to age, comorbidities, and frailty (Kojima et al., 2016; Santos et al., 2016). The nurse's role in medication safety and preventing adverse outcomes in the geriatric population was emphasized by the JC (Cima & Clark, 2012).

The research tradition for this qualitative study was phenomenology. Qualitative research seeks to understand how individuals or groups construct their worlds, how they interpret their experiences, and how they attribute meaning to their experiences (Creswell, 2013). Qualitative research is based on qualitative forms of data such as feelings, words, and perceptions. Such qualitative data are applied to explore a phenomenon of interest in the real-life context where the phenomenon occurs (Smith & Osborn, 2015). The qualitative design involves the ability to understand the meaning people attribute to experiences; it is largely inductive process; it largely yields descriptive data such as pictures and words as against numerical data; and lastly, the researcher is the primary instrument for data collection and analysis (Creswell, 2013; Smith & Osborn, 2015). By contrast, quantitative research uses measurable data such as numbers and metrics to obtain a perspective regarding a research subject. A quantitative approach was not appropriate to address the research questions for the proposed study since it is context-specific and directed at providing understanding of nurses' perception regarding their role in managing patients' polypharmacy.

Creswell (2013) posited that scientists elect a phenomenological approach when they seek to identify human experiences related to specific phenomenon lived or

experienced by the participants. Phenomenological research begins with a shared experience and uses participants' narratives to investigate perceptions of the experience and its effects. Phenomenology is a tradition that guides the researcher to explore a condition or experience of interest based on the reality of the participant, and extrapolate information obtained from the participant to understand the experience of a larger group (Patton, 2015). This method allowed me to elucidate the bedside nurses' perception on their day to day experience handling polypharmacy and how they perceive their role and responsibilities in managing polypharmacy.

Role of the Researcher

As the primary researcher in the study, my role was that of an observer only. This role involved developing all research materials, implementing all research protocols, recording and documenting all research outputs, and analyzing and reporting of the final findings of the study. I did not have any personal or professional relationships with the facility where the study participants are employed and therefore, I had no personal or professional relationships with the potential participants for the study. I applied reflexivity towards reducing the possibility of researcher bias during the process of data collection and analysis. Reflexivity is a process that shows the researcher's engagement with the research process (Patton, 2015). I examined my own assumptions regarding the role of nurses in bedside nursing and polypharmacy and recorded such assumptions in a journal. This enabled me to assure that such assumptions were not reflected in the data collection and interpretation process. Because the study was not conducted in my work environment, I avoided other ethical issues relating to power differentials. The study was

not funded by any individual or organization, eliminating any conflict of interest due to funding sources. The participants were purely voluntary; however, a thank you gift was given.

Methodology

Participant Selection Logic

In order to obtain meaningful answers to research questions, it was important to implement an appropriate sample strategy. The sample must appropriately represent a population being studied and be able to provide meaningful data on the research subject. The sampling method chosen for this study was the purposive sampling method (Patton, 2015). The goal of a non-probability sampling method is not to obtain generalization; rather, the goal is to find answers to research questions using a population with the requisite characteristics and to obtain transferability. Under the sampling strategy, the participants in a study are selected because of the characteristics of the population of interest, and the research purpose (Patton, 2015). Therefore, I recruited participants based on their characteristic as bedside nurses that care for geriatric populations. Specifically, the participants for this study were registered nurses providing care to elderly patients 65 years or older, at the target facility. This constituted the criteria for participant selection. Factors such as age, years of service, race, or gender were not constituted as part of the inclusion criteria for this study; however, such data were collected as they can be used in descriptive analysis.

The sample size must be adequate to facilitate both the collection of rich data as well as produce meaningful findings. For instance, where the sample size in a study is too

large, it may hinder the scheduling of interviews and make research processes unmanageable (Creswell, 2013; Patton, 2015). A small number of participants, on the other hand, can facilitate in-depth investigation of a phenomenon in qualitative research (Creswell, 2013; Patton, 2015). For this study, the sample size was expected to be twelve.

Participants for the study were identified through posting a flyer on LinkedIn with my dissertation topic and my contact information, once all the necessary permission had been obtained from Walden University's IRB. Persons interested in participating in the study were requested to contact me directly. On being contacted by such potential participants, I proceeded to initiate individual contact via phone, email, WebEx, or face-to-face communication to further discuss the study, assure that the person met the selection criteria, and answer any questions the potential participants had. This was followed by providing the participant with an informed consent form. Only the persons who indicated "I consent" participated in the study. The interviews were conducted via telephone, WebEx, email, or face-to-face communication at a location of the participants' choice that was a quiet environment that provided privacy.

Saturation refers to a phenomenon where additional participants' interviews do not provide any further insights into a research question (Creswell, 2013; Patton, 2015). Evidence from the literature suggests that for homogeneous groups for interview studies, saturation will often occur between 12 and 15 participants. As a result, 15 is suggested as a maximum for qualitative interviews when participants are homogeneous (Latham, 2013; Latham, 2019). As stated previously, the study aimed for a target sample size of 12 or until I reached saturation.

Instrumentation

The instrument for data collection for this study was an interview protocol. This was comprised by a list of questions on the research topic. I created the interview protocol (Appendix A). Interviews are a commonly used method in qualitative studies that are effective for obtaining insights regarding a research subject. This research framework enables the researcher to explore responses and probe for pertinent details that improve understanding of the research problem (Jamshed, 2014). Therefore, the interview was effective for collecting data for this study. Additionally, a pre-interview screening tool was used to ascertain inclusion and exclusion criteria (see Appendix E).

The basis for instrument development for the study was literature sources. I developed the interview protocol based on careful consideration of literature on polypharmacy, polypharmacy in geriatric care, and bedside nursing roles. I have developed the interview protocol based on literature on the key concepts and phenomena in the study.

Procedures for Recruitment, Participation, and Data Collection

The study involved the collection of primary data. Primary data refers to the information collected directly for the purpose at hand; primary data is the first-hand data that will be collected from original sources (Englander, 2012; Smith & Osborn, 2015). In the case of my study, the original sources for primary data were the registered nurses who participated in the study. I collected data by conducting semi-structured interviews based on the interview protocol that were developed for the study. The transferability of

primary data is based on the fact that it is collected from original sources. The procedures for recruitment and participation have been discussed under the section "Participants Selection Logic." Participants were identified using fliers (see Appendix C). Fliers were posted on LinkedIn. Persons interested in participating were requested to contact me directly. I answered questions the individual had about the study. I arranged a web meeting with the participant. The participant was instructed to be in a quiet private location for the interview. The participants were provided with a copy of the questions before the interview, so that they could become familiar with the questions. The interviews were conducted via web, at a quiet area chosen by the participants. I conducted a one-time interview with each participant, lasting 45-60 minutes. I explained the study and informed consent and asked the individual to respond via email with the verbiage I consent. I provided the participant with a copy of the informed consent via email.

The goal of interviews is to obtain the perceptions, opinions, experiences, and reflections of people who have specific knowledge regarding the subject of interest (Englander, 2012; Merriam & Tisdell, 2016). The two main types of interviews are structured interviews and semi-structured interviews. The structured interview format is rigid, comprising of a strict set of questions, while the latter format is more flexible and allows for varied questions and instinctive responses. This flexibility thus allows for more details and additional data to emerge from the participants' reflections (Ortiz, 2016; Smith & Osborn, 2015). I adopted the semi-structured format to allow for more in-depth

interaction and facilitate full expression by the participants regarding their experiences in providing bedside care to geriatric patients who are subject to polypharmacy.

It is important to record the interview process efficiently and accurately, as this will contribute to objectivity and accountability in the research process (Krueger & Casey, 2015; Smith & Osborn, 2015). Accordingly, I recorded each interview with an audio-digital device where the participants are comfortable with the process. Audio-recording was the preferred method for recording the interview as it assured that valuable data were not lost and allowed no interruptions to the dialogue. I also took contemporaneous notes to track any transitions between dialogues as well as to record any significant non-verbal responses. Both natural and prompted statements were recorded and treated carefully in order to understand the perceptions of the interviewees. Observations regarding the types of statements, whether prompted or natural, are important for quality and validity particularly where there are multiple records of responses that are potentially biased (Creswell, 2014; Merriam & Tisdell, 2016; Turner, 2010). The audiotapes were transcribed within 24 hours of each interview section. Each session lasted for 45 to 60 minutes. Participants were informed that they were free to send in additional information or thoughts on the research subject via email up to 24 hours after the study.

I used snowball sampling to ask participants to refer other registered nurses from other departments where care is provided for populations that include older persons to contact me. The exit strategy for the study involved thanking the participants for their participation after each interview. I offered a $20.00 gift card as thanks. Additionally, I

informed them that a copy of the summary of the findings will be mailed or emailed to them for review once the analysis was completed to facilitate member checking, and another copy after the final report is developed. Member checking involves providing the transcript of the interview to each participant and enabled them to double-check the transcript for accuracy. Member checking is important for confirming reliability in qualitative research since the data collection and transcription process can be highly subjective (Creswell, 2013). Member checking occurred at the end of each interview. Participants were free to suggest corrections where they feel their perceptions were not appropriately captured. The final step in the exit strategy involved mailing a "Thank You" card to the participants along with the summary of findings once analysis was completed and the final report developed.

Data Analysis Plan

Data analysis is a process through which meaning is derived from data. It involved reducing the collected data into constructs that best represent the experiences of the research participants and constitute answers to the research questions. Data analysis involved consolidating and interpreting the information obtained from research participants as well as applying what the data has read and seen to derive meaning from data and answer research questions (Merriam & Tisdell, 2016; Ortiz, 2016; Saldana, 2016). Just like there are different approaches to research, it is important to select and implement methods of data analysis that are best suitable for the research design and for achieving research goals (Smith & Osborn, 2015). Thus, an effective data analysis plan connected the data collected to specific research questions. For this study, the interview

protocol was developed based on the research study to represent alignment and to best answer the research questions (See Appendix B).

I conducted thematic analysis to locate themes within participant responses. The process began with a review of the interview transcripts. I began the data analysis process by reviewing the interview transcripts and made a list of key concepts within the material. I then carried out a second reading cycle in order to verify the identified concepts. Any new concepts identified were merged with the concepts identified in the first reading cycle to create a master list. The master list constitutes a broad classification system that reveals the recurring patterns of information in the transcript and these patterns of information formed the basis for generating codes or themes (Merriam & Tisdell, 2016).

Coding is a process in which specific designations are assigned to various aspects of transcribed data, making the data easy to retrieve (Saldana, 2016). Themes or codes are phrases and expressions that are consistent among the study participants. The process of coding therefore created an inventory of the transcribed data. Following the coding process, all the codes were grouped together to identify patterns, in the data. This analytical coding process extended just beyond descriptive coding as it incorporated interpretation of data. Patterns of data that are not relevant to the research subject were eliminated while patterns of data that were relevant to the research question were retained. I scrutinized patterns to understand the perceptions of nurses in the roles of providing bedside care to geriatric patients who are subjected to polypharmacy as part of their care process. I used a narrative approach to report the research findings and NVIVO

software to identify themes and patterns for analysis. I also used Microsoft Office Suite. Each of the research questions were addressed within the results section. Information on external factors that are irrelevant to the research question were not included in the final report.

Issues of Trustworthiness

Credibility (Internal Validity)

In research studies, it is important to show that the findings are accurate from the standpoint of the researcher, the study participants, and other people who will read the study. Therefore, I have adopted several strategies in order to establish credibility. Credibility can be evaluated based on the use of well-established research procedures. The phenomenological approach has been used in comparable projects in nursing and so represents a contributor to credibility for the proposed study. Reflexivity also establishes credibility in a research study (Creswell, 2013). I used member checks and provide each study participant with a copy of the interview transcript that pertains to them, to allow them to check the report for accuracy. This process contributed to the credibility of the study. I recruited the number of participants so that saturation can be achieved. For the study, construct validity was further established using wide conceptual information in addition to the empirical processes used. I collected data for the theoretical framing of the study from multiple sources including databases, books, existing research, and scholarly articles and a review of Walden University's previous dissertations. The interview protocol was also derived from these conceptual information and theoretical framework

supporting construct validity for both the research processes and the outcomes (see Appendix A).

Transferability (External Validity)

Transferability is a concept that denotes that the findings from a study can be applied to other situations (Creswell, 2013). For this study, semi-structured interviews were used which allowed participants to share their experiences in the healthcare and professional nursing setting. This means that the findings may be useful in similar settings. Transferability was also established through thick and detailed description of the research variables and procedures.

Dependability

Dependability in a study means that other researchers can repeat the processes employed in the study. The processes adopted in a study must be clearly defined (Creswell, 2013). Triangulation was also applied in the study. Triangulation involved using different sources of data to build a framework for the study as well as justify the themes derived from the study. The process enabled exploration of data from assorted viewpoints and helped to assure that deductions made from the data are free of error (Saldana, 2016). Triangulation involved data collected from peer reviewed articles, audio-taped interview information, member-checking, and written notes, to explain the themes from the study. The proposed study adopted purposive sampling to eliminate any bias regarding the role of the nurses – only nurses who work with geriatric patients were selected for the study. This strategy also helped to assure that the study can be replicated

among other nurses who provide bedside care for geriatric populations whose treatment involves polypharmacy.

Confirmability

This concept is the qualitative counterpart showing objectivity in the study (Patton, 2015). This was established in the study through such processes as reflexivity, and member checking of the research findings.

Ethical Procedures

In conducting this study, I have abided by all required ethical and legal procedures. Accordingly, the first step in the study was to obtain institutional permission from my university. Next step was to obtain any other permissions needed from research facility. Since I utilized social media no additional permissions were required. I then proceeded to contact the potential participants for the study.

Ethical concerns related to participant recruitment included assuring that full informed consent was obtained from participants based on full understanding of all aspects of the study. This included understanding of the risks and benefits associated with the study. Accordingly, interested nurses were provided detailed information regarding the study including the research topic, the processes involved in the study, any risks and benefits associated with participation, participants' rights, and assurance of confidentiality. This detailed information constituted part of a consent form. After reading the information and asking any questions they may have, the interested participants emailed me with the verbiage "I consent". Only persons that respond "I consent" participated in the study.

A key ethical principle in research is to protect participants' rights. This included their rights to privacy, safety, and confidentiality. It was stated clearly on the consent form as well as explained orally to all interested persons, that participation was entirely voluntary, and participants were free to leave the study for any reason and at any time. If the participants did not feel comfortable at any point in the interview process, the interview would be terminated, or a more acceptable method would be instituted. For example, where a participant was not comfortable with being audio-taped, the practice would be stopped, and written notes taken. The role of the participants and the researcher was clearly explained in the consent form to promote ethical behavior and accountability.

Ethical principles in research involve the principle that no harm be done to participants as a result of their participation in a study. Therefore, the privacy and confidentiality of participants in the study were maintained. All responses were held in confidence and participants will not be identified by their names. Pseudonyms were used in place of any identifying data. Where any participant withdraws from the study for any reason, it would affect saturation for the study. Thus, efforts would be made to recruit a replacement from the sample population to replace any person who withdraws. I had no withdrawal from the study. There were minimal risks associated with participation in the study. All the documents used in the study will be destroyed within five years after the study is concluded according to Walden University IRB policy. There were no conflicts of interest related to relationships between me and participants as I do not work in the target institution, LinkedIn is a public entity. There were no conflicts of interest related to sources of funding as the study was my complete responsibility.

Summary

This chapter presented the methodology that was adopted for this study on bedside nurses' role in polypharmacy and medication management. The purpose of this qualitative descriptive phenomenological study was to explore the bedside nurses' perceptions of their role regarding patient polypharmacy. The study was based on a descriptive qualitative design. Data collection was done using a semi-structured interview. Data analysis was done using thematic analysis. Trustworthiness in the study was established through the processes of reflexivity, triangulation, and member checking. Dependability was also established using a well-established research design and sample strategy. Findings of my study are presented in Chapter 4.

Chapter 4: Results

Introduction

The purpose of the study was the exploration of the bedside nurses' perceptions of their roles regarding patient polypharmacy for geriatric patients. The lived experiences are revealed thematically in this chapter. The research questions for the current study are the following:

1. How do bedside nurses perceive their role in managing polypharmacy to hospitalized elderly patients?
2. What are the lived experiences of bedside nurses in managing polypharmacy in elderly patients in the acute care community?

Setting

The setting of this study was any healthcare environment in which nurses provide bedside care to geriatric patients. The nurses interviewed work in various healthcare environments, including hospitals and skilled nursing facilities.

Demographics

The demographic results revealed no major anomalies in the data that would suggest an unrepresentative sample. The ages of participants were concentrated in the twenties, thirties, and forties, as expected. Eight of the participants identified as women and four as men. Most (8) were married and four were single. Half (6) had children at home.

Data Collection

Data were collected via interviews by either telephone or video conferencing software. All participants granted informed consent to be interviewed and have their interviews recorded.

Data Analysis

I used NVIVO software to identify any themes to emerge across the interviews. The relevant responses corresponding to each theme were compiled and organized in the results section as such. The collection of responses for each theme generated perspectives on the lived experiences of bedside nurses working with geriatric polypharmacy. I coded the data based on keywords and key phrases. When a participant used a keyword or key phrase, the count for the associated theme was increased by one. Similarly, when a participant responded affirmatively to a question asking about specific thematic content, the count for the associated theme was increased by one per participant. The interpretation of the results was based on a combination of the counts for each theme and the specific qualities expressed by each participant concerning each theme. For example, Participant Three stated: *Taking so many meds can lead to major errors and we are the last line of defense for medication errors, including conflicts, resistance, and that sort of thing.* This counted towards the theme of polypharmacy contributing to medication error, but the interpretation of this response included identifying the qualities of conflicts and patient resistance towards taking medication to help explain why the participant believed that polypharmacy contributes to medication errors.

Evidence of Trustworthiness

The reflexivity notes were preserved in the case. A review of such notes reveals consistent data analysis processes across all interview results. The research findings were found to be consistent as well. Each theme discovered had at least five participants use a keyword or key phrase associated with the theme. No inconsistencies were found between the total count for each theme and the responses of the participants.

Results

Theme One: Polypharmacy is a major issue impacting the nurse's role in geriatric care

Theme one had three sub themes related to the role of the nurse in geriatric care. The three subthemes were overloaded leading to role conflict. Variance in Roles and Responsibilities and Role Clarity Issues Leading to Role Conflict

Sub Theme: Overloaded Leading to Role Conflict.

The first sub theme that emerged from the data was bedside nurses becoming overloaded with their work duties when caring for geriatric patients. In particular, the nurses indicated that managing polypharmacy had contributed to them being overworked. All of the participants recognized that bedside nurses faced difficulties because they are at least occasionally overworked. Three of the participants indicated that they had major difficulties stemming from being overworked directly because of polypharmacy management, while most others recognized polypharmacy management as just one of many contributors to the nurses being overworked. Being overworked leads to role conflict because nurses are at times unable to adequately fulfill all of their roles. Some of

the nurses indicated that they had to take over the roles of others and have others take over their roles because of being overworked.

Participant Three: *Every day, I have too much to do. We have to put off certain tasks a day or two because of the demands on us and managing multiple medications is another source that puts too much on our plates.*

Participant Five: *Yes, that's pretty common. Our workloads get heavy during certain times.*

Participant Nine: *Actually yes, that happens some time. But there are many parts of my job that can create a hefty workload. Managing medication isn't one of the most difficult part of the job, but I can see how it does sometimes slow everyone down.*

Participant Ten: *Of course. That's part of being a nurse. Medication management can slow our processes down.*

Participant Eleven: *Yes, always having too much to do is a major barrier in providing proper patient care and education. There are constant interruptions, not enough help, and support…Allowing a smaller patient to nurse ratio will help nurses properly educate and manage patient medications and care. If this isn't possible there could be a medication nurse or pharmacist who comes around reassure education.*

Participant Twelve: *Yes, it's very challenging. Patients have to keep up with so many medications, it becomes impossible, so we have to take over, even for patients who are in good mental states and generally have good memories. It's just too much for even them. If we weren't so organized and didn't have so many checks, we would be overloaded too.*

In the last few years, we've had so few medication errors because of the major controls we've had to put in place.

Sub Theme: Variance in Roles and Responsibilities.

The second sub theme revealed is that there is high variance in the roles and responsibilities of bedside nurses of geriatric patients. This suggests that different contexts and environments may lead to different impacts on role conflicts and issues facing bedside nurses.

Participant One stated: *I think every case is different. There may be some similarities between cases, but different patients have different needs and different contexts provide different levels of support. I've worked as a home care provider and I was required to commit major time and resources to caring for a single patient. In other cases, I've shared responsibilities for several patients with other nurses. The experiences between the two are very different. I think some of the things that all of these cases have in common are balancing dependencies and promoting independence and making care personalized. Guidelines tend to focus on the special needs shared by geriatric patients, but each patient has unique needs. Personalizing care is very important.*

Participant Six: *Yes, very frequently. It's not uncommon for errors in medication to arise. Patients are also way less likely to adhere to taking so many medications. As a general rule, the more meds a patient takes, the less likely the patient is to want to take the meds, let along do so correctly. It's difficult for nurses to keep up with so many medications as well.*

Participant Twelve stated: *I could cover a lot of ground here. It's a total care process and requires psychological and physical well-being monitoring. We have to do so much for many patients and other patients we have shared roles so it's almost specialized. I'm not sure it can be easily defined.*

Sub Theme: Role Clarity Issues Leading to Role Conflict.

The third sub theme discovered is issues with role clarity leading to role conflict. Eight of the participants indicated that a lack of role clarity contributes to role conflict in their organization or would contribute to role conflict if their roles were not clear.

Participant One stated: *When roles are not well-defined. I could easily see that becoming a major problem.*

Participant Four stated: *When staff have conflicting duties, or someone forgot to do something. That's when role conflicts being accumulating.*

Participant Five: *I could see it happening when roles are not well-defined. We use a specific system for assigning, administering, and overseeing care. That's how we minimize role conflict. In looser systems or those that have to be more flexible and adaptable, let's say, I could easily see how role conflict would emerge especially in managing medication schedules.*

Participant Six: *Mainly because of a lack of defining roles. From my experiences, small organizations struggle much more with roles and defining roles.*

Participant Eight: *Time management issues and not being able to define work duties assigned to such roles.*

Participant Nine: *We don't have too many role conflicts but the role conflicts that occur may happen because of a lack of clarity and poor communication between staff members.*

Participant Ten: *Well, I guess role conflict would emerge in places where roles are not well-defined.*

Theme Two: Polypharmacy impacts the care nurses provide to geriatric patients

Theme two had four sub-themes related to impact of care provided to the geriatric patients. The subthemes were polypharmacy is very common, patients' resistance to polypharmacy, polypharmacy leads to errors, and finally medication changes exacerbate polypharmacy difficulties.

Sub Theme: Polypharmacy is Very Common.

The first subtheme of theme two revealed the commonality of polypharmacy. All of the participants indicated that they managed polypharmacy and had patients who took more than six medications. Several even indicated that most of their patients took at least six medications.

Participant One stated: *Yes. It's difficult to handle. I would say most of such patients have struggled with medication schedules. They make mistakes no matter how many controls we implement.*

Participant Two stated: *Absolutely. Some more than ten if you include multivitamins and other supplements. The outcome for patients, that's hard to say. The outcomes for nurses, well I guess that would be greater difficulties and trying to coordinate everything.*

Participant Five stated: *Yes. The outcome? I guess positive. Most of my patients need at least six medications and it does present challenges,*

Participant Nine stated: *Yes. Most of our polypharmacy administrations are successful. Our error rates are extremely low, and we always find the cause of error and resolve it.*

Participant Eleven: *Most elderly patients are on more than 6 medications. It is rare to see someone on less than 6 medications. In most cases there is a problem with medication management. Some elderly patient forgets to take their medications or will accidently double up in them.*

Participant Twelve stated: *Yes. That's very common now. I think the patients benefit from their medications in almost all cases. It's just that they have to take so many now that it's difficult to keep up with. So, I think medications are good in general, of course, but taking so many can lead to problems.*

Sub Theme: Patient Resistance to Polypharmacy.

The second subtheme revealed is that a source of stress and issues in the workplace is patient resistance to polypharmacy. Half of the participants indicated that they had patients who resisted taking so many medications or changing medications. There is some indication that patients were distrustful of the staff because of the confusion caused by polypharmacy.

Participant One stated: *Patients remembering to take medications, patients questioning the medication they are taking, and just trying to maintain complex medication schedules.*

Participant Two stated: *Developing trust in patients and promoting their independence. It's difficult when they are stubborn…I think record-keeping and scheduling are the most*

common. Sometimes, families and patients can form the kind of resistance that makes our job difficult though.

Participant Three stated: *It's a mix of organizational barriers and those coming from the patients. Effective and well-managed organizations make management much easier, but some patients are going to be resistant and question everything we do. Makes it difficult.*

Participant Six stated: *Yes, it's challenging because patients erect barriers and nurses must go through many more steps to ensure compliance.*

Participant Ten stated: *I guess my main role is preventing errors. Taking so many meds can lead to major errors and we are the last line of defense for medication errors, including conflicts, resistance, and that sort of thing.*

Sub Theme: Polypharmacy Leads to Errors.

The third sub theme is polypharmacy leading to an increase in errors. All participants indicated that polypharmacy made it more difficult to ensure that the proper medication was always taken. Several of the participants also indicated that polypharmacy directly contributes to an increase in medication errors.

Participant One stated: *Yes. It's difficult to handle. I would say most of such patients have struggled with medication schedules. They make mistakes no matter how many controls we implement.*

Participant Three stated: *Yes. There are way more errors and mix-ups when patients are on so many medications.*

Participant Four stated: *Yes. I don't want to question prescriptions, but patients are often on many medications and it is not uncommon for it to lead to medication errors.*

Sometimes it is the nurse's fault and sometimes it is the patient's fault just depends on the circumstances.

Participant Twelve stated: *I guess my main role is preventing errors. Taking so many meds can lead to major errors and we are the last line of defense for medication errors, including conflicts, resistance, and that sort of thing.*

Sub Theme: Medication Changes Exacerbate Polypharmacy Difficulties.

The fourth sub theme revealed is that medication changes tend to exacerbate polypharmacy difficulties. Five of the participants recognized medication changes as presenting major challenges to managing polypharmacy. No explicit question was asked about whether medication changes exacerbate polypharmacy management issues.

Participant One stated: *Impossible to do perfectly. So very challenging. Changes in medication schedules are the most challenging, I think. When patients with complex medication schedules have changes to such schedules, it throws off routines and make adherence so difficult…A lot of people will think that we are giving them the wrong medication. They resist. But it's just because they forgot changes or are confused. That's the most stressful part for me.*

Participant Six stated: [My major roles are] *Medication administration and informing the patient. Those are the central aspects of this role I would say. We also have to make connections with the patient and make sure that they know what's going on with their medication and what changes may be made.*

Participant Seven stated: *Having clearly defined roles is a necessity in nursing, and I think healthcare in general. Medication recalls and major changes to a patient's mediation schedule can drastically present challenges.*

Participant Ten stated: *Somewhat. I think the major challenges come when patients are having difficulties and require several medication changes in a short time period. This can lead to complications. But we have a good system that lets us keep up with these changes quite easily. Digital record-keeping has certainly improved our abilities to do this.*

Participant Twelve stated: *There are a lot. Just the sheer number for some patients. The confusing names of the medications are confusing for many patients. A major difficulty is when patients change medications. It's not only difficult for them, but for us as well. We've had patients changing medications pretty often and they will swear that they are taking the wrong ones after. It's a headache for everyone, but it's just part of the job.*

Theme Three: Polypharmacy education is needed for nurses to effectively manage care of geriatric patients

Sub Theme: Training and Education are Keys to Managing Polypharmacy.

Theme three had one sub theme which is training, and education serve as the keys to the effective management of polypharmacy. While numerous factors were listed, training and education were most common. All participants indicated that either training or education was a major factor in effective polypharmacy management, while most indicated that both were major factors.

Participant One stated: *Training, scheduling, and maintaining a system that easily allows nurses to see updated medication schedules are key.*

Participant Two stated: *Yes, education, time, and training are all important. I think training is most important. So is having a competent organization.*

Participant Three stated: *Training, certainly. We have to be trained to quickly process and use schedules. There is no room for error.*

Participant Six stated: *Yes, training might be the strongest, but having someone double-check every step would likely minimize safety risks. In some ways, the nurses are the second check, but additional checks can be useful.*

Participant Seven stated: *Sufficient training and the proper systems for nurses to easily monitor drug and care schedules.*

Participant Eight stated: *Clear medication schedules with easy instructions and well-trained nurses are crucial.*

Participant Nine stated: *Great records and a great staff that works together. But yes, education, time-management, and training are important too. Great records and a great staff that works together. But yes, education, time-management, and training are important too.*

Participant Ten stated: *Allocating enough time is key, I believe. Education and training are of course important for proper administration.*

Participant Eleven stated: *Allowing a smaller patient to nurse ratio will help nurses properly educate and manage patient medications and care. If this isn't possible there could be a medication nurse or pharmacist who comes around reassure education.*

Summary

This study was an exploration of the bedside nurses' perceptions of their roles regarding patient polypharmacy for geriatric patients. The setting of the study included healthcare organizations in which bedside nurses are present. The findings revealed three major themes and several subthemes. My findings revealed that the nurses indicated that polypharmacy was very common for their elderly patients, being overloaded with work is thought by nurses to contribute to issues with role definitions, and training and education were identified as key to effectively managing polypharmacy.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of the current qualitative descriptive phenomenological study was to explore bedside nurses' perceptions of their roles concerning patient polypharmacy and potential complications and issues that may arise in the fulfillment of such roles. Potential role conflicts were also investigated. A semi-structured interview of bedside nurses was conducted. The data analysis featured a thematic analysis of the responses of the participants. The results revealed three major themes and eight subthemes that emerged in the responses to the interviews. Nurses indicated that polypharmacy was very common for their elderly patients. In addition, they identified being overloaded with work to contribute to issues with role definitions. Training and education were identified as major factors in effectively managing polypharmacy.

Interpretation of the Findings

The eight themes identified in my study are centered on the increased pressures of polypharmacy on nurses. Such pressures appear to lead to a higher rate of medication error. Prior research suggested that the rate of error tends to be higher for elderly patients with polypharmacy (Hosseini et al., 2018; Morin et al., 2018; Ong et al., 2018; Rajeev et al., 2016; Vrettos et al., 2017). There are many potential explanations for this relationship, including patients forgetting to take medications and confusing medications. Because the current work is qualitative in nature and focused exclusively on the

experiences of bedside nurses, the conclusions only involved the experiences of bedside nurses.

My results support the theme of the multitude of roles of health professionals in managing polypharmacy and the barriers challenging them for the proper care of elderly patients. The results of several studies show that that physicians, nurses, and pharmacists have a significant role in medication management (McIntosh et al., 2018; Stewart et al., 2017). Moreover, many studies suggested that strategies including de-prescribing may help alleviate the heavy workload burden on nurses (McIntosh et al., 2018; Stewart et al., 2017). The participants in my study identified training and education of staff and patients as the primary means to reduce the negative impacts of polypharmacy on medication management and general bedside care. Other strategies including systems of checks and controls and transparent communication were identified as contributing to effective polypharmacy management (McIntosh et al., 2018; Stewart et al., 2017).

I found that clarity of roles of bedside nurses was important for effective polypharmacy management. Developing a clear understanding of roles, potential conflicting responsibilities, and workload pressure may alleviate the issues caused by polypharmacy for beside nurses, a finding supported by prior research (McIntosh et al., 2018; Stewart et al., 2017). Prior research also suggested that patients recognize similar burdens in the effective management of polypharmacy (Sinnige et al., 2016; Namara et al., 2017; Reeve et al., 2018). As Reeve et al. (2018) noted, there is a lack of research on the perceptions of healthcare professionals concerning the effective management of

polypharmacy for elderly patients. Results from my study helped to fill the research gap on the impacts of polypharmacy through the development of the eight themes.

Most notably, the themes suggested several potential explanations for the increase in medication errors in polypharmacy patients. Bedside nurses seem to hold the position that being overworked and not having clearly defined roles may contribute to difficulties in the management of polypharmacy in elderly patients. Resistance from such patients may also be a factor in difficulties in managing polypharmacy. The complexity of polypharmacy was identified as a root cause of many of the issues facing the bedside nurses. Other participants recognized that the systems within their organizations likely play a major role in their ability to maintain a clear set of roles and effective polypharmacy management. There appear, then, to be multiple levels for explaining polypharmacy. At the organizational level, controls, communication, culture, and various systems are crucial for nurses fulfilling their roles and duties in the effective management of polypharmacy (McIntosh et al., 2018). At the individual level, training and education may best explain trends in polypharmacy management (Stewart et al., 2017).

Limitations of the Study

The major limitations of the current study were a small sample size, and a survey with focused questions that only cover some potential polypharmacy factors. Thus, the focus was limited to the development of an improved understanding of the perception of bedside nurses on issues involving the management of polypharmacy among geriatric patients. The qualitative nature of the study was designed around determining such perceptions. Because the interviews were in-depth, the sample size was relatively small.

Recommendations

The recommendations for future research include to explore the specific factors that contribute to polypharmacy management error and the pressures on nurses which may contribute to such errors. For future research, nurses should remain part of the sample, but the sample may also be expanded to other stakeholders in the healthcare industry and include patients who take many medications.

Implications

The current work reveals several major stressors for bedside nurses and potential disruptions to the fulfillment of their duties, including overworked nurses and roles not clearly being defined for bedside nurses. For the practice of bedside nursing for geriatric patients, the current work may provide the grounds for organizational changes in the role definitions for nurses, though additional research is required to support a change. In particular, the difficulties in managing polypharmacy and the complexities across the range of bedside nursing duties present major challenges for certain healthcare organizations (Fulton & Riley, 2005; Rajeev et al., 2018). For example, organizational culture and the structures for checking medication plans may be changed to reflect better practices and minimize the risk of medication error. Minimizing errors resulting from polypharmacy and improving the operations of healthcare organizations with a history of medication errors will affect positive social change.

Conclusion

Bedside nurses continue to face major challenges in managing polypharmacy for geriatric patients. While the research on medication errors due to polypharmacy suggests

major risks, the existing research did not focus on the perceptions and experiences of bedside nurses in managing polypharmacy for geriatric patients. The current work is intended to help fill this gap via interview results from bedside nurses working with geriatric patients. The results revealed a mixture of experiences. While some nurses suggested that their organizational systems aided their polypharmacy management, others indicated that maintaining clear and transparent roles in the management of polypharmacy were undermined by organizational challenges and heavy workloads. All participants recognized the importance of education and training for bedside nurses required to management polypharmacy for geriatric patients. Role conflict resulting from heavy workloads and unclear role definitions may be a significant contributor to the emergence of error in polypharmacy management among geriatric patients. Resistance from such patients and a lack of familial support may also help explain the difficulties in polypharmacy management in this population.

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Appendix A: Interview Protocol

1. How would you describe the experience of providing bedside nursing for geriatric patients?

2. Do you have older patients who are on more than 6 medications at a time? What do you find to be the outcome of such situations in most cases?

3. Do you find managing medication for geriatric patients who have six or more medications at a time challenging? In what way?

4. When you have to manage polypharmacy for geriatric patients, how does that affect your well-being as a nurse?

5. What are the barriers to effectively managing elderly patient's polypharmacy as a nurse in the acute care setting?

6. In taking care of such patients are there times when the demands associated with medication management conflicts with other role expectations? Can you provide details?

7. Specifically, do you experience times when you have too much to do in a given time frame especially in relation to medication management for geriatric patients?

8. Are there times when there is lack of clarity in your role in medication management and assuring the safety of your elderly patients?

9. What are the factors that you think can help you effectively manage patient medication safety when patients are on several medications at the same time? (Such as education, time, and training?)

10. What do you perceive to be your role as a nurse where there is polypharmacy in acute care setting?

11. Why do you think role conflict occurs in in managing elderly patient's polypharmacy in the acute care setting?

12. When you have patients that have many medications at the same time, do you find any areas of stress as you care for such patients? Can you provide details?

13. What are the practical factors responsible for the challenges related to your role? Such as poor coordination, workload burdens, and lack of clarity in individual responsibilities.

14. What are the institutional factors responsible for challenges with your roles? Such as hospital culture, application of electronic health records, and collaboration and engagement of nurses, pharmacists, patients, and families?

Appendix B: Demographics

Code# _____
Questionnaire

1. Age: ( ) 20-29 ( ) 30-39 ( ) 40-49 ( ) 50-59 ( ) 60-69 ( )>70yrs

2. Gender: ( ) Male ( ) Female

3. Marital Status ( ) Married ( ) Single ( ) Widow ( ) Divorced

4. Do you have any children living at home? ( ) No ( ) Yes, How Many?

5. What is the highest educational degree you have completed in the nursing field?

( ) Diploma ( ) Associate ( ) BSN ( ) MSN ( ) Doctorate

7. Have you ever belonged to any professional organizations related to your career?

( ) No ( ) Yes, Please specify_____

8. Please list the year you obtained your RN License: _____

9. Please list the number of years worked in Nursing: _____

10. What is your annual compensation in nursing field?

( ) <50,000 ( ) 50,000-75,000 ( )>75,000-100,000 ( )>100,000

Appendix C: Flyer

Are Your Patients Taking 6 or More Prescription Medication?

WOULD LIKE TO HEAR FROM YOU!

You are invited to participate in

a research study of nurses' perception of managing the elderly patient's polypharmacy

This study involves a one on one interview that will last about 45 to 60 minutes to help further develop an understanding of nurses' experience and roles in managing polypharmacy in the hospitalized elderly population

Location

All interviews will be conducted by appointment only at a location of your choice

Are You Eligible?

- Must be a Registered Nurse
- Involved in bedside patient care
- Currently working in the Acute Care Setting for elderly patients (65+)

Interested

For Further Information, Contact Name MSN, MBA, RN, NEA-BC

Appendix D: Alignment between Interview Protocol and Research Questions

Research Question (RQ)	Interview Protocol (IPQ)
How do bedside nurses perceive their role in managing polypharmacy to hospitalized elderly patients?	IPQ1. How would you describe the experience of providing bedside nursing for geriatric patients? IPQ2. Do you have older patients who are on more than 6 medications at a time? What do find to be the outcome of such situations in most cases? IPQ3. Do you find managing medication for geriatric patients who have six or more medications at a time challenging? In what way? IPQ4. When you have to manage polypharmacy for geriatric patients, how does that affect your well-being as a nurse? IPQ5. What are the barriers to effectively managing elderly patient's polypharmacy as a nurse in the acute care setting? IPQ9. What are the factors that you think can help you effectively manage patient medication safety when patients are on several medications at the same time? (Such as education, time, and training?) IPQ14. What are the institutional factors responsible for challenges with your roles? Such as hospital culture, application of electronic health records, and collaboration and engagement of nurses, pharmacists, patients, and families?
What are the lived experiences of bedside nurses in managing	IPQ6. In taking care of such patients are there times when the demands associated

polypharmacy in elderly patients in the acute care community?	with medication management conflicts with other role expectations? Can you provide details? IPQ8. Are there times when there is lack of clarity in your role in medication management and assuring the safety of your elderly patients?
What are the bedside nurses' perception of their role strain in managing elderly patient's polypharmacy?	IPQ13. What are the practical factors responsible for the challenges related to your role? Such as poor coordination, workload burdens, and lack of clarity in individual responsibilities? IPQ7. Specifically, do you experience times when you have too much to do in a given time frame especially in relation to medication management for geriatric patients? Can you provide details? IPQ12. When you have patients that have many medications at the same time, do you find any areas of stress as you care for such patients? Can you provide details?
What are the nurses' perception of their role ambiguity in managing elderly patient's polypharmacy	IPQ10. What do you perceive to be your role as a nurse where there is polypharmacy in acute care setting? IPQ11. Why do you think role conflict occurs in managing elderly patient's polypharmacy in the acute care setting?

Appendix E: Pre-Screening for Inclusion/Exclusion Criteria

Pre-screening Questionnaire:

1. Are you a bedside registered nurse caring for elderly patients?
2. Do you care for elderly patients 65 years or older?
3. Do you administer six or more prescription medications to patients in the acute care setting?