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# Individual Understanding of the Risks Associated with Polypharmacy

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This is to certify that the doctoral dissertation by

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Abstract

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Abstract

With many individuals experiencing multimorbidity, individuals are being prescribed more medications. Although there are benefits to taking medications to manage symptoms and treat disease processes, there are also risks to taking multiple medications. The purpose of this phenomenological study was to explore participants' understanding of the risks associated with practicing polypharmacy. Game theory, credibility theory, and belief bias were the conceptual frameworks used to explain how individuals experienced their care and being prescribed 5 or more medications. Eight participants residing in subsidized housing in a small Midwest city, who were taking 5 or more medications volunteered to take part in semi-structured interviews answering a series of 10 questions. Phenomenological analysis was used to organize the data and to assist with the development of themes regarding the nature of the participants' lived experiences. According to study findings, 7 out of 8 participants stated that they trusted their providers and that their providers used a more directive approach to prescribing medications instead of offering choices to the participants. In addition, participants lacked knowledge of the risks associated with taking all medications collectively, indicating that more education is needed for individuals. Results of the study may be used in both provider training and patient training to stimulate social change that may improve provider patient communication, increase understanding of provider patient interactions, elicit positive patient outcomes by providing knowledge of awareness, communication, and interaction styles, which play a role in patient outcomes.

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# Dedication

This dissertation is dedicated to my belated mother and father, Gayle and Keith Gramza. They were integral in teaching me that I could accomplish anything that I was determined to accomplish, and taught me how to persevere and remain diligent. To my husband, Wallace McHenry and my three amazing daughters, Shaylyn, Olivia, and Nadia, who encouraged me and gave me inspiration to continue moving forward to completion. Thank you for your patience and understanding throughout this amazing journey with me. And to my Aunt, Pat Burnham, your interest and admiration of me and my endeavors have carried me through to the end, and I sincerely thank you. And to a dear, esteemed colleague, Kimberly Hanson who connected with me regularly throughout the process, adding objectivity, and encouragement to take breaks and helped to ground me and refocus with kind words, I truly thank you.

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# Chapter 1: Introduction to the Study

Adverse drug events in adults are a health concern in the United States. Annually, there are hundreds of thousands of individuals in the United States each year who visit hospital emergency rooms as a result of adverse drug events (Center for Disease Control [CDC], 2012). Many scholars have focused on elderly individuals and individuals who suffer with schizophrenia without focusing on a broader range of individuals between the ages of 19-64. The purpose of this study was explore individuals', ages of 19-64, reported complications regarding taking five or more medications.

In this phenomenological study, I described participants' perceived understanding of their diagnoses and medications prescribed for their diagnoses. I interviewed participant who had been prescribed five or more medications. For the purposes of this study, I focused on participants' report of the combination of medications they were prescribed, and I asked them to identify if they had experienced any side effects while taking medications, how many prescribers they had, and if they had been hospitalized due to adverse drug events. By asking the aforementioned questions, I gained a better understanding of the individuals' understanding of their medications, any difficulties connected to taking medications, confusion of what medications they were taking, and if there had been any negative effects associated with being on five or more medications.

The study findings may lead to positive social change by addressing the gap of knowledge and understanding of the risks associated with taking five or more prescribed medications by individuals between the ages of 19-64. This improved understanding could lead to awareness, which could lead to change. Individuals could benefit from

individual psychopharmacologic education, especially during additions or deletions of medications from their medication regimens.

## Background of the Problem

Few scholars have explored patient medication education within the adult population. According to Lenahan, McCarthy, Davis, Curtis, Serper, and Wolf (2013), many individuals have difficulty recalling their medications, and individuals who have difficulty recalling the name of the medication also cannot identify the pill. These individuals have more instances of nonadherence to medication regimens and uncontrolled symptoms (Lenahan et al., 2013). The CDC (2012) also identified that elderly individuals consume three times the amount of medications as the nonelderly individuals. The elderly are taking an average of three to six different medications at a time (Maio et al., 2011). An increased number of medications can increase the risk of adverse drug events, hospitalizations, and even death (CDC, 2012). Holt, Rung, Leon, Firestein, and Krousel-Wood (2014) and Berry et al. (2014) found that the elderly may experience forgetfulness and communication misunderstanding, decreasing the adherence to medications for individuals. Yasein, Barghouti, Irshaid, and Suleiman (2013) identified that two-thirds of individuals did not take their medications properly as prescribed.

Few scholars have focused on nonelderly adults (ages 19-64) and polypharmacy along with the participant's knowledge of the risks associated with taking five or more medications. It is important for individuals to be well informed about their medications and combinations of medications and to be comfortable asking their prescriber questions

pertaining to the safety and possible interactions of the medications that they are being prescribed.

## Statement of the Problem

In the United States, there have been approximately 700,000 individuals reported to have presented to the emergency room due to adverse drug events, with a reported 120,000 of those individuals being admitted to the hospital for care; 100,000 deaths were reported due to adverse drug events (CDC 2012). Although individuals need medications for their multiple illnesses and ailments (including both mental illness and physical illnesses), individuals may not understand the medications they are taking; the purpose of taking the medications; as well as the potential risks of prescribed medications, risks related to combining different medications, and possible side effects associated with the different medications that they are taking. According to Sarkar, López, Maselli, and Gonzales (2011), between the years of 2005 and 2007, there were a reported 13.5 million adverse drug events (ADE) in the combined inpatient and outpatient setting nationally. The annual cost of these adverse drug events reportedly ranged from 17 to 29 billion dollars. Sarkar et al. reported that 72% of the 13.5 million ADE were from the outpatient setting, and 28% reported in the emergency room or other hospital/inpatient setting.

## Purpose of the Study

The purpose of this study was to understand the level of knowledge that community dwelling individuals between the ages of 19 and 64 had regarding taking five or more medications in general, side effects of their medications, as well as drug-drug interactions. The results of this study can be used to develop more attention on the

importance of awareness of knowledge surrounding medications to improve adherence and to decrease ADEs. By hearing about individuals; thoughts, feelings, and knowledge associated with taking five or more medications, there can be a better understanding of whether or not people need to be more aware of their medications, interactions, and adverse effects of being on five or more medications.

## Research Questions

1. What is the lived experience of adults who are prescribed five or more medications?
2. What is the knowledge of medications and understanding of risks associated with medications?
3. What are the participants' ability and comfort in asking prescribers questions pertaining to their medications?

## Theoretical Framework

There are many different models of decision making. There are different perspectives on the patient-provider relationship and decision making, as well as the belief that the patient-provider relationship is important in medical and mental health care. For this study, there were four different frameworks that I included: the game theory, paternalism versus autonomy in health care, credibility theory, and belief bias. To explore participants' understanding of prescribed medications with multimorbidity, I focused on different decision making models as possible contributing factors to polypharmacy; individuals' level of comfort with their care; and asking questions of their

provider regarding medications, side effects, and general questions regarding starting or stopping their medications.

In regard to paternalism versus autonomy in the medical practice and the medical provider-patient relationship, Murgic, Hebert, Sovic and Pavlekovic (2015) reported that autonomy is ethically essential in the medical field. In addition, Murgic et al. reported that patients have more of a choice in their care.

According to credibility theory (Gass & Seiter 1999), individuals consider professionals to be credible and when a person is perceived to be credible, then an individual may be less apt to ask questions pertaining to his or her medications. Credibility-enhancing actions from the prescriber can include highlighting qualifications, providers showing that they care about the other person, being assertive, and highlighting sources of information.

According to belief bias (Anandakumar, Connaughton, Coltheart & Langdon 2017), people tend to accept all things that fit within their beliefs. For example, if individuals believe that doctors are knowledgeable and medications fix things, then individual may not challenge the doctor or ask questions.

## Nature of the Study

A phenomenological study was used in the study. Phenomenologists focus on people's lived experiences and common meanings or threads of the participants. Phenomenological scholars explore the thoughts and feelings of the participant's lived experience. I wished to understand the participants' lived experiences surrounding their understanding of their medications, interactions, side effects, and purpose for use while

taking numerous medications for multiple ailments. I was the primary collector of the data through interviewing, as well as observing individuals, while they communicated with me.

## Operational Definitions

*Adults*: Individuals between the ages of 19 and 64.

*Adverse drug event (ADE)*: Injuries resulting from drug-related medical interventions (Kohn, Corrigan, & Donaldson, 2000). Injuries can be defined as falls with personal injury to body, losing consciousness, and seizures

*Adverse drug reactions (ADR):* Any noxious undesired and unintended drug effect (Kohn et al., 2000).

*Health literacy:* The degree to which individuals have the capacity to obtain, process, and understand information about basic health and services available to make decisions (DiPiro et al., 2014).

*Medication error (ME):* Problems that arise during the process of medicine use regardless of their associated outcomes (World Health Organization, 2016).

*Medication-related problem (MRP):* Event or circumstance involving drug therapy that actually or potentially interferes with the desired health outcome (Wolstenholme, 2011). MRP has three subgroups including ADEs, adverse drug reactions (ADR), and medication errors (ME).

*Multimorbidity*: Cooccurrence of two or more chronic conditions (Guthrie, Makubate, Hernandez-Santiago, & Dreischulte, 2015).

*Polypharmacy*: The use of five or more medications by a patient. According to Kukreja, Kalra, Shah, and Shrivastava (2013), psychiatric polypharmacy is described as taking five or more medications at a time.

## Assumptions, Limitations, Scope, and Delimitations

Limitations to the study included that the participants were within a small geographic location and not representative of the large population of individuals being treated with polypharmacy. Access to adults between the ages of 19 and 64 may have been a limitation as individuals may not feel comfortable disclosing how many medications they are on and what they are taking them for.

I assumed that the participants would answer openly and honestly to the questions. Phenomenological inquiry may not provide the descriptions similar to quantitative studies concerning polypharmacy. The qualitative method could be a limitation as the data are more subjective information than objective due to individuals' perceptions of their lived experience. Quantitative studies have been able to identify issues surrounding the elderly and polypharmacy as well as polypharmacy within the population of individuals who are challenged with schizophrenia and other illnesses, such as cancer patients, AIDS/HIV patients, and cardiac patients. This study's findings were limited to interpretation rather than to quantitative analysis.

## Significance of the Study

The significant increase in adverse drug events, emergency room visits, and even death of individuals due to polypharmacy is high (CDC, 2012). With the majority of past studies focusing on the elderly population, it is unclear how polypharmacy affects the population

of individuals between the ages of 19 and 64, and it is unclear what level of understanding these individuals have regarding risks associated with polypharmacy and what their lived experience has been while taking numerous medications. The study findings may lead to positive social change by focusing on the gap of knowledge and understanding of individuals between the ages of 19 and 64 who have been prescribed five or more medications. These findings could lead to awareness and change in the way they approach their care provider about medications. Also, the results may bring a different level of awareness to the individual who can ask questions or inquire in a different way to professionals who may then decide to consider other alternatives to multiple medication prescribing. Individuals could benefit from individual psychoeducation, especially during additions or deletions of medications from their medication regimens. Alternatively, individuals who are already be aware of the risks associated with polypharmacy may interact with their provider in a positive way.

## Summary of Chapter One

Adults are more at risk of experiencing ADEs due to the amounts of medications that individuals are being prescribed by physicians and psychiatrists (Smith-Marsh, 2016). The purpose of this study was to explore individuals' understanding of the risks associated with taking five or more medications for psychological or physical illnesses and ailments. Individuals who take five or more medications have a greater risk of injury or an ADE. However, scholars have not explored the population of individuals between the ages of 19-64 and their understanding regarding the concoction of medications they are on. The conceptual framework that was used for the purpose of this study was that of

game theory, credibility theory, and belief bias. This framework assists with understanding how the interactions between the prescribing practitioner and the patient impacts the outcomes of treatment with relation to medications. By understanding the beliefs of the patients and their interactions with their provider, we begin to understand their lived experiences with polypharmacy and their understanding of the risks associated with their medications.

In Chapter 2, I outlined the literature review which provides a framework for this study, theories that were used including game theory in regard to the relationship between the physician and the patient and their shared responsibility in decision making pertaining to treatment. I also examined paternalism and autonomy with regard to the relationship between the patient and the physician, credibility theory and belief bias.

In chapter 3 I explain the research rationale.as well as the design and my role as a researcher, recruitment and selection of participants. Detailed analysis of the data is also provided in this chapter as well as any ethical treatment and trustworthiness were also addressed. Chapter 4 includes all details about the participants and their responses to the questions. Included in chapter 5 is the interpretation of the data that was collected and findings from the semi-structured interviews, recommendations as well as the limitations of the study and implications for social change.

# Chapter 2: Review of Literature

## Introduction

Many people rely upon medications to treat ailments, decrease symptoms, and manage both their mental health and physical health (CDC, 2014). Arnold (2015) focused on the significance of polypharmacy within the elderly population and indicated that polypharmacy contributes to the morbidity of elderly individuals. This is one of many scholars who have found the correlation between polypharmacy and morbidity. There is a gap in the research surrounding individuals within the age group of age 19-64, as the majority of the research has been conducted with elderly participants or record reviews looking primarily at the elderly population. The review of the literature includes the parameters surrounding the search strategy used and the significance of polypharmacy within different age populations of individuals. In this literature review, I will focus on the research on the challenges regarding polypharmacy and the effects that polypharmacy has on individuals. This will provide a better understanding of the scope of the issues surrounding polypharmacy within the aforementioned age group, individual's knowledge of the risks associated with polypharmacy, and the negative or positive effects of being prescribed numerous medications could contribute to a person's overall wellness and quality of life.

## Major Section Preview

The search terms used to find sources for this dissertation included *polypharmacy, ADEs, MEs, ADRs, adults, medication related problems, health, and medication literacy.* I used different EBSCO databases to gather peer-reviewed articles and abstracts, including

PsycArticles, PsycINFO, PsycBooks, PsycCritiques, and PsycEXTRA. To collect additional information, I broadened my search to include the Medline medical database; ProQuest Nursing and Allied Health database; and the CINAHL, MEDLINE, and Cochrane database. I searched for full text, peer-reviewed articles between the years of 2010 and 2016 with participants between the ages of 19-44 and 45-64. I identified a total of 84 journal articles out of 5,744 total articles found after narrowing the search by adding criteria. Out of the 84 articles, only seven directly related to the topic of this dissertation.

## Review of Literature

There can be risks associated with taking five or more medications for different ailments. The risks identified include drug-drug interactions, significant side effects, hospitalizations, and death (CDC, 2012;Eyoh, 2016). In the following literature review, I provide insight into individuals' understanding regarding the risks associated with taking five or more medications; individuals' medication literacy; and individuals' perception of their role in the medical, mental health, and pharmacologic decision making.

### Polypharmacy

Polypharmacy has become the standard norm due to the increase of individuals with multimorbidity (Guthrie et al., 2015). The use of multiple medications has become the typical treatment for all ailments. According to Guthrie et al. (2015), polypharmacy is described as the use of five or more medications; individuals taking 10 or more medications has been termed as major polypharmacy. The amount of medication is noted to fluctuate within different studies, and there is not a precise definition of polypharmacy

being five medications or 10 medications. Individuals prescribed and taking five or more different kinds of medications may experience adverse effects. Prescribed medications can be of benefit and successful at treating numerous conditions; however, it can alternatively pose as hazardous.

**Adverse Drug Events**

Guthrie et al. (2015) found that 6.5% of emergency room admissions have been caused by ADEs as identified. Prescribing multiple medications to patients is considered to be poor prescribing practice, and it can create adverse outcomes such as unplanned hospitalizations. In addition, the more medications someone is prescribed, the higher the chance of medication nonadherence. Payne, Abel, Avery, Mercer, and Roland (2014) examined different age groups regarding polypharmacy and unplanned hospitalizations and found that 7.1% of the individuals with one or more unplanned hospitalizations due to ADEs were between the ages of 20 and 59. Whereas, Payne et al. found that 8.7% of the individuals were between the ages of 60-79. The most common ADEs included falls, allergic reactions, unintentional overdoses, and issues from side effects. According to Hampton et al. (2014), there were a variety of events that brought individuals to seek medical treatment in the emergency departments. For example, movement disorders and spasticity were experienced after taking antipsychotics, and confusion and impaired consciousness was experienced by some individuals in relation to taking lithium (Hampton et al., 2014). In regard to individuals presenting to the emergency department for a change in mental status, behavioral and mood changes, as well as impaired cognitive functioning, were experienced by individuals taking sedatives and anxiolytics

(Hampton et al., 2014). Stimulants and antidepressants had smaller numbers of people presenting to the emergency department with adverse events; however, when they did, they had complaints of cardiovascular issues and hypersensitivity to the medications (Hampton et al., 2014). Al Hamid, Ghaleb, Aljadhey, and Aslanpour (2014) examined hospitalizations and found that many of the hospitalizations were due to ADRs focusing on the elderly population.

According to Pedrós et al. (2014), 186 individuals who presented to the urgent care presented with ADEs. These individuals were taking multiple medications and had negative consequences related to the medications they were taking (Pedrós et al., 2014).With regard to the elderly population and polypharmacy, Chaipichit, Krska, Pratipanawatr, Uchaipichat, and Jarernsiripornkul (2014) explored how individuals qualified their ADRs, and they noted that individuals had a difficult time identifying what the symptoms were from and how to be able to better assist patients with ADR. According to Cardoso, Miasso, Galera, Maia, and Esteves (2011), adherence may play a role in adverse drug interactions as well as their knowledge of the benefits and risks.

**Age Group**

Polypharmacy within the elderly population has been explored as individuals within the 65 year and older population have had more negative outcomes than others. The negative outcomes described included falls, hospitalizations, and emergency rooms. Jones,Tabassum, Zarow, and Ala (2015) found that the noncognitively impaired elderly struggled with recall of medical issues, amount of medications, and names of prescriptions. If the elderly patients incorrectly reported their medications to their

doctors, there could be prescribing issues such as drug-drug interactions. Crofford (1987) identified many different challenges with polypharmacy in the elderly. In addition, Crofford found that the higher amounts of medications an individual was taking, the higher the likelihood there would be ADRs.

According to Ramaswamy et al. (2011), 12% of elderly individuals were taking at least five medications, and 23% of individuals were taking 10 or more medications. In addition, doctors were not aware of the potentiality of inappropriate prescribing (Ramaswamy et al., 2011). Ramaswamy et al. identified that one of the barriers in prescribing numerous medications was the lack of education or training regarding prescribing for elderly individuals and numerous medications.

Kulkarni et al. (2012) looked at individuals on five or more medications in the treatment as usual (TAU) of Bipolar I and schizoaffective disorder with the average age of the individuals being 42 in an age range of 18 to 79. After 2 years of following TAU within this group, symptoms were managed successfully with polypharmacy in only 84 individuals and unsuccessfully with 155, indicating that these individuals had a relapse of their symptoms within the 2-year time frame (Kulkarni et al., 2012). Kulkarni et al. did not focus on ADEs, MEs, or ADRs. Kulkarni et al. did identify that within this 2-year time period, 44% of the individuals were hospitalized. The hospitalizations were due to symptom nonmanagement, as Kulkarni et al. did not adequately define whether the hospitalizations were due to adverse drug events, drug-drug negative interactions, or other reasons pertaining to the combination of the medications.

**Medication and Health Literacy**

DiPiro et al. (2014) outlined the meaning of health literacy. DiPiro et al. stated that health literacy is the capacity an individual has to obtain, process, and understand the basic concepts pertaining to health information and services needed to help him or her to make appropriate decisions. Zhong, Zheng, Guo, and Luo (2016) found that although patients were provided with information about their medications, fewer than 25% of the patients were able to recall the side effects of the medications. In addition, Zhong et al. found that age and education correlated with the level of an individual's literacy. For example, older individuals had a lower level of literacy, and individuals with a higher education level increased their level of medication literacy and understanding.

Makaryus and Friedman (2005) examined the percentages of individuals who could list their medications, had knowledge about their diagnosis, could identify the purpose of their medications, and could list the side effects of the medications they were discharged on. Makaryus and Friedman indicated that there was a decrease in medication literacy in individuals at or after discharge from an inpatient setting. Four to 18 days after individuals were discharged, only 56% of individuals were knowledgeable about the dosages of their newly prescribed medications at discharge, and only 11% of the participants were aware of the side effects or adverse effects the newly prescribed medications could have (Maniaci, Heckman, & Dawson, 2005).

The level of knowledge an individual has about his or her health and his or her medications is considered to be a person's health or medication literacy level. According to Serper et al. (2013), individuals thought that their primary care physician knew more

about all of their medications than they did. Individuals may get a false sense of security with that thought process. The patient's perception was that the health care provider had greater knowledge than the patient, and the patient did not question the provider.

## Theoretical and Conceptual Framework

According to a qualitative study that was informed by game theory, the authors were looking at the role or interactions between the individual decision makers such as the patient and the physician and specifically looked at physicians and patients each playing a role in the decision making (Tarrant, Dixon-Woods, Colman, Stokes 2010). If the patient has a higher level of trust in the provider, then they may allow more of the decision making to be done by the provider and if not the patient would play more of a role in the pharmacological decision-making as well as overall care. There are different principles that providers follow that would limit the decision making or autonomy of a patient to include that of harm, paternalism, legal moralism, and welfare. This is also important to take into consideration as even though the patient may want to play more of a role in the decision making regarding their mental, physical health care, the provider may believe that it is in the best interest of the patient to make the choices they do.

According to Loignon and Boudreault-Fournier (2012), their review of research focused on individual's participation in decisions and the care they gave or received. The research showed the most common models included that of patient choice and paternalism. Historically, paternalism is seen as a provider's portion of the decision making as dominant and subordinate. According to Murgic et al (2015), the literature

reviewed thus far shows that more providers are giving patient's a decision making role in their medical care than in previous decades.

With all of the frameworks collectively reviewed, individuals either have a choice in their care or they do not have a choice and the provider/prescriber may be directive. In addition, if patient's believe that their practitioner is expert and more knowledgeable than they are, then they may give the decision making over to the practitioner and may be less likely to ask them questions about their prescriptions and overall care.

# Chapter 3: Research Methods

## Introduction

Scholars have examined the issues that have been surrounding polypharmacy with a main focus on the elderly population. There are minimal studies on younger individuals, such as those between the ages of 19-64. In this chapter, I outline the qualitative method that was used to assist in understanding the participants' personal experiences with polypharmacy. In addition, the participants' understanding of the risks and benefits of the medications and their experiences with their prescribing physician and level of comfort with asking questions of the professionals was also addressed.

## Research Design and Rationale

### Research Methodology

Qualitative methodology was selected to study polypharmacy within the 19-64 year age group. Due to the lack of qualitative investigations of this age population, it was difficult to predict what the findings would show. In regard to polypharmacy within the elderly population, there are a large number of quantitative studies identifying variables to measure among a large number of elderly individuals. According to Creswell (2009) and Patton (2002), qualitative inquiry is nonuniform, yet captures diverse perspectives on a particular topic. I collected data from individual interviews with participants, observations, and documents to assist with building patterns and themes from the information gathered

## Research Design

A qualitative approach for this study assisted in a better understanding of what people are aware of when taking multiple medications. Phenomenology is one of the qualitative designs used to explore the participants' lived experience, and it takes into consideration their subjective viewpoint of what it means to them. Phenomenology was used to bring life to the participants' lived experiences of being prescribed five or more medications by the same or different physicians. In exploration of a person's lived experience in research, I can begin to understand or make sense of their thoughts, feelings, perception, and description.

## Participants of the Study

The participants consisted of a total of eight individuals selected from a convenience sample who were prescribed and were taking five or more medications for different ailments albeit mental health or any physical health conditions. The participants must have been prescribed five or more medications, live in a small Midwestern city, and were within the 19-64 year-old age range. The CDC (2012) suggested that there have been issues surrounding polypharmacy including ADEs, ADRs, and MEs resulting in emergency room visits, hospitalizations, and falls. The participants included both men and women who had been prescribed or were taking five or more medications daily.

## Research Questions

1. What is the lived experience of adults who are prescribed five or more medications?

2. What is the knowledge of medications and understanding of risks associated with medications?
3. What are the participants' ability and comfort in asking prescribers questions pertaining to their medications?

## Ethical Protection of Participants

The participants in this study were adult volunteers between the ages of 19 and 64. There was no more than a minimal risk associated with participating in this study. If a participant experienced harm or difficulty associated with participating in this study, a referral to services or resources in the community, such as mental health professionals, primary care physicians, or crisis services, was made. Each participant completed a consent form, and confidentiality was protected. Files including informed consent and consent to voice record, digital voice recordings, and transcripts will be stored in a locked cabinet in my home office. Only I had access to the transcripts. Identifying information was removed from transcripts prior to data validation. In addition, participants were assigned an alphanumeric code to maintain confidentiality.

## Procedures

The following procedures served as a sequential guide to recruit and inform participants, collect and analyze data, and validate findings. Participants were recruited through a flyer/handout that was placed and the office of the Public Housing Authority in a small Midwestern city.

1. After gaining approval from the IRB at Walden and the administration of the Public Housing Authority in a small midwestern city, I placed an information

packet about the research in the office of a small Midwestern City Housing Authority including my contact information for those individuals who were interested in participating to be able to reach me and leave a message or e-mail.

2. I scheduled informative phone calls with the interested individuals and gained basic information to make sure the individual fits the required criteria of participants in the study (age between 19-64 and taking five or more medications).
3. I contacted the participants during the specified time agreed upon and set up a time and place to complete the interview and complete the consent required. Conducting an interview in the participant's home was only approvable if (a) a neutral, private location is also offered as an alternative such as reserving the community room or library at the different housing buildings or giving an option for a conference room at a local coffee house (Java Vino) or library; or private office space (b) my presence would not expose the participant or family to any risks; (c) extra provisions were made to ensure privacy during the interview; and (d) extra provisions were made to ensure that I was not imposing on the family by letting the interview run long, staying beyond my welcome. Therefore, I used a timer or soft alarm to assist with time awareness and setting stopping times as well to do check-ins with participants.
4. During the individual interview, each participant was given a copy of the letter describing the study and was asked to sign the consent form/consent to voice record form. The interview also included asking questions listed in the interview

protocol and concluded with asking the participants if they had any other pieces of information to add.

5. I transcribed digital audio recordings verbatim and analyzed the data using the NVivo program to identify themes. I took notes as well.
6. I validated themes and similar terms extracted from transcribed audio recordings about their experiences and written observations and notes. Hermeneutics was used to interpret the text. This interpretation were assisted with NVivo software to find common themes within the rich texts.

## Data Collection

Data were collected through the means of one interview that took approximately 1-2 hours. In the first part of the interview, I focused on background information of the participant with the main purpose of putting the participant's experience into context. This interview involved building rapport, signing the consent form, and gathering information about the individual's life experience related to being prescribed and taking five or more medications for different ailments. Information gathered during the interview provided insight into the level of knowledge the participants had about their medications and the associated risks, if any. In addition, the demographics of the participant were collected as well including age, number of medications, education level, and natural support system. Also in the interview, the participant was informed of the nature of the study and my personal family experiences related to possible risks and benefits related to being prescribed numerous medications.

I asked focused questions that stemmed from the research questions in this study (Appendix B). Each participant was asked to answer interview questions to address the research questions. Each question for the second interview is listed in Appendix B. Additionally, the questions served to validate the overall meaning for the group of participants discovered during the analysis of data.

The interviews were conducted in my residence or an available conference room in the human services building, whichever was more comfortable and selected by the participant that was free from distraction and private. Additionally, notes were taken to document any nonverbal communication and to provide details of the environment. Data were organized by creating files of the transcribed interviews. Files and recordings will be maintained in a locked filing cabinet in my home office in addition to having information in a password-protected file on my personal laptop at home. Once the data were transcribed, the process of analyzing the information began.

## Data Analysis

Once the data were organized, I obtained an overall understanding of what type of information the data provided through use of coding for themes. After data collection, I transcribed the interviews. Reading each transcript in its entirety and gaining a general sense of the information provided was the initial step in gaining a better understanding of the meaning of the participants' reported experience. The goal of this initial step was to understand what types of information the data conveyed.

The subsequent step was to begin by highlighting and listing statements identified in the text that had relevance to the phenomenon being studied. In this case, I extracted

statements to understand how individuals within the particular age group understand their medications and the risks and benefits of taking their medications for the conditions in which they were prescribed them. In addition, statements of commonality were identified on their feelings, descriptions, and perceptions of their relationship to taking medications and approachability of their provider.

I then labeled the statements to understand the phenomenon of individuals taking five or more medications experiences. For the study, I identified any patterns or themes from the transcripts of the audio recorded interviews. These expressions represented the knowledge of medications, the connection and comfort level of their prescribers, and their lived experiences of any adverse drug issues in regard to the participants' experiences of the phenomenon. The statements were reframed by using psychological meanings to describe the everyday, ordinary language concerning the phenomenon. The final step was to analyze the data, which involved developing individual descriptions of the participant's personal experience. Constructing what it means for each participant to be on five or more medications was a part of the descriptive explanation of the individual interview. The descriptive explanation incorporated all aspects of the individual interview.

## Verification of Findings

The research findings were verified instead of validated, which is common in qualitative studies. Verification of the findings keeps the integrity of qualitative inquiry intact (Creswell, 1998). The process of verifying the findings entailed at least two of eight recommended steps. Creswell (1998) recommended that the researcher use

procedures that comprise either "persistent observation, triangulation, peer review, negative case analysis, clarifying researcher bias, member checks, rich and thick description, or external audits" (pp. 201-203).

Clarification of researcher bias was important in this study. The reader needs to understand the researcher's position in relation to the topic (Creswell, 2009). I had many family members and friends, as well as clients, who experienced polypharmacy in different ways. Many of the individuals that I had experience with had, in some way, been impacted by the use of five or more medications and some with a lower level of understanding of the interactions of different medications. To minimize this bias, I had a peer reviewer assist in identification of presence of bias.

The final form of verification stemmed from having a rich description of the participant's experience. Detailed description "allows the readers to transfer information to other settings and to determine whether the findings can be transferred based on shared characteristics" (Creswell, 1998, p. 203). This study included verbatim transcripts providing contextual and descriptive information. Each of the aforementioned methods of analysis was important in providing a rich description.

## Summary

In this chapter, the methodology that I chose was outlined. The rational for selecting the individuals was also outlined, in addition to the instrumentation and protocol used to analyze the data. Ethical protection of the participants was also described.

Chapter 4 includes details about the population chosen; the sample size; the data collection and data analysis; and the procedures, themes, and the results including quotes and observations.

# Chapter 4: Results

## Introduction

The purpose of this qualitative study was to explore the lived experiences of community dwelling individuals between the ages of 19-64 who were taking five or more medications. Particularly, I wished to know if individuals were aware of the risks associated with taking five or more medications including side effects and drug-drug interactions and what the challenges were, if any, associated with polypharmacy. Furthermore, it was important to know the participants' ability and comfort in asking prescribers questions pertaining to their medications. The questions that were asked of each participant are included in Appendix B. I used NVivo software to manage the study data and to assist in the analysis. I used NVivo to sort the interview data into common words and phrases, which facilitated the development of themes in the coding process. Three research questions were used to guide the study:

1. What is the lived experience of adults who are prescribed five or more medications?"
2. What is the knowledge of medications and understanding of risks associated with medications?
3. What are one's ability and comfort in asking prescriber's questions pertaining to their medications?

I will present the results of the analysis of the study data in this chapter. I will describe the setting and different conditions that may have influenced the participants or their experience at the time while answering the questions and sharing their lived

experiences. In addition, Chapter 4 includes the description of the demographics of the participants including their age, gender, and how many medications they have been taking, whether prescribed or over the counter, and number of prescribers they had. I also present the results of asking the participants a series of questions for the qualitative study. Data collection and analysis will be outlined and themes identified. Evidence of trustworthiness and the results will be shared, including credibility, transferability, dependability, and confirmability as well as my observations and a summary.

## Research Setting

In this study, I applied the convenience sampling strategy where I displayed a flyer at the eight different subsidized housing units in a small, Midwestern city to gain volunteer participants for the study. Interested individuals were asked to contact me via telephone or e-mail if they were between the ages of 19-64 and taking five or more medications. They were given choices as to where the interview would take place. Three of the eight participants asked to meet with me at an office in the downtown area of the small Midwestern city for confidentiality purposes. Two participants asked for me to meet with them in their apartment, and three participants asked that I meet with them in the community room at their housing complex where we could meet in confidentiality. One of the interviews in the community room had a lot of background noise; however, the participant was accepting of this and was not distracted by the background noise in the hallway.

After approval from the IRB from Walden University, flyers were displayed at the eight different subsidized housing complexes, and interested individuals left voicemails for me

expressing their interest. Interview times and places were then set up for each of the participants. Each participant received an informed consent form that included the study description, along with the expectations of the process for the study for the participant (see Appendix C). The participants were asked to complete the consent form in person, and I gave them the choice of reading it themselves or having me read it to them prior to signing, indicating their agreement to voluntarily participate in the study. The in-depth interviews were semistructured, which allowed for the participants to share their experiences and describe their understanding of any risks associated with polypharmacy. In this study, I collected data from interviews with the participants. I used the same interview protocol for all interviews. After an introductory greeting, I asked the participants whether they would agree to be recorded. All participants agreed to being recorded. I then approached each interview with the questions that are outlined in Appendix B and also identified later in this chapter.

## Data Collection

The participants were assured that their identity would be confidential and were given alphanumeric codes to identify them in the study. Data were collected through the means of one interview that took on average approximately 1 hour. In the interview, I focused on background information of the participant with the main purpose of putting the participants' experience into context. This interview involved building rapport, signing the consent form, and gathering information about the participants' lived experience related to being prescribed and taking five or more medications for different ailments. Information gathered during the interview provided insight into the level of

knowledge the participants had about their medications and the associated risks of the medications, if any. In addition, demographics of the participant were collected, including age and number of medications. Also, in the interview the participants were informed of the nature of the study and experiences related to possible risks and benefits related to being prescribed numerous medications.

I asked a series of focused questions outlined in the research questions in this study (Appendix B). Each participant was asked to answer interview questions to address the research questions. Additionally, the questions served to validate the overall meaning for the group of participants discovered during the analysis of data. Each participant was given an informed consent to read or I gave them the option of having me read it to them prior to signing it.

The interviews were conducted in the participant's residence or an available conference room in the building, whichever was more comfortable and selected by the participant that was be free from distraction to ensure privacy for the participant.. Additionally, notes were taken to document any nonverbal communication and to provide details of the environment. Data were organized by creating files of the transcribed interviews. Files and recordings have been maintained in a locked filing cabinet in my home office, in addition to having information in a password-protected file on my personal laptop at home. The data were transcribed, and each transcript was reviewed numerous times to gain an in-depth understanding of the participants' lived experiences.

## Data Analysis

As previously mentioned, I assigned alphanumeric identifiers to each of the participants to assure participant confidentiality, and face to face semi-structured interviews were completed. Interviews took place in a space of the participant's choosing, and I transcribed the interviews verbatim. Each transcript was read by me in its entirety and I reviewed my field notes which contained my observations, reflections, and insights to gain a better understanding of the meaning of the participants' reported lived experience.

Next I highlighted and listed statements identified in the text that had relevance to the phenomenon being studied. In this case, I extracted statements to understand how individuals within this particular age group understood their medications and the risks and benefits of taking their medications for the conditions in which they were prescribed them. In addition, statements of commonality were identified on their feelings, descriptions, and perceptions of their relationship to taking medications and their perception of the approachability of their provider.

Labeling the statements identified as necessary to understanding the phenomenon of individuals taking five or more medications. For this study, I began to identify patterns and themes from the transcripts of the audio recorded interviews. These expressions represent the knowledge of medications, the connection and comfort level with their prescribers, and their lived experiences of any negative or positive outcomes in regard to the participant's experienced of the phenomenon. The statements were reframed by using psychological meanings to describe the everyday ordinary language concerning the phenomenon.

Finally, analysis of the data took place, which involves developing individual descriptions of the participant's personal experience with the use of NVivo 12. I inputted and arranged the transcripts into subfolders that identified, sorted and arranged the data. This assisted in the development of themes with regard to the participant's lived experience and coded for participant's personal experienced commonalities. I continued data analysis until data was saturated.

## Evidence of Trustworthiness

There are four components of trustworthiness including credibility, transferability, dependability, and confirmability. In relation to qualitative research, valid and reliable instruments are not used for data collection and therefore it is absolutely pertinent that the researcher addresses trustworthiness in regard to their research through assessing the aforementioned components of trustworthiness (Creswell 2014).

### Credibility

The quality of a phenomenologic qualitative study is significantly important to contribute to the knowledge in the area of clinical psychology as well as related to polypharmacy. Triangulation is one of the main ways to check for credibility in one's research. Triangulation is asking the same questions of the different participants, collecting data from different sources and also different methods used to ask research questions (Dye, Rosenberg, & Coleman 2000).

In addition, I was aware of and transparent with regard to personal biases related to the topic regarding polypharmacy. Reflecting on my viewpoint to clarify my biases is an important part of being credible. I employed a systematic procedure during the

interview process. By asking all of the participants the same line of open ended questions in a semi-structured interview style, it added to the credibility of the study.

**Transferability**

Trustworthiness of transferability relates to external validity. Whether the research has the ability to be generalized, and if it can be used in different contexts and situations. According to Creswell (2009), there are eight strategies that are primary related to transferability. For the purpose of this study, I used detailed and rich description. Detailed description of the participants and the demographics were included so that the study can be duplicated in the future. The detailed descriptions ensure transferability by transporting the reader to the environment and also give the discussion a bit of shared experience.

**Dependability**

To ensure dependability, adherence to the quality standards and guidelines outlined by Walden University was done. Particularly, the guidelines followed included the Form and Style Review Checklist as well as the Dissertation Checklist, and the Dissertation Minimum Standards Rubric. Furthermore, the engagement of the dissertation chair and committee with incorporation of any recommendations or suggestions was utilized to ensure a dependable research study. With regards to the study and the participants, the research study and the environment with which it was conducted was described in totality. Interviews were conducted in-person. Each of these methods were used to ensure the study results can be viewed as a dependable addition to knowledge base in the area of polypharmacy and psychology.

## Confirmability

Trustworthiness as it relates to confirmability is the level of confidence that the findings of the research are based on the participant's narratives instead of on the researchers' biases. Phenomenology focuses on one's lived experiences and common meanings or threads of the participants. Unlike quantitative research, qualitative phenomenological design explores the thoughts and feelings of the participant's lived experience (Creswell 2014). By recording the topics that were unique in the study, identifying themes and coding, one is completing an audit trail which is one of the techniques used to prove confirmability.

## Demographics

Inclusion criteria for the study reflected the following sample characteristics: all eligible participants were both males or females between the ages of 19-64. In addition, they were all community dwelling individuals in public city housing in a small midwestern city. All eight disclosed that they were taking five or more medications. Also, the participants were not pregnant and were not a resident in any facility such as jails or prisons, nursing homes, mental health facilities and were not classified as elderly. I interviewed eight participants face to face, 1 male and 7 females. The individuals interviewed were in the ages ranging from 28-62 years of age with the average age of 49.5. A summary of each participant's experience follows the table.

Table 1
Demographics

| Participants | Identifier | Age | Gender | # of Providers | # of Medications |
|---|---|---|---|---|---|
| 1 | MM001 | 62 | F | 4 | 15 |
| 1 | MM002 | 62 | F | 8 | 22 |
| 1 | MM003 | 38 | F | 2 | 11 |
| 1 | MM004 | 53 | F | 4 | 15 |
| 1 | MM005 | 52 | F | 4 | 13 |
| 1 | MM006 | 28 | F | 3 | 10 |
| 1 | MM007 | 53 | F | 4 | 10 |
| 1 | MM008 | 53 | M | 2 | 15 |

Note: *N=8*

## Background

### Interview Questions

The interview questions posed were to answer the three research questions through exploration of the participant's knowledge and understanding of the medications in which they were prescribed and taking on a daily basis, their knowledge and understanding of the risks, if any, and the comfort level they have with their prescribing practitioner. The following interview questions set the foundation for answering the research questions.

**Interview Question 1:** The first question was a two part question where the beginning asked for demographics and the second part of the question asked specifics of the demographics. " Please tell me how many medications you are currently taking (prescribed and over the counter)? Please tell me the names of your medications and the reasons why you take those medications".

The answers to the first part of the question is depicted in Appendix D identifying how many medications each participant is taking. The second part of the question related to the participants ability to name the medications and share the reason for taking them to get a better understanding of what the participants were aware of with regard to the name and reason for taking the medications. Seven out of the eight participants referred to a list of their prescriptions in front of them with the dosages, the names of the prescriptions, and the reason for taking them and the timing of taking the medications. The participants identified that if they did not have that in front of them they would 1) not remember all of the medications or 2) their specific reason for taking all of the medications.

The participant that is 28 years of age (MM007) and on 10 medications with four being over the counter and six being prescribed did not refer to a list of their medications and was able to recall the purpose for taking all of the medications. The least amount of medications taken by participants is 10 different medications and the most is 22 different medications. A listing of the medications individuals were prescribed is outlined below as well as the purposes for taking the medications and the potential for certain drug interactions as outlined on a website specializing in drug-drug interaction identification.

MM001 shared: I was prescribed the following medications: cholecalciferol, clonazepam, Epinephrine, Glucagon, Glargine, Levothyroxine, Lisinopril, naproxen, Omega-3, potassium chloride, prazosin, pyridoxine, Quetiapine, aripiprazole. She also shared that she has some pain issues, diabetes mellitus, as well as issues with anxiety and seizures. She also shared that she has been on these medications for the past 17 years. MM002 stated while looking at a list on her online record on her phone:

"I am on the following medications": Doxepin, Omeprazole, Fluoxetine, Gabapentin, cyclobenzaprine, Naproxen, hydroxyzine, PEG electrolytes, lamotrigine, lisinopril, lidocaine, and amitriptyline. She shared that she has been taking medications for a while, since the late 1990s, but in the past two years she has been on five or more medications. While looking at the list, she states "it doesn't say here what they are for, but I think the amitriptyline and lidocaine I think are for pain", lisinopril is for heart, nope blood pressure, lamotrigine is a mood stabilizer, the PEG thing that is if I am not regular which hardly ever happens. Hydroxyzine is pain, so is the Naproxen and the cyclobenzaprine. The gabapentin is for what they describe as "periodic limb movements of sleep", it happens even if I am awake. The fluoxetine is ah, depression, and omeprazole heartburn acid reflux. Doxepin is another one that is for depression and anxiety all that, so…"

MM003 shared that she was prescribed the following medications:

> Phenhydromine, Diphenhydramine, Amoxicillin, ascorbic acid, aspirin, buspirone, calcium, carbadilol, Zyrtec, Penlac, Benadryl, Flonase, Lasix, Furosemide, clonazepam, Gabapentin/Lidocaine/Amitriptyline cream, albuterol,

levothyroxine, potassium, metformin, Zyprexa, Lyrica and Omeprazole. Amoxicillin and that is an antibiotic used before any procedures due to heart issues, ascorbic acid Vitamin C, I take vitamins, aspirin since my heart surgery, buspirone, I take it for depression, and calcium, and carboxy… I use for my eyes, Zyrtec allergies, carbadilol, I think it says on the sheet for my heart. Penlac is for my nails, Benadryl is for insomnia or nasal congestion. Furosemide, and Lasix, that is for fluid retention and heart failure. Clonazepam is for my mental health, and the Gabapentin/Lidocaine/Amitriptyline cream I use for pain. The levo…albuterol is an inhaler I use for wheezing or when I am sick, and the levothyroxine is used for thyroid and stated "I don't know if I am under thyroid or over thyroid". Potassium is for heart, and metformin… "That's for um they called it pre-diabetes but now they call it glucose intolerance". Zyprexa is main on for mental health. Lyrica is for neuropathy, "I have like back pain and leg pain and a lot of different pains and they are hoping that the Lyrica will even that out. Because right now I think they are calling it fibromyalgia", and omeprazole is for heart burn.

MM004

This participant shared that they were on the following medications: losartan, omeprazole, haloperidol, pravastatin, Januvia, levothyroxine, lorazepam, and Imitrex. I've got low thyroid, that is what the Losartan is for, I've got high blood pressure, high cholesterol, diabetes and acid reflux and I take the omeprazole for acid reflux."

MM005

This participant shared that they are prescribed baclofen, Effexor, Keppra, carbamazepine, simvastatin, loperamide, levothyroxine, and Botox injections. 6-7 medications; Baclofen 10 mg 3 x daily; vagus stimulator-seizure activity; Effexor 375 mg-depression; Keppra 500 mg 3 tabs am and 3 tabs night seizures; Carbamazepine (Tegretol) 300 mg + 200 mg seizures, Simvastatin 20 mg daily cholesterol; loperamide for diarrhea-wears diapers, Botox injection in arm for muscles; Levothyroxine 10 mcg "but I don't remember what it is for".

MM006

This participant reports taking Adderall, Xanax, Metoprolol, naproxen, trazodone, bupropion, Symbicort, Magnesium sulfate, Zyrtec, and levothyroxine. 15 meds prescribed and over the counter. Unsure of what she is on and needs to look on phone on her on-line record. Adderall 10 mg 2 x and prn 25 mg as needed; Xanax 0.5 mg as needed/scheduled-anxiety; Metoprolol tartrate 25 mg 2 in a.m. and 2 in p.m. for blood pressure and thickening of heart wall; Naproxen/Aleve; protonix; Trazodone 2 (50) for sleep; buproprion 450 mg for depression; Symbicort inhalant for asthma; magnesium 500/day; Zyrtec for allergies, calcium, vit D3, Flonase; Levothyroxine (Synthroid) for thyroid-antidepressant (?), and calcium.

MM007

This participant is prescribed Viibryd, Latuda, prazosin, clonazepam, lidocaine two kinds, and naproxen and over the counter medications such as Tylenol and ibuprofen. At least five prescriptions and then over the counter medications. Viibryd is for depression, Latuda for bipolar; Prazosin for night terrors "which doesn't work but I take

it"; Clonazepam for anxiety; Lidocaine patches, salve, and cream for back pain; nicotine gum for smoking cessation; Naproxen as an anti-inflammatory as well as Tylenol and Ibuprofen for inflammation and pain; Fiber and an over the counter deep tissue rub. MM008

This participant shared that he is prescribed Celebrex or celecoxib, Ritalin, Latuda, lorazepam, omeprazole, metformin, fish oil, Chantix, Lyrica, albuterol, and Wellbutrin (bupropion). About 10 medications; Celoxib (Celebrex) is for depression, Ritalin, Latuda-depression or bipolar, Lorazepam-sleep aid, Lisinopril, Omeprazole, Metformin-diabetes, Curcumin-anti-inflammatory, fish oil, vitamin c, multivitamin, Chantix-smoking cessation, Lyrica, Albuterol inhaler for respiratory, Wellbutrin for weight loss; was on pain medications four times per day for last 14 years and went off of them 6 weeks ago.

**Interview Question 2**

The second question that was asked of the participants was, "How many different doctors do you work with that prescribe these medications?" This question is part of the demographics and details are outlined in Appendix C. This question was asked as part of trying to understand if all of the medications prescribed were from one provider/practitioner or if there were more than one practitioners. This interview question assists with answering the second research question related to the risks of being on five or more medications.

**Interview Question 3:** The third question asked of participants was, "How would you describe your overall health since you have been taking the medications?"

The primary theme that emerged from the question was that of their quality of life is poor, fair or better with the majority of individuals describing their current overall health as fair to poor.

Participant MM001 indicated: " I wouldn't say I was healthy, Not good, not good. Still having 70 percent of symptoms while taking the medication".

Participant MM002: "Physically no, I don't feel physically better or healthier".

Participant MM003: "Fair, fair, because the medications are what keeps me going.I'm stable".

Participant MM004: "Fair, it could be better".

Participant MM005: "Poor, tired all of the time, falls have increased due to the medications that relax muscles; I have to wear diapers due to diarrhea and incontinence. Memory is poor, focus is hard".

Participant MM006: "Overall Mental health in many ways is better now than previously but also more clear and aware when I am having problems. I felt more numbed, mentally numbed where, just the therapy is helping. I better understood why what and doing something to change that and in the past seeing someone just to see someone. I think when I started getting into recovery it was about that same time, like I have some control in my health and just taking what the doctor says".

Participant MM007: "Overall wellness and health rate as a 70 out of a 0-100 scale for quality of life per se. Some medications do not work. Prazosin is supposed to take away night terrors and it does not. Pain is not managed".

Participant MM008: “Overall health poorer than previous when was not on medications. Feels more down, somewhat. Began medications in 2003. Quality of life on a 0-100 scale is 25 at present”.

**Interview Question 4**: “How confident are you in your prescribing doctor and what level do you feel as if they understand you?

The theme that arose were those of higher trust versus lower trust that they are heard by their doctors or feel understood by their providers. This was quite interesting as all of the participants have numerous providers and seven out of the eight participants are trusting of their providers and on numerous medications that do not work well all of the time to improve their overall health.

Participant MM001 shared “I have major issues with one of the medical entities in town, I told them I had that and it did not work and they said maybe it’ll work this time you know it was a complete nightmare for a full year. My foot doctor does understand me and I trust him, Dr. Powell does, and my diabetes doctor does, but not sure my regular doctor does”.

Participant MM002: “Um, as far as prescribing medicines, I feel as if it is their first and their go to and like let’s not figure this out and let’s put you on something to see if this figures it out and helps. The other day I went in and she said I don’t have a magic pill. I don’t want a magic pill, I just want answers. That’s all I have ever wanted is answers. I am so sick of pills. But I do need the omeprazole that much I do know in life”. Additionally, “I think I feel heard but not listened to. Um, she is really not empathetic, I

have noticed that". "Um I trust her" and then later she stated "I can ask her questions but I am not sure I will get a full answer".

Participant MM003: "I do basically I trust them all except I need a different pain pill because the one I am on doesn't work".

Participant MM004: "Yes, doctors are pretty open and they listen".

Participant MM005: "Minimally. I think they understand me now but not sure about my new doctor yet as she is new. I am frustrated".

Participant MM006: "I really like doctors now; I really like her (GP) feel very confident working with her. She prints things out and talks things out. Trust my psychiatrist and nurses will get back to me".

Participant MM007: "The doctors I have now I feel as if they understand me more than previously. The last 13 doctors did not understand me".

Participant MM008: "APNP/psychiatrist I am confident that they understand me but unsure of others at this point. APNP did Genesight testing to help get me the best medications. Two that did not show on there I continue to take because I do not want to go off".

**Interview Question 5:** "Please tell me what you know about the risks and side effects of taking the prescribed medications that you are on?"

This question posed to be quite interesting in that the main themes identified for individuals being on 10-22 medications were drowsiness, or that they were given a sheet

of paper with the side effects and risks outlined however no one was really aware of the risks or the possible interactions or side effects of all of their medications.

Participant MM001: “Well you always get, you know you get a slip when you get medications” and “I can’t tell you what all of them are. I know there are risks of taking too many medications and interacting with the other”.

Some drug-drug interactions identified from the drugs.com website as a major interaction between potassium and lisinopril which could create significantly high levels of potassium in the blood called hyperkalemia which has the potential to lead to kidney failure, muscle paralysis, irregular heart rhythm or cardiac arrest. Other potential drug-drug interactions in reference to the medications this individual is prescribed include that of low blood pressure, dizziness or drowsiness, and high blood pressure (https://drugs.com/druginteractions.html).

Participant MM002: “so some can have a drowsy effect” and “or heart feeling funny and I know there are so much more but I can’t think of them off the top of my head”.

The drug-drug interactions that are considered “major” interactions include amitriptyline and fluoxetine which can cause sedation, dry mouth, blurred vision, constipation, and urinary retention. Interactions between doxepin and fluoxetine which cause sedation, dry mouth, blurred vision, constipation and urinary retention as well. The next major drug-drug interaction identified is between amitriptyline and cyclobenzaprine which has the potential of causing serotonin syndrome with symptoms of confusion, hallucination, seizure, extreme changes in blood pressure, increased fever, excessive sweating and diarrhea. Severe cases could experience coma or death. It is reported that

the combination of doxepin and cyclobenzaprine and also the combination of fluoxetine and cyclobenzaprine also have similar drug-drug interactions as the previous. Moderate interactions include that of dizziness or drowsiness, confusion, and difficulty concentrating and heat intolerance (https://drugs.com/druginteractions.html).

Participant MM003: “I get it refilled I get a sheet on it. Yeah it is like weight gain, sleepiness and tiredness. I know the weight gain, I have gained like, I looked at my driver license last time I got it in 2010 I think and I gained at least 50 pounds since then and I don’t know if it is side effects of the medications that I have been slowly having to take or if it is the way that I am eating”.

According to the drugs.com drug-drug interaction checker, there are three different combinations that have major interactions, including the combinations of clonazepam and Zyprexa, Benadryl and potassium chloride, and potassium chloride and Zyprexa. The first combination can This can cause low blood pressure, shallow breathing, weak pulse, muscle weakness, drowsiness, dizziness and slurred speech. Whereas the other two combinations may affect the stomach and upper intestinal tract. There are numerous moderate interactions which outline side effects such as dizziness, drowsiness, confusion, and difficulty concentrating (https://drugs.com/druginteractions.html).

Participant MM004: “Suicide, Suicide is the risk of the medication, I cannot remember. Prolixen was for sure but I don’t know about the haloperidol”.

The drug-drug interactions identified that the mixture of these medications could cause drowsiness, dizziness, confusion and difficulty concentrating as well as lower one's blood pressure(https://drugs.com/druginteractions.html).

Participant MM005: "Risks of taking all my medications is that I cannot drink alcohol. It is common sense. I believe everyone should have a pharmacologist on their team to help with this understanding".

The drug-drug interactions identified from the website included that of weight gain, constipation fatigue and low blood pressure when taking carbamazepine and levothyroxine conjunctively. In addition, Effexor and Keppra combined as well as baclofen and Keppra combined, carbamazepine and Keppra combined, baclofen and Effexor, carbamazepine and Effexor, carbamazepine and baclofen in combination, could increase side effects of dizziness, drowsiness, confusion and difficulty concentrating (https://drugs.com/druginteractions.html). This participant stated that one of the challenges she has had in the past included falls which could have been a result of dizziness, and she stated that she cannot go back to school or continue her education as she has memory issues and concentration issues. Also noted was an interaction of carbamazepine and grapefruit or grapefruit juices as this could cause increased levels of the carbamazepine. If one becomes toxic of carbamazepine the side effect is drowsiness (https://drugs.com/druginteractions.html).

Participant MM006: "I don't know, I am given sheet of paper to look at". I don't typically look at them.

According to the drugs.com website, there are major interactions between the bupropion and Adderall, the bupropion and trazodone, increasing and individual's risk for seizures at it lower the seizure threshold in an individual. There is a report of moderate drug-drug interaction between Xanax and Zyrtec, bupropion and Zyrtec and trazodone and Zyrtec, as well as the combination of metoprolol and Xanax, metoprolol and trazodone, Xanax and trazodone which increases side effects of dizziness, drowsiness, and difficulty concentrating. (https://drugs.com/druginteractions.html).

Participant MM007: "This is a catch 22. No one knows what the risks or side effects are".

Some of these medications do interact and according to Drugs.com website, the side effects include dizziness, drowsiness, and confusion. One interaction the medication Latuda has is with food. If an individual eats grapefruit, it may increase the blood levels of the medication which can increase the risks of high blood sugar, diabetes, seizures, abnormal muscle movements, and heat related disorders (https://drugs.com/druginteractions.html).

Participant MM008: "No one has told me about risks of medications other than liver damage. The pharmacist just gives the meds and tells when to take and with or without food".

According to Drugs.com the interactions identified with these medications include an increased risk for seizures, increase blood pressure or heart rate, dizziness, confusion, and difficulty concentrating. In addition, one interaction the medication Latuda has is with food. If an individual eats grapefruit, it may increase the blood levels of the

medication which can increase the risks of high blood sugar, diabetes, seizures, abnormal muscle movements, and heat related disorders (https://drugs.com/druginteractions.html).

**Interview Question 6** "What was the most challenging aspects of taking five or more medications daily?"

The theme identified with this question was that individuals have a difficult time remembering to take their medications regularly. According to Participant MM001 shared:

"I'm having a heck of a time keeping them straight because some I take twice per day". And Participant MM002 stated: "Sometimes I almost forget to take them and ah, sometimes, or when I do, I don't wanna do it. I mean I just kind of coach myself to take them".

Participant MM003 stated: "I forgot to take it over a period of about six days" and "well it would be a problem if….now I get mine bubble packed….. I think that would be the most challenging to have to set up my own medications". She shared that the only way she can have the bubble packed medications is if it is funded by her managed care organization that she is in and if this program goes away she would be quite worried as she would have to figure out a way to set up her own medications.

Participant MM004 indicated: " What is challenging for me is picking them up (medications) from the pharmacy is hard". She shared that all of her medications run out at different times and she has to make sure to be aware of when her medications are due to be refilled.

Participant MM005 concluded that the most challenging aspect of being on five or more medications is “gets in the way of me learning or educating myself”, as the side effects of the medications makes her feel doped up and not able to concentrate or remember things.

Participant MM006 reported: “Taking medications regularly or scheduling is hard due to too many, no schedule-sleep hard, picking up meds at pharmacy as they all run out at different times”.

Participant MM007 indicated “ Sometimes I forget medications. I take six pills at a time and that is hard. Mental weight; scheduling when to take the medications. In the past 3 months have forgotten to take medications three times”.

Participant MM008 shared: “I have forgotten sometimes. Medications not working”. He shared that he struggles with depression and his symptoms are not managed with the medications as his pain was not managed by the medications and he went off all of them. He stated by going off the pain medications after the first few weeks he is actually feeling less pain and wonders if his depression would lift if he went off the other medications but he will talk with his prescriber.

**Interview Question 7** “What was the most positive aspects of taking five or more medications daily?”

This question was asked of the participants as a balancing question as part of their lived experiences with taking five or more medications. I wanted to gain insight into how individuals perceived the benefits of takin medications, if any. The responses elicited from this question were highly variable. There were no two answers alike.

What I found fascinating was that all of the participants involved in the study identified very independently unique positive aspects of taking medications. Three out of the eight participants described their positive aspects more collectively.

Such as participant MM003 stated: “Medications allow me to stay in my apartment and be independent”. Participant MM004 indicated: “They keep me alive”, and participant MM006 said: “Most of my symptoms are managed”.

The other five participant focused on one set of symptoms that were addressed with medications such as participant MM001: “Medications control my insulin”, even though this participant is on 15 different medications for different ailments, this was the most positive aspect for the participant that was identified. Similarly, others focused on individual ailments that were managed such as seizures, mania, heartburn, and successful smoking cessation.

**Interview Question 8** “Have you had any hospitalizations, falls, adverse reactions to medications in the past?”

This question was posed to the participants to hear about their lived experiences related to negative aspects of taking five or more medications. I originally thought that it would be difficult for the participants to respond to this as it could be difficult to identify why one has fallen as there could be many variables however, the following is how the participants responded:

The theme that arose within this question is that of increased falls since being on medications and the second theme found was that of suicidal ideation that the participants have experienced taking medications.

MM001 responded that she was hospitalized "Mostly for mental health reasons, suicide attempts and stuff like that, numerous times went to the emergency room and on the antibiotics and stuff and C. Diff. and I was severely dehydrated".

MM002 reported: "I have had falls but I cannot tell you for certain if it was because of the medications". "And a prescriber at the county put me on Rexulti and that gave me a reaction I saw this one doctor, pain doctor and he gave me a cortisone shot and I had a reaction to that".

MM003 shared: "I forgot to take it (Zyprexa) over a period of about six days and I ended up in the hospital and they gave me sublingual Zyprexa every prn to catch up. So she was hospitalized for not taking medications, more of a side effect of going off medications spontaneously.

MM004 said: "Yeah, yeah… Yeah I am also an alcoholic too and that is how I ended up in there and ended up in there more than once, drinking and taking my medications". Also, "I was at work and took Xanax I was doing something on a moving belt. I felt like I was going to have a heart attack". "Cephalexin makes me throw up. I don't know what statin does. Steroids, I don't want steroids as it interacts with Haloperidol".

MM005 shared: "Yes. I fall a lot. I fell once due to medications relaxing muscles too much and drop foot and I broke arm and had to have stay in nursing home. When at

the nursing home some idiot gave me Darvocet and I was choking on vomit and needed to go to the hospital". This participant was upset when responding to this question. She stated that she still gets angry when she recalls this memory but she is "ok".

MM006: Dizziness due to medications, some falls, can't remember, she has been in car accidents when she is not on ADD medications and she becomes distracted. Sometimes she has been hospitalized but not in the past 13 years. She has gone to the hospital but not admissions. She did fall and break her leg once in the recent past, but she is not sure if this is due to medications.

MM007 reported: "Once I was hospitalized due to becoming suicidal on a new medication and they kept me for three or four days and took me off the medication. I have falls a lot as when I take all medications at night I become disoriented. (She also shared after the recording was turned off that she does drink and smoke marijuana and this may interfere with her medications contributing to her falls").

MM008 responded to this question and states: "Kidney issues due to not hydrating enough with medications and have been hospitalized for this multiple times".

**Interview Question 9:** "Do you believe that there are other treatment options then medications for your medical or mental health conditions that could be helpful?"

I asked this question to gain a better understanding of the participant's perspective of possible alternatives if they were able to take less medications. This question was to assist with gaining insight into their lived experiences and if they believed that there could be alternatives to taking medication that they were not offered previously.

MM001 responded that she took a class once and been to a few groups that were helpful many years ago however this has not been offered to her currently.

MM002 shared: “Well I have heard about like ah, I don’t want to say herbal remedies but just like ah…folk medicine or like eating one thing might ah…help with indigestion or something else might help with….” And expanded with: “Yeah people had to get through life before medicine. Ya know they came up with their own stuff, some of it wasn’t so great. But um, like one of them was taking in like something horrible, something with lead in it or something like that. But I found out something and I don’t know if you know this but oh, silver….it’s called colloidal silver, it is supposed to be really good for you, I wouldn’t think that drinking a metal would be but apparently it is”.

MM003 explained: “ Physical therapy, chiropractic, um I’m trying to think. When I was with the county way back when they had down at the downtown they had mental health groups that I had went to”.

MM004 shared “Counseling” could help and shared that instead of being put on another medication that she is going to grief counseling due to all of the losses she has experienced and this is helpful.

MM005: “Yes, homeopathic treatments I would like to research, pet therapy-would like a dog, acupuncture I would like to try”. She is looking into this on her own as her prescribing providers have not offered her alternatives to medications thus far.

MM006: WRAP “(Wellness Recovery Action Plan) and Acceptance and Commitment Therapy (ACT); EMDR might be helpful. Therapy is good. Mail delivery medications”. This participant shared that since she has become educated about herself

and her challenges with mental health and physical ailments she knows what is available and could be helpful, however providers have not suggested alternatives to her.

MM007 shares: “Exercise, quit smoking, and medicinal THC would be nice and helpful for anxiety, depression, and pain issues”. Her practitioners have suggested to her to quit smoking however they have not suggested medicinal marijuana or exercise to her knowledge.

MM008: “Physical knee replacements, shoulder replacements, physical therapy, nutritional therapy or dietician, weight loss”. This participant stated that his prescribing practitioners have not recommended much of the above except for weight loss as he is over 400 pounds.

**Interview Question 10:** “Do you feel as if your doctor is directive (telling you what medications you need) or gives you a choice (does your doctor ask for your input)?”

The theme identified with regard to whether individuals perceive they have a choice in what medications they are prescribed or if they believe their practitioner to be more directive where the participant has less of a choice, was that of their practitioners being directive and not giving them a choice. Even though it was identified that seven of the eight participants believed that their practitioner was directive and made the medication decisions, Participant MM006, the participant that stated that she believed her practitioner to give her a more direct role in prescribing stated the following:

> “You don’t have healing unless you have a good relationship with your doctor”, and “Dr.White, I really like her”. She still indicated that her doctor made the decisions and because she trusted her prescribing practitioner she did not ask any

questions of her and believes she has her best interest at heart. She also stated: "Doctor gives me a choice and I am an advocate for herself. We were taught to do what the doctor says, instead of advocating for self. If I wasn't recovery oriented or trained in self-responsibility or educated then I would just do what the doctor says".

Participant MM001 stated "No" I don't get a choice, when I go in and ask or make a suggestion they put me on what they want me to be on.

Participant MM002 shared "She doesn't ask me", she just states that she is going to put me on a medication and I don't believe I have a choice. "I don't know if the medication is working", but I keep taking it.

Participant MM003 disclosed: "I have been asking him for a different pain pill for quite a long time and he keeps giving me the Tramadol". Indicating that the doctor is more directive and in a parental role directing the treatment without discussion of the reasoning for not changing medications.

Participant MM004 indicated: "they talk to me about what they are going to put me on", and she does not ask or get to choose what she is taking. She also shared that she trusts her prescribing practitioner and does not question.

Participant MM005 said: "More directive. Some doctors increase doses of medications to shut me up". " They don't listen to me", "I was at Mayo and they forced me to go to Gundersen and I was really angry", she did not get a say in this per her report.

Participant MM007 shared: "Directive, I have had to really fight for the medications I have right now".

Participant MM008 stated: “They are more educated than I am, more directive, I do not have choice”. This statement goes along with belief bias as this participant believes that due to their education he has to listen to them as he is less educated and therefore has less of a say in his treatment.

## Overall Lived Experiences of Participants

### Participant MM001

This participant reported that her health was not particularly better since taking five or more medications and her mental health was “not good, not good”. She reported that she continues to have 70 percent of her symptoms not managed by the medications and has had some significant issues with practitioners in the past where she did not feel validated or listened to. She does report a higher level of trust with her specialty practitioners however less trust for her primary care practitioner at this point in time. She was unclear what the risks were regarding all of the medications she was on and shared that “they give me a list at the pharmacy” however she never really looks at the list. This participant also shared that she struggles with keeping her medications straight as she takes so many and some she takes twice daily. The one medication she finds helpful is the one that controls her diabetes. That is the ailment that is most controlled with the medications. She shares that the adverse effects of being on all of the medications is suicidal ideation which she has experienced. When asked if she felt there was any alternative treatments that could be helpful, she shared that a class or group therapy could be helpful in managing some of the mental health symptoms instead of the medication.

And finally, she shared that she does not believe she gets a choice in her care and that the practitioner is more directive in her care and medications.

**Participant MM002**

In regard to this participant's lived experience, she shared that being on five or more medications has not improved her physical health. She shared that "she feels heard but not listened to" by her practitioner. The difficult thing about being on numerous medications is that she forgets to take her medications sometimes. She shared that the only side effect she knows off the top of her head is that "some can cause drowsiness". In addition, she shares that one of the medications that does work is the one that controls her heartburn. She shared that an adverse effect she experienced was a reaction to a new medication that was added to her numerous other medications where she needed to go to the emergency room for treatment. Possible alternatives to medications she would like to consider is herbal remedies. This participant describes her practitioner as directive and does not give her the choice in taking part in her care, and she reports trusting her.

**Participant MM003**

This participant describes her overall health as being "fair" and reports that "medications keep me going". She shares that she does not know if there are a lot of risks associated with all of the medications but that she "gets a sheet" from the pharmacy when she gets her medications and that some may cause tiredness. She shares that she has had some falls and this could be related to the medications. One difficult thing is organizing her medications and taking the right ones and that is why she gets her medications bubble packed for ease of dispensing without having to do this herself. She believes that the

medications allow her to be able to remain living in her apartment and shares that alternatives to medications could be group therapies. She does report trusting her practitioner with her care and the decision making and when she tries to give her input on what she needs she does not believe that the practitioner listens to her and is more directive with her care.

**Participant MM004**

This participant shared her lived experience and stated that her overall health is "fair and could be better". She does state that she has had an adverse reaction to medications and she was hospitalized to take her off of her medication that was causing her problems. In addition she states she trusts her practitioners and they are directive and tell her what they are going to do with her medications and care. She said the only risk of a medication she is taking is risk of suicide and the most difficult thing about taking so many medications is picking them up from the pharmacy as sometimes they do not have the medications and the different prescriptions run out at different times during the month. She believes her medications keep her alive. The only alternative she thinks could be helpful in place of some of the medications is counseling.

**Participant MM005**

This participant describes her overall health as being poor as she is tired all of the time, she has had numerous falls due to her muscles relaxing too much because of the medications and she has to wear diapers as she has incontinence issues due to the

medications. She is not aware of the risks of taking five or more medications but knows she cannot drink alcohol with them. She does not believe her practitioners are credible, and believes that they do not listen to her and sometimes "puts me on medications to shut me up". She fell due to the medications and broke her arm and needed to go to a nursing home for a period of time to recuperate. The most positive thing about taking some of the medications is that she no longer has seizures. So in essence she does not trust her doctors and they are more directive and she does not believe that she has a say in her care. She does believe an alternative to some medications would be therapies such as pet therapy.

**Participant MM006**

This participant stated that after many years of not being well on medications, her overall health is better. She does trust and like her practitioners and she feels as if she has a say in her care and treatment. In the past she has had car accidents that were a negative outcome to her not taking the medications she was prescribed or taking some of the medications and driving. She is not aware of the risks such as side effects or drug-drug interactions but states "I get a sheet of paper with those on it". She identifies that her practitioners give her a choice and she advocates for herself and feels it is collaborative with regard to decision making. She does believe that some alternatives to medications is therapy and mail delivery of her medications would be best as it is difficult for her to pick up medications from the pharmacy as they need refilling at different times. She would like to be off all her medications someday.

**Participant MM007**

This participant shares that her overall health is fair and 70 percent of her symptoms are managed currently. She had many years of struggles where she was on numerous medications and her symptoms were not managed. She did have an adverse reaction to medications and was hospitalized for suicidal ideation and taken off the medication. She is not aware of the risks, side effects, or drug-drug interactions stating: "This is a catch 22 no one knows what the risks or side effects really are". She believes her practitioners now understand her and she trusts them. She does believe that her practitioners are directive and does not give her a choice, nor does she ask questions of them. An alternative to medications could be exercise.

**Participant MM008**

This participant shared his lived experience and states his overall health is "poorer on all of the medications" then prior to medications. He stated that he does trust one of his practitioners and that they are directive and do not give him a choice in the decision making related to his care and medications. He stated that he has not been told of the risks, side effects, or drug-drug interactions associated with taking all of his medications. He forgets sometimes to take his medications and this elicits a negative outcome for him. The medication he knows that has worked is that of a smoking cessation medication as he no longer smokes. He has had kidney failure and been hospitalized due to some of his medications and needed to be taken off or have medications readjusted. Different therapies could be alternatives to medications per his report. When asked the question about decision making medically he stated that: "They are more educated than I am, more directive, I do not have choice".

## Study Results

The conceptual framework for this study encompassed that of Game Theory, Credibility Theory, and Belief Bias. Game Theory looks at the role or interactions between the decision makers (Tarrant, Dixon-Woods, Colman, & Stokes 2010). This theory is typically used in mathematics however has been tagged in psychology as "Social Interaction theory" In this study, the decision makers identified were the practitioner of the participant and the participant themselves. According to the Game Theory, the outcome depends on the interaction or collaboration between and choices made by the practitioner and the participant/patient. Adversely, if the patient does not have a high level of trust for the physician, then the patient would attempt to play more of a role in the pharmacological decision-making as well as their overall care. There are different principles that providers follow that would limit the decision making or autonomy of a patient to include that of harm, paternalism, legal moralism, and welfare (Tarrant, Dixon-Woods, Colman, & Stokes 2010). This is also important to take into consideration as the provider may believe that it is in the best interest of the patient to make the choices and decisions on behalf of the patient.

A review of research focused on individual's participation in decisions and the care they gave or received. The most common models in this research included that of patient choice or autonomy and paternalism. Paternalism is seen as a provider's portion of the decision making as dominant and subordinate (Loignon & Boudreault-Fournier 2012). For the purpose of this study, I am researching from the angle of the participants

lived experiences related to interaction with their providers and the participants experiences with five or more medications.

Credibility Theory is another framework that was used in this study. This theory focuses on past experiences to predict future events. Therefore, if a patient has experiences with a practitioner and they deem them as being credible or trustworthy, then they predict that future events or outcomes will be similarly positive.

In relation to the belief bias framework, Stephens, Dunn and Hayes (2018) connect belief bias and decision making. Specifically that judgements are influenced by ones past experiences to come to a conclusion. The belief bias is also called response bias and is closely linked to credibility theory as they both take into consideration one's past experiences to influence the decision making in a certain situation or circumstance.

## Summary

In Chapter 4, the findings from the face to face interviews with the voluntary participants were presented. The participants shared their personal perspectives on their lived experiences in the phenomenological study to help with a better understanding of their experience being on five or more medications and also shared their understanding and knowledge of the risks associated with practicing polypharmacy. Analysis of the data identified themes with regards to their knowledge. The themes that surfaced from the analysis of the participant's narratives identified their personal descriptions of their experiences while taking five or more medications, including their level of knowledge and understanding of the risks and benefits of taking medications, their connection with their practitioners who were prescribing the medications and their perspective of the

outcomes of their care. The research questions were answered based on their narratives and the emergent themes.

Chapter 5 further addresses the content and answers to the research questions that were asked of the participants. Interpretation of the data with identification of the key findings, limitations of the study as well as recommendations for further research being outlined and implications for social change addressed.

# Chapter 5: Discussion, Conclusions, and Recommendations

## Discussion

According Masnoon et al. (2017), the most common way of reporting polypharmacy was through a numerical context. Typically, medications are prescribed to individuals to optimize health outcomes with those who have multimorbidity. Individuals who are prescribed more medications have an increased chance of ADEs, ultimately causing harm although the intent was to optimize patient's health (CDC, 2012).

This phenomenological study was done using open-ended questions to explore the level of knowledge the participants had regarding their lived experience with taking five or more medications, the risks and benefits of their medications, their comfort level with their practitioner, and the type of relationship and interaction style they had with their practitioner. Despite the research on polypharmacy, there was a gap on a certain population of individuals, as well as focusing on a person's lived experiences in relation to polypharmacy. To fill the gap in literature, it was important to focus on individuals between the ages of 19-64 and their understanding of the risks associated with taking five or more medications as this has not been explored.

I also explored what individuals know about taking five or more medications and what the challenges are associated with polypharmacy. By hearing about individuals' thoughts and feelings and knowledge associated with their experience of taking five or more medications, I had a better understanding of what is needed to help people be more aware of their medications, interactions, and adverse effects of being on five or more medications.

## Interpretation of Findings

The results of this qualitative study assists in filling the gap within the literature related to polypharmacy and individuals' understanding of the risks associated with it. In regards to the first research question, I found that all participants did not know all of the possible risks, side effects, or drug-drug interactions of their medications. In addition, although many reported not liking having to take so many medications, they continued to take the medications without asking questions. Furthermore, seven of the eight participants did not know their medications or what they all of them were used to treat without referring to a printout of the medications provided by their practitioner or the pharmacist. All participants described that their prescribing practitioners were more directive with their care; however, one participant connected with her prescriber and liked her as a person; she perceived this prescribing practitioner as someone who would give her choice when in actuality she did not have a choice.

The study results support the theoretical framework of game theory where both the prescribing practitioner and the participant worked in conjunction with one another for the acquired outcome. Seven out of the eight participants responded that more paternalism on the prescribing practitioner's part was used where they did not feel as if they had a choice pertaining to their care. One individual believed that he or she did have a choice in his or her care due to his or her belief that the practitioner was credible, likeable, and had similar interests as the participant. The conceptual frameworks of credibility theory and belief bias also played a role. The participant who perceived her practitioner as credible asked fewer questions of the provider and believed his or her

practitioner would only do what was in their best interest. The other participants believed that their providers were less credible; however, their belief was that prescribing practitioners would not prescribe them medications that were not needed, and because the prescribing practitioners were educated more than the participant, the participant assumed that the prescriber knew what they were doing and did not feel comfortable asking questions.

## Limitations of the Study

There were limitations to this study. This study was completed/conducted with individuals between the ages of 19-64 who resided in a small Midwest city within the subsidized housing complexes. This was a small subsection of the population as a whole. Although the subsidized housing units were minimally culturally diverse, future scholars would benefit from having a more diverse population to pull from.

Another limitation to this study was that of unbalanced gender participation. This subpopulation of individuals who took part in the study were primarily female. There was only one male who agreed to being interviewed for this study, and seven females agreed to take part in the interview. Future studies would be improved if the gender was more balanced male-female.

Pertaining to assumptions, it was assumed that the participants would answer openly and honestly to the questions presented by the interviewer. Phenomenological inquiry may not provide the descriptions similar to previous quantitative studies concerning polypharmacy. Also, some of the participants stated that they do not think their practitioners know what they are doing; however, even out of the eight stated that

they trust their practitioners. By completing a qualitative study, a scholar could see the limitation to this as being more subjective information than objective due to individual perception of their lived experience.

## Recommendations

There are many individuals who are taking and being prescribed numerous medications. It is recommended that further research focus on this age group of individuals either qualitatively or quantitatively. Future studies with this age group in different parts of the county or country may be well informed about the medications they are taking in regard to the risks including drug-drug interactions and side effects of the medications. Additionally, it would be interesting to better understand individuals' perception of the relationship they have with their prescribing practitioner and their perception of the prescribing practitioner knowledge and relate it to perception of credibility and individuals' belief of prescribers in regard to their care.

## Implications of Social Change

The results of this study could prove to be beneficial to many different groups of individuals in understanding the risks of numerous medications and also sharing with others the right to choice of treatment about their care and the medications that they are putting in their body.

This study could be used as a resource for many, including individuals, practitioners who prescribe, and education systems. Individuals can begin to understand the interactions between themselves and their prescribers, explore what their perceptions and beliefs are, and begin to understand that they have a right to ask questions about their

medications even though they may be less educated than the prescribing practitioner. Prescribing practitioners can begin to understand their role and whether or not they are parental in their responses or can assist with their patients' choice in their care to prescribe or deprescribe. With regard to the education system such as universities and colleges, this study could be useful for individuals going into the field of medicine or prescribing to better understand giving patients a choice, allowing others to ask questions, and understanding the importance of informing the patient about their medications that are being prescribed related to the risks and benefits. Furthermore, this could be a resource for advocacy groups and patient advocates at clinics and hospitals to assist patients with gaining knowledge of their medications including both the risks and benefits and assisting individuals with communicating with their providers for a better understanding to minimize ADEs and to assist patients with taking part in informed decision making with regard to their medications.

## Conclusion

Discoveries or findings engendered from this phenomenological research assist with closing the gap within the present literature through descriptions of participants' lived experiences with taking five or more medications and the knowledge of the risks associated with this as described by the eight participants between the ages of 19-64. I found that there was a lack of knowledge of the risks associated with taking medications, especially five or more medications taken conjunctively.

The research questions assisted with gaining a better understanding of the participants' understanding of taking five or more medications, how this has impacted

their lives, and their understanding of the risks associated with polypharmacy. One of the main themes recognized was that although individuals were prescribed five or more medications, they did not know the risks associated with all of the medications, but rather they stated one or two different risks or side effects of one of their medications. In addition, although they received printouts of the risks and side effects, none of the individuals have read the printouts outlining the risks or benefits.

I have known many individuals who have trusted their prescribing practitioners without asking questions regarding their medications and who have had adverse reactions to medications including falls, motor vehicle accidents, and impairment related to daily functioning. I wanted to better understand others' lived experiences regarding five or more medications. I learned what they thought were positive contributions of being on the medications that they were prescribed and also learned what alternatives they were open to trying that have not been offered recently to them including group or individual therapy, pet therapy, acupuncture, essential oils, and plant derived natural supplements. Future researcher needs to be conducted on assisting individuals with understanding they have a voice in their medical and mental health care regarding their medications and alternative treatments to minimize ADEs, improve understanding of the risks associated with polypharmacy, and improve communication between practitioners and their patients.

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# Appendix A: Interview Protocol

Date:_____

Location:_____

Name of
Interviewer:_____

Name of
Interviewee:_____

Interview Number: One
Duration: _____ hrs/minutes

1. Please tell me how many medications you are currently taking (prescribed and over the counter)? Please tell me the names of your medications and the reasons why you take those medications.

2. How many different doctors do you work with that prescribe these medications?

3. How would you describe your overall health since you have been taking the medications?

4. How confident are you in your prescribing doctor and what level do you feel as if they understand you?

5. Please tell me what you know about the risks and side effects of taking the prescribed medications that you are on?

6. What was the most challenging aspects of taking five or more medications daily?

7. What was the most positive aspects of taking five or more medications daily?

8.Have you had any hospitalizations, falls, adverse reactions to medications in the past?

9.Do you believe that there are other treatment options then medications for your medical or mental health conditions that could be helpful?

10 (There may be more questions to ask, such as follow up questions depending on the answer to their previously asked questions). Do you feel as if your doctor is directive (telling you what medications you need) or gives you a choice (or does your doctor ask for your input)?

Appendix B: Demographic Information

**Table 1**

| Participants | Identifier | Age | Gender | # of Providers | # of Medications |
|---|---|---|---|---|---|
| 1 | MM001 | 62 | F | 4 | 15 |
| 1 | MM002 | 62 | F | 8 | 22 |
| 1 | MM003 | 38 | F | 2 | 11 |
| 1 | MM004 | 53 | F | 4 | 15 |
| 1 | MM005 | 52 | F | 4 | 13 |
| 1 | MM006 | 28 | F | 3 | 10 |
| 1 | MM007 | 53 | F | 4 | 10 |
| 1 | MM008 | 53 | M | 2 | 15 |

Note: *N=8*