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Walden University

College of Health Sciences

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Augustina Oha

has been found to be complete and satisfactory in all respects,
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2018

Abstract

Impediments of Self-Managed Type 2 Diabetes in Mgbidi Women, Nigeria

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MS, Walden University, 2015

MS, University of Phoenix, 2011

BS, Winston Salem State University, North Carolina, 2008

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

March 2018

Abstract

Type 2 diabetes is a complex metabolic disorder characterized by hypoglycemia or hyperglycemia that affects fat, protein, and carbohydrate metabolism. Researchers have identified that for individuals with Type 2 diabetes, staying on interventions for diabetes self-management is sometimes difficult and challenging. It is an increasing public health concern, especially in certain minority populations and in many developing and developed nations. This is especially true for the population of women 40 years and older in Mgbidi, Nigeria**.** In the Enugu State of Nigeria, women bear most of the burden of Type 2 diabetes when compared to the males in the state. This study explored and evaluated the impediments to self-managed Type 2 diabetes among Mgbidi women in the Enugu State of Nigeria, West Africa, using a qualitative phenomenological approach. The concept of impediments influencing cultural behavior was used as the guiding framework. The participants were a group of 9 women 40 years and older who live with Type 2 diabetes. Face-to-face in-depth structured and unstructured interviews were used for the data collection. The responses of the participants were recorded using a tape recorder with their consent. Their responses were analyzed using aspects of Hycner's and Colaizzi's approach for analyzing phenomenological data. The result of this study supported and expanded on the findings of the current literature review. Individual and social challenges and barriers came to light; such as lack of or non-functioning care centers, lack of diabetes related education, and misconceptions like ignorance, social support and medications behaviors. The use of the concept of impediments influencing culturally sensitive self-management behavior of type 2 Diabetes strengthened the study. The findings could help to enhance cultural sensitive diabetes education for this population and other populations who have diabetes in this community.

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Dedication

I dedicate this work to God Almighty for guiding me and my family all these years of this educational journey and beyond. For in Joshua 1:9, I feel He was speaking to me when He said, “Have I not commanded you? Be strong and courageous. Do not be afraid; do not be discouraged, for the LORD your God will be with you wherever you go” and when I read that, I believed. To my late husband, Fabian O. Oha, who taught me how to believe in myself and how to be the strong woman I am today in spite of all the obstacles and huddles I have to jump. My mom used to tell us that it takes persistence, perseverance, and diligence to accomplish your goal. I also dedicate this work to her, Mercy Agu. I thank my children, Amanda, Ashley, Gary, and Valerie, for understanding on the nights I did not make diner because of my assignments. I thank them for their prayers, love, and support as well as my sister, Florence Maduji, for all her encouragements and prayers during the long periods of this adult education; to my late brother Bernard Agu, who started this educational journey for me at my earlier age for his inspiration and love; my late brother Paul Agu (McPacy), for supporting my early education, and my late brother Anthony Agu for all his love and encouragement. By accomplishing this goal, I know I did not disappoint them. I love you all and thank God every day for you being a part of my life.

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I also want to thank my committee member Dr. Naa-Solo Tettey and my University Research Review member Dr. Raymond W. Thron for their insightful comments and encouragements. I want to express my deepest gratitude to them for their hard questions that helped me to broaden my research from many perceptions and perspectives.

Finally, I want to thank Walden University for giving me the opportunity to realize my vision of becoming more than just a scholar, but an agent of social change that will touch populations globally.

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Chapter 1: Introduction to the Study

Diabetes is a disorder in which blood sugar or blood glucose levels are high. There are many types of diabetes, but the two major types are Type 1, also known as insulin-dependent diabetes mellitus or juvenile diabetes, and Type 2 diabetes, also known as adult-onset diabetes or noninsulin dependent diabetes. Type 2 diabetes accounts for about 90% of all the diabetes cases, globally (Santos-Longhurst, 2014).

The prevalence, incidence, and burden of Type 2 diabetes have continued to increase globally, especially in African countries in spite of much research and knowledge on the disorder. The resulting complications and burdens rest more heavily on the developing, tropical countries like Nigeria (Chijioke, Adamu, & Makusidi, 2010). Type 2 diabetes is more prevalent in adults 40 years and older (Center for Disease Control and Prevention [CDC], 2010; Chijioke et al., 2010). Individuals who have Type 2 diabetes are prone to many types of both long and short-term complications of this disorder, which often lead to premature death or low quality of life. This vulnerability to elevated mortality and morbidity is visible in adults with Type 2 diabetes might be because of their inability to self-manage the disorder, especially in the resource-poor underdeveloped and developing nations like Nigeria, as diabetes is not curable but is manageable (Chijioke et al., 2010; Journal of American Physical Therapy Association, 2016). According to Chijioke et al. (2010), it is predicted that prevalence of Type 2 diabetes in adults will increase in the next 2 decades, and much of the increase will occur in the developing and underdeveloped countries where the majority of patients are between the ages of 45 to 64.

There is little or no research that specifically addresses the impediments of self-managed Type 2 diabetes in women in Mgbidi in Eastern Nigeria. There have been many studies on Type 2 diabetes in Nigeria, but no researchers have specifically addressed the population of Mgbidi women in the Eastern part of Nigeria. The intent of this study was to evaluate and identify the challenges, barriers, and needs of the population of women who have Type 2 diabetes in Mgbidi Eastern Nigeria, in West Africa, and to identify the indicators and factors that may hinder or support how this population manages their disorder. The results of this study may enhance Type 2 diabetes self-management education and awareness that is specific to this population to help them make the necessary lifestyle changes for better health outcomes.

Background of the Study

Type 2 Diabetes is the single leading cause of nontraumatic amputations, end-stage renal disease, and blindness in the United States (Wu, Driver, Wrobel, & Armstrong, 2013). About 21 million people in the United Sates, 150 million globally, have Type 2 diabetes, and about 41 million are at high risk for this disorder. This number is expected to double by 2025 (Chan, 2014). According to the American Diabetes Association (2017), 79 million Americans are prediabetic. Annually, about 48,374 diabetic patients in the United States begin treatment for end-stage kidney disease, and about 202,270 individuals with end-stage kidney disease because of diabetes are living on chronic dialysis or with a kidney transplant (World Health Organization [WHO], 2013). According to Nyenwe et al. (2003), "Although there is a paucity of data in the prevalence of Type 2 diabetes in Nigeria and other African countries, available data suggest that

Type 2 diabetes is emerging as a major health problem in Nigeria." (p. 9). This makes Type 2 diabetes a public health issue that needs attention. Diabetic self-management is the cornerstone for the best outcomes (American Diabetes Association, 2013). Health care providers have to first identify the factors that hinder or prevent diabetic patients from achieving desired results, whether it is lack of education or low health literacy, ignorance, inadequate self-management education, beliefs, cultural norms, food literacy, food scarcity, or health care access and utilization in Nigeria.

Type 2 diabetes is more common in adults 40 years and over and accounts for about 90 to 95% of all cases of diabetes (WHO, 2010). Managing diabetes can be very challenging and frustrating, especially in undeveloped and developing nations like Nigeria. The CDC (2012) has indicated that a healthy diet and active lifestyle can help to control the health complications associated with Type 2 diabetes. Within the next few years, diabetes may become the principle global cause of mortality and morbidity within this specific area (WHO, 2011).

Diabetes self-management education and awareness are essential to integrate components of diabetes prevention and care (WHO, 2011). It will be helpful for the health care providers to understand the challenges and barriers experienced by individuals who live with Type 2 diabetes to assist them in making informed decisions that will enable them to cope with the demands of living with this chronic and complex disease and help them with the behavior changes that support self-management efforts to improve health outcomes. Individuals living with Type 2 diabetes in Nigeria are prone to many types of diabetes complications that often lead to premature death as a result of

poorly managed diabetes (Chijioke et al., 2010). Researchers determined that, in 2010, the mortality rate of Type 2 diabetes in Nigeria was 32.5%, with a mean age at diagnosis and death at 53.43 (Chijioke et al., 2010). The mortality rate was 55% for men and 43% in women because of hyperglycemic or diabetic foot syndrome (Chijioke et al., 2010). Chijioke et al. (2010) identified that more men died from diabetic foot syndrome and more women died from diabetic ketoacidosis than other complications. The WHO identified that diabetes is a chronic and complex disorder that requires high quality clinical care as well as effective self-management skills. As a result, self-management education and on-going support are vital contributors to psychological and metabolic outcomes for individuals living with Type 2 diabetes (Haas et al., 2016).

There is an urgency to identify the sources of impediments to the success of Type 2 diabetes self-management in Mgbidi, Nigeria in West Africa as well as worldwide. Diabetes has reached an epidemic level (CDC, 2012). According to the CDC (2014), the number of individuals living with this disorder is increasing worldwide, and diabetes self-management, awareness, and education have been established to improve preventive care practices and clinical outcomes (WHO, 2014). There are few statistics and research studies available for this culture in Nigeria because this part of the world has not been studied. In addition, some of the diabetes research in Nigeria is still in a primary stage. This makes Type 2 diabetes a public health issue that needs urgent attention in Mgbidi, Nigeria. Diabetic self-management is the cornerstone for the best outcome in preventing Type 2 diabetes complications (American Diabetes Association, 2013). Health care providers have to first know the factors that hinder or prevent the diabetic patients from

achieving the desired result in Nigeria in order to design effective diabetic self-management education.

Problem Statement

Type 2 diabetes is one of the leading epidemics globally and one of the major human health threats in Nigeria, West Africa (Adejoh, 2014). According to Adejoh (2014), about 1.71 million individuals are living with Type 2 diabetes in Nigeria, West Africa, and this number includes many women 40 years and older. Many people in Igbo Land in Nigeria do not practice or are not successfully practicing Type 2 diabetes self-management (Chinenye et al., 2012). Women with Type 2 diabetes in Mgbidi in Igbo Land Eastern Nigeria cannot attain meaningful self-management of their disorder without knowledge of their challenges and barriers. They need to understand how to attain the desired goals; this is my goal in this study. The problem might be a result of the rising rate of Type 2 diabetes among this population, increased urbanization, health beliefs of the culture, traditional health care system in this culture, health care access and utilization, health care conditions, and health care disparity in Eastern Nigeria (Oguejiofor et al., 2014). According to the CDC (2013), Type 2 diabetes, in all its form, imposes unacceptable high human, economic, and social cost on Nigerians at all income levels. These impediments reduce the women's ability to self-manage their Type 2 diabetes, and when identified, could help in developing effective self-management education for this culture to reduce morbidity and mortality. Diabetes self-management awareness and education is the cornerstone of care for Type 2 diabetes patients when it

comes to successful health-related outcome, but first, the challenges, and barriers have to be identified, and their needs must be met for the best outcomes.

Purpose of the Study

This study is a critical element of care for individuals that live with Type 2 diabetes in Eastern Nigeria. The problem is that some people in this culture find it difficult to attain and maintain a healthy blood sugar, which results in diabetes complications that lead to poor quality of life, disability, morbidity, and premature death. The results of this study may help to define the standard for diabetes self-management education and awareness of quality and how to help this population manage this disorder to reduce or eliminate complications of diabetes. The specific gap that I want to address with this study is to identify if the problem is a knowledge deficit in the self-management of Type 2 diabetes by women 40 years and older in Mgbidi related to the glycemic index, also called blood sugar control, and local food. Identifying if the low diabetes knowledge or health literacy is associated with the gender could be a risk factor for the development of Type 2 diabetes complications. These gaps could be addressed with cultural specific self-management awareness and education (Mufunda, Wikby, Björn, & Hjelm, 2012). The differences defined by the concept of impediment influencing self-management of Type 2 diabetes between my selected population and the populations that have already been studied presented a research gap that this study is designed to address. The results could lead to positive social changes by designing cultural specific diabetes self-management education for this population. Once the impediments are determined,

education and policy changes could be suggested to assist women in Mbgidi, Nigeria to overcome the impediments.

The Igbo women in Eastern Nigeria show poor self-management of their Type 2 diabetes, which is evident by many diabetes complications occurring in this culture. According to Chukwu et al. (2013), the incidence of diabetes mellitus complications was higher in women rather than men in the Enugu State of Nigeria where Mgbidi is located (Chukwu et al., 2013; Udeogaranya, 2015; Onwudiwe et al., 2011). Identification of the major impediments to this disorder is a vital step in helping this population to attain the best possible health outcome (Udeogaranya, 2015). Health care providers cannot adequately help these Type 2 diabetes patients attain meaningful self-management of their disorder without adequate knowledge of their challenges, barriers, and needs to help them achieve their desired goals (Shrivastav, Shrivastava, & Ramasamy, 2016). In this research, I identified the challenges, barriers, and needs of the women living with Type 2 diabetes as it relates to diabetic self-management. The outcome of this study can, hopefully, be used to improve the quality of Type 2 diabetes education and awareness interventions as it relates to self-management in Mgbidi, Nigeria, West Africa, because the health care providers and the health officials need to know this population's perception if they are to assist in improving their self-management and their health outcome.

Research Question

To guide this study, I developed one primary research question and other subquestions for interviews.

Primary research question: What are the impediments to Type 2 diabetes self-management among women over 40 with Type 2 diabetes living in Mgbidi, eastern Nigeria?

Interview Questions

1. Do you have any religious/family beliefs that affect the management of your disorder?
2. What are the challenges or barriers you face trying to manage your diabetes?
3. How do you perceive your diabetes?
4. How does your diabetes interfere with your daily life, hobbies or recreational activities?
5. How often do you check your blood sugar?
6. Does any other member of your family have diabetes?
7. Do you have easy access to health care?
8. Do you manage your type 2 diabetes with Medication? If so, what type of medication
9. How does Type 2 diabetes affect your choices of food?
10. Have you had any type two complications since you were diagnosed?
11. How do you think the health care access and utilization affect your self-management?
12. What do you do to self-manage your diabetes?
13. What are your experiences living with type 2 diabetes?
14. How does your perception about type 2 diabetes affect your self-management?

15. How does your Type 2 diabetes affect your family and your loved ones?
16. Do you have access to education on self-management of Type 2 diabetes?
17. Do you manage your Type 2 diabetes with medication?
18. Please describe anything you believe hinders your Type 2 diabetes self-management
19. What do you think can be done to improve your self-management care for Type 2 diabetes for you to overcome the impediments?

Conceptual Framework

Conceptual frameworks are specially used as an organizing tool in an empirical study and the idea of a conceptual framework is practical for deductive and qualitative experimental exploration (Green, 2014).

The concept of impediments influencing cultural sensitive Type 2 diabetes self-management behavior served as the guiding framework for this study. Many types of conceptual frameworks have been identified to meet specific purposes in research like exploratory or descriptive studies. It has been established that Type 2 diabetes self-management is an essential aspect of self-managed diabetes in many cultures (Wattanakul, 2010). Self-management of Type 2 diabetes is vital for achieving and maintaining desired glucose levels as well as eliminating, reducing, delaying, or preventing Type 2 diabetes complications (WHO, 2014). Self-management of Type 2 diabetes is characterized by multidimensional behaviors. The fundamental aspects of Type 2 diabetes self-management behavior are medication, which patients, most of the time, must administer to themselves, exercise, foot care, maintaining a healthy lifestyle,

and blood glucose monitoring. Type 2 diabetes self-management behaviors are among the most vital aspects of achieving optimal glycemic control using the concept of impediments as described by the women in Mgbidi who have Type 2 diabetes. This conceptual framework provided data that help for an in-depth understanding of the sources of the impediment to the success of self-managed Type 2 diabetes for this reference population. The responses of the participants could help to fill the gap of inadequate or ineffective self-management of this disorder for the population who have diabetes in Nigeria (Chijioke et al., 2010; Chinenye et al., 2012). Some predictors of Type 2 diabetes self-management behaviors include diabetes knowledge, age, gender, educational level, duration of diabetes disorder, self-efficacy, attitude, social support, health care access and utilization as well as problem solving abilities of the patients (Wattanakul, 2012).

Nature of the Study

The nature of this study was qualitative. A qualitative method was used for the in-depth description of the experiences of the participants. According to Creswell (2009), qualitative research is best for an in-depth description of participants' experiences. The data collection methods were structured and unstructured interviews. I used a phenomenological approach through individual interviews and open-ended questions. Face-to-face and in-depth interviews were used with open ended questions and structured prompts to collect information on the perceived impediments to self-management among the target population. Individuals interviews were conducted face-to-face, but member checking was conducted using phone conversations as the participants preferred phone

conversations to face-to-face contact for feasibility. I created structured prompts, which I used based on the initial responses to the open-ended questions. These allowed me to probe deeper into the perceptions of the participants. Multiple probes or prompts were used, as there are variations among the perceptions of impediments to self-management among the women over 40 with Type 2 diabetes in eastern Nigeria.

I recorded the interviews and then transcribed the recordings before using qualitative software or hand to code themes. The themes were then compared to the literature and my theoretical framework to provide a deeper understanding of the perceptions that were discussed during the individual participant's interviews.

Definitions

Access: Access to health care means having the timely use of personal health services to achieve the best health outcomes. Attaining good access to care requires three discrete steps and involves five dimensions: accessibility, availability, acceptability, affordability, and accommodation, which determines the degree of fit between diabetes patients and the health care system (Agency for Healthcare Research and Quality, 2014).

Community-based recruitment approach: Community-based recruitment is defined as a general term describing those strategies that center on a specific community and its community members. Strategies include focus on recruiting patients through community events or locations (such as churches or outpatient clinics) and utilization of various community members such as municipal health workers (Agency for Healthcare Research and Quality, 2016.

Demographic: Relating to characteristics and structures of population and may include age, gender, material status, education, income, and family history (Merriam-Webster, 2017).

End-stage kidney disease: A condition that occurs in some diabetes patients as a complication. This is when diabetes damages the kidneys and causes them to fail. In this condition, the filters of the kidney, the glomeruli, become damaged. Because of this, the kidneys leak abnormal amounts of protein from the blood into the urine (American Heart Association, 2015).

Glycemic level: A system that ranks foods on a scale from 1 to 100 based on their effect on blood-sugar levels. Carbohydrate is an essential part of our diets, but not all carbohydrate foods are equal. The Glycemic Index (GI) is a relative ranking of carbohydrate in foods according to how they affect blood glucose levels. Carbohydrates with a low GI value (55 or less) are more slowly digested, absorbed and metabolized and cause a lower and slower rise in blood glucose and, therefore usually, insulin levels (Glycemic Index foundation, 2017).

Impediments to self-managed Type 2 diabetes: Anything that hinders the efficiency of the self-managed Type 2 diabetes. An impediment to self-managed diabetes includes factor that hinder or obstruction in the self-management of Type 2 diabetes success (U.S. National Library of Medicine National Institute of Health, 2011). Impediment is anything that makes progress or movement difficult or impossible (Cambridge University Press, n.d).

Phenomenology: A philosophical perspective of a qualitative design that focuses on an individual's subjective experience and interpretation of his/her immediate environment and world around him or her (Trochim & Donnelly, 2008).

Physician-based recruitment approach: In this approach, the physician or the staff contacts the patients by phone or during their office visits and introduces the patients for this study (Agency for Healthcare Research and Quality, 2015).

Self-management: The responsibilities and actions selected by diabetes individuals to maintain health glycemic control.

Self-management Education: An ongoing process to facilitate skill, knowledge, and ability needed for diabetes self-management that incorporate goals, needs, and life experiences of individuals with diabetes (National Standard for Diabetes Self-Management, 2017).

Assumptions

The primary assumption in this research was that by identifying the challenges, barriers, and needs of self-managed Type 2 diabetes for the women in Mgbidi, the diabetes education and awareness interventions were fashioned using culture specific materials to improve their health outcome to prevent diabetes associated complications. I made conscious selections concerning the topic and the research participants. I assumed that the participants would be honest when responding to the research questions. I also assumed that the participants would participate throughout the period of the study and that the participants' responses were dependent on the knowledge of their disorder and

how much they were able to reflect on their past experiences of their diabetes for those who had the diabetes for many years. I also assumed that the result of the research could accurately reflect the actual impediments to the self-managed Type 2 diabetes in this population. I also recognize that there are some limitations related to this assumption.

Scope and Delimitations

The scope of delimitations of this research consisted of the perceptions of the Type 2 diabetic women in Mgbidi, Nigeria, including community based studies to improve self-managed Type 2 diabetes. This study on impediments to Type 2 diabetes was limited exclusively to women 40 years and older who live with Type 2 diabetes in Mgbidi, Nigeria. All the participating women were 40 years or older, were able to provide their informed consent, and were able to take part in all aspects of the evaluation. No woman in the community was excluded if she lived with Type 2 diabetes and was within the age of 40 years and older. I excluded men from this study, and therefore, it was not possible to explore whether the impediments to self-managed type in women differs from that of men based on gender in the Mgbidi community. I also included the caregivers of the women where necessary for the benefit of those who cannot take care of themselves. To manage confidentiality, the caregiver needed to be a family member of the patient and with the patient's consent, but fortunately, when collecting the data, I did not have to face the problem of confidentiality for caregivers, for all the participants were able to take of themselves and discuss their challenges, barriers, and needs for Type 2 diabetes self-management.

Limitations

The limitation for this research is that it involved just a limited number of women from Mgbidi, Nigeria. As a qualitative study, this may restrict the research findings and conclusions for generalization.

Another limitation for this study was that since the participants are only women, the findings may not be generalizable to the male counterparts who have the same problem. Another limitation may be the truthfulness of the research participants, as I depended on the participants self-reporting their impediments to self-manage Type 2 diabetes. Again, the nature of the nonrandom convenience sampling method that was used for this study further restricts the generalization of the research findings.

For all these reasons, the findings were interpreted with caution. Nevertheless, the findings from this study may help to clearly examine the impediments to the success of self-managed Type 2 diabetes. I also assumed that this study would help to identify the problems this population face regarding their health care services as it relates to accessibility, availability, acceptability, and affordability for most of this population does not have health coverage.

I understand that researchers do not always conduct studies that are completely bias free, especially in qualitative research. Researchers' bias was discussed in detail by Creswell (2013). Creswell stated that what is assumed by the researcher about an area of research as well as professional or personal bias may direct the course of the study. Many aspects of the research process like the question to be answered by the research, the research method, and the approach used to collect and analyze the data are all affected by

the researcher’s bias and assumption (Creswell, 2013). I also viewed the potential researcher’s bias as a limitation for this study. I avoided surrogate information bias by using open-ended questions that included the perspective of all the participants. I also avoided population bias by making sure that all the participants had the inclusive requirements for the study. I avoided sampling bias as a researcher by giving all the women in the Mgbidi community an equal opportunity to be selected as a participant for the study. I avoided data analysis bias by being extra cautious when interpreting the participants’ responses.

Significance of the Study

This research was conducted to gain insight into the impediments to self-management of this disease faced by the women over 40 who have Type 2 diabetes in the Eastern part of Nigeria. The outcome of this research could be used to define standards for diabetes self-management awareness and education to help decrease the prevalence of diabetes and reduce or eliminate complications. Diabetes self-management, education, and awareness have been established to improve preventive care practice and improve clinic outcomes (CDC, 2011). For this population, health care access may be one of the impediments to good health when compared to other populations who have Type 2 diabetes in other countries. African countries as a whole bear a greater burden of illness, disability, quality of life and death from preventable and chronic disorders (WHO, 2009). This study could help identify community-based responses that might change health beliefs and behavior, health attitudes, health policies, and health laws that will reduce health disparities and encourage and reflect values of fairness and inclusive and diverse

opportunities for the diabetes population in this part of Nigeria. The outcome of this study could also help to decrease the burden of diabetes in Nigeria, West Africa, and identify the importance of self-management in the treatment of Type 2 diabetes, as stated by Onwudiwe et al. (2011) and Nyenwe (2003). I also identified the perception of the Type 2 diabetes patients in Mgbidi, identified the effect of the impediments on the self-management and outcome, and identified the difference between Nigeria and the United States, which is where the majority of the studies have been conducted.

Significance of Social Change

In this study, I generated information that adds to the existing knowledge on Type 2 diabetes and the challenges, barriers, and needs within this given area. I also contributed to filling the gap in the literature and provide an avenue to positive social change for this population and other populations who have Type 2 diabetes. The findings can be used to promote policy change and support initiatives and programs that will promote self-managing Type 2 diabetes for the diabetes population and promote preventive care for those who are at the risk of Type 2 diabetes and those who do not have this disorder but may be predisposed to diabetes indicators. The findings of this research can help a variety of health professionals involved in preventive and treatment of diabetes like the health care providers, the policy makers, researchers, and the population who has this disorder as well as the health educators. It will help the health educators to fashion diabetes education materials that are culture specific to empower the diabetic population in this culture to be able to set goals and make frequent daily decisions that are effective and fit their lifestyle and values that will help this population

manage their Type 2 diabetes while putting into consideration their personal, psychosocial, and physiological factors. Tripp-Reimer, R., Choi, E., Kelley, S., Enslein J.C (2010) suggested that diabetes interventions must be developed that will address cultural variation within ethnic communities because the identified problems may not be isolated to this population only but may be present in many of the health services globally (Simmons et al., 2008). The authors stated that interventional generalizability of the challenges, barriers, and needs types should not be unexpected in similar ranking of challenges, barriers, and needs among different ethnic groupings in the same area

Summary and Transition

Type 2 diabetes self-management is an ongoing process of facilitating the skill, ability, and knowledge necessary for diabetes self-management. Diabetes self-management materials incorporate the life experience, goal, and needs of individuals living with Type 2 diabetes and this should be directed by evidence-based standards (National Standards for Diabetes Self-Management Education, 2017). The overall goal of diabetes self-management education is to support self-management education behaviors, problem solving skills, informed decision making, and active collaboration with the health providers and other health professionals (Funnel, 2016). All these will not be possible if the impediments to self-managed Type 2 diabetes are not identified. Type 2 diabetes and the related complications and death is a global public health issue that affects many nations. Self-management of Type 2 diabetes has been identified as an evolutionary process of developmental education and awareness of learning to live with this complex and debilitating nature of diabetes in a social context (Moonaghi et al.,

2014). Because daily care is handled by the individuals who have diabetes, families, and their caregivers, there is a vital need for effective, reliable, and valid measures for self-management of the Type 2 diabetes, which validated the importance of this study.

There are many vital self-management behaviors for individuals living with Type 2 diabetes that support better health outcomes, and these include an active lifestyle, healthy diet, constant monitoring of the glucose, good problem-solving techniques, healthy coping skills, risk reducing behaviors, and compliance with medication regimes where medication is applicable. These measures are useful to the health care providers as well as the diabetes educators dealing with the diabetes patients and the researchers evaluating new approaches to care. The finding from this study could provide important information for the providers as well as the educators for the self-managed Type 2 diabetes in this reference population and other populations who have Type 2 diabetes. In Chapter 2, I will review literature on the impediments of self-managed Type 2 diabetes in Nigeria as it relates to women in Mgbidi.

Chapter 2: Literature Review

Introduction

A literature review is the process of studying existing data on a specific topic. It serves a variety of purposes at various stages of the research process. In this review, I evaluated the sources of impediments to the success of self-managed Type 2 diabetes in the eastern part of Nigeria, focusing on adult women. I focused on adult women because Type 2 diabetes is a disorder that is more prevalent in adults. I focused on women because there is no research on this population in the reference culture (American Diabetes Association, 2014; Buowari, 2013).

According to the WHO (2014), about 150 million individuals are affected by Type 2 diabetes globally. Type 2 diabetes patients cannot attain meaningful self-management of their disorder without understanding the sources of impediments to the success of self-managed Type 2 diabetes (CDC, 2012). The purpose of this study is to help health professionals understand the challenges, barriers, and needs of the Type 2 diabetic patients to help the diabetes self-management education and awareness programs. This study will also help the health practitioners engage in community-based health promotion for the diabetic population especially in Mgbidi, one of the Igbo communities in Nigeria, as Nigeria has the highest number of individuals living with diabetes in Africa (Chukwu et al., 2013).

Literature Search Strategy

As part of the exploration of the sources of impediments to the success of self-managed Type 2 diabetes focusing on African women in Mgbidi, I searched the scholarly

literature databases *Academic Search Complete, Science Direct, Science and Nursing Database,* and *ProQuest* accessed from the Walden University library website. I also searched scholarly journal articles, magazine articles, reports, fact sheets from private organizations and state organizations, like the WHO and CDC, as well as books. Materials were chosen based on publication date from the year 2010 to date.

I used key search terms such as *Type 2 diabetes, diabetes self-management, education and awareness, diabetes interventions, health care access*, and *health care use*, as well as *health disparity, barriers, and challenges to self-managed Type 2 diabetes, community-based interventions*, and *health promotions*. Even though there are many studies addressing Type 2 diabetes self-management around the world and Nigeria, little has been done to address or ascertain the challenges, barriers, and needs of the diabetic women in Mgbidi - Igbo Land (Chijioke et al., 2010), hence the importance of this study. In this study, I identified the sources of impediments to the success of Type 2 diabetes self-management in this ethnic group or tribal region of eastern Nigeria.

The Theoretical Framework Appropriate for This Research

The prevalence of Type 2 diabetes has increased globally, especially in underdeveloped and developing countries in the present century (Hu, 2011). The need for behavioral change necessitates the use of theories to encourage behavioral change in societies. The health field has many health theories to help individuals to modify or change their behaviors for better health outcomes. The health theories include the health belief model, state of change or the trans-theoretical model, the precaution adaptation process model, and the theory of planned behavior (U.S. Department of Health and

Human Services, 2012). Among all these types of theories, I used the concept of impediments influencing cultural sensitive Type 2 diabetes self-management behavior.

Conceptual Framework

The concept of impediments influencing cultural sensitive Type 2 diabetes self-management behavior served as the guiding framework for this study. Conceptual frameworks are specially used as an organizing tool in an empirical study, and the idea of a conceptual framework is practical for deductive and qualitative experimental exploration (University of Pennsylvania, 2012). Many types of conceptual frameworks have been identified to meet specific purposes in research like exploratory or descriptive studies. Type 2 diabetes self-management is an essential aspect of self-managed diabetes in many cultures (Wattanakul, 2012) Self-management of Type 2 diabetes is vital for achieving and maintaining desired glucose levels as well as eliminating, reducing, delaying, or preventing Type 2 diabetes complications (WHO, 2014). Self-management of Type 2 diabetes is characterized by multidimensional behaviors. The fundamental aspect of Type 2 diabetes self-management behaviors is medication, which the patients, most of the time, must administer to themselves, as well as exercise, foot care, maintaining a healthy lifestyle, and blood glucose monitoring. Type 2 diabetes self-management behaviors are among the most vital aspects of achieving optimal glycemic control using the concept of impediments as described by the women in Mgbidi who have Type 2 diabetes. The conceptual framework provided data that could help in an in-depth understanding of the sources of the impediment to the success of self-managed Type 2 diabetes for this reference population. The responses of the participants helped fill the

gap of inadequate or ineffective self-management of this disorder for the population who has diabetes in Nigeria (Chijioke et al., 2010; Chinenye et al., 2012). Some predictors of Type 2 diabetes self-management behaviors include diabetes knowledge, age, gender, educational level, duration of diabetes disorder, self-efficacy, attitude, social support, health care access and utilization as well as problem solving abilities of the patients (Wattanakul, 2012).

The objective of this Type 2 diabetes self-management research is to assist individuals in Igbo Land, especially women, with this disorder, to improve their knowledge, awareness, skills, and confidence to help them to take control of their disorder with efficient self-management education as it applies to their activities of daily living and health outcomes. High-quality structured self-management education and awareness have a profound effect on the health outcome and does drastically improve quality of life for diabetes patients (Patient Trusted Medical Information and Support, U. K., 2013). To achieve this objective, the sources of impediment to the success of self-managed Type 2 diabetes must be ascertained.

The concept of exploring the perceived barriers and impediments to culturally sensitive Type 2 diabetes self-management education and awareness served as the framework of this research for individuals who live with this disorder and have had to carry out most of their own self-management care for best health outcome. Type 2 diabetes self-management is a vital tool for the treatment of this disorder. Self-management is vital for achieving the desired glycemic level for preventing, delaying, or eliminating the development of diabetes complications that decrease quality of life for the

patients that lead to mortality or morbidity (George & Thomas, 2010; University of Tennessee, Knoxville, 2010). The need to integrate cultural sensitivity in Type 2 diabetes self-management education and awareness to better serve the population who live with this complex disorder has been emphasized by various studies (George & Thomas 2010; National Center for Biotechnology Information, 2014). Many recommendations and suggestions have been projected to enhance cultural sensitivity in Type 2 diabetes self-management educations and awareness.

These suggestions include

1. Identifying the major sources of impediments to the success of self-managed Type 2 diabetes for the reference culture.
2. Including those barriers and challenges in designing the diabetes education and awareness intervention for that culture.
3. Ensuring that care is provided with regards to the cultural practice.
4. Evaluating how the diabetes population's culture can affect their health practice.
5. Using the outcome to design the education that is culturally sensitive to improve how diabetes individuals in the reference culture are educated on their disorder (Abioye & Oluseyi, 2013; American Association of Diabetes Education, 2007; Abloye & Oluseyi, 2013).

The recommendation from the American Association of Diabetes Educators (2007) emphasized the need for diabetes self-management intervention be culturally sensitive for the diabetes population culture for which it is developed to better serve them. Some traditional diabetes education or intervention and education programs are

too universal, generic, and lack culturally sensitivity as they relate to gender, age, belief, ethnicity, or food habits of the particular culture and use the mode of one size fits all (American Association of Diabetes Educators, 2007). Many diabetes educators instruct the diabetes population what to do and how to do it, ignoring the uniqueness of the different cultures (George & Thomas, 2010; Jack 2012; U. S. National Library of Medicine, 2013).

According to the International Diabetes Federation (2012), culturally sensitive diabetes education is one of the obvious sources of impediment to the success of self-managed Type 2 diabetes in Nigeria. It is recommended that Type 2 diabetes education and awareness initiatives aim at behavioral changes that promote diabetes self-management and encourage the comprehension of the impacts of the various factors. Initiatives should also focus on cultural effects on glycemic levels, and being able to accomplish appropriate lifestyle changes to achieve and maintain desired blood glucose levels (International Diabetes Association Federation, 2012). Many vulnerable groups, like women in Mgbidi, demonstrate poor diabetes self-management, probably because the unique factors of the reference population are ignored in the diabetes education along with awareness interventions for the population's culture, which makes self-management habits hard for the population (International Diabetes Federation, 2012; Jack, 2012; US. National Library of Medicine, National Institutes of Health, 2013). There is a need to have a high-efficiency model of diabetes self-management care in Africa, due to decreased barriers to care, including the lack of infrastructure needed to support self-management, the fear that drugs may not be available, distance to health care facility, and

transport cost and to instill the sense of self-reliance in the diabetes patients in Africa. This objective will be achieved by encouraging self-management, promoting healthy eating with local food, increasing active lifestyles, and teaching healthy coping mechanisms. All of these components are vital for self-managed Type 2 diabetes; thus, I entitled sources of impediments of Type 2 managed diabetes in Mgbidi. I identified the challenges, barriers, and needs of the population who have Type 2 diabetes to help them accomplish the objectives of the Africa Diabetes Care Initiatives. This will help the diabetes population of all ages in Africa to face their future with hope. Existing information from the literature reviewed revealed that the primary prevention of Type 2 diabetes is possible, but patients, healthcare access, utilization, and health system based challenges and barriers, as well as culture sensitive awareness and education can prevent implementation of evidence-based practice for the population who lives with Type 2 diabetes in Nigeria (Chan, 2014).

In spite of the information and knowledge acquired through previous research, adherence to recognized evidence-based self-managed care that includes culturally sensitive education and awareness is at a minimal level. This will not help the population of Type 2 diabetics achieve optimal or desired health outcomes. The solution to this problem is not to blame patients or the providers but to fix the problem. It is necessary to investigate the impediments and barriers responsible for the problem in each culture; hence, this study is vital to enhance the knowledge that already exists to improve the diabetes self-management care and the health outcome. In addition, this reference

community has not been studied before; as such, there is no information available for the Igbo culture when it comes to diabetes self-management (Chijioke et al., 2010).

According to Diabetes and Metabolic Disorder (2014), Type 2 diabetes is one of the most burdensome and the most challenging chronic diseases of the present century. In Nigeria, about 32.5% of the population has Type 2 diabetes (Chijioke et al., 2010). Living with this complex and debilitating chronic disorder has been described as a dynamic personal transition adaptation according to Moonaghi et al. This is based on the restructured of the disorder, alleged knowledge, and management of the self-care, and the adaptation to the disease is the fundamental part of care (Hu, 2011).

Literature Review Related to Type 2 Diabetes Challenges and Barriers Variables

Moonaghi et al. explored the experience of Type 2 diabetes educator's barriers adaptation of Type 2 diabetes patients. They conducted a study using qualitative content analysis. They collected the data using in-depth, semi-structured and face-to-face interview with 15 Type 2 diabetes patients (Moonaghi et al., 2014).

The study participants were women 40 years and older because the prevalence of this disease and its severe complications and more pronounced lifestyle disruption is higher in this age group, and it changes their psychosocial adjustment and involves considerable healthcare cost. The researchers obtained approval from the ethical community at Mashhad University of Medical Science for this study. They recruited participants were given written and oral information about the research, and their consents were obtained. The objective of the study according to the researchers was to evaluate and explore the experience of Type 2 diabetes educator's barriers to adaptation

of Type 2 diabetes patients encountered by health care providers, clinicians, and the Type 2 diabetes patients (US National Library of Medicine National Institutes of Health, 2014).

Moonaghi et al., 2014 selected their participants based on the participants' willingness to take part in the research, having been diagnosed with Type 2 diabetes for at least 1 year, having the physical and cognitive ability to take part, as well as having the appropriate age, gender, previous experiences of the disease in their family, economic status, need or lack of need to use insulin, job background, and education. They used qualitative content analysis focusing on contextual meaning to present facts and understanding of the phenomenon under study that were encountered by the health care professionals, the diabetes patients, the policy-makers, the health care system, and the clinicians (Moonaghi et al., 2014). Adequate time was allotted for the data collection (about a year). They also had close communication with the sample, and the data were collected using semistructured in-depth face-to-face interviews. The interviews were conducted individually with regards to the participant's choice of time and place, and each individual was interviewed only once in his/her native language. This was later translated to English. The researchers evaluated the participants' experiences as it related to living with this disorder. They tape recorded the interviews and each interview lasted 60 to 80 minutes, with a minimum of 45 minutes (Moonachi et al., 2014).

The interview questions were open-ended, example;

1. "Can you tell about your experiences of living with diabetes?"
2. "Can you identify some things you did or experienced that has helped you adapt to diabetes?"

3. “Can you identify some things you did or experienced that was not helpful in adaptation to your illness?” (Moonaghi et al., 2014)

The research participants were made up of 33.3% male, with average age of 47.8 plus or minus 12.0. Their mean duration of diabetes diagnoses was 11.7 plus or 6.45, 83.3% were married, 53.3% use insulin injection. Also, 53.3% had low economic status and 33.3% had previous experience of diabetes in their families, had lower than high school education and 40% were college graduates. The research identified that the women had lower education than the men and that most of the women do not have jobs and three of the men were retired.

The result established major themes. While analyzing the data, the researchers identified three major themes as the participants’ experiences of the facilitators and barriers in adaptation to diabetes. These include: -

1. Individual Context
2. Supportive System
3. Self-Comparison

The researchers identified belief about diabetes and personal background, as the subtheme of individual context, which applies to all diabetics who are trying to modify their behaviors for better health outcome, some of them believe that diabetes has no cure and will result to death. This indicated that the patient’s belief of illness control was a good predictor of his/her outcome of lifestyle change and that the ones that have negative beliefs always have problem modifying lifestyle for better (Moonaghi et al.,2014).

Individual context involves the person's previous experience with this disorder, the person's beliefs, as well as the person's background.

The researchers identified family, societal, and human interactions in health organization as the subtheme of a supportive system (*Journal of Diabetes and Metabolic Disorder,* 2014).

Prevalence of Type 2 Diabetes as it Relates to Traditional Health Care System and HealthCare Access in Nigeria

Type 2 diabetes is the disorder that affects the general population in many developing countries like Nigeria. About six million individuals are estimated to have Type 2 diabetes in Nigeria (International Diabetes Federation, Diabetes Association of Nigeria, 2014). Researchers identified that 27% of all deaths in Nigeria is as a result of non-communicable diseases like diabetes (International Diabetes Federation, Diabetes Association of Nigeria, 2014; Buowari, 2013). The aim of Diabetes Association of Nigeria is to prevent some of the non-communicable diseases (NCDs) like diabetes, high blood pressure, and kidney problems with adequate health promotion and preventive activities. Type 2 diabetes is a disorder that causes high levels of glucose in the blood because the body is not making enough insulin or the cell is not utilizing the insulin produced by the body efficiently (World Health Organization, 2014). This sometimes results in mortality or morbidity or other forms of diabetes complications like heart disease, blindness, renal failure, stroke, neuropathies, amputation or infant mortality caused by deliveries associated with diabetic pregnancy (Norris et al. 2002). Because of this, Amose, Green, and Raghupathi, (2013) conducted a survey on two different groups

in Nigeria. The participants of the first group were made up of college students that had at least a bachelor's degree. The second group consisted of people who had less than a high school diploma that had diabetes. The researchers randomly selected 100 participants from the two groups in the rural community of Lagos, Nigeria to evaluate the awareness of their disorder and possible complications associated with the disease (Amoo, Green, & Raghupathi, 2013).

The researchers used an online calculator to analyze the statistical test of the difference between the two groups surveyed. The methodical framework of the study identified three entities associated with the disease management. These included:

1. The health care delivery system
2. The heath care provider and
3. The patients (Amoo, Green, & Raghupathi, 2013).

The researchers identified the health care delivery system, as the provider of the resources, structure, and the process that directed the health care delivery program initiatives of the health care providers (Amoo, Green, & Raghupathi, 2013). They stated that while the providers did the screening, and diagnosis of the complication, as well as the prevention and treatment of the individuals that had the disease; they identified the patients as the consumers of the services of the health care system, and as the consumer, the patients, must have adequate information about their disorder to help them make informed decisions for self-care management that will result in better health outcome. This article supported that when it comes to self-management of Type 2 diabetes and other types of disease, the importance of adequate education and awareness cannot be

over emphasized. This article validated the importance of this study on sources of impediments to the success of self-managed Type 2 diabetes that is culturally belief specific. This could help the health care delivery system and the providers understand the needs of the patients to enable them provide appropriate awareness and education interventions for the population that have the disorder since the success of the self-management depends on the health literacy of the patients about their disorder. In addition, collaboration is not just for the health system and the health care professional, but it also includes the patients for the system of collaboration in health care management and intervention is defined as intervention for the population with disease like diabetes that patients' self-management efforts are vital for better health outcome (Adekunle, Omolase, & Owoege, 2010; Diabetes Management Association of America, 2010).

The prevalence of the chronic and complex complications of diabetes in Nigeria hospitals as well as out-patient's clinics are, in part, a result of the traditional health care system in Nigeria. In Nigeria, health and religious beliefs are closely interwoven. This affects how people in Nigeria see health and treatment of diseases. They believe in holistic traditional medical healing before the advent of the western method of disease treatment and cure in the late 18th century (Awojoodu & Barn, 2009). The health care ideas of numerous tribes in Nigeria continue to be influenced by different religious beliefs (Okeke, Okafor, & Uzochukwu, 2006; Abubakar, Kusa, Ahamade, & Hussani, 2007).

The strong religious ideas about health cause the Nigerians to believe that diseases are associated with wrong doing of the individuals who suffer from the disease

or the members of their family or their ancestors (Nwoko, 2009). Some tribes in Nigeria, like the Fulani and the Housas, believe that cancer is a result of some contact with the evil spirits (Abubaka, Musa, Ahmed, & Hussani, 2007). The Igbo Tribe believes that a convulsion, which is caused by high fever or malaria, to be diabolic. The Igbos also believe that mental illness is as a result of evil spirits (Okeke, Okafor, & Uzochukwu, 2006; Nwokolo, 2009).

Access and Utilization of Health Care Treatment in Nigeria

The traditional health care system in Nigeria affects how people access and utilize treatment for their disorders. Most of the community still utilizes the traditional medical practices that are provided by the traditional medical practitioners know as "healer(s)". The practice affects how most of the communities understand and use the diabetes self-management care. It will help to understand the perception of the Type 2 diabetes patients in the Igbo communities in Nigeria for the education and awareness to be effective. The traditional medical practitioners are most of the religious priests with some knowledge of spiritual rituals and herbs that they believe appease the spirits, diagnose, and cure the disorders (Awojoodu & Baran, 2009). They believe that these religious priests or the healers understand the mental, spiritual, social, and physical aspect of the patient's environments, and as such are better able to help them more than the western medicine and the treatment or healing that involves mending their relationship between the patients and their gods, which is known as the spirit of their ancestors (Izugbara & Duru, 2006). These religious healers use concoctions from herbs and plants to treat their patients and use animals like goats, hens, lambs, and other types of animals

for sacrifices to appease their gods (Okeke, Okafor, & Uzochukwu, 2006; Mafimisebi, Oguntade, 2010).

The accessibility and utilization of this traditional health care system in Nigeria is enhanced and fundamental to care delivery because the religious priests or the healers live among the patients. This helps to facilitate heal-patient relationship as well as enhance open communication for both the healer and the patient. Their services are also readily accessible, available, culturally acceptable and affordable by all the patients (Saad, Azaizeh, & Said, 2005; Abioye-Kuteyi et al., 2001).

For effective self-managed Type 2 diabetes education and awareness, the present health care system must understand the diabetes population and their belief system. This will help the current health care system to adapt their teaching intervention services to the needs of the diabetes patient in Igbo Land, and help them provide services based on the sources of the impediment to the success of Type 2 self-managed diabetes as it relates to their cultural beliefs and way of life.

The Health Care Conditions in Nigeria

According to Oyebanji, (2014), the health care condition in Nigeria is deplorable and expensive and cost does not guarantee the effectiveness of the services and at state level, the situation is more depressing (Oyebanji, 2014). In some states, the ratio of patients to a physician is approximately 4,100 patients in 1997 (Oyebanji, 2014). Currently, it must have increased, making it harder for the Type 2 diabetes patients to access or utilize the modern health care services. Many factors are responsible for the situation of health care in Nigeria. These situations include, but not limited to

1. Poor outcome related to lack of access to health care.
2. The underlying cause of the poor health care system like lack of sufficient progress towards improving the situation,
3. Fragmentation of services
4. Lack of collaboration and coordination of services
5. Lack of resources
6. Decaying and inadequate infrastructure,
7. Inequality in resources distribution and access to health care and
8. Most importantly politics (Uzodinma, 2012).

Other factors include health care cost as patients are expected to provide full payment of services at the time of receiving the care, as well as economic status of the patients, ethnic disparity in the country as Nigeria is made up of about 350 ethnic groups.

To improve this condition for the diabetes population, the International Diabetes Federation and Nigeria Diabetes Association teamed up in 2009 to launch a support intervention for about 181 million women that live with Type 2 diabetes globally (International Diabetes Federation and Diabetes Association of Nigeria, 2014). This research on the "Sources of Impediments to the Success of Self-Managed Type 2 Diabetes" wants to ensure that the local Igbo women are included in the health agenda of the IDF and Nigeria Diabetes Association. This organization identified that about one half of the diabetes population are women, because of the current increase in life span for the present generation; and for this reason, more women are at high risk of Type 2 diabetes.

Type 2 diabetes has a great adverse effect on women in terms of complications, especially in rural Igbo communities in Nigeria and this is very obvious in terms of diabetes associated complications that cause a greater rate of morbidity and mortality for the women population that live with diabetes (IDF & Diabetes Association of Nigeria, 2009; Oyebanji, 2014). For this population to benefit from self-management education, their challenges, barriers, and needs must be ascertained for better outcome.

Disparity of Access and Use of Health Care for the Population Who Live With Type 2 Diabetes in Nigeria

The effect of Type 2 diabetes in terms of the suffering for the population that has this disorder and economic cost is very high and increasing daily**.** One in every ten individuals in many parts of the world is currently living with this disorder or is at the risk of developing it (Minnesota Department Health, 2005*; Healthline, 2014*). Type 2 diabetes is the leading course of disability and death in both developing and developed countries, and its prevalence and associated complications are growing and escalating significantly especially in developing and underdeveloped nations. This condition is worsened by the disparity of health care access and utilization in many nations. According to The Behavioral Risk Surveillance Survey, diabetes prevalence has risen from 3.8% in 1994 to 5.5% in 2003 in many developed nations like United States where health care is available to most of its citizens (Minnesota Department of Health, 2005). According to Minnesota Department of Health, disparity in health and health care access is not only unjust, but it is costly and detrimental to the health of the society. Minnesota Department of Health identified that to reduce or eliminate disparity in diabetes care,

there must be a strategic plan that will develop and monitor population specific health goals that encourage active lifestyle, healthy nutrition, as well as organizing the changing face of diabetes conferences and other health initiatives and programs; and most importantly, taking part in the elimination of health disparity programs (Minnesota Department of Health, 2005). While this is part of Minnesota research, it can apply to the diabetes population globally. The population that is at the greatest risk of diabetes is increasing and the changing demographic is most prevalent in the elderly population, hence, the growing burden of Type 2 diabetes in many developing countries like Nigeria where the majority of the citizens live below the poverty level and cannot afford or access health care services.

Audu, Ojua, Ishor, & Abari, (2013) evaluated the inequality and health care access in Nigeria to see if there was any difference in how adults from different ethnic groups in Nigeria that have Type 2 diabetes access and utilize health care services and their health status. They also examined the social inequality and social class difference in the provision and access to health care in Nigeria. The researchers identified that disparity and class difference in access and utilization of health services are associated with wrong conceptions of health care in terms of the therapeutic effectiveness against the preventive measures utilized by the affluent class. They concluded that there is a class segregation and disparity in availability and accessibility to health care in Nigeria (Audu, Ojua, Ishor, & Abari, 2013). This article also stated that some individuals are more prone to illness and death than others in Nigeria because of social class and inequality. They also determined that where people are placed in the social stratification

of the class determines their health status in Nigeria (Audu et al., 2013). Patients may have the same disorder like Type 2 diabetes, but their behavior and the approach in which they respond to the disorder maybe different and this makes a great difference in their health status (Audu et al., 2013). The affluent patients may seek the professional health care services, or even travel overseas for treatment, but the less affluent ones may administer self-care or even dismiss the signs and symptoms of the disease as not needing attention. This is more common among the poor in the society, and the poor are more likely to under-utilize the health care services because of the health care costs (Cockerham, 2013). Cockerham, author of Social Causes of Health and Disease stated that poverty, unhealthy lifestyle, stress, poor work condition, and unpleasant living are indirectly or directly related to the health status of a community. This indicates that in order to understand Type 2 diabetes and other chronic health disorder and how people respond and react to it, their physical, mental, as well as their socio-economic environment that associated to the disease has to be taken into consideration (Cockerham, 2013; Audu et al, 2013). Audu, et al. also maintained that illness behavior is shaped by the person’s location on the social structure in the society. They also argued that health care in Nigeria is hard to comprehend because it emphases medical cure as an alternative or substitute to medical care (prevention and management) and this is not realistic to many chronic diseases like Type 2 diabetes. In addition, they determined that there is enormous disparity and inequality in health care provision among class and geo-political zones in Nigeria (Audu et al., 2013). In Nigeria, most health care cost is paid out of pocket. According to World Health Organization, (2011), 63 percent of the health care

cost in Nigeria is out of pocket payment (WHO, 2011). This accounts for about 2/3 of the total cost of health care in Nigeria. Payment through private health care insurance is only about 3.1 percent (WHO, 2011). This indicates that 95.4 percent of the health care cost in Nigeria is paid out-of-pocket (WHO, 2011). This restricts the society's direct access and utilization, and compels many of low affluent citizens who want to utilize the health care services in Nigeria to sell their individual assets for the health care services, and this decision is sometimes made when it is almost too late to save the person's life. This out of pocket health care cost has created a huge barrier for low class individuals to access and utilize health in Nigeria, hence this increases the disparity and inequality in this country; and social inequality is another face of class design in Nigeria created by inadequate resources (Audu et al., 2013). Inequality in access and utilization of health in this country presumes that everybody in Nigeria is employed, not minding the scarcity of jobs, unemployment, and early retirement that is the order of the day in Nigeria. This makes it hard to assign many of the citizens who do not have paid jobs to any social or occupational class (Audu et al., 2013).

Studies Related to the Factors Affecting Health Behavior of African-American Men With Type 2 Diabetes

This study was sponsored by the American Diabetes Association. The researchers conducted an exploratory study to evaluate the cultural and psychosocial factors that affect the health behaviors of people with Type 2 diabetes. They evaluated the impact and management of Type 2 diabetes on the lifestyle, sense of self, and significant others for African-American men. According to the article, even with the disproportionate

burden of the Type 2 diabetes as well as the associated complication among the African-American men, there is rarely any published research devoted specifically to diabetes patients in this population (American Diabetes Association, 2015).

The researcher used qualitative and quantitative designs to evaluate and comprehend the behavioral and psychosocial perspectives of the African-American men with this disorder (American Diabetes Association, 2015). The participants were 220 African-American men 18 years and older that lived with Type 2 diabetes. The researchers collected and analyzed both quantitative and qualitative data. They used non-probability, purposive sampling method to identify their participants from the health care providers. The eligible participants must be 35 to 92 years old and must been diagnosed with Type 2 diabetes at least 2 years. The samples were recruited regardless of marital status, education, or employment (American Diabetes Association, 2015). They evaluated the distribution of clinical biomarkers of Type 2 diabetes A1c, LDL Cholesterol, and total cholesterol as the quantitative data. They determined that more than 1/3 of the participants have A1C result > 10 percent, approximately 4/5 of the participants had A1C result above the recommended level of 7% of American Diabetes Association. Also, more than 1/3 of the participants had a LDL concentration greater than 130mg/dl and 44 percent had total cholesterol greater than 200mg/dl (American Diabetes Association, 2015).

The researchers also used in-depth semi-structured interviews to collect qualitative data from 16 participants 39 to 71 years that have been diagnosed with Type 2 diabetes for at least 2 years. The men narrated their experiences with Type 2 diabetes

and each and every one of them having a unique experience (American Diabetes Association, 2015). Almost all the research participants believed that they developed Type 2 diabetes because of poor diet high in refined sugar. Others said that genetic predisposition or heredity played a part in their developing this disorder. Yet some believed that both diets as well as genetic predisposition were the reason they developed the disease (American Diabetes Association, 2015). Some of the study participants who were diagnosed at a young age ignored it and did not want to modify their health behaviors or take other actions to control the disorder because they see it as a barrier to enjoy their youth. Some of the men were just afraid of the consequences of not being able to control the disorder in their youth. Many feared doing manual jobs that require energy because of being fatigued or having cuts that might take long to heal or other diabetes symptoms like excessive thirst, unexplained weight loss, frequent urination, increased hunger, tiredness or blurred vision, and slow healing wounds. According to the research, many of the men presented symptoms of the disease and seek sought medical help and this lead to their diagnosis, but some of them were diagnosed while on just regular physical checkup or had the complication at the time of diagnosis, because they did not have the symptoms or fail to recognize it (American Diabetes Association, 2015).

The research identified poor glycemic control for this population; and saw this as dangerous because poor glycemic control leads to diabetes complications (American Diabetes Association, 2015). The researchers explained that the poor glycemic control might be because the diabetic self-management services and diabetes care that target this population did not take into consideration some vital contributing factors to health

outcome like behavioral, economic, psychosocial circumstance that are unique to this particular diabetic population (American Diabetes Association, 2015).

The study recommended that the diabetic care, education, and awareness, and other self-management efforts targeting this population have to take into consideration the unique cultural and psychosocial indicators that will ease how African-American men perceive the disorder for better health outcome. They also recommended the use of support group and peer education to encourage social support for this population (American Diabetes Association, 2015).

Challenges of Living With Type 2 Diabetes

Windsor and Clark (2014) conducted research among the Type 2 diabetes patients living in Aboriginal Rural Community in Canada. The objective of the research was to optimize participation with the Aboriginal individuals by sharing their experiences of living with Type 2 diabetes (*Australian Journal of Rural Health,* 2014). The study used qualitative content analysis of semi-structured interview to examine diabetes health services and experiences and challenges of this population. The researchers recruited eight participants – three males and five females who have Type 2 diabetes. They asked the study participants to tell their experiences with this disorder. Some of these participants (one male and three females) were arranged for six follow up interviews. They narrated their daily experiences and challenges with this disorder in a conversational interview (Windsor & Clark, 2014). The researchers recorded and analyzed the conversation. The descriptive study explored the challenges and experiences of the participants and how the data on the Type 2 diabetes help can help the

health professionals to adapt diabetes health services that are cultural specific for this population. The identified challenges for this population included

1. Lifestyle – which involves active lifestyle, dietary change, and weight loss
2. How to make responsible choices
3. A belief in living day by day, and being aware that life cycle may need to be modified
4. How the health workers communicate with the population and the significance of what is communicated.
5. Challenges related to the Type 2 diabetes and traditional or western medication.

The researchers identified the need for cultural specific services that dealt with the barriers and challenges described by the research participants. They recommended future research addressing the described barriers and challenges be utilized to produce cultural sensitive health services that will benefit the reference population (Windsor & Clark, 2014)

The Importance of Primary Health Care in Management of Type 2 Diabetes

Brdenheimer, Wagner & Grumbach, (2014) conducted research to evaluate evidence showing the extent primary health care can improve the management of chronic conditions using diabetes as an example to reduce cost and quality of life. They identified that primary care helps to prevent illness, disability, improve quality of life and prevent premature death in people with chronic disorders. The researcher evaluated 39 studies

and determined that interventions based on chronic care model components improved the health outcome of about 93% of at least one process or outcome measured for the diabetic individuals (Brdenheimer, Wagner, & Grumbach, 2014). To evaluate if chronic care programs can eliminate or reduce cost, eighteen out of the twenty-seven researches evaluated on diabetes, congestive heart failure, and asthma indicated reduction in health care expenses and reduced use of health care services **(**(Brdenheimer, Wagner, &Grumbach, 2014). The objective of the study was to examine the effectiveness of intervention that target improvement of quality/outcome of chronic disorder management. They used systematic review of literature (Brdenheimer, Wagner, & Grumbach, 2014). They noted that in terms of overall number of approaches, support for self-management proves to be more effective and patients reported significant improvement (Brdenheimer, Wagner, & Grumbach, 2014). The researchers recommended effective primary health care services in addressing chronic disease management.

Literature Related to Methodology and Methods

For a unified discussion on the qualitative design, as well as justification for utilizing the preferred method and the rational for not choosing the alternative approaches, as recommended by the Walden University Research Department, the literature related to the methodology and methods is discussed in detail in chapter 3. For this research, qualitative approach, integrated review approach, and phenomenological approach were used to explore the issues of impediments to the success of self-managed Type 2 diabetes in Nigeria women.

Integrated Literature Review

Integrated literature review is a unique method of research that generates new information on the reference topic (Torraco, 2011). It is a method that integrates and uses none-experimental and experimental research in qualitative study. Integrated literature review is a new form of research method that reviews, critiques, and synthesizes representative literature to generate new framework and perspective (Journal of Advance Nursing, 2012). Integrated literature review is the only design that enables researchers to blend diverse methodology. It has the ability to play a greater role in the evidence-based practice and initiatives in the health care field and it enhances data collection (Journal of Advance Nursing, 2012). An efficient integrated literature review has the ability to and also permits the use of most primary research methodologies to become an integral part of evidence based initiatives. This study reviewed many designs before choosing this method. It rejected some methods like ethnographical approach to qualitative research because it involves field work where the evaluator is a participant observation as part of the field study (Trochim, 2006; Creswell, 2013), and other qualitative approach like grounded theory that take more time for data collection.

Phenomenological Approach

According to Waters, (2015) phenomenology refers to an individuals' perception of an event as opposed to the event as it exists externally to the individual or group. Phenomenological approach to research is a research method that attempts to comprehend an individual's perspectives, perception, and understanding of a specific

conditions or event (Waters, 2015). The objective of a qualitative phenomenological study is to narrate or describe a live experience of a condition or event, according Waters, (2015) because phenomenological research is a qualitative analysis of descriptive data, the process of analyzing its information is different from other conventional qualitative techniques. According to Croswell, (2013) phenomenological research refers to a research method that aims at individuals or group defined experience on a problem or event. Because this data collection is unique, the participant's expression of themselves, description, or narration of their life experiences is acceptable and was used to collect the information in a phenomenological research. The participant's oral or written self-report can be used as well as their aesthetic expression like poetry, arts, or narratives (Waters, 2015). Unlike questionnaires or surveys, a research using phenomenological research approach will specifically ask the study participant to describe their experiences of an event or condition using open end unguided question without suggesting or directing the participant's way of responding (Waters, 2015).

This method is very appropriate for this research on the impediments to the success of self-managed Type 2 diabetes in Mgbidi, Nigeria because it wants the participants to describe, in detail, every impediment they experience trying to manage their Type 2 diabetes. The phenomenological approach gives them the opportunity to do that not minding the uniqueness or similarities in their challenges and barriers to others. Unlike Grounded Theory which is a study method that aims at developing a theory that suggests, justifies, or explants a problem or concern of the reference population and how that problem is resolved (Andrews & Scott, 2013), is not appropriate for this study

because the intent of the study is not to generate theories but to investigate and explore condition as it exist among the study participants and for them to express their live experiences, challenges, barriers, and perceptions about their disease – Type 2 diabetes. This method is conducted over an extended period and involves observation for the sole objective of describing the culture and their shared value (Creswell, 2-13). This study rejects this approach because it does not have the pressure of long time to devote to this project. In addition, it just wants to identify the challenges and barriers that prevent the participant from managing their disorder not describing their shared norms, values, or their culture, in general. This study also rejected ethnographical technique, which is a qualitative research method that evaluates cultural mold and perspectives of the population of interest in their natural setting. This method also aims at describing, analyzing, and reporting the culture of the reference population outcome to understand the culture of the people's share behavior, beliefs, and language. This approach is rejected because the intent of this study is not to study the cultural norms and values of the participants in detail.

A phenomenological analysis, according to Creswell, (2013) is a qualitative research approach that focuses on gaining insight into a given group, individual, or population in a given context to make sense of a give phenomenon and that is exactly what this study does. Before deciding on the phenomenological approach for this study, other qualitative approaches were reviewed and rejected because phenomenological method has been used extensively in many community-based preventive programs and has been proven to be effective for explanation of perspectives for specific individuals or

group affected by a condition like Type 2 diabetes and other chronic disorders (Patton, 2002)

Summary and Conclusion

Diabetes self-management is found to be the fundamental to improving the quality of life for the population that live with Type 2 diabetes, to prevent, reduce, or eliminate complications, disability or premature death (Patient Trusted Medical Information, U. K., 2013; American Association of Diabetes Education, 2014; International Diabetes Federation, 2012). Inadequate or negligence of diabetes awareness and education interventions especially in most part of the developing and underdeveloped nations has been the underlying problem for diabetes education on self-management globally particularly in many rural parts of Nigeria.

From the literature reviewed for this research, there is every indication that there is a need for cultural specific diabetes self-management education and awareness strategies and other diabetes interventions. It is also established that even though there are many diabetic research, there are not many that are gender specific. Only one research was found that focused on African-American women (Rahim-Williams, 2014). In addition, the one that was found is more than ten years old. Not a single study was found on the self-management of diabetes for the population of interest, which indicates or validates the importance of this research. Evidence supports the effectiveness of self-management and the importance of incorporating cultural specific elements for the reference population education and awareness intervention for Type 2 diabetes (Community Toolbox, 2014). Studies also established the need for gender specific study

and highlighted that there is a difference in their needs, challenges, and barriers of diabetes self-management among male and female (BioMed Center, 2015) that can inform gender-sensitive diabetes self-management care, education, awareness, counseling and support (BMC, 2015).

For the population that live with Type 2 diabetes in Nigeria, this study, among other things, established that health care access and utilization is one of the major barriers and challenges to good health in Nigeria, as African countries bear the greatest burden of illness, disability, quality of life, and death from preventable chronic diseases like diabetes because of health care access (BMC, 2015).

Social Change Implications

This study may build community-based responses that might change behaviors, policies, and laws that encourage and reflect values of fairness, inclusion, and diverse opportunities for the population living with Type 2 diabetes in Nigeria as well as other chronic disease population, which is what social change is all about.

The social changes this study will bring can benefit the population that have both type 1 and Type 2 diabetes in Nigeria, even though it is just concentrating on Type 2 diabetes for the women in eastern Nigeria. When the impediments to the success of self-managed diabetes are identified, it will help the health practitioners to fashion appropriate education programs for the population in this country bearing in mind how culture affect people's way of life and habits. This will enhance patients' adherence and help the practitioners to quit trying to get the diabetic patients to comply and shift the attitude from recognition of patient responsibilities for self-management to a fresh kind of

collaborative relationship with the diabetic population. This will empower the patients to do better because their self-management plan will be tailored to suit their goals, priorities, culture, resources, as well as lifestyle, instead of the one-size fit all they have now.

A large number of the literature reviewed suggested that many Type 2 diabetes patients have problems controlling their blood glucose level with Type 2 diabetes self-management because their cultural indicators were not factored into the self-management education interventions(American Association of Diabetes Education, 2007; Association of Diabetes Education, 2011), and this supports the need for this study on the impediments to the success of self-managed Type 2 diabetes for this reference culture and population as well as the use of the qualitative phenomenological design for the women living with this disorder in this culture.

Chapter 3 outlines the detail multiple qualitative phenomenological methodology for this study. The study population, sample selection, procedures used in selecting the sample, instrumentation, pretest of the semi-structured and structured instruments and data collection and analysis. Chapters 3 also include the role of the researcher and the efforts to safeguard the participants ethically, and the credibility of the research.

Chapter 3: Research Method

Introduction

The research methodology is the framework associated with a specific set of paradigmatic assumptions that are used to conduct a study (O'Leary, 2004). Disease management is vital for all chronic diseases like diabetes. Awareness and education of Type 2 diabetes aims at providing the skills and knowledge necessary to make the lifestyle changes that are sustainable. However, very few studies existed for my reference population, the Mgbidi women in the Eastern part of Nigeria, West Africa (see Chijioke et al., 2010). The purpose of this qualitative phenomenological research was to identify the challenges, barriers, and needs of the women living with Type 2 diabetes in Mgbidi, in the eastern part of Nigeria, as it relates to diabetes self-management. In addition, in order to identify the perception of these women about their disorder and the characteristics of their cultural beliefs that affect the management of their Type 2 diabetes, which may or may not resolve after pregnancy. In this study, I used qualitative methods to identify the challenges, barriers, and needs of the women population who have Type 2 diabetes in Nigeria.

The in-depth and first-hand information collected from this research could be used to provide culturally sensitive diabetes awareness and education for the population who has Type 2 diabetes in Mgbidi in Eastern part of Nigeria, West Africa. This chapter includes the summary of the research design, approach, and the rational for using the selected approach and design. Also included in this section is the role of the researcher, participant selection logic, instrumentation, the procedure for recruitment, data collection,

data analysis plan, and other logistics. In addition, I discuss the trustworthiness and method of the ethical protection of the research participants.

Research Design and Approach

In the previous chapter, a literature review was conducted to explore the impediments to self-managed Type 2 diabetes. The intent of this qualitative study was to explore the impediments to the success of self-managed Type 2 diabetes in Mgbidi women in Nigeria. Even though Mgbidi women with Type 2 diabetes exhibit high levels of Type 2 diabetes associated complications (Chijiokw et al., 2010), little consideration has been directed to their unique cultural beliefs and practice about diabetes and how it affects their management of this disorder. The focus of this study was to (a) identify the patients' perceptions and knowledge of this disorder, (b) identify the challenges, barriers, and factors that prevent them from achieving and maintaining their desired level of glucose, and (c) identify if it is cultural, food literacy, or health beliefs that are responsible for the impediments and to identify factors that interfere with their self-managed Type 2 diabetes. I employed a qualitative approach to evaluate the impediments to self-managed Type 2 diabetes in Mgbidi women who are 40 years and older who have been diagnosed with Type 2 diabetes. I used a phenomenological approach, which uses a descriptive and inductive research design of a qualitative approach for this study. The phenomenological approach was chosen because it aims at describing an experience as it is actually lived by the group, individual, or culture (see Creswell, 2013). Qualitative phenomenological research deals with phenomena that are impossible or difficult to quantify numerically, like attributes, meanings, and symbols, but it may involve content

analysis, which is a method for studying and classifying verbalization of normal individuals as well as psychologically impaired people. Content analysis is a method that carefully describes written, spoken, or visual communication in qualitative research (Kohlbacher, 2015). Content analysis enhances both oral and written qualitative data. It measures intensity, frequency of voice, and order or occurrence of the participants' responses.

The significance of the phenomenological study is that it provides a detailed description of a specific experience through in-depth data collection to identify the meaning of the participants' experiences. In addition, a qualitative phenomenological design does not use theories to determine cause of the event or experience in a study; instead, it focuses on obtaining a direct description of the event from the participants as they experience or live it. That is why this approach was appropriate for this study on impediments to the success of self-managed Type 2 diabetes.

I evaluated and rejected many other forms of qualitative designs before deciding on the phenomenological qualitative approach. My intent was to identify the impediments of the self-managed Type 2 diabetes in Ibo women, 40 years and older, who live with Type 2 diabetes. The result of this research could be used to improve the self-management education for Type 2 diabetes in this population and other populations who live with this debilitating and complex disorder globally.

The Study Participants

The study participants for this study were inclusively women who live in the Mgbidi community and who have been diagnosed with Type 2 diabetes at least for 1

year. They must be 40 years or older as well as their caregivers for those that do not take care of themselves. I excluded the women who could not speak English. This means that women who were unable to explain or describe their impediments to the success of their self-managed Type 2 diabetes in English did not participate in this study, as Nigeria has English as one of its official languages. Nigeria has about 350 languages. Ritchie and Lewis (2003) identified that a sample size of even one participant can be used to gain an in-depth understanding of a phenomena or event being studied and that samples can be small in scale and purposively selected on the basis of salient criteria. They also stated that the data collection technique can involve close contact between the participants and the researcher that is interactive and developmental and allows for emergent issues to be explored (Ritchie & Lewis, 2003).

Creswell (2013) identified that conceptual categories and data can be generated from a single incident or contact. There are no specific rules when determining an appropriate sample size in qualitative research. Qualitative sample size may best be determined by the time allotted, resources available, and study objectives (Patton, 2002). Creswell, J. W. (2013). Qualitative inquiry and research design. Obtaining all of the perceptions will lead to data saturation. Saturation occurs when adding more participants to the study does not result in additional perspectives or information Glaser and Strauss (1967). This means that eight to 20 participants is an acceptable sample size for phenomenological research. A number of factors can affect the sample size in a qualitative study. The concept of the saturation should be the guiding principles. Creswell (2013) suggested five to 25 participants. Morse (1994) suggested at least six. I

recruited nine participants because I believed that nine participants would provide a sufficient understanding of the impediments to the success of the self-managed Type 2 diabetes in the reference population. I stopped at nine participants because I reached data saturation.

Sample

I used the purposive and snowball sampling for this study. Purposive sampling is a type of nonprobability sampling. Snowball or purposive sampling is appropriate for research conducted to serve a very specific purpose or need. Snowball sampling is a subset of purposive sampling (Trochim & Donnelly, 2008; University of California, 2015). Because the sampling of this study was predefined, a purposive or snowball method of sampling was appropriate for recruiting the sample. Snowball sampling was also suitable for this study because some of the participants could also recommend other potential participants in the community for the study. In addition, snowball sampling method is a type of convenience sampling that can be used when trying to recruit participants who are hard to identify (Trochim & Donnelly, 2008).

Setting

The study was conducted in Mgbidi in the eastern part of Nigeria, West Africa. Mgbidi is located in the Enugu State in Nigeria, West Africa. The ethnic group in Enugu is Igbos. Expatriates from many parts of the world also reside in the Enugu State. This area was chosen because there was little research on Type 2 diabetes in this part of Nigeria. I recruited my participants from the women who live with Type 2 diabetes in the Mgbidi community. Enugu state was rated among the states in Nigeria that had a

high incidence of cases of Type 2 diabetes in 2012 (University of Nigeria, Nsukka, Nigeria, 2013). In 2012, the incidents of Type 2 diabetes were more prevalent in women in Enugu state, and women recorded a higher percentage level of fasting blood sugar than men (University of Nigeria, Nsukka-Nigeria, 2013). In 2012, 56% of women in Enugu state had Type 2 diabetes (University of Nigeria Nsukka, 2013). The Type 2 diabetes prevalence rate for women at Enugu state was 12% more than that of men (University of Nigeria, Nsukka – Nigeria, 2013).

Sample Size

In a qualitative study, a number of factors influence the sample size, but the concept of saturation should be the guiding principle. In a qualitative design, sample size is not intended to be representative of the general population but to establish an in-depth insight of the population in reference to the research question (Creswell, 2013). In addition, a sample for qualitative research should not be too large that it is hard to manage the large information it generated or too small that it is hard to reach data saturation (Creswell 2013).

Research Question

To guide this study, I developed one primary research questions and other subquestions for interview. The primary research question was as follows: What are the impediments to Type 2 diabetes self-management among women over 40 with Type 2 diabetes living in eastern Nigeria?

Interview Questions

1. Do you have any religious/family beliefs that affect the management of your disorder?
2. What are the challenges or barriers you face trying to manage your diabetes?
3. How do you perceive your diabetes?
4. How does your diabetes interfere with your daily life, hobbies or recreational activities?
5. How often do you check your blood sugar?
6. Does any other member of your family have diabetes?
7. Do you have easy access to health care?
8. Do you manage your type 2 diabetes with Medication? If so, what type of medication
9. How does Type 2 diabetes affect your choices of food?
10. Have you had any type two complications since you were diagnosed?
11. How do you think the health care access and utilization affect your self-management?
12. What do you do to self-manage your diabetes?
13. What are your experiences living with type 2 diabetes?
14. How does your perception about type 2 diabetes affect your self-management?
15. How does your Type 2 diabetes affect your family and your loved ones?
16. Do you have access to education on self-management of Type 2 diabetes?
17. Do you manage your Type 2 diabetes with medication?

18. Please describe anything you believe hinders your Type 2 diabetes self-management
19. What do you think can be done to improve your self-management care for Type 2 diabetes for you to overcome the impediments?

The Role of the Researcher

In qualitative research, the researcher is considered as the instrument of data collection (Denzin & Lincoln, 2011). I understand the vital concept that different people experience and see the world in different ways. To understand my population of interest, to answer my research questions, I served as an interface for interaction between the populations who experience the disorder and the challenges and barriers or phenomenon under research. I designed the interview questions and met with the participants to conduct group and individual interviews to discuss the impediments to the self-managed Type 2 diabetes for women in Mgbidi, Nigeria, West Africa.

I made the assumptions, set delimitations, analyzed and interpreted the data and presented the findings. To show the accuracy of the data I collected, I used many resources like field notes and a tape recorder to record the participants' responses for validity. Under this circumstance, I made every effort to control personal bias. Before I chose my topic, I made sure that it was possible that I could be totally unbiased about the topic. I made sure that I had no opinion one way or the other. I am convinced that I can stay neutral and unbiased about the responses and opinions of the participants.

Even though qualitative research may be prone to researcher's bias because of personal beliefs and prejudices, as suggested by Creswell (2013), Yin (2003), and

Trochim and Donnell (2008), there is no research that is completely free of bias. I further addressed that by adhering to good behavioral conduct when conducting both the group and individual interviews. I drew my conclusions inductively from observations. I also recorded only the expressed opinions of the participants. I acted as an active listener, observer, and recorder. I did not indicate disagreement or agreement with the participants' opinions during the interviews, and I summarized the findings as well as corroborated the data to form a unified representation of the participants' responses. I also adhered to and complied with research code of ethics as it relates to human subjects in research – The Ethical Principles and Guideline for the Protection of Human Subjects in Research. My participants were chosen randomly, and I had no conflict of interest for this study. As the researcher, I developed a relationship with the participants as well as had confidence and trust their responses. I also spoke their language and had the ability to understand them, but I was also conscious of their psychological and interpersonal dynamics.

Instrumentation – Data Collection and Management

Data collection is a vital aspect of any type of study, and qualitative data collection involves both direct interaction with participants, one-on-one, and direct interaction with a group of individuals who are taking part in the study. The benefit of the qualitative method is that the data collected are richer and have a deeper insight into the phenomenon (University of Surrey, 2009). Before I collected the data, I sought and obtained permission to conduct this research from the Walden University Institutional Review Board. I also received a signed informed consent from the participants. They

also agreed to be digitally tape recorded while doing the individual interviews. I used the instrument I developed to collect the information from the participants. I ensured that the questions I used reflected the environmental and cultural setting of the research and were easily comprehended by the participants; clear and simple unambiguous sentences were used to facilitate easy understanding. I continuously evaluated and monitored the instrument during the individual interviews to ensure accurate recording of the participant's responses.

To collect the data for this study on the impediments to the success of self-managed Type 2 diabetes, I used structured and unstructured in-depth interviews that lasted between 60 to 80 minutes. The interviews were recorded with the participants' consent. The main interview question was one open-ended question with subsequent questions as needed following the participant's responses. I highlighted that while some prior research for diabetes exists, the one outlined here is fundamental and has particular importance to this population. The primary question was the following: Did your diabetes self-management behavior outcome relate to physical activity, cultural food habit or scarcity of the right of diabetes diet? To answer this question, I asked them the following: What are your impediments to the success of your self-managed Type 2 diabetes? Without suggesting the direction of their response, the participants explained their challenges, barriers, and needs as it applied to each participant. For more in-depth insight, I utilized probes and prompts, more question(s) as applies to the individual response to get additional information. Creswell (2013) suggests that the collection of data for qualitative study should be in a natural setting to navigate or facilitate contrived

result that could be out of context if the participants are not in the natural setting (Creswell, 2013). I suggested that the participants choose their preferred setting, but I ended up using a building in the church premises. This was where they were not disturbed and where their privacy would not be violated. This was in a building beside the church, because the community health clinic that used to be in the community is no more in existence,

For privacy and confidentiality protection, I assigned the participants pseudonym and have the list of the participant's names away from other de- identified information about the participants. After collecting the data, I translated the recorded responses from the participant's interviews. I will safe guide the transcripts and the recording for five years as recommended by Walden University.

Procedures for Recruitment, Participants, and Data Collection

I used community based recruitment approach, which is defined as a term describing the strategies that centered on a particular community. I recruited the participants from Mgbidi community, with the help of the community leaders and the local churches as well as the community members who announced it to the villagers in the community and I distributed the flyers with the information for the study in the public places. I put the flyers in many public places in around the community like the local churches and the old nonfunctioning health centers. Community based recruiting strategies involves focusing on participants through community events or places like the local churches, the local food stores, and using various community members. I did not use the physician-based recruitment approach as planned because that did not exist;

participants were recruited through the community based method also, the physician based method was not needed because I recruited more that needed from the local churches. In this method, the physician or the staff could contact the patients by phone or during their office visits and introduce the patient for the study.

In a qualitative study, the sample size is not intended to be a good representative of the population, but to create an in-depth comprehension of the reference population as it relates to the research question. I to recruited 9 participants based on the time constraint imposed on my travelling to Mgbidi, Nigeria which is outside the United States to collect my data. To recruit the participants: -

1. I contacted the community leaders about the study to get their assistance in identifying the participants and permission to conduct the study in their community.
2. I asked the community leaders that accepted to assist me to give me a letter of support.
3. After I received the Institutional Review Board approval to conduct the research, I provide the community leaders with flyers for recruitment for distribution and I also place the flyers in many public places around the community like the churches, the community health centers, and any place in the community where the villagers have social gatherings.
4. When the women who want to participate contact me, I arranged for the meeting place and time. I also collected their contact information and give them the consent form for signing after explaining to them their rights to

participant in the study. This should be returned on or before the interview meeting. At the time of the collecting the signed consent information, I scheduled the interview time, date, and place.

5. I also ask the participants to recommend other women in the community that have Type 2 diabetes who meet the research inclusive criteria.
6. I contacted the participants close to the scheduled interview day to remind them of the appointment.
7. I conducted individuals, face-to-face interview.
8. I transcribed the data and conduct content analysis of the interviews.
9. I made available to each participant their interview summary to make sure it was correct or to make modifications where necessary.

Qualitative and Quantitative Research Comparison

I utilized a qualitative research approach for evaluating the impediments to self-managed Type 2 diabetes in women 40 years and older that live Type 2 diabetes in Eastern Nigeria, West Africa, that has been diagnosed with this disorder for at least one year. Qualitative research approach, unlike quantitative design which generates statistical or numerical data, explores situations, events and provides in-depth comprehension of the circumstance in a natural setting (Trochim, 2006; Creswell, 2013). Qualitative approach begins with assumption to gain insight on the motivation and underlying rational for certain actions and why people behave the way they do or the meaning people or group give to their social problems (Creswell, 2013). Qualitative design provides in-depth insight to the setting of the problem; generates ideas as well as hypotheses for later

quantitative research. Qualitative approach uses inductive the method while the quantitative method uses deductive approach. Qualitative method emphasizes the principles of subjective and usually uses a small number of the samples selected to fulfill a given quota while quantitative design uses a larger number of the reference population (Creswell, 2017). For data collection, qualitative approach utilizes semi-structured or unstructured techniques like group or individual in-depth interviews or discussion while quantitative design uses structured methods like telephone, interview or email or online questionnaires. Qualitative design generates non-statistical in-depth large amounts of data unlike quantitative method that produce numerical information usually in the form of tables, charts, graphs, and in tabulation forms, and the research findings are descriptive in nature, always conclusive and recommends a final course of action while qualitative design is exploratory and investigative, develops initial comprehension and base for further decision making (Trochim & Donnelly, 2008; Creswell, 2013). Qualitative design does not aim at firm or rigid definition of categories for the population of interest or event under evaluation and cannot be used to make generalizations (Journal of the American Diabetes Association, 2015).

Qualitative Design Approach

Qualitative research uses the input of the individuals that experience or affected by the condition to judge the challenges or barriers that prevent the individual from contributing or participating in issues that affect them. Qualitative approach aims at collecting a better insight of events or condition through first hand experiences while

truthfully reporting or quoting the actual discussion or responses from the sample. Qualitative data collection comes under four categories: -

1. Individual interview
2. Observation
3. Focus group
4. Action Research (Creswell, 2013).

In this review, I explored the barriers and challenges to self-managed Type 2 diabetes through the theories of Onwudiwe, Mulions, Winston, Shaya, Pradel, Laid, Elijah & Saunders (2011), utilizing subjective and inductive analysis of data to comprehend the specific challenges and barriers associated with the general population that have this disorder. Qualitative research is of great benefit because it enhances collection of information that cannot be quantified like facial expression, environmental condition, and emotional expression (Yin, 2003, Trochim &, 2008). These characteristics of qualitative method are very useful for the study in Mgbidi, Nigeria where many of the natives are unable to read and write. According to Creswell, (2013) qualitative method is very beneficial because it makes the researcher the instrument of data collection. Also, these characteristics of qualitative research are very useful for this study at Mgbidi where many of the natives might be intimidated by unfamiliar data collection methods, personal connection and where storytelling and personal discussion is an accepted cultural norms or phenomenon. Qualitative approach is chosen for this research because it is appropriate to evaluate and answer the research question using questions and observation to draw out individual and group experiences and their perceptions as it relates to the research

question, using phenomenological approach to engage the diabetes patients participating in this study to discussing their experiences and challenges, barriers and needs for managing their disorder; and collaboratively share their opinions of the issues that affect the self-management of their Type 2 diabetes. Qualitative method helps the researchers to collect data in the participants' natural setting like churches, community hall, health clinics or any place where they have social gathering as well as their homes, take field notes, use tape recorders in the interviews, transcribe and give detailed analysis of their responses, and report the findings.

Qualitative research techniques also enable and enhance comprehensive reporting of the finding that will not be possible to do with quantitative approach that uses graphs, charts, or tables. It provides opportunities for all the participants to express themselves irrespective of their education or literacy level (Creswell, 2013). Qualitative research technique creates avenue for openness and encourages the participants to expand on their responses and can open new topics areas not considered initially.

The weakness of qualitative method is that collecting qualitative data is generally more time consuming than quantitative data collection that needs less time (Trochim & Donnelly, 2008). Cost and staff generally necessitates smaller sample size. Moreover, because fewer people are studied, make it less easy to generalize and it is also difficult to make systematic comparison and responses are unique to each participant. It can encourage researcher's bias, but knowledge and awareness of the potentials for this will help this study to avoid introducing bias to the study. This study will use a second coder and also have a member-check session and debriefing with the sample. These measures

helped me to identify and eliminate bias. The time invested in this research method is usually compensated by the rich wealth of information and knowledge gained from the qualitative technique.

Data Analysis Plans

When the data were collected, I used the qualitative data analysis software to analyze it. I prefer the Qualitative Data Analysis because according to Creswell (2013), it provides in-depth understanding of data without suggesting interpretation by the researcher, based on the content analysis; the evaluator can draw conclusion regarding the respective aims and objectives of the study for instance like the interview data. In addition, qualitative data analysis software tools enable researchers to easily sort, structure, and analyze large amount of data or text and help in the management of the resulting interpretation and evaluation.

I utilized the Colaizzi's strategies for analyzing the qualitative phenomenological data. According to Coliazzi (1985), this method is suitable for analyzing the perception of the participants for a phenomenological research. The purpose of this research is to understand the impediments to the self-managed Type 2 diabetes in the reference population – Mgbidi women in Nigeria, West Africa. I used the phenomenological data analysis method of Creswell (2013) and Coliazzi method as they are very similar. I used the simple six basic steps in qualitative analysis as described by both authors

i. **Data Collection:**

   I collected data from the participants on their challenges, barriers, and needs for Type 2 diabetes self-management

ii. **Data Preparation:**

I prepared the data for analysis by transcribing the participants' responses during the interview

iii. **Open Coding:**

I identified the significant factors and statements from the responses as it relates to their Type 2 diabetes self-management. I also created more general restatements and meanings for the significant segment from the materials.

iv. **Axial Coding (Analytical Coding):**

Axial coding is the process of relating categories to subcategories (Creswell, 2013).

I found words or clusters of words that are common to all the research subjects' responses. Analyze and group the segments into groups or categories. I also organized the categories based on my research questions.

v. I exhaustively described the phenomenon being researched.

vi. I simultaneously combined the categories into themes. Then, I check back with the participants to validate the finding, giving them the opportunity to clarify or reveal new information and make sure that their intended meaning was conveyed correctly.

vii. I also analyzed the data using content analysis of the transcribed interview data by hand using tables as described by Hycners (1985) method for analyzing phenomenological data. The purpose of phenomenological approach is to show the essential and specific acknowledge or identify phenomena through how the

researcher perceives the participants in the interviews and this translates into collecting deeper and insightful data through qualitative inductive approach, discussion, and interviews as well as observation of the participants (Lester, 1999; Nova Southeastern University, 2015).

Ethical Protection of Human Participants

To protect the human subjects for my research, I took the necessary measures to protect the participants. I made sure that I followed the principles for using the human subjects in research as stipulated by the code of ethic – the National Research Ethics of 1974 that was established by the National Commission for the protection of human subjects of Biomedical and Behavioral Research. In readiness to conduct this study, I completed the National Institute of Health (NIH) web-based training course – Protecting Human Research Participants as required by Walden University. I did not collect data for this study until I receive the necessary approval from the Walden University Institutional Review Board to do so. I let my second coder and the external auditors who help me to sign a confidentiality agreement. In addition, only the participants who are 40 years and older were allowed to participate in this study. No participant was compelled or enticed to participate in any way. All the participants were asked to sign the informed consent forms. The purpose of this study was clearly explained to the participants as well as the expectations from the participants in the research, which is to be as honest as possible. The consent forms also explained the voluntary nature of the study. The risks involved, if any, is also explained to the participants as well as the benefits.

The consent forms also explain the procedures for maintaining the subject's confidentiality. It also provided contact for my advisor, my chairperson, the Walden University Research participant advocate and my contact information, should they have any question or doubts before or after the research has been conducted. The participant in this research was open to only Mgbidi women, 40 years and older that have Type 2 diabetes for at least one year and their care givers, if the caregiver is a member of their family. I do not anticipate any physical or emotional injury or any type of harm to the participants as a result of their participation in this study. I continuously repeat to the participants throughout the interviews, the voluntary nature of their participation, either to take part in this research or not. And also let them know that they can withdraw at any stage of the research process without any consequence or repercussions.

I maintained the participants' confidentiality throughout the process in multiple ways. I identified the participants by random number. I separated their names from the collected data throughout the process of the data collection, data analysis, and storage of the date. When in Nigeria, I store information in an electronic file that is securely locked in my laptop, which is securely locked in my room when I am not using it. I also secure the recorded data and the field notes in my room when not in use. When I come back to the United States, I lock the recorded data and field notes in my home office cabinet for five years after which I will destroy them as required by the Walden University Institutional Review Board rules and regulations.

Trustworthiness

Trustworthiness has been a vital concept in qualitative research as it helps the researchers to give details and clarify merits of qualitative expressions outside the boundaries that are normally used in qualitative investigation (Shenton, 2004) and many reviewers are hesitant to accept trustworthiness of qualitative study but many frameworks have been in existence to guarantee the rigor in qualitative work for decades (Shenton, 2004) and these include -

1. Credibility
2. Transferability
3. Dependability
4. Conformability
5. Ethical Procedures

Establishing trustworthiness is a vital aspect of qualitative research. It has to be considered at every aspect of the research from pre-planning to how data is collected, how the samples are recruited, and their involvement, how the data is analyzed, how the research assumption and conclusion are validated as well as how the research findings are reported and disseminated (Ely et al, 1991).

Credibility

Establishing credibility is one of the vital aspects of qualitative research and this should be done from the participant’s perspective (Trochim, 2006; Trochim & Donnelly, 2008). According to Trochim (2006), the objective of a qualitative study is to explain in detail or comprehend the phenomena of interest from the participant’s eye; as such, the participant is the only person that can legitimately judge the credibility of the result of a

qualitative research. Credibility refers to whether the result of a qualitative research can be believed. When we evaluate credibility, we are checking if the research evaluated what it is meant to investigate, and verifying if there is any outside reason that would make the data for the study to be inaccurate. I established credibility for this research by checking back with the participants to validate that their intended information and meaning were conveyed correctly. I also confirmed with the participants through member-checking that the descriptive result truly reflects their impediments to self-management of their Type 2 diabetes disorder. I also use triangulation, which involves the use of many approaches like observation and individual interview interviews that involve the major data collection strategies for qualitative study. The uses of many sources of data to establish validity in a phenomenological research has proven to be beneficial in validating credibility.

There are many sources of data collection like facial expression, voice pitch, and body language enhance the description of the reference phenomenon. I also established credibility for this study by using prolonged engagement technique, and I am also familiar with the reference culture. I provided a detailed description of the environment under which the research was conducted as suggested by Trochim & Donnelly (2008) and Trochim (2006). Every individual who was approached to participate in this study was given the opportunity to decline to take part in the study to make sure that the data collection involves only the individuals that offer their information freely and willingly, so that they are very frank in their responses. According to Patton (2002) credibility is very vital in a qualitative study as the researcher is the person who is the major

instrument of the data collection and analysis. For this reason, I improved the credibility of this research finding by engaging the participants in the process of data analysis (member-checking and debriefing). As stated by *Patton* (2002); Western Michigan University, (2014), suggested that the researchers' trust is equally vital for adequacy of the procedures.

Transferability

Transferability is defined as "the degree to which the result of a qualitative study can be transferred or generalized to other settings or context" (Trochim, 2006, Qualitative, para. 3). Transferability is used to establish in-depth description of qualitative research (Lincoln & Guba, 2008). To improve the transferability of this study, I provided an in-depth and accurate description of my study method, assumption, process and detailed summary for each interview responses, before confirming accuracy from the participants. I provided in-depth summary description of the theme I identified and conclusions I drew from the participant's information as suggested by Creswell (2013). According to Creswell, transferability can be improved by using external auditors to evaluate the study process and findings. For this reason, I used the secretary to the church in the community to monitor and audit these activities, in an effort improve transferability. The external auditors will evaluate the recorded items for meaning, for the individual interviews, transcripts, their theme clusters as well as my major themes as the responses that were commonly shared by the research participants. I also use external auditor who are knowledgeable on the phenomenological method and have used it to conduct a qualitative study. The auditor was identified through referrals from fellow

student at Walden University. The external auditor was aware of Walden University requirements. The auditor would have completed the appreciate collaborative training initiative (CTI) course under the social and behavioral research per Institutional Review Board requirement and their certificate will be current when I am ready to use the auditor.

Dependability

Dependability in qualitative research is viewed as the assumption that a research can be replicated or repeated by other researchers in other setting and situation applying the same measures to get the same result (Trochim, 2006). In a qualitative study that lacks measurement, this perception applies to the context and setting in the evaluation, because each evaluator is responsible for describing any changes that take place during the evaluation and how the changes affected the utilized method used to collect the data and the analysis (Trochim, 2006).

To establish the dependability and reliability of this study, I include in my final documents the in-depth explanation of any adjustment(s) or alterations made to the data-collection process or procedure as well as the preliminary data analysis as necessary. To establish dependability for this study, I also used external auditing. According to Trochim, (2006) “external audits provide an opportunity for outsiders to challenge the process and finding of a study” (Trochim, 2006, Qualitative validity para. 4). They provide opportunity to summarize the preliminary findings. They also provide opportunity to evaluate and assess adequacy of the preliminary result and the data. The feedback can lead to more data collection and development of better and more articulated

finding that validates the research for the benefit of other researcher or provide avenue for future research.

Conformability

Conformability is viewed as the degree to which the result and findings can be corroborated or confirmed by other researchers or readers (Trochim, 2006). I established conformability by checking and rechecking data throughout the research process. I also utilized content analysis of the transcribed interview data by hand with the use of tables, as suggested by Trochim (2006). Member checking validates the actual value of the research findings, which would convince readers and other researcher of the accuracy of the research. To improve the conformability for this study on impediment to self-managed Type 2 diabetes in Mgbidi women in Nigeria, West Africa. I used an external auditor to check the data I collected and I also utilized a member checking from the research participants to confirm the accuracy of the information documented

Summary

In this research, I used qualitative research approach and phenomenological approach to explore the issue of impediments to self-managed Type 2 diabetes in Mgbidi women in Nigeria, West Africa. I used individual face-to-face interview for data collection. I used open-ended interview question thus- What are your challenges, barriers, or your needs while trying to self-manage you Type 2 diabetes? I developed five primary questions and ten sub-questions. The participants provided first hand in-depth information on the impediments to their self-management of their disorder. I analyzed the data using Colaizzi and Creswell steps for analyzing phenomenological qualitative

research approach which are similar to analyze my data. I used these methods because they enable me to identify the patterns and themes of the perspective in my participants' responses. I used prompt and probe the participants when I want to get more detailed information from them, and their responses were tape recorded with their permission. To establish validity and reliability, I triangulated my data by collecting information from women, 40 years and older from Mgbidi in Nigeria that live with Type 2 diabetes, utilizing individual, face-to-face types of data collection approach – and not focus group interviews, as well as engage a second coder to establish reliability and validity and also conduct debriefing and member-checking sessions with the research participants. To ensure trustworthiness, I collect data from 9 individuals as time and availability warranted.

The findings of this research could help patients to comprehend the impediments to self-managed Type 2 diabetes in Mgbidi women in Nigeria. It will also be added to the existing information available on Type 2 diabetes self-management, help the health professionals to fashion a culturally sensitive diabetes education and awareness that is not one size fit all. It could also help to build community-based response that might change behaviors, policies, and laws that encourage and reflect values of fairness, inclusion and diverse opportunities for the population that has Type 2 diabetes in Nigeria, as well as other chronic disorder population.

Chapter 4: Results

Introduction

The purpose of this study was to explore, evaluate, and identify challenges, barriers, and needs of the population of women who have Type 2 diabetes in Mgbidi in the Awgu local government area of Enugu State, Nigeria, West Africa, and also to identify the indicators and factors that might hinder or support how the women in Mgbidi manage their Type 2 diabetes. The primary question was the following: What are the impediments to Type 2 diabetes self-management among women over 40 years of age with Type 2 diabetes living in Mgbidi, eastern part of Nigeria? In the quest to satisfy this question, I collected data from nine women who have Type 2 diabetes in Mgbidi using face-to-face qualitative interviews and analyzed the data using features of Colaizzi's (1973, 1978) 7-step method and Hycner's (1985) method for analyzing phenomenological data and organizing the emerging themes as I described in Chapter 3. I used these methods because they enabled data entered under different heading to be put side-by-side for comparison and because they are very helpful when identifying relationships between different themes and factors.

In this chapter, I provide the results in the following order: setting, demographic information of the participants, and how the data were collected, managed, and analyzed. I also discuss the key themes that were identified in the course of the study, the findings, and summary of the result as well as provide evidence of quality of the study or trustworthiness.

Research Questions

To guide this study, I developed five primary research questions and other sub questions.

Primary research question: "What are the impediments to Type 2 diabetes self-management among women over 40 years with Type 2 living in Mgbidi, eastern Nigeria?"

1. Do you have any religious/family beliefs that affect the management of your disorder?
2. How do you perceive and experience your diabetes?
3. What are the challenges or barriers you face trying to manage your diabetes?
4. How often do you check your blood sugar?
5. How does your diabetes interfere with your daily life, hobbies or recreational activities?

Secondary / prompt/probe Questions

1. How does Type 2 diabetes affect your choices of food?
2. How does your perception about Type 2 diabetes affect your self -management?
3. What do you do to self-manage your diabetes?
4. How does your Type 2 diabetes affect your family and your loved ones?
5. Do you have access to education on self-management of Type 2 diabetes?
6. Do you manage your Type 2 diabetes with medication?
7. Do you have easy access to health care?

Setting

The participants did not disclose any personal or organizational conditions that affected their experience with Type 2 diabetes self-management during the period of the interview that could have influenced the interpretation of the result findings of this study, but one participant pointed out that her husband was blind as a complication of Type 2 diabetes and that since her husband became blind, she was very concerned for her own faith because she did not know how she and her husband could manage life as she was having some problems with her vision now. However, this information did not influence this study in anyway. Excluded from this study were participants unable to read or write and those who did not give consent for inclusion in the study; included in the study were participants who had been diagnosed with Type 2 diabetes for at least 1 year and were native of Mgbidi and gave their consent to take part.

Demographics

In this study, I identified and registered a convenience sample of nine women with Type 2 diabetes at the community church. Forty-one potential eligible women attended the information session. Nine of the women were chosen (22%) to participate in the study. The other 32 (78%) women were ineligible because they did not speak English or were not a native of Mgbidi or simply did not live in the Mgbidi community.

Descriptive statistics were used to report the sample characteristic. The mean age of the sample was 40 years with a *SD* of 8.8. The participants' years of living with Type 2 diabetes ranged from 1 to 15 years. About one third of the participants three (33%) had

been diagnosed with Type 2 diabetes for 1 to 5 years, three (33%) participants had been diagnosed for 5 to 10 years, and two (22%) had been diagnosed for 15+ years.

More than 78% of the sampled population used medication to control their Type 2 diabetes and only 22% used diet and exercise. The majority of participants, four (44%), were married, two (22%) were divorced, and three (33%) were widowed. Among the participants, three had primary education, two had secondary education which is much like middle school in the U.S., two had college education, which is like high school, and two had university education. Among the college and university educated, two were health care workers (retired nurses). Three (33.3%) of the participants had family members who live with diabetes, and six (66.6) did not. Table 1 summarizes the demographic characteristics of the study participants. The minimum age of the participants is 40 and the maximum is 71.

Table 1

Demographic Characteristic of the Study Participants (N = 9)

Characteristic	*N* = 9	Percentage
Age:		
40-50	3	33.33
51-60	3	33.33
61-70	2	22.22
71+	1	11.22
Gender:		
Female	9	100
Male	0	0
# of years diagnosed Type 2 diabetes:		
Less than 5 years	4	44.44
5-10 tears	3	33.33
More than 10 years	2	22.22
Marital status:		
Married	4	44.44
Widow	3	33.33
Divorced	2	22.22
Educational level:		
Primary education	3	33.33
Secondary education	2	22.22
College education	2	22.22
	2	22.22
University education		
Use medication:		
Yes	7	77.77
No	2	22.22
Type of diabetes treatment:		
Insulin	2	22.22
Pills	5	55.55
Diet & exercise	2	22.22
Family history of diabetes:		
Yes	3	33.33
No	6	66.66
Profession/ Occupation:		
Primary school principal	1	11.11
Secondary school teacher	1	11.11
Retired health care professionals	2	22.22
House wives	5	55.55

Data Collection

The purpose of this research was to better comprehend the differences in diabetes self-management, particularly challenges, barriers, and needs of women living with Type 2 diabetes in Mgbidi – Awgu local government of Enugu State, Nigeria. The approval from the Walden University Institutional Review Board research number 12-08-16-0309491 of December 7th 2016 formed part of the process for the data collection for this study to ensure human subject protection. The participants were informed that by signing and returning the consent form, they implied consent to participate in the study; the consent forms were collected from the participants. The participants were interviewed based on their willingness to participate, being a native of Mgbdi, and being above the age of 40. To collect the data, I identified and recruited nine women from the local churches in Mgbidi. I conducted face-to-face interviews to explore the women's diabetes self-management experiences, challenges, barriers, and needs from March 9, 2017 to March 13, 2017. The interviews took place at a private setting adjacent to the church, which was free from any interruption or disturbance. The participants were interviewed for 45 minutes to 60 minutes, but some of the participants took longer time describing their impediments, especially those who have experienced some type of Type 2 diabetes complications. Those who have had complications took more time to explain their experiences with the complications. With the participants' permission, the interviews were recorded using a digital voice recorder. The nine women were used to explore the perceptions about challenges, barriers, and needs of self-management of Type 2 diabetes for women from the Mgbidi community, which was the target population for this study. I

transcribed each individual sample's interview. I locked the transcripts and the voice recorder up in my file cabinet in my home office imminent for the right time for destruction of the data as recommended by the Walden University guideline for handling research information as I stipulated in Chapter 3. Information was collected from the participants as I indicated in my original plan. There were no variations in the information collection from my original plan presented in Chapter 3. There were no unusual circumstances encountered in the collection of the information.

Data Analysis

I used thematic content analysis for the transcription of the information from the interview data by hand, using tables and aspects of Hycner's (1985) and Colaizzi's (2010) guidelines for phenomenological analysis of interview data. The interviews were guided by five primary questions, some secondary questions, and other prompt questions that came from the participants' responses for clarification. I did not use a software program for my data analysis because I used Hycner's step-by-step procedures for a phenomenological analysis of interview data that addressed many concerns raised in relation to the phenomenological study that were not clearly identified by other theorists and phenomenologist. I used Hycner's step-by-step method to analyze the participants' interview information. Many themes emerged through analysis of the data. I also employed some aspects of Colaizzi's strategies for analyzing qualitative phenomenological data because according to Colaizzi (1979), this method is suitable for analyzing the perceptions of the participants for phenomenological research. I used the simple basic steps in qualitative analysis as described by both authors as follows:

1. Transcription and reading of the data: I read the entire transcripts many times to understand the literal statements and read the participants' transcripts again and again to understand their challenges, barriers, and needs to manage their Type 2 diabetes. I read and re-read the transcripts to obtain a general sense of the entire content.
2. Formulation of meaning: For each participant, I extracted significant statements that were relevant to the phenomenon under study. I complied a significant preliminary list of statements and phrases that emerged from the transcripts that are relevant to the participants' challenges, barriers, and needs for self-managed Type 2 diabetes.
3. Categorizes, cluster of themes and integrating of the formulated meaning: I formulated meanings from the statements, and eliminated or reduced some information for sometimes the participants repeated the information they gave earlier, so I reduced or collapsed or eliminated the repetitions.
4. Grouping the clusters and theme*:* I organized and sorted the meanings into categories and clusters of themes to identify what the statements had in common and grouped each participant's component of meaning under themes (of the thing the statements had in common). I presented it to my external auditor, and she agreed with me 100% on the choice of the themes.
5. Fundamental structure: I identified and formulated meanings that I integrated into a descriptive summary for each theme extracted from each participant's

components of meaning, highlighting the themes I identified from their responses to be their challenges, barriers, and needs for Type 2 diabetes self-management.

6. Validation and feasible modification description summary: I validated the summary by contacting all the participants for possible modification of the descriptive summary and member checking, which all of them preferred to do over the phone. I presented the descriptive summary to the participants for them to compare my descriptive summary with their challenges, barriers, and needs, and all of them established that my summaries conformed to what they intended to communicate and reflected their experiences and feelings on their challenges, barriers, and needs for their Type 2 diabetes self-management. However, I could not speak to one of the participants because she passed away before the summary of the interview was ready, 2 days after she was interviewed.
7. Validation of exhaustive description and fundamental structures: I compared the identified cluster of themes that emerged from all the samples and identified the general and unique themes for most of the participants and determined the themes that should not be clustered. I then used the information to highlight and write the merged summary after collapsing the preliminary list from the data into major themes.

Specific Themes and Categories

The purpose of this qualitative phenomenological study is to identify the impediments to self-managed Type 2 diabetes in Mgbidi women in Nigeria, West Africa. The primary research question was “What are the impediments to Type 2 diabetes self-

management among women over 40 years and older from or living at Mgbidi in eastern Nigeria?" To answer this research question and other secondary questions, I recruited and interviewed 9 out of the 41 women who were interested to participate in the study. I presented the theme clusters that portray the finding from the study research questions for impediments to self-managed Type 2 diabetes in Mgbidi women in Nigeria through the analysis process which represented the challenges, barriers, and needs of Type 2 diabetes self-management as well as the participants experience for self-care as follows: -

Identified Common Themes Clusters

The following are the Identified challenges, barriers and needs:

1. Lack of care services in the local community:

    This includes no hospitals or non-functioning health clinics, as they used to have a health clinic that is no more inexistence now, financial and income barriers, transportation difficulties and helpless.

2. Lack of Type 2 Diabetes Self-Management Education:

    This includes low health literacy and inadequate diabetes information

3. Lack of physical activities:

    This involves the tiredness associated with Type 2 diabetes, lack of support groups as well as lack of motivation.

4. Lack of access to routine check-ups

    This includes high indirect costs to access care-services in the community, geographic distance to care and lack of community outreach activities.

5. Lack of health care Insurance coverage.

6. High cost of blood glucose monitoring materials in Nigeria.

7. Medication behaviors and misconception:

This includes ignorance, lack of social support, and medication behaviors

Brief Description of the Specific Theme Clusters That Emerged From the Data Lack of Health Care Services in the Locally Community

The interviews started with open-ended questions to each of the participants. The primary research question was "What are the impediments to your Type 2 diabetes self-management? As I said earlier in chapter 3, the participants were not directed to discuss their challenges, barriers, and needs for Type 2 diabetes in any particular way. They were not guided in any way on how to answer the questions. Each of them started with their experiences and challenges living with Type 2 diabetes by giving a brief summary of their life and when they were diagnosed with this disorder, their age, educational level, marital status, and family history of diabetes which I presented in table one. Two of the participants added that they are retired health care professionals. I assigned pseudonyms to the participants which I used in this discussion instead of using their names.

Non-communicable disease like Type 2 diabetes is the leading cause of mortality and morbidity in Nigeria and other parts of the world especially the low-income communities like Mgbidi, where most of the people are not employed (European Journal of Sustainable Development, 2017). According to European Journal of Sustainable Development, "Type 2 diabetes come top on the list of non-communicable disease clusters and Type 2 diabetes and other non-communicable diseases seen to be affecting the poor of the poorest nations of the world" (European Journal of Sustainable

Development, 2017 p. 249-270). The impact is very high in Sub-Sahara Africa of which Nigeria occupy a considerable position. This might be because the patients, most of the times, are unable to access healthcare services and education necessary to treat or prevent the non-communicable disorder. The participants explained that at Mgbidi, there is no hospital or functioning health clinic. They also explained that they use to have a health clinic in their community that is no more in existence now. The participants explained that because of the lack of a health facility in the community, they have to travel to Enugu which is their state capital to receive medical services coupled with the fact that there is no reliable transportation because of bad roads in the community. They explained that this constitutes a major hindrance for them to sort medical services or diabetes self-management education. They said that these reasons, make they to feel helpless and give up to try to help themselves with self-management of their disorder both with medication, which they said is hard to afford and self-management education; they reported that their government is not doing much in assisting them to maintain good health by providing the basic amenities like a functioning health clinic in the community. Despite the high prevalence of Type 2 diabetes and serious long-term complication in Nigeria, there is still no established evidence-based guideline for self-management of Type 2 diabetes that take into consideration the culture of the populations that have this disorder in Nigeria especially Mgbidi community (Chinenye at. al, 2012). Diabcare Nigeria Study Group (2012) reported that the mean age at the onset of Type 2 diabetes in Nigeria is lower than the mean age of onset in patients in the developed world in 2008. According to the article, the average age for Type 2 diabetes diagnoses in Nigeria in 2008

was 39.4 while the mean age of diagnosis in the same year for developed countries was 57.1(Profile of Nigerians with diabetes mellitus - Diabcare Nigeria study group, (2008)

The participants explained that the challenges and barriers to not having a functioning hospital or health clinic in the community are very obvious due to the fact that many people are dying from this disorder in their community. All the participants emphasized that not having a hospital or clinic in the community makes it hard for them to access health care services. They reported that they have to travel to their state capital to see a doctor or receive any type of care services, and that sometimes the first visit is just to get an appointment date that might be from one week to one to three months away and this can take a whole day to travel to and from Enugu – the state capital for the appointment because of bad roads and lack of transportation.

Participant 1 stated,

> I was diagnosed with Type 2 diabetes about two years ago when I had a wound on my feet that refuse to heal. When I was diagnosed, they explained everything about Type 2 diabetes to me and how to self-manage it, but since then I have gone back to see the doctor again only once, and I have forgotten some of the instructions the nurse gave me on how to manage it.
>
> She added,
>
> Since then, I have not gone back again to see the doctor because of the cost associated with the travel. If to say that we have a functioning hospital or health clinic, I could have been getting some help from here in

the community. Even there is a health clinic beside the church here but the clinic is not functioning and our government is not doing anything to reopening it.

Participant 2 stated,

"If we have a functioning clinic or hospital that it will make seeing the doctor or diabetes specialist easier."

Participant 3 said,

"I have pains in my joints; I cannot do all the walking it takes to get to the neighboring town to catch a bus to Enugu and my legs really hurt when I walk."

Participant 4 shared,

Even when I manage to go see the doctor, he just tells me everything he wants me to know by mouth, which got in through one ear and goes out through the other even before I get home; he does not give me any printed material.

Participant 5 said, "I do not always want to think about having diabetes. I do not at any time want to say that I am diabetic; I always say that my sugar is a little elevated because this makes me helpless."

Participant 6 said,

"Type 2 diabetes self-management supposed to be a "management of Type 2 diabetes and related risk factors within a holistic context" and that is taken away from them by their state government by not providing a

functional hospital or clinic in their community. She went further to say that Type 2 diabetes and its management can have a significant effect on their lives when it comes to feelings of codependency, isolation, experience of loss, overuse of protection mechanism, and loss of freedom, all of which can possibly have consequences for the best self-management of the Type 2 diabetes.

She also said that she feels helpless because there is no hospital or health clinic in their community where she can run to when needed.

Participant 7 said,

"Not having a hospital or functioning health clinic in the community is a major barrier and challenge for my accessing health care services and medication for my Type 2 diabetes because I do not have any relation that have a vehicle to take me to the doctor; and I live very far from the place where the community members usually go to get transportation for travelling outside the community.

She also added, "I always miss my regular follow-ups of her doctor's appointment because of other costs associated with the travel." She explained that "transportation barriers are a major challenge for my poor medication adherence and financial hardship." She said, "Not having a functioning hospital or health clinic really limits my ability to access health care for my Type 2 diabetes and other chronic disorders."

Participant 8 said,

> I did not know much about Type 2 diabetes when I was diagnosed. I was having symptoms of diabetes, but did not know what it was until my daughter, who lives in another state, came and took me to the hospital at the state where she lives, and that was the hardest period of my life because when I came back from the hospital which is many miles away from my home town, I was very discouraged. I wouldn't have felt that way if I think that I have a hospital or working health clinic in my community I can go to for diabetic education and treatment; I just felt like I was sentences to death.
>
> She also said that once people are diagnosed with Type 2 diabetes, there should be a place where they should go to for regular diabetes education and diabetes monitoring.

Participant 9 said,

> "In order to reduce the diabetes complications and helplessness of the patients, it is vital to address the barrier, challenges, and needs of non-functioning hospital or health clinic in our community." She also remarked that to effectively reduce their challenges and barriers with Type 2 diabetes, there must be collaboration between the Enugu State government, the community members, and the health care providers to

leverage resources like a functioning health clinic and knowledgeable staff to promote community engagement that can address impediment, barriers, and challenges for achieving a positive self-management outcome of Type 2 diabetes in their community.

Lack of Structured Diabetes Self-Management Education

Most of the participants said that they have little or no knowledge of self-monitoring techniques and have not be practicing that since they were diagnosed with Type 2 diabetes because of inadequate training in self-management. All the participants interviewed mentioned that one of the major barriers to self-managed Type 2 diabetes in their community is lack of motivation and education to self-management as they have no access to that.

All the participants verbalized severe Type 2 diabetes self-management education knowledge deficits. The most disturbing thing is that about 77.7% of the participants have no knowledge of how to test their own blood glucose by themselves and lacked knowledge of the difference between hypoglycemia or hyperglycemia corrective measures if they happen to experience that. This indicates that a greater focus has to be placed on ensuring that the health clinic in the community is functioning and have diabetes education specialists as this is one of the major identified barriers and challenges for the diabetic patients in Mgbidi, to encourage diabetes self-management education. All the participants said that a functioning health clinic in their community will make Type 2 diabetes education accessible to the populations that have diabetes in this

community that will be emphasizing the physiological symptoms to hypoglycemia and hyperglycemia.

All the participants explained that they try to self-manage their Type 2 diabetes with diet and exercise but they find it very difficult because of inadequate knowledge. They reported that that they try to get diabetes knowledge anywhere they can because there are not functioning hospitals or health clinics in the community and no health providers or health professional to help them with the necessary education on self-management in the community.

All the participants stated that there is no organized or structured self-management education and no evaluation by the healthcare professional to assess the barriers to self-management strategies in their community to help them cope with the barriers to Type 2 diabetes self-management.

All the participants explained that they took some type of oral medication to manage their Type 2 diabetes but never adhere to it because of availability and cost. 2(22) said that they practiced self-management; not because they knew what they were doing but because they could not afford to buy their medication anytime they need it.

Most of them reported that they took their medication when they are able to buy it. About 89% of the participants said that sometimes, when they are out of their medication, they can go for a month or more before purchasing the next refills. In addition, in Nigeria, you do not need doctor’s prescription to buy any medication (Okeniyi, 2017). So, they can just walk into a pharmacy and buy it. This sometimes means inadequate medication or not adequate titration of diabetes drugs for the patients.

In Nigeria, drugs are not regulated or need to be prescribed by health care providers for the patients to purchase it. According to Olayemi**,** (2012) **"**Pharmacy sell whatever they have and do not feel any obligation to register the prescription drugs which they dispense". This may be a barrier to self-management of Type 2 diabetes because the participants reported buying medications on the advice of their families and friends or other diabetic patients when they cannot get to their doctors

Participant 1 said,

> whenever she is unable to get her medication for any reason, she resorts to more exercise. She said "I try to modify my diet and eat food that does not have too much starch. I do not drink soda which used to be my favorite drink any more. I try to utilize the little knowledge I get from my friend who also have Type 2 diabetes. My friend told me not to eat too much sugar. I do some exercise like little walk here and there when I have the strength. I try not to eat too much carbohydrate but that is very hard because that is the staple food here. I have nurtured myself to stop drinking soda which used to be my favorite drink as I do not drink beer or any alcohol beverage".

Participant 2 stated,

> "Self-management is a struggle when you do not have health professionals in the community to run to for guidance or directions. I do anything I know to do because I do not want any complication of Type 2 diabetes for they are not fun; I try the herbalists and the healers too".

Participant 3 said,

> "When I was at Lagos with my daughter, she takes me to the health clinic often for regular classes on self-management. That made it easier for me and my family but now that I am back home, I cannot believe I do not have that privilege again. There is not even a dietician in this entire Mgbidi community".

Participant 4:

> "I try very hard to mind what I eat when I do not have my medicine".

Participant 5:

> "I have not had carbohydrate for a long-time. I basically use diet to manage my Type 2 diabetes because I am always too tired to exercise"

Participant 6:

> "When my daughter had a child, I went to stay with her for some period of time, she was always on top of me – don't eat that, you cannot have that!" She emphasized constant nagging from her daughter on her diet, but she sees it as a positive snagging, but now that she is back home, she missed the nagging because she understood that it has a good influence on her self-management of her Type 2 diabetes.

Participant 7:

> "We need planned patient education and supervised Type 2 diabetes self-management education here in the community for we are helpless and do not know what to do most of the times. Self-management should be an

ongoing process not just what we receive once or twice a year when we visit the doctor"

Participant 8:

"I am planning to go to live with my daughter and her husband at Enugu where I can access health care services because here I cannot fill my medication when I need them even if I have the money and I do not have a planned diet"

Participant 9:

"Because I lack self-management education help, I now use herbal medicine from an herbalist but the problem for me is that I do not know when my blood glucose is high or very low because of inadequate knowledge of self-management of my Type 2 diabetes which contributes to the difficulties many of us in this community with Type 2 diabetes have. There is nowhere to obtain such information in the community. The government does not care about our self-management education needs to provide Type 2 diabetes self-management education and health literacy based on individualized needs".

Knowledge Deficit in Diabetes Diet

Most of the participants (78%) seem to have the wrong understanding of the diabetes deity and need. One of them reported that she has not been eating carbohydrates

food for the past four years. This indicated knowledge deficit for food nutrients since Nigerian's staple food is carbohydrates, and most of the food she said she eats like beans have some considerable amount of carbohydrates.

The following are the example of the participants' responses in their own words: -

Participant 1:

> This participant said "when I visit the doctor, the nurse explained many aspects of Type 2 diabetes to me emphasizing the importance of self-management of Type 2 diabetes with exercise and diet but they never give me any printed educational materials". The hospital just gives me oral information that enters through one ear and goes out the other even before I get home; I have already forgotten most of the information given to me at the hospital".

Participant 2:

> Participant 2 said "we have never had any diabetes diet education in the community; and most of us have problems relating the dietary suggestion and recommendations we get from the media to our cultural food". She also said "most of the food suggested by the media are mostly western food and hard to translate to our local cultural food.

Participant 3:

> This participant remarked, "I benefited from using the locally available diet to control my Type 2 diabetes like eating plenty of leafy vegetables

we cultivated in the community by themselves and less meat which is not readily available because of the cost".

Participant 4:

This participant said, "I am aware that candies are not good for those of us that have diabetes, and most of us that have Type 2 diabetes in this community recognized that lemon juice, vinegar, water, basil leave and other vegetables are good for managing Type 2 diabetes and many of us acknowledge using them because they are readily available locally and are beneficial in controlling blood sugar, but the problem is that we do not know when the blood sugar is too low because many of us test it only when we go to the doctor.

Participant 5

This participant said "controlling Type 2 diabetes with diet is hard for me in this community because of lack of knowledge and education" and is seen as causing difficulties and made make me and my family to see it as something very hard to do".

Participant 6:

This participant said "sometimes, I felt like I lack control over food because I craved some type of food and sugary beverages but I am trying very hard to cut the craving for I do not want any complication from this disorder".

Participant 8:

> This participant said I was addicted to soda (which they call mineral drink) but I have tried hard to give it up because I dread the complications of Type 2 diabetes”.

Participant 9:

> This participant said “it is very difficult to change the way we prepare and eat our food and particular kinds of food caused specific difficulties more especially when it comes to foods that had cultural basis and during some local holidays and festival”.

Lack of Physical Exercise

Most of the participants reported that they lack the ability to engage in physical activities because of the tiredness associated with Type 2 diabetes. Fatigue is one of the distressing and common complaints for individuals with Type 2 diabetes and can possibly hinder the abilities of the diabetes individuals to perform every day diabetes self-management responsibilities. Diet and physical activity is an area that all the participants said that they require more support in other to enhance and refine their Type 2 diabetes self-management. All the participants indicated having problem with exercise and physical activities. All of them expressed that the topography of their community made it difficult for them to exercise because they live in very hilly geographical area. The participants discussed factors that contribute to their inability to be more active. All of them said that the topography of their community, lack of motivation, and social support prevent them from being physically active.

I identified that only about 33 % of the participants participated in any type of physical activities, and that those who did, did not do that by choice; but because they work in the farm with their families which translates to physical activities. Few of the participants, about 22.2% did some exercise by walking around their premises, and about 50% of them associated their inactivity to tiredness associated with Type 2 diabetes; while 100% of the participants stated that lack of support group and lack of motivation contribute to their being in active lifestyle. Very few of them actually participated in enough physical activates to sustain self-management care. I also identified that there were many modifiable factors preventing the Type 2 diabetes patients in this community from being physical active. Other challenges I identified was lack of physical activities for Type 2 diabetes patients in this community were accessibility of gyms and necessary equipped venues for physical activities, economic difficulties, social mores of an insular and culture that highlights self-reliance and self-sufficiency as well as lack of support system, modern technology, and other socioeconomic challenges hinder Type 2 diabetes self-management outcome in Mgbidi community as not many families could afford health insurance to help with the self-management material and education (Opoola, 2016)

The following are some of the examples of the participant's responses in their own words comments: -

Participate 1

> Participate 1 said "I cannot see very well, so I do not try to go for a walk because I am afraid of falling. It could have been easier for me to exercise if there were organized activities where we help each other".

Participant 2:

Participant 2 said "I use to go for a walk with my husband but he just passed, so I don't feel like going alone"

Participant 3

Participant 3 said "They only have gyms in the urban areas not in the local communities like ours. It is hard for me to climb these hills and go down the valleys to go for a simple walk because it hurt my knees to do that".

Participant 4:

Participant four explained that social support is also associated with negative self-management of Type 2 diabetes. She stated "sometimes my family nagged and criticized me and make me feel guilty for trying to make meals suitable for a diabetic for the whole family; it is hard to cook separate food for my family different from what I make for myself. In addition, there is no community based set up that encourage education of patients and their families that results in social support group or motivation. 100% of the participants stated that there is no vibrant or self-motivated group designed to create a sense of accountability to encourage the Type 2 diabetes self-management in Mgbidi.

Participant 5:

Participant 5 said "I am not very active because when I look at the hills and valleys around me, I do not feel like going out. Honestly, one of the hardest things about self-management of my Type 2 diabetes is to be active when

your knee and all the joints in your body hurts and for me physical activity and exercise are the battle I find very difficult to get into".

Participant 6:

Participant 3 said "I am always too tired to do anything, but sometimes, I try to walk around the house and the yard".

Participant 7:

Participant 7 said "I use to go to the farm with my husband but now I have knee and joint problems so I don't go anymore, I don't do anything anymore, I just sit in the house because I so tired to do thing"

Participant 8:

Participant 8 said "I go to the farm with my family; I see that as being active"

Participant 9:

She said "I go to the farm everyday with my husband and sometimes with my children and when I come back, I don't want to do any other thing because I am very tired and sometimes, we come back so late that I cannot stand any more activities than to rest, go to bed and get ready for the next day as we go to the farm every day except on Sundays".

Lack of Access to Routine Medical Service and Check-Ups

Most of the participants, about 78% reported that they were unable to access the health care services because they cannot afford it. In Nigeria, not many people are able to afford health care insurance coverage (Opoola, 2016). The 22% that did not see it as a

hindrance are retired health care workers. All of them also reported that they cannot afford blood glucose monitor and the strips even the retired health care works. Among all the participants interviewed, only one individual actually tested and monitored her blood glucose as needed.

Type 2 diabetes self-management education is an ongoing process for assisting the diabetes patients with the necessary skill, awareness, and ability needed for self-management; and this process incorporate the life experience, goals, and needs of the individuals with Type 2 diabetes to guide them through evidence-based principles (National Standards for Diabetes Self-Management Education, 2017). The aim of this is to support self-management behavior, informed decision making, problem solving, and an active collaboration between the health care providers, the patients and also to enhance Type 2 diabetes health outcomes. These are not readily available to the Type 2 diabetes patients in Mgbidi community because the cost associated with going to the health care provider for regular check-up is not attainable for these women and their families as needed. All the participants stated that they do not keep the routine doctor's appointment or checkups because of the direct and indirect costs associated with the services.

The participants also discussed how the barriers to community based service for Type 2 diabetes self-management contributed to lack of motivation and acceptable strategies that are religiously or culturally favorable for keeping appointments for check-up and failure to go for follow-up appointments because of the distance between patients residents and hospitals or health clinics, and the resources for information on preventive health care and non-adherence resulting in Type 2 diabetes complication, mortality or

morbidity. Many of the participants explained that the community rural setting predisposed them to many barriers and challenges, such as bad roads that are caused by the topography of their community that created barriers to access health care services which would help to enhance their ability to achieve their self-management of Type 2 diabetes goals.

All the participants reported that they did not have any community resources that could help with the self-management education for Type 2 diabetes; and that no efforts have been made by the health care providers and Enugu State government to help the population that live with diabetes in implementing self-management education for their type II diabetes. I identified that they lacked sustainability, possibly due to inadequate consideration of many aspects that are involved in a successful type II diabetes self-management. The participants also discussed social support as a component of community outreach framework, and the vital role it plays in diabetes self-management, and enhancing awareness and understanding of the benefits of social support, mostly between health care providers and the patients that is fundamental to enhance and understand the plight of these diabetes patients' self-management, to ensure availability and adherence to professional advice, encourage lifestyle modification, and eventually improving the outcomes of diabetes self-management for this population and other population that have diabetes.

Below is example of the comments from some of the participants: -

Participant 1

Said "I do not keep my regular check-up appointments because most of the times, I do not have money for transportation and other associated cost to travel to Enugu for the check-ups".

Participant 2:

Said "I only keep my check-up appointment when my son who live in Lagos come home. When he is home, he takes me to the doctor, pay for the health services, and the medication; but he does not come home quite often, sometimes, it takes up to six months to one year before he visits home again".

Participant 3:

"I am really unable to afford the check-ups most of the time because I have to save up for the transportation, the doctor's fees and also have money to buy the prescribed medicine. It is very hard to save up for all the costs associated with the doctor's visit. If we have a functioning health clinic in the community, it will not be that expensive and the appointment will be easier to keep".

Participant 4:

"I keep my check-up appointments just because my daughter-in-law who lives at Enugu come home a day before my appointment date to pick me up for the appointment. My son pays for all the expenses and buys my medicines. That is the only way I am able to keep my check-up appointments sometimes. I thank God for them".

Participant 9:

> Participant 9 said “the lack of community outreach is also a major handicap when it comes to being active and because of the lack of community outreach, there are no planned activities in the community and no specific places we can go for a walk or other types of activities”.

Misconception With Type 2 Diabetes Self-Management

Most of the participants indicated that they pick information from the wrong places like advice from the traditional healers who advised them to make concoctions from traditional medicines or leaves or the bark of trees, that has not been tested to treat Type 2 diabetes or suggestions from their grandmothers or grandfathers or other family members and friends who are not health care professionals. They get medical advice from anywhere they can find them even from ignorant sources. Their responses suggested that Type 2 diabetes self-management education will be safer for the diabetes individuals in Mgbidi community as it is harder for them to adhere to their medication regimen than the self-management education. Many of the participants believe that several factors hinder them from using medications to manage their Type 2 diabetes but self-management takes only education for them to be successful in self-management. Some of the participants discussed how they had been eating only beans for years trying to abstain from carbohydrates. Some of them explained that they do not eat any food that does not taste bitter as they believe that bitter foods decrease the high blood glucose and some said that diabetes can be cured with herbal medicine. Many of the misconceptions were related to type of herbal medicine and types of food. Most of the them emphasized that their daily

lives with Type 2 diabetes are an ordeal they will never get over until they have access to the right attitude and knowledge of Type 2 diabetes self-management education that they can reach easily within the community.

Below are some of the participants' responses on this theme cluster:-

Participant 1:

Participant 1 said "My initial reaction when I was diagnosed with this disease was hopelessness, anger, and many questions which I thought the health care professionals will help me understand, but up till now, after many years with Type 2 diabetes, I still have as many of the questions I had when I was diagnosed because of inaccessibility of health care providers in the local community. I thought that by now I would have learnt everything I need to know to manage this disorder, but I was wrong".

Participant 2:

Participant 2 expressed "Since I cannot get hold of the professional health care providers in the community, I resort to culturally created self-management perspectives. I utilized alternative remedies, and herbs and they help".

Participant 3:

Participant 3 said "Since I was diagnosed, my life has not been the same. I cannot do farm work as I used to do because of tiredness and the fact that exercise can cause my bones to deteriorate and cause weakness in my

muscles, so I made being active a thing of the past; now I cannot even eat what I use to eat, so every now and then, I just eat what my whole family eat not minding the effect on my health".

Participant 9:

Participant 9 said "I did not have good knowledge and good background information on preventive care of Type 2 diabetes self-management education before I was diagnosed but I thought that with the help of the health professional I will come to understand the right things to do to manage this disorder".

Lack of Health Care Insurance Coverage

The participants reflected on health care coverage in Nigeria. All the participants shared their preconception on how corruption leads to inadequate medical administration and incompetence in providing universal health care coverage for Nigeria population. They noted that about two-thirds of Nigerians live below poverty level and that the National Health Insurance System in Nigeria covers only families that work in public sector and that many families work in private sector or self-employed. One of the retired health care worker among the participants noted that only about 3% of the Nigerian population has health care Insurance coverage (Opoola, 2016). They said that private prepaid health coverage is not accessible for the poor or those families that are employed in private sectors or self-employed because the premiums are not affordable. They emphasized that because of this that Type 2 diabetes patients and other populations in Nigeria that have any type of health conditions have no alternative than to pay for their

health care services out of pocket. Below are some examples of the participants' remarks:-

Participant 1:

> This participant said "health care insurance is a significant challenge and barrier for individuals in Nigeria receiving the right care at the right time and setting. I am sure that this makes many people in Nigeria not to go to the hospital when they still have the chances of surviving from their condition. If we have health insurance coverage, self-management education, community outreach and support to encourage healthier life-style that the people in Mgbidi community and other Nigerian population as whole life expectancy could increase; and if hospitals and the health providers could make commitment to guarantee that everybody who go to the hospital obtain the needed care not minding their ability to pay before treatment just as it is in America where people are treated before they are billed, we will be able to manage our health because this paying before treatment put so much financial constraints that adversely affect many of us in this community because many of us do not have stead income or work in the public sector to afford health coverage and more especially when the illness is sudden".

Participant 5:

> Participant 5 remarked "paying out of pocket for health care services make it hard for people to go the hospital when they are sick and many people

are taken to the hospital only when they are almost dead because of that not many people who are taken to the hospital come back quite unlike America where hospitals treat the patients who do not have health coverage before asking for payment. For us here in Nigeria, it is pay before service. We have to come up with the payment before treatment".

Participant 6:

"My aunty who is just 47 years old passed last week because they were waiting for a portion of her land to be sold before they take her to the hospital because payment is needed at the time of service. If to say that she had health insurance, or have the privilege of treatment before billing, her odds of still being here with us and managing her health will be increased".

Participant 7:

"Lack of health insurance coverage makes many families in Mgbid as well as other parts of Nigeria to resort to herbalists, alternative medicine, and native doctors which is even sometimes against their religious beliefs because they are desperate to save their loved one".

Participant 8:

"If we have health insurance coverage, monitoring materials will also be covered including the medicines. The basic blood glucose monitor in Nigeria is about N6, 000 to N10, 000 which is the monthly income for most families in this community. The blood glucose monitors are readily

> available in Nigeria but its affordability is a different thing altogether. Nobody can afford it in this community unless you have a child that work in the public sector or have their own business. Until the government decides to do something, our odds of living a health life remains the same".

Evidence of Trustworthiness

The trustworthiness of qualitative research is generally questioned because the concepts of reliability and validity could not be addressed in the same way as other methods. Trochim and Donnelly (2008) stated that evidence of quality of as qualitative research can be best established or described in terms of credibility, transferability, dependability, and conformability, as well as how the participants' responses approximate the result findings. I conducted the qualitative research; I judged the trustworthiness of my research finding using the concepts appropriate and relevant to my research. There is evidence that my study findings are confirmable, credible, dependable, and transferable and also approximate the true response from the study participants as it related to impediments to self-managed Type 2 diabetes challenges, barriers, and needs.

To authenticate the conformability of my qualitative study result, I used the help of a second coder who identified the same themes as I did and agreed 100% with me on the identified themes. Both the second coder and I identified approximately the same challenges, barriers, and needs as stated by the participants.

In addition, evidence indicated the conformability and credibility of the participants agreed that their responses conformed with my identified themes. One of the

participants suggested that I put more emphases on the challenges, barriers, and needs of health care insurance coverage and the need for a functioning health clinic in their community.

Another example of the credibility, dependability, transferability, and conformability of my study is the results of the individual interviews with the participants. I spent time with the participants and was able to bond and understand them and earn their trust to share their intimate challenges, barriers, and needs and experiences with me. I did not use an online survey or other forms of data collection. I used face-to-face in-depth interview, which gave me full engagement with the participants. I was fully exposed to my participants. For instance, some of these women shared their experiences with their immediate families experience about their disorder. Their sharing of these intimate personal painful experiences suggested the extent of their trust to me.

To further ensure trustworthiness and credibility in this my study, I triangulated the data by using multiple methods of data collection such as in-depth individual interview which form the major data collection strategies for my qualitative study on impediments to self-managed Type 2 diabetes as stipulated by Shenton (2004), as well as field notes and a recorder which is methodological triangulation. The community leaders also authorized this study in their community and the second coder was involved in the analysis and interpretation of the data which is data triangulation. Different sources of the same information such as many interviews from 9 women were used to validate the finding which is another data triangulation. Many questions were asked about the self-managed Type 2 diabetes and the participants were encouraged to support their responses

with examples. I asked many follow-up questions to make sure that I interpreted their responses correctly. I read and reread the data from the raw data interview materials until the theory emerged which provided the scope of the phenomenon. I concentrated on the aspects of the conversations and field notes that were most relevant to the topic under study.

Summary of the Results

Grouped by themes, the results of my qualitative study provided insight about the impediments to self-managed Type 2 diabetes in Mgbidi women. I evaluated the challenges, barriers and needs of the women population at Mgbidi community that have Type 2 diabetes. The participants discussed their experiences with Type 2 diabetes and the challenges, and barriers they faced with the self-management. All of the participants explained that they lacked the knowledge of self-management when they were diagnosed with this disorder and that after many years with this disorder they still lacked adequate knowledge on how to self-care for themselves and that their self-management knowledge has not changed for better. They explained that they have not acquired much knowledge because of lack of frequent contact with the health care providers and lack of health care clinic or hospital in their community. The results indicated that Type 2 diabetes self-management education is the corner stone for diabetes management and is found to be the integral elements of Type 2 diabetes care (American Diabetes Association, 2017). The participants emphasized that their community needs help to increase their knowledge on Type 2 diabetes self-management. The results were grouped by themes that provided insight about the research questions posed by this qualitative research. Exclusively, the

result of this research provided insights to the challenges, barriers, needs, and experiences of the nine women in Mgbidi. The results of this study also provided insight into many of the difficulties and challenges surrounding their ineffective self-management of their Type 2 diabetes and the roles the government should play in helping them. The results also indicated that the services of the traditional healers and herbalists are still patronized by the community in spite of the fact that it is against their new found religious beliefs. The traditional healers' patronage by the community is caused by their inability to afford or access health care services and absence of hospitals or health clinics in their community. The study results presented the impediments to self-managed Type 2 diabetes in Mgbidi women as it relates to health care access and utilization, challenges, barriers, needs and the importance of a functioning health clinic in a community; but it did not translate into behavioral change for this population in regards to blood sugar monitoring or self-management as this is not the immediate objective of the study.

Chapter 5 discussed the interpretation of the findings, provided the limitations of the study, described recommendations for further research, described the implications of social change and provided the conclusion.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of my qualitative study, as I stated in the previous chapters, was to explore, evaluate, and identify the perceptions, challenges, barriers, and needs of the population of women who have Type 2 diabetes in Mgbidi, Awgu local government area of the Enugu State in Nigeria, West Africa, which is a rural community and also to identify the indicators and factors that hindered or supported how this population self-manages their Type 2 diabetes. Based on the literature reviewed on this population (see Chapter 2), this is the first study ever done on this population on Type 2 diabetes. Even though there has been much research on Type 2 diabetes in Nigeria, there were no indications that anything has been done on this population with Type 2 diabetes. This community was chosen because it possessed the characteristic of a rural community with limited access to modern and essential amenities as well as health care. The primary research question for this qualitative study on the impediments to self-managed Type 2 diabetes was as follows: What are the impediments to Type II diabetes self-management among women over 40 years from or living in Mgbidi? To answer the research question, I registered and recruited nine women from Mgbidi out of the 41 women who came to the information session. I used the qualitative phenomenological method with face-to-face in-depth individual interviews to collect the data. I used the phenomenological method because it was suitable for my study, and phenomenological research focuses on the phenomenological inquiry of people's experiences as they relate to the event or phenomenon and how people interpret those experiences. Again, phenomenological

approach attempts to comprehend perspectives, understanding, and perceptions of individuals in a specific setting or situation (Waters, 2015). I used this approach because my goal was to describe a lived experience of an event. I used individual interviews to allow the participants to describe their lived phenomenal experience, challenges, barriers, and needs for their self-managed Type 2 diabetes. I analyzed the phenomenological data. The findings of this study, as indicated in Chapter 4, are summarized below. In Chapter 5, I summarize the key findings of this research as related to the specific cluster of themes stated in Chapter 4 as well as state the limitations of this study. I also provide the recommendations for future research and present the social change implication that impact the women with Type 2 diabetes in the Mgbidi community.

Concise Summary of the Key Findings

Table 2 shows the common themes identified among the participants.

Table 2

Common Themes Clusters and Number of Times the Themes Were Identified Among the Participants (N = 9)

Common theme clusters	# of times identified	Percentage
Lack of care services in the community		
No hospital or functioning health clinic	9	100
Income barriers	7	77.7
Transportation difficulties	7	77.7
Helpless	5	55.5
Financial & income difficulties	9	100
Lack of diabetes related education	7	7.7
Low health literacy	6	66.6
Inadequate diabetes diet information	7	77.7
Lack of physical activities		
Tiredness associated with Type 2 diabetes	7	77.7
Lack of support group	9	100
Lack of motivation	9	100
Lack of access to routine check-ups	9	100
High indirect cost	9	100
Geographic distance	9	100
Lack of community outreach activities	9	100
Lack of health care insurance coverage	9	100
High cost of blood glucose monitoring material	8	88.8
Inadequate medical visits	9	100
misconceptions		
Ignorance	6	66.6
Social support	9	100
Medication behavior	7	77.7
Unstructured education on self-management	9	100
Inadequate diabetes dietary information	7	77.7

Note. *Two of the participants reported having adequate knowledge about Type 2 diabetes self-management; they also indicated that they have access to healthcare services and regular check-ups. One said that she has access to diabetes monitoring materials like blood glucose monitor and strips and get her medication refills as needed.

Summary of the Key Findings

The following is the summary of the key findings that emerged from this qualitative study:

1. In this study, I identified that clear communication and effective collaboration between the patient and the health care providers and self-management educators are very vital and the cornerstone that ensures clear goals for the patient and ensures that progress is being made towards achieving the desired goals. The appropriate interventions like psychosocial, behavioral change, medicine, and education are being used.
2. As reported by the participants, I also identified that self-management education and constant contact with health care providers is necessary for the patients to overcome the challenges, barriers, and needs to cope with the demands of living with Type 2 diabetes and to facilitate the changes necessary for behavioral modifications associated with self-managed Type 2 diabetes. Health care facilities should be within the reach of the patients to reduce the helplessness associated with behavioral modification and self-management.
3. As emphasized by the participants, there has to be a setting for communication between the providers and the patients in the community, such as health clinic or hospital. This is vital to facilitate and support skills that are necessary for successful self-management and is essential for the diabetics' everyday living. This requires a personalized approach that is effective in the delivery of care and should involve diabetes

educators and experts who are experienced in psychological and social clinics as well as behavioral Type 2 diabetes self-management.

4. The participants stressed that the political instability and poor leadership at the federal, state, and local government levels in Nigeria greatly influence the health care services in their community.
5. All the participants stressed the need for dieticians in their community to help them translate their local foods to appropriate diabetic nutrition and portion size.

Interpretation of the Findings

In this section, I discuss the interpretation of the findings presented in Chapter 4 as they relate to self-managed Type 2 diabetes behavior, challenges, barriers, and needs of women with Type 2 diabetes in the Mgbidi community. The literature search for this qualitative research focused primarily on Mgbidi women with Type 2 diabetes, but unfortunately, there were very few literature reviews on this population of interest on self-management of Type 2 diabetes; hence, I had no base study with which to compare my findings for this particular population. I was unable to confirm or extend knowledge in the public health discipline because there were no prior studies on this population to compare my findings. In my literature review, as described in Chapter 2, I focused on self-managed Type 2 diabetes in Nigeria.

The concept of the impediments influencing cultural sensitive Type 2 diabetes self-management behavior served as the guiding framework for this study. Conceptual frameworks are specially used as an organized tool in an empirical study, and the idea of

a conceptual framework is practical for deductive qualitative experimentation (University of Pennsylvania, 2017). Many types of conceptual frameworks have been identified to meet specific purposes in research like exploratory or descriptive studies. In this study, I used the concept of impediment influencing cultural sensitive Type 2 diabetes self-management behaviors to explore, evaluate, and discover the social influence on health behavior and how these influences function at different stages of human life (see Gochman, 1998).

Through the key finding of this study, I extended knowledge in the discipline of public health as related to Type 2 diabetes self-management, provided epidemiological perspectives, and evaluated a subpopulation that had not been studied in Nigeria, West Africa. I did not find any literature published on this population of interest, which is Mgbidi women. The majority of the literature found on Type 2 diabetes self-management challenges, barriers, and needs were published for other populations in Nigeria as Nigeria has about 250 ethnic cultures (National Geography, 2017; Nigerian Fact Sheet, 2012). In addition, cultural consensus studies on beliefs among the distinct ethic population and the Mgbidi are nonexistent. All the participants were women. This study on the impediments of self-managed type diabetes in this population revealed shared, single cultural beliefs about the challenges, barriers, needs, and treatment of Type 2 diabetes among the participants.

I interpreted my result findings using the major common theme clusters as identified in Chapter 4. I discuss the finding under the following headings:

1. Confounders like quality and access of health care, health literacy, and method of communication with the providers and not having a functioning health clinic or hospital as well as income barriers, transportation difficulties, helplessness, and financial and income difficulties.
2. Individual factors like helplessness and lack of motivations for physical activities and tiredness associated to Type 2 diabetes.
3. Level of perceived social support from health care providers/family/friends and lack of community outreach, high indirect cost associated with keeping doctor's appointments, and geographic distance.
4. Beliefs and adherence to recommendations for self-management and income barriers
5. Misconception, ignorance, and inadequate diabetic dietary information
6. Health care insurance and self-management materials

The Theme Clusters

Lack of Care Service in the Community

All the participants' complained that there is no health clinic or hospital in their town, which made them and many other surrounding communities around them to have to travel a long way for health care services. All the participants discussed how hard it was for them to manage their Type 2 diabetes without having a health clinic in the community. They said that success to health care services is very vital for rural communities. The age of the participants ranged from 40 to 71 years, and it appeared that

the difference demography did not play any role in their experiences and barriers for this disorder, as all of them had similar experiences. The problem of not having a functioning health clinic in the community seriously affected the community who lives with Type 2 diabetes. Ideally, all communities should be able to conveniently use health care services such as primary care and behavioral health as well as self-management education, emergency care, and public health services (Healthy People 2020, 2017). Access to health care services is essential for overall social, mental, and physical wellbeing to prevent death, increase quality of life, detect or prevent disease, and increase life expectancy of residents of the rural community (Health People 2020, 2017). I identified that the Mgbidi rural community experiences many barriers to health care services that hinder their ability to receive the health services needed to maintain and keep desired health outcomes. Coupled with not having a functioning health clinic or hospital in the community, the residents also have no reliable means of transportation due to bad roads in the community. In addition, all the participants emphasized that when they finally got to the providers, they did not receive printed information on self-managed Type 2 diabetes because the oral information received was not remembered or easily forgotten. The participants reported that all these are major challenges, barriers, and needs for their self-managed Type 2 diabetes and other health conditionings also affected their qualities of life, which worsen the lack of health knowledge and health literacy. They also noted that financial and income difficulties also affected every aspect of their self-management.

Individual Factors

All the participants stated that they lacked the ability to participate in physical activities because of the fatigue and tiredness associated with Type 2 diabetes and the physical topography nature of their community as they live in a very hilly area. They (about 78%) stated that diet and physical active are the areas that they need more support as it is hard for them to translate the local food to diabetic diet appropriate portion size. They also stated that the lack of structured diabetes self-management education left them guessing - what is the right thing to do to manage their disorder and that made them feel helpless and not motivated. Most of the participants expressed that they lacked their family support because of the lack of knowledge and especially when it came to dietary changes for Type 2 diabetes. Most of them expressed that they depend on their adult children for their medication to be filled or to keep their doctor's appointments. Some of them also stressed that having family responsibilities place a financial constrain on their self-management.

Level of Perceived Social Support

The participants stated that they lacked community resources that support or encourage self-management care. Some of them even reported not having their family support because the family members did not know how to support them, and some said that they actually had bad experiences with their family support when it came to food because they did not want to make separate or different food from what they ate as a diabetic for their family; and that not having any community outreach is also a major hindrance to self-management of their Type 2 diabetes. All of them said that they have

nowhere to turn to for help; and that they cannot even turn to their health care providers because of indirect costs like transportation, cost of doctors' charges, medication, and the geographical distance to the doctor's office and other costs associated with the doctor's visit.

Beliefs and Nonadherence to Recommended Self-Management Care and Income Barriers

The participants discussed their challenges and barriers to medications non-adherence as it relates to cost and availability in the community. They emphasized that because some of the medications are not even available in the community; they have to travel out of the community to buy them. Many of the participants said that they do not buy the medicine because of their family obligations and responsibilities as well as other financial constraints. The medicine non-adherence was influenced by the participant's cultural beliefs and the influence of the traditional healers in their community. The participants said that their self-management choices were self-initiated or motivated by other Type 2 diabetes patients who suggested they use the traditional healers they were using, as well as the attitude and beliefs of their families towards the medication that was prescribed for them by the health professionals. Sometimes, their families believed that the prescribed medications are too expensive or out of reach. Many of the participants expressed frustration for not being able to afford their medication in a timely manner and having to resort to traditional alternative medicines. One of the participants noted that sometimes, she unknowingly compromises her health condition more with the traditional medicine regimen because she did not have other alternative.

Misconception, Ignorance, and Inadequate Diabetes Information

All the participants discussed their diet and diabetes knowledge. Most of them, about 78%, had high diet misconceptions. Some of the participants had the misconception that carbohydrates have to be completely eliminated from their meal plan. One of them said that she had not eaten carbohydrate for the past four years. Some of them believed that bitter leaves and other better foods reduce blood sugar. The participants expressed that they received information about Type 2 diabetes self-management from all the wrong places like the traditional healers, or from friends and family members who have little or no real knowledge of diabetes or other diabetes patients. Another participant discussed getting her self-management information from ignorant source like her grandmother or grandfather who do not even have diabetes knowledge and no medical background. Some of them expressed concern that they have to prepare food for their families different from what they eat.

Health Care Insurance and Self-Managed Materials

All the participants stated that the absence of health care insurance was a significant barrier to their self-management of Type 2 diabetes. They explained that it hindered their getting the right care in the right setting and at the right time before it was too late for the individual receiving the care. One of the participants expressed that health care insurance is another important aspect of Type 2 diabetes self-management care because it influenced and affected how often individuals go to see their doctors, how they adhered to their medication regimen and accessed the diabetes self-management materials and education as all these are supposed to be covered by the National Health Insurance

Scheme (NHIS) which is the health care coverage they have in Nigeria; but the most unfortunate thing about this coverage is that only about 3 percent (Opoola, 2016) of the Nigerian population can afford this coverage. The participants reported that having health care insurance determined the type of health care service an individual received in Nigeria and making it worse is the "pay before service" method they use in Nigeria; and even though health care coverage is a vital aspect of Type 2 diabetes self-management, very few people in this community can afford it and this compounds and compromises self-management care in this in Nigeria as well as this community (Opoola, 2016)

Limitations of the Study

There are many limitations in this study. The first limitation is that all the participants are the same sex – women; this restricted the generalization of the study finding to all the Type 2 diabetes patients. This study was just groundwork into the challenges, barriers, experiences, perception and needs of the population that have Type 2 diabetes in Mgbidi. This study might not have exhausted all the experiences and challenges of self-managed Type 2 diabetes create the in this community. In addition, I designed the instrument; a self-designed instrument might not have created the best health outcome on this topic. Again, I spent a short period of time in the community for collecting the data, and I interviewed a very small number of participants (9 participants). As a qualitative study, this could restrict the research findings and conclusions to this group. While this sample method maybe a limitation, I felt that it was vital to recruit and interview more research samples than only those that speak English and the interviews were conducted in a restricted rural geographic area. Diversity in participants enabled

data to be collected from wide range of behavior; this was not the case for this study. This could act as a possible confounder to the result. Another limitation to this study was the truthfulness of the research participants as this study depends on the participants' self-reporting of their impediments to self-managed Type 2 diabetes.

For all these reasons, the findings were interpreted with caution as I assumed that participants gave truthful accounts of their impediments to self-managed Type 2 diabetes. Nevertheless, the finding provided a preliminary base for future research for this population on this topic and may help to clearly understand the impediments to the successes of self-managed Type 2 diabetes.

Recommendations for Future Research

This study identified gaps in Type 2 diabetes self-management behavior for this population and provided valuable baseline information for further studies on the challenges, barriers, and needs for self-management education for this population of Mgbidi women. Further studies are encouraged on behavioral goal setting and better self-management behaviors that would help to change the identified gaps. Future research would be beneficial to this population as this serves as a preliminary base for potential studies that would use a much larger number of participants and also include male Type 2 diabetes patients for better generalization. Also, a longer follow up period of the participants is advised.

To promote good healthcare and quality of health for the rural community of Mgbidi residents with Type 2 diabetes, the local, state, and federal governments should try to put in place evidence-based initiatives that encourage individuals with Type 2

diabetes and other chronic disorders to manage their health to attain their desired health outcome. It is vital that future research identify primary preventive and health management that would modify or curb Type 2 diabetes self-management educations for this community.

In light of all the identified challenges, barriers, and needs for this rural community, future researches are encouraged to find cost effective methods of self-management education for this community that could lessen their burdens and concerns for self-management of Type 2 diabetes that will involve service providers and the policymakers that can improve the quality of health and well-being of this population.

Implications for Social Change

Development of a tailored intervention that is intended for empowering patients with knowledge and skills for Type 2 diabetes self-management could improve long-term patient outcomes. This study has the potential for positive social change for this community as it could contribute to the existing body of knowledge on Type 2 diabetes' challenges, barriers, and needs. It also could help to fill the gap in the lack of existing literature for this population, and the health professional could use the information from this study to interact and communicate with this population and other population in Nigeria that have Type 2 diabetes to understand how to better meet their needs for Type 2 diabetes self-management.

The finding from this study can be used to promote policy change or persuade establishment of polices that support initiatives and programs that promote self-managed Type 2 diabetes for the Type 2 diabetes population, promote and encourage preventive

and management care for those that are at the risk of Type 2 diabetes, and those who do not have this disorder, but may be predisposed to diabetes indicators. Diabetes Association of Nigeria which is an organization that organizes and regular group sessions where patients with diabetes are educated on various aspects of diabetes care could use this study to influence policy change. The Ministry of Health and the Departments of Public Health in Nigeria could also work towards the establishment of policies and programs that promote and support self-management of diabetes.

The knowledge and information from this study can also motivate the state government to make policies that can help them develop guidelines for Type 2 diabetes self-management as stipulated by the National Standard for Diabetes Self-Management Education as recommended in 2017. The study findings could also help a variety of health care professionals in Enugu state and other parts of Nigeria involved in preventive and management care of Type 2 diabetes like the health care providers, the policy makers, researchers, and the populations that have this disorder, as well as the health educator. It could help the diabetes specialists in Enugu state fashion diabetes educational materials that are cultural specific to empower the diabetes individuals in this culture set goals and make frequent daily decisions that are effective in their lifestyle change and value that can help them manage their Type 2 diabetes.

Conclusion

This study was conducted to determine impediments to self-managed Type 2 diabetes in the target population. The results revealed vital challenges, barriers, needs, and misconceptions surrounding the self-managed Type 2 diabetes in Mgbidi. The

information from the participants highlighted a high level of diet related misconceptions, knowledge deficit(s) about self-management, income barriers, transportation difficulties, low level of health literacy, lack of health facilities in the community, and other barriers associated with rural community life. It was identified that all the misconceptions and the barriers prevailed among the entire participants. In addition, affordability of self-management material and medicine and lack of shared decision making between the providers and the patients seem to be a major barrier. The community has many factors and indicators as their impediments. The findings also revealed that the individuals with Type 2 diabetes in Mgbidi need some form of motivation and self-management education to promote better knowledge about Type 2 diabetes self-management.

Recommendations for Action

While this study's results have added to available knowledge and information about the women of Mgbidi that live with Type 2 diabetes and identified many of their challenges, barriers, and experiences for self-management to improve diabetes outcomes in this community, further research in this topic have been highlighted. One area that needs immediate attention is to reopen the old health clinic in the community and make it functional. Enugu State government should help to ensure that the community has some resident nurses and other health care workers to help them with their health care needs

The findings from this study also identified that the community does not utilize health care providers because of the distance from the community to the health care professionals. The state ministry of health can create a public health program that could be visiting this community and other small communities around them at least once or

twice a month to cater to their health care needs and create type II diabetes awareness and education. The team of public health staff could undertake health education and promotion in the community.

Another recommendation is that the health care systems establish a method to subsidize care for the vulnerable patients in the community so that the most serious and urgent cases are treated without asking for payment up front before saving lives. Alternatively, the providers could work with the local traditional leaders on how to collect payment from the patients after the emergency health crisis have been averted. In addition, the local government can set aside a percentage of the allocation from the state to equip some mobile clinics to take care of the emergent cases that present at the time of the community visits. Alternatively, the local government can levy a small amount on all taxable adults in the local government to support the public health programs or the mobile clinic.

References

Abioye-Akanji, *Oluseyi,* G. (2013). An Exploration of the Barriers to Diabetes Management Among West. Retrieved from https://digitalcommons.ric.edu/school_of_nursing/21

Abioye-Kuteyi, E. A., Elias, S. O., Familusi, A. F., Fakunle, A., & Akinfolayan, K. (2001). The role of traditional birth attendants in Atakumosa, Nigeria. *Perspectives in Public Health, 121*, 119–124. doi:10.1177/146642400112100214

Abubakar, M. S., Musa, A. M., Ahmed, A., & Hussani, I. M. (2007). The perception and practice of traditional medicine in the treatment of cancers and inflammations by Hausa and Fulani tribes on Northern Nigeria. *Journal of Ethnopharmacology, 111*, 625–629. doi:10.1016/j.jep.2007.01.011

Adejoh, S. O. (2014). Diabetes knowledge, health belief, and diabetes management. Retrieved from http://sgo.sagepub.com/content/4/2/2158244014539966

Adekunle, O., Omolase, C. O., & Owoeye, J. F. A. (2010). Diabetic retinopathy in a Nigerian Community. Retrieved from http://www.smj.org.sg/sites/default/files/5101/5101a8.pdf

Agency for Healthcare Research and Quality U.S. Department of Health and Human Services. (2008). Patient Safety and Quality: An Evidence-Based Handbook for Nurses https://archive.ahrq.gov/professionals/clinicians-providers/resources/nursing/resources/nurseshdbk/nurseshdbk.pdf

Agency for Healthcare Research and Quality. (2014). Access to health care national healthcare quality report, 2014 Retrieved from http://www.ahrq.gov/research/findings/nhqrdr/nhqr11/chap9.html

Agency of Healthcare Research and Quality. (2015). AHRQ activities using community-based participatory research to address health care disparities. Retrieved from http://www.ahrq.gov/research/findings/factsheets/minority/cbprbrief/index.html

Alkin, M. C., R. Daillak, R., & White, P. (2015) *Using evaluations: does evaluation make a difference?* Beverly Hills, CA: Sage. Retrieved form http://scx.sagepub.com/content/12/3/319.abstract

American Diabetes Association. (2010a). National standards for diabetes self-management education. Retrieved from http://www.ncbi.nlm.nih. Gov/pmc/articles/PMC2797385/

American Diabetes Association. (2010b). National standards for diabetes self-management education. Retrieved from http://www.ncbi.nlm.nih. Gov/pmc/articles/PMC2797385/

American Diabetes Association. (2017). National standards for diabetes self-management education. Retrieved from http://care.diabetesjournals.org/content/27/suppl_1/s143

American Diabetes Association. (2013). Fast fact data and statistics about diabetes. Retrieved from http://professional.diabetes.org/admin/UserFiles/0%20-%20Sean/FastFacts%20March%202013.pdfQ

American Diabetes Association (2014). Empowerment and self-management of diabetes. Retrieved from http://clinical.diabetesjournals.org/content/22/3/123.long

American Association of Diabetes Educators. (2007). AADE Position Statement: Individualization of Diabetes Self-Management Education. SAGE Publication, Volume 33, Number 1, January/February 2007(DOI: 10.1177/0145721706298308), Retrievedfromhttp://www.diabeteseducator.org/export/sites/aade/_resources/pdf/individualization_dsme.pdf

American Association of Diabetes Educators. (2010). A Sustainable Model of Diabetes Self-Management Education/Training Involves a Multi-Level Team That Can Include Community Health Workers. Retrieved from //www.diabeteseducator.org/export/sites/aade/_resources/pdf/research/community_health_workers_white_paper.pdf

American Heart Association. (2015). Kidney Disease & Diabetes. Retrieved from http://www.heart.org/HEARTORG/Conditions/Diabetes/WhyDiabetesMatters/Kidney-Disease-Diabetes_UCM_313867_Article.jsp

American Diabetes Association. (2014). Statistics about Diabetes Data from the *National Diabetes Statistics Report, 2014* (released June 10, 2014) Overall Numbers, Diabetes and Pre-diabetes. Retrieved from http://www.diabetes.org/diabetes-basics/statistics/

American Diabetes Association. (2017). Cultural and diabetes education: Recommendations for diabetes educators. Retrieved from Cultural_sensitivity_and_diabetes_education_Recommendations_for_diabetes_educatorsttps://

American Association of Diabetes Education. (2011). Cultural Sensitivity and Diabetes Education. American Association of Diabetes Educators (AADE) Position Statement. Retrieved from http://www.diabeteseducator.org/export/sites/aade/_resources/pdf/general/Cultural_Sensitivity_and_Diabetes_Education_PS_2011.pdf

American Association of Diabetes Educators. (2017). Cultural Sensitivity and Diabetes Education. Retrieved from www.diabeteseducator.org/docs/default-source/legacy-docs/_resources/pdf/research/Cultural_Sensitivity_and_Diabetes_Education_TDE.pd

American diabetes Association. (2014). Diabetes Spectrum. External Barriers to Diabetes Care: Addressing Personal and Health System Issues. Retrieved from http://spectrum.diabetesjournals.org/content/14/1/23.short

American Diabetes Association. (2014). 79 million Americans have pre-diabetes. Retrieved from https://www.ahealthiermichigan.org/2014/03/25/79-million-americans-have-prediabetes-are-you-one-of-them/

American Diabetes Association, Diabetes Spectrum. (2015). Views From Within and Beyond: Illness Narratives of African-American Men With Type 2 Diabetes. Retrieved from http://spectrum.diabetesjournals.org/content/17/4/219.full

Amoo, T., Green, B. O, &Raghupathi, V. (2013). The Awareness of DiabetesAnd Its Complication In A Developing Country. Retrieved from http://www.nedsi.org/proc/2013/proc/p121026007.pdf

Andrews, T & Scott, H. (2013). What is Grounded Theory? Retrieved from http://www.groundedtheoryonline.com/what-is-grounded-theory

Audu, D. T., Ojua, T. A., Ishor, D. G., &Abari, C. A. (2013). Inequality and Class Difference in Access to Healthcare in Nigeria. Retrieved from www.iiste.org/Journals/index.php/RHSS/article/download/8369/8497ISSN. 2222-1719 (Paper) ISSN 2222-2863 Vol.3, No.16, 2013

Awojoodu, O., & Baran, D. (2009). Traditional Yoruba medicine in Nigeria: A Comparative Approach: Bulletin of the Transilvania University of Brasov, Series 6:

Medical Sciences, 6(51), 129–136. Retrieved from http://but.unitbv.ro

Bodenheimer, T., Wagner, E. H., &Grumbach, K. (2014).Improving Primary Care for Patients with Chronic Illness. Retrieved from http://jama.jamanetwork.com/article.aspx?articleid=195407

Boston University School of Public Health. (2013). Behavioral Change Models Retrieved from http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/SB721-Models/SB721-Models

Buowari, O. Y. (2013). Diabetes Mellitus in Developing Countries and Case Series Retrieved from http://cdn.intechopen.com/pdfs-wm/42090.pdf

Cambridge University Press. (n.d). Definition of “impediments. Retrieved from https://dictionary.cambridge.org/us/dictionary/english/impediment

Centers for Disease Control and Prevention. (2012). Diabetes Report Card 2012: National and State Profile of Diabetes and its Complications. Diabetes Public Health

Resource, Retrieved from http://www.cdc.gov/diabetes/pubs/reportcard/diabetes-overview.htm

Center for Disease Control and Prevention. (2014). National Diabetes Statistics Report, 2014, Estimates of Diabetes and Its Burden in the United States. Retrieved from http://www.cdc.gov/diabetes/pubs/estimates14.htm

Chan, M. (2014). Global Report on Diabetes. World Health Organization. Retrieved from http://apps.who.int/iris/bitstream/10665/204871/1/9789241565257_eng.pdf

Chijioke, A., Adamu, N. A., Makusidi, A. N., (2010). Mortality pattern among Type 2 diabetes patients in Ilorin, Nigeria. Department of Medicine, University of Ilorin Teaching Hospital, Ilorin, Nigeria. Retrieved from http://www.unilorin.edu.ng/publications/chijiokea/MORTALITY%20IN%20TYPE%20II%20DM%20 (SA).pdf

Chinenye S., Uloko A. E., Ogbera A. O., Ofoegbu E. N., Fasanmade O. A., Fasanmade A. A., Ogbu O. O (2016). Profile of Nigerians with diabetes mellitus—Diabcare Nigeria study group (2008): Results of a multicenter study. Indian Journal of Endocrinology Metabolism, 16, 558-564.

Chukwu, B. N.; Ezebuiro, V. O.; Samuel, E. S; &Nwachukwu, K. C. (2013). Gender Differential in the Incidence of Diabetes Mellitus among the Patients in Udi Local Government Area of Enugu State, Nigeria. Retrieved from http://www.mcser.org/journal/index.php/mjss/article/viewFile/1769/1773

Creative Research System. (2012). Sample Size Formulas for our Sample Size Calculator. Retrieved from http://www.surveysystem.com/sample-size-formula.htm

Coulter, A. &Ellins, J. (2006). Picker Institute Europe: Quest for Quality and Improved Performance. Patient-Focused Interventions: A Review of the Evidence. Retrieved from http://www.health.org.uk/public/cms/75/76/313/526/Patientfocusedinterventions.pdf?realName=juNCmR.pdf

Cockerham, W. (2013). Social Causes of Health and Disease (2nd Edition). Polity Press, MA 02148 U. S. ISBN: 978-0-7456-6119-3

Creswell, J. W. (2009). Research Design: Qualitative, Quantitative, and Mixed Approaches (3rd Edition). Los Angeles: SAGE Publications, Inc.

Creswell, J. W. (2013). Research Design: Qualitative, Quantitative, and Mixed Approaches (4th Edition). Los Angeles: SAGE Publications, Inc.

Community Toolbox. (2014). Diabetes Prevention and Control: Self-Management Education. Retrieve from http://www.thecommunityguide.org/diabetes/selfmgmteducation.html

Denzin, N. K. & Lincoln, Y. S. (2011). The SAGE Handbook of Qualitative Research (Sage Handbooks). Fourth Edition. Illinois. SAGE Publications, Inc

Disease Management Association of America. (2010). The Definition of "Disease Management. Retrieved from http://www.dmaa.org/dm_definition.asp,

Dochman, D. D. S. (2013). Health Behavior: Emerging Research Perspectives. Retrieved from https://books.google.com/books/about/Health_Behavior.html?id=iNIFCAAAQBAJ&source=kp_cover

Ely, M., Anzul, M., Friedman, T., & Steinmetz, A. M. (2003). Doing Qualitative Research: Circles Within Circles. Retrieved from https://www.amazon.com/Doing-Qualitative-Research-Circles-Teachers/dp/1850008140

European Journal of Sustainable Development (2017). Double Burden, Non-Communicable Diseases and Risk Factors Evaluation In Sub-Saharan Africa: The Nigerian Experience. Retrieved from http://www.ecsdev.org/images/V1N2/ekpenyong%20249-270.pdf 1, 2, 249-270, ISSN: 2239-5938

Frankfort-Nachmias, C., &Nachmias, D. (2008). Research methods in the social sciences (7th Ed). New York: Worth.

Funnel, M. M. (2017). National Standards for Diabetes Self-Management Education American Diabetes Association and BMJ: Open Diabetes Research & Care Retrieved fromhttp://care.diabetesjournals.org/content/25/suppl_1/s140.long

Galloway, R. D. (2016). Health Promotion: Causes, Beliefs and Measurements Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1069052/

George, S. R., & Thomas, S. P. (2010). Lived experience of diabetes among older, rural people. *Journal of Advanced Nursing, University of Tennessee-Knoxville. Retrieved from https://works.bepress.com/sandra_thomas/8/*

Glaser, B. G. & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Piscataway, New Jersey: Transaction.

Glycemic Index Foundation. (2017). What is The Glycemic Index? Retrieved from http://www.gisymbol.com/about/glycemic-index/

Gochman, D. S. (1998). Health Behavior: Emerging Research Perspectives. **Editors:** Bahar**, Sonya (Ed.). ISBN 978-1-4899-0833-9**

Green, H. (2014). Use of theoretical and conceptual frameworks in qualitative research: Nurse Researcher. 21, 6, 34-38. Retrieved from ournals.rcni.com/doi/pdfplus/10.7748/nr.21.6.34.e1252

Haas et al. (2016). National Standards for Diabetes Self-Management Education and Support. American Diabetes Association, 8-39. http://dx.doi.org/10.2337/dc12-1707

Healthy People 2020. (2017). Healthcare Access in Rural Communities Introduction - Rural Health. Retrieved from https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Access-to-Health-Services

Healthline. (2014). Type 2 Diabetes Statistics and Facts: Prevalence & Risk Factor Retrieved from http://www.healthline.com/health/type-2-diabetes/statistics

Hu, Frank B. (2011). Globalization of Diabetes: The role of diet, lifestyle, and genes. American Diabetes Association Diabetes Care Retrieved fromhttp://www.ncbi.nlm.nih.gov/pmc/articles/PMC3114340/

Hycner, R. H. (1985). "Some guidelines for the phenomenological analysis of interview data," Human Studies 8, 279-303

International Diabetes Association Federation. (2012). The Africa Diabetes Care Initiative 2010-2012). Diabetes in Africa: facing the future with hope for all ages. Retrieved from http://www.idf.org/webdata/ADCI-2010-2012.pd

International Diabetes Association Federation, Diabetes Association of Nigeria. (2014). Diabetes Score Card. Retrieved from http://www.idf.org/membership/afr/nigeria

Izugbara, D. A., &Duru, E. C., (2006). Trans-ethnic Sojourns for Ethno-medical Knowledge Among Igbo Traditional Healer in Nigeria. Preliminary Observations. Journal of World Anthropology, 2(2), 27-47. Retrieved from http://wings.buffalo.edu/research/anthropologist/JWA/

Jack, L., Jr. (2012). Diabetes Self-Management Education Research: An International Review of Intervention Methods, Theories, Community Partnerships and Outcomes. Disease Management & Health Outcomes, Volume 11, Issue 7, pp 415-428

Jones, S. R, Carley, S., & Harrison, M (2014). An introduction to power and sample size estimation. The importance of power and sample size estimation for study design and analysis. BMJ Publication Retrieved from http://emj.bmj.com/content/20/5/453.full.pdf+html

Johnston, G. (2009). Ethnography: Your guide to Doing it Right. Retrieved April 12, 2013 from http://www.aipmm.com/html/newsletter/parchives/00032.ph

Journal of American Physical Therapy Association. (2016). Epidemiology of Diabetes and Diabetes-Related Complication. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3870323/

Journal of Advanced Nursing. (2012). The integrative review: updated methodology. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2648.2005.03621.x/abstract?deniedAccessCustomisedMessage=&userIsAuthenticated=false

Journal of the American Dietetic Association. (2015). Qualitative vs Quantitative Methods. Tow Opposite that Make a Perfect Match. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/1272821

Journal of Diabetes & Metabolic Disorders. (2014**).** Facilitators and barriers of adaptation to diabetes: experiences of Iranian patients. Retrieved from https://jdmdonline.biomedcentral.com/articles/10.1186/2251-6581-13-17

Keen, A. (2013). Saturation in Qualitative Research Distinguishing Between Descriptive and Theoretical Saturation. Retrieved from http://www.rcn.org.uk/__data/assets/pdf_file/0003/511464/Research2013Th39.pdf

Kohlbacher, F. (2015). The Use if Qualitative Content Analysis in Case Study Research. Forum Qualitative Sozialforschung/Forum: Qualitative Social Research, 7(1), Art.21, Retrieved from http://nbn-resolving .de/urn: de: 0114-fqs0601211

Lester, S. (1999). An Introduction to Phenomenological Research. Taunton: Stan Lester Developments. http://www.sld.demon.co.uk/resmethy.pdf

Lincoln, Y. S. & Guba, E. G. (2008). Guba's Evaluative Criteria. Retrieved from http://www.qualres.org/HomeLinc-3684.html

Locks, E. A. & Latham, G. P. (2006). Current Directions in Psychological Science: New Directions in Goal-Setting Theory. R.H. Smith School of Business, University of Maryland, and Rotman School of Management, University of Toronto. Retrieved from http://www.wku.edu/cebs/doctorate/documents/readings/locke_latham_2006_goal-setting_theory.pdf

Journal of Ethnobiology and Ethnomedicine. (2010). Preparation and use of plant medicines for farmers' health in Southwest Nigeria: socio-cultural, magico-religious and economic aspects. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2821299/

Mason, M. (2015). Sample Size and Saturation in Ph.D. Studies Using Qualitative Interviews. Retrieved from http://www.qualitative-research.net/index.php/fqs/article/view/1428/3027

Mendenhall T. J. & Doherty W. J. (2007). Partners in Diabetes: Action Research in a primary care setting: SAGE Publication: Retrieve from http://www.cehd.umn.edu/fsos/projects/cpc/pdf/pid-action.pdf

Merriam-Webster. (2017). Learner’s Dictionary. Retrieved from http://www.learnersdictionary.com/definition/definition

Minnesota Department of Health. (2005). Minnesota's Disparities in Diabetes by Race/Ethnicity. Minnesota Diabetes Program Retrieved from http://www.health.state.mn.us/diabetes/data/disparities.pdf

Morgan, D. L. (2013). Focus Groups as Qualitative Research: Planning and Research Design for Focus Groups. Retrieved from http://www.uk.sagepub.com/gray3e/study/chapter18/Book%20chapters/Planning_and_designing_focus_groups.pdf

Moonaghi, H. K., Areshtanab, H. N., Jouybada, J., Bostanabada, A. M., & McDonald, H. (2014). Facilitators and barriers of adaptation to diabetes: Experiences of Iranian patients. Journal of Diabetes & Metabolic Disorders, 3-17. doi:DOI: 10.1186/2251-6581-13-17

Mufunda, E., Wikby, K., Björn, A., Hjelm, K. (2012). Level and determinants of diabetes knowledge in patients with diabetes in Zimbabwe**:** a cross-sectional study**.** Pan African Medical Journal**.** Retrieved fromhttp://www.ncbi.nlm.nih.gov/pmc/articles/PMC3567417/

Muchira, J., Stuart-Shor, E., Kuriuki, J., Mukuna, A., Ndigirigi, I., Gakage, L., Mutuma, V., Karani, A. (2015). Distribution and characteristics of risk factors for cardiovascular–metabolic disease in a rural Kenyan community. International Journal of Africa Nursing Sciences, Volume 3, 2015, Pages 76-81. Retrieved from http://www.sciencedirect.com/science/article/pii/S2214139115000244

National Geography. (2017). Nigeria Facts. Retrieved from http://travel.nationalgeographic.com/travel/countries/nigeria-facts/

National Cancer Institute, Rimer, B. K., &Glanz, K. A. (2012). The theory at a glance: A guide for health promotion practice (2nd Ed.). Washington, DC: U.S. Department of Health and Human Services, National Institutes of Health. The website of the National Cancer Institute (http://www.cancer.gov)

National Center for Biotechnology Information. (2014). Effectiveness of self-management promotion educational program among diabetic patients based on health belief model. Retrieved from http://www.ncbi.0nlm.nih.gov/pmc/articles/PMC3977410/

National Standards for Diabetes Self-Management Education. (2017). 2017 National Standards for Diabetes Self-Management Education and Support. Retrieved from https://professional.diabetes.org/sites/professional.diabetes.org/files/media/2017_national_standards_for_dsmes_public_comment.pdf

Norris, S. L., Engelagau, M. M., & Narayan K. M. V. (2002). Effectiveness of Self-management training in Type 2 Diabetes. A systematic review of randomized control trial Diabetes Care, 24(3), 561-587. Doi:10.2337/diacare.24.3.561

Nwoko, K. C. (2009). Traditional Psychiatric Healing in Igbo Land, Southeastern Nigeria.
African Journal of History and Culture, 1(2), 36-43. Retrieved from http://www.academicjournals.org/AJHC

Nova Southeastern University. (2015). Insights on the Process of Using Interpretive Phenomenological Analysis in a Sport Coaching Research Project. Retrieved from http://www.nova.edu/ssss/QR/QR20/2/callary1.pdf

Nyenwe, A. E.; Odia, O. T.; Ihekwaba, A. E.; Ojule, A., Babatunde, S. (2003). Type 2 diabetes in adult Nigerians: a study of its prevalence and risk factors in Port Harcourt, Nigeria. Retrieve from http://www.ph.ucla.edu/epi/rapidsurveys/diabresclinpract62%283%29_177_185_2003.pdf

Oguejiofor, O., Odenigbo, C., &Onwukwe, C. (2014). Diabetes in Nigeria: Impact, Challenges, Future Directions. Retrieved from http://www.omicsonline.org/open-access/diabetes-in-nigeria-impact-challenges-future-directions-2161-1017.1000130.pdf

Okeke, T. A., Okafor, H. U., &Uzochukwu, B. S. C. (2006). Traditional healers in Nigeria: Perception of cause, treatment, and referral practices for severe malaria. Journal of Biological Science, 38, 491–500.doi:10.1017/S002193200502660X

Okeniyi, O. (2017). Addressing drug prescription problems in Nigeria. Retrieved from https://www.dailytrust.com.ng/sunday/index.php/comment-debate/5963-addressing-drug-prescription-problems-in-nigeria

Olayemi, O. (2012). Addressing drug prescription problems in Nigeria - Daily Trust. Retrieved from https://www.dailytrust.com.ng/sunday/index.php/comment-debate/5963-addressing-drug-prescription-problems-in-nigeria

O'Leary, Z. (2004). The essential guide to doing research. Sage Publication. London. Retrieved from https://www.amazon.com/Essential-Guide-Doing-Research/dp/0761941983

Onwudiwe, N. C; Mullins, C. D.; Winston, R. A.; Shaya, F. T.;Prael, F. G.; Laird, A.; & Sunders, E. (2011). Barriers to Self-Management of Diabetes: Qualitative Study Among Los-Income Monolith Diabetics. Retrieved from http://www.ishib.org/journal/21-1/ethn-21-01-27.pdf

Opdenakker R., (2014). Advantages and Disadvantages of Four Interview Techniques in Qualitative Research. Retrieved from http://www.qualitative-research.net/index.php/fqs/article/view/175/391

Opoola, L. (2016). Only 3 percent of Nigerians have healthcare coverage – NHIS**.** Retrieved from https://www.dailytrust.com.ng/news/health/only-3-percent-of-nigerians-have-healthcare-coverage-nhis/172812.html

Oyebanji, J. O. (2014). Health Conditions in Nigeria. Reported Cases from Noticeable Diseases. Retrieved from http://www.onlinenigeria.com/health/

Patton, M. Q. (2002). Qualitative Evaluation and Research Methods. SAGE Publications. Newbury Park London New Delhi.

Patton, M. Q. (2015). Qualitative Evaluation and Research Methods (4th Edition). SAGE Publication. Thousand Oaks, United States. ISBN13 9781412972123

Patient Trusted Medical Information and Support, UK (2013). Diabetes Education and Self-Management Programmers. Retrieved from http://www.patient.co.uk/doctor/diabetes-education-and-self-management-programmes

Ritchie, J. and Lewis. J. (2003). Qualitative Research Practice: A Guide for Social Science Students and Researchers. SAGE Publications Inc. 2455 Teller Road

Thousand Oaks, California 91320, ISBN 0 7619 7109 2. Retrieved from https://mthoyibi.files.wordpress.com/2011/10/qualitative-research-practice_a-guide-for-social-science-students-and-researchers_jane-ritchie-and-jane-lewis-eds_20031.pdf

Rosenstock, I. M; Strecher, V. J., & Becker, M. H. (2014). Social Learning Theory and the Health Belief Model. Retrieved from http://heb.sagepub.com/content/15/2/175.short

Saad, B., Azaizeh, H., & Said, O. (2005). Tradition and Perspectives of Arab Herbal Medicine: A review. *Evidence-Based Complementary and Alternative Medicine, 2, 475–479.doi:10.1093/ecam/neh133*

SAGE Journal. (2001). Perspectives in Public Health: The role of traditional birth attendants in Atakumosa, Nigeria. Retrieved from http://journals.sagepub.com/doi/pdf/10.1177/146642400112100214

Santos-Longhurst, A. (2014). Type 2 Diabetes Statistics and Facts.Healthline. Retrieved from http://www.healthline.com/health/type-2-diabetes/statistics

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects Retrieved from http://www.crec.co.uk/docs/Trustworthypaper.pdf

Shrivastav, S. R., Shrivastava, P. S., Ramasamy, G., 2014). The role of self-care in the management of diabetes mellitus. *Journal of Diabetes Metabolic Disorder*. Retrieved from http://jdmdonline.biomedcentral.com/articles/10.1186/2251-6581-12-14

Simmons, D., Weblemoe, T., Voyle, J., Prichard, A., Leakehe, L., Gatland, B. (2008). Personal Barriers to Diabetes Care: Lessons from a Multiethnic Community in New Zealand. *Diabatic Med 15:958-964, 1998*

Torraco, R. J. (2011). Writing Integrative Literature Review: Guidelines and Examples. SAGE Publication. Retrieve from http://www.sagepub.com/gray/Website%20material/Journals/hrd_torraco.pdf DOI: 10.1177/1534484305278283

Tripp-Reimer, R., Choi, E., Kelley, S., Enslein J.C. (2009). Cultural Barriers to Care: Inverting the Problem. *Diabetes Spectrum 14:13-21,2010*

Trochim, W. M. K. (2006). *Types of Questions: Social Research Methods*. Retrieved from Social Research Methods: http://www.socialresearchmethods.net/kb/questype.php

Trochim W. M. K. & Donnelly J. P. (2008). Research Methods Knowledge Base. (3rd ed.). Mason, OH. Atomic Dog/Cengage. ISBN 1592602916, 9781592602919

Udeogaranya, P. (2015). Diabetes Self-Care Knowledge among Type 2 Outpatients in Southern-Eastern Nigeria. Retrieved from http://www.researchgate.net/publication/41392040

Uloko, et al. (2012). Profile of Nigerians with diabetes mellitus - Diabcare Nigeria study group (2008): Results of a multicenter study. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/22837916

University of Pennsylvania. (2012). Reason & Rigor: How Conceptual Frameworks Guide Research. Retrieved from www.sagepub.com/books/Book234596

University of California. (2015). Types of samples. Probability sampling (Representative samples) Retrieved from http://psychology.ucdavis.edu/faculty_sites/sommerb/sommerdemo/sampling/types.htm

University of Southern California. (2014). Types of research designs - organizing your social sciences. Retrieved from http://libguides.usc.edu/content.php?pid=83009&sid=818072

University of Nigeria, Nsukka-Nigeria. (2013.) Gender Differential in the Incidence of Diabetes Mellitus among the Patients in Udi Local Government Area of Enugu State, Nigeria. Retrieved fromhttp://www.mcser.org/journal/index.php/mjss/article/viewFile/1769/1773

University of Surrey. (2009). Methods *of collecting qualitative data.* Data collection approaches for qualitative. Retrieve fromhttp://libweb.surrey.ac.uk/library/skills/Introduction%20to%20Research%20and%20Managing%20Information%20Leicester/page_54.htm

University of Tennessee, Knoxville. (2011). Issues in Nursing Research, Training, and Practice Retrieved from books.google.com/books?isbn=1464965277

University of South Florida Scholar Commons. (2011). African American women with Type 2 diabetes: Understanding self-management. Retrieved from http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=2207&context=etd

U. S. Department of Health and Human Services, National Institutes of Health. (2012). The theory at a Glance -Foundations of Theory in Health Promotion and Health

Behavior. A Guide for Health Promote Practice, Retrieved from http://www.cancer.gov/cancertopics/cancerlibrary/theory.pdf

U. S. National Library of Medicine, National Institutes of Health (2010). Change in Goal Ratings as a Mediating Variable between Self-Efficacy and Physical Activity in Older Men. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2904848/

U. S. National Library of Medicine, National Institutes of Health. (2011). Barriers to self-management of diabetes: a qualitative study among low-income minority diabetics. Retrieved fromhttp://www.ncbi.nlm.nih.gov/pubmed/21462726

U. S. National Library of Medicine, National Institutes of Health. (2013). Acculturation and glycemic control of Asian Indian adults with Type 2 diabetes Community Health. 2013 Feb; 38(1):78-85. doi: 10.1007/s10900-012-9584-6.

U. S. National Library of Medicine, National Institutes of Health. (2014). National Standards for Diabetes Self-Management Education and Support. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4181074/

US National Library of Medicine, National Institutes of Health. (2015). Qualitative vs quantitative methods: two opposites that make a perfect match. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/12728213

U.S. Department of Health and Human Services, National Cancer Institute. (2012). Theory at a Glance - A Guide for Health Promotion Practice. Retrieved from Theory-Glance-Health-Promotion-Practice/dp/147762399X

United States Embassy in Nigeria. (2016). Nigerian Fact Sheet. Retrieved from http://photos.state.gov/libraries/nigeria/487468/pdfs/Nigeria%20overview%20Fact%20Sheet.pdf

Uzodinma, A. (2012). Communiqué of the 2009 Nigerian national health conference (Primary health care in Nigeria: 30 years after Alma Ata). Retrieved from http://uzodinma-adirieje.blogspot.com

Van Dyk, E. J. (2013). Improving outcomes for persons with Type 2 diabetes through self-management education. Retrieved from http://udini.proquest.com/view/improving-outcomes-of-persons-with-goid:288349419

Wattanakul, B. (2012). Factors Influencing Diabetes Self-Management Behaviors among Patients with T2DM in Rural Thailand. Retrieved from https://dspace-prod-lib.cc.uic.edu/bitstream/handle/10027/9139/Wattanakul_Boontuan.pdf?sequence=1

Waters, J. (2015). Phenomenological Research Guidelines. Retrieved from http://www.capilanou.ca/psychology/student-resources/research-guidelines/Phenomenological-Research-Guidelines/

Western Michigan University. (2014). What Guides Evaluation? A Study of How Evaluation Practice Maps onto Evaluation Theory Retrieved from

http://www.wmich.edu/evalphd/wp-content/uploads/2010/05/What_Guides_Evaluation.pdf

Windsor, C., Clark, M. (2014). Rural self-reliance: the impact on health experiences of people living with type II diabetes in rural Queensland, Australia. US National Library of Medicine
National Institutes of Health. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4071306

World Health Organization. (2014). Types of diabetes: there are three main types of diabetes. Retrieved from http://www.idf.org/types-diabetes

World Health Organization. (2011). Position Statement: Self-Management Education. Diabetes Self-Management Education: A Right for All. Retrieved from http://www.idf.org/education/self-management-education

World Health Organization. (2014). IDF Atlas Sixth Edition Posted Update 2014. Key Finding 2014.Retrieved from http://www.idf.org/diabetesatlas/update-2014

World Health Organization. (2013). Diabetes mellitus Organization. IDF DIABETES ATLAS.6th Edition. Retrieved from http://www.idf.org/sites/default/files/EN_6E_Atlas_Full_0.pdf

World Health Organization, (2014). Diabetes mellitus. Publication of WHO. Retrieved fromhttp://www.who.int/mediacentre/factsheets/fs312/en/

World Health Organization. (2009). Global Health Risks: Mortality and burden of disease attributable to selected major risks. Retrieved from http://www.who.int/healthinfo/global_burden_dise

World Health Organization, (2014). Diabetes mellitus. Publication of WHO. Retrieved fromhttp://www.who.int/mediacentre/factsheets/fs312/en

World Health Organization. (2004). Diabetes Action Now. Retrieved from http://www.who.int/diabetes/actionnow/en/DANbooklet.pdf

World Health Organization. (2011). World Health Statistics 2011. Geneva: WHO. Retrieved from http://www.who.int/whosis/whostat/EN_WHS2011_Full.pdf

World Health Organization. (2011). Global Diabetes Plan 2011-2021 International Diabetes Federation. Retrieved from https://www.idf.org/sites/default/files/Global_Diabetes_Plan_Final.pdf

Wu, S. C., Driver, V. R., Wrobel, J. W., Armstrong, D. G. (2013). Foot ulcers in the diabetic patient, prevention and treatment. US National Library of Medicine National Institutes of Health. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1994045

Yin, R. K. (2003). Case Study Research: Design and Methods (3rd ed.). Thousand Oaks, CA: SAGE

Appendix A: Letter of Introduction to the Stakeholder

Date:

Dear Sir/Madam.
My name is Augustina Oha. I am a doctoral candidate at Walden University. I want to conduct research on the Impediments of Type 2 Diabetes Self-Management in Mgbidi Women in Awgu Local Area. It has been identified that many populations in Nigeria find it difficult to self-manage their Type 2 diabetes. I am interested in finding out the impediments to self-managed Type 2 Diabetes in Mgbidi Women which results in many diabetes complications and negative health outcome for this population and other populations that have Type 2 diabetes.
This research is being conducted to gain insight into the impediments to self-management for this population.
I just want to introduce myself and ask for your support for the data collection form the Mgbidi community.

Thank you,
Sincerely yours,

Augustina Oha
Doctoral Candidate
Public Health program
School of Health Sciences
Walden University
100 Washington Avenue South Suite 900
Minneapolis, MN 55401

Appendix B: Recruitment Flyer

You May be Able to Help Improve Diabetes Self-Management Education in Your Community

How Can You Do That?

- Share Your Experiences with Type 2 Diabetes
- Share Your Impediments to Your Self-Managed Type 2 Diabetes
- Describe How Diabetes affect Your Life Experience
- Share Your Challenges, Barriers and needs for Self-management of Type 2 Diabetes

Who Can Participate?

- Women Living at Mgbidi – Awgu, Enugu State, Nigeria
- Who have Been Diagnosed with Type 2 Diabetes for at least One Year
- Any Mgbidi Women who is 40 years or older and have Type 2 Diabetes
- Women Who is a Native of Mgbidi or Live in Mgbidi for at least One Year and have Type 2 Diabetes

How Do I Sign Up or Find more Information on How to Participate?

- **For Information:** Contact Augustina Oha – the researcher
- Attend the Information Meeting: -
- Date:
- Time:
- Place:

Appendix C: Consent Form

CONSENT FORM

Impediments of Self-Managed Type 2 Diabetes in Mgbidi Women, Nigeria

You are invited to take part in a research study about Impediments of Self-Managed Type 2 Diabetes in women of Mgbid who have Type 2 Diabetes. The researcher is inviting Mgbidi women who are 40 years and older that have type 2 diabetes to be in this study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Augustina Oha who is a doctoral student at Walden University

Background Information:

The purpose of this study is to identify the impediments to self-managed type 2 diabetes in women living with type 2 diabetes in Mgbidi, Nigeria

Procedures:

If you agree to be in this study,

- You will be asked to participate in a 45 to 60 minutes face-to-face interview.
- The interview may be in a private room in the local health clinic which is adjacent to St. Benedict's Church, or the conference room in the church
- The interview will be audio recorded to allow for in-depth description of your challenges, barriers and needs for self-managed type 2 diabetes.
- The data will be collected from you only once.
- There priest will be available for free counseling for anybody who need that, for both participants who will be interviewed in both the health clinic and the church.

- There be will a follow-up meeting approximately one week after the interview for data collection, and this will last about 60 to 90 minutes.

- You can quite at any stage of the interview if you become uncomfortable in any way

Here are some sample questions: -

Primary Questions –

(h) Do you have any religious/family beliefs that affect the management of your disorder?
(i) How do you perceive your diabetes?
(j) What are the challenges or barriers you face trying to manage your diabetes?
(k) How does your diabetes interfere with your daily life, hobbies or recreational activities?
(l) How often do you check your blood sugar?
(m) Does any other member of your family have diabetes?

Voluntary Nature of the Study:

This study is voluntary. You are free to accept or turn down the invitation. No one at the health clinic or any place will treat you differently if you decide not to be in the study. If you decide to be in the study now, you can still change your mind later. You may stop at any time. Please note that not all volunteers will be contacted to take part. The researcher will follow up with all volunteers to let them know whether or not they were selected for the study. You are free to withdraw at any stage of the process without penalty and your identity will not be shared with anybody about this study.

Risks and Benefits of Being in the Study:

There is no anticipated risk in taking part in this study. By taking part in this study, you may be able to help improve diabetes self-management education in your community Being in this study would not pose any risk to your safety or wellbeing; instead it will enable you to contribute to the existing knowledge about self-management of type 2 diabetes
However, in the event that you experience any form of anxiety or stress during the process of this study, you can withdraw from participation and a free counseling will be provided for you.

Payment:
There is no form of compensation or payment for participating in this study.

Privacy:
All the records of this study will be kept private. Reports coming out of this study will not share the identities of individual participants. Details that might identify participants, such as the location of the study, also will not be shared. The researcher will not use your personal information for any purpose outside of this research project. Data will be kept secure by locking them in a secure place where only the researcher will have access to. Data will be kept for a period of at least 5 years, as required by Walden University.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher by Phone at (336) 965-2006. By email: augustina.oha@waldenu.edu. If you want to talk about your rights as a participant, you can call the Research Participant Advocate at Walden university at 612-312-1210, or 1-800-925-3368 Extension 312120 by email at irb@waldenu.edu.

The researcher will give you a copy of this form to keep for your record.

.

Obtaining Your Consent

If you feel you understand the study well enough to make a decision about it, please indicate your consent by signing below

Printed Name of Participant ______________________________

Date of consent ______________________________

Participant's Signature ______________________________

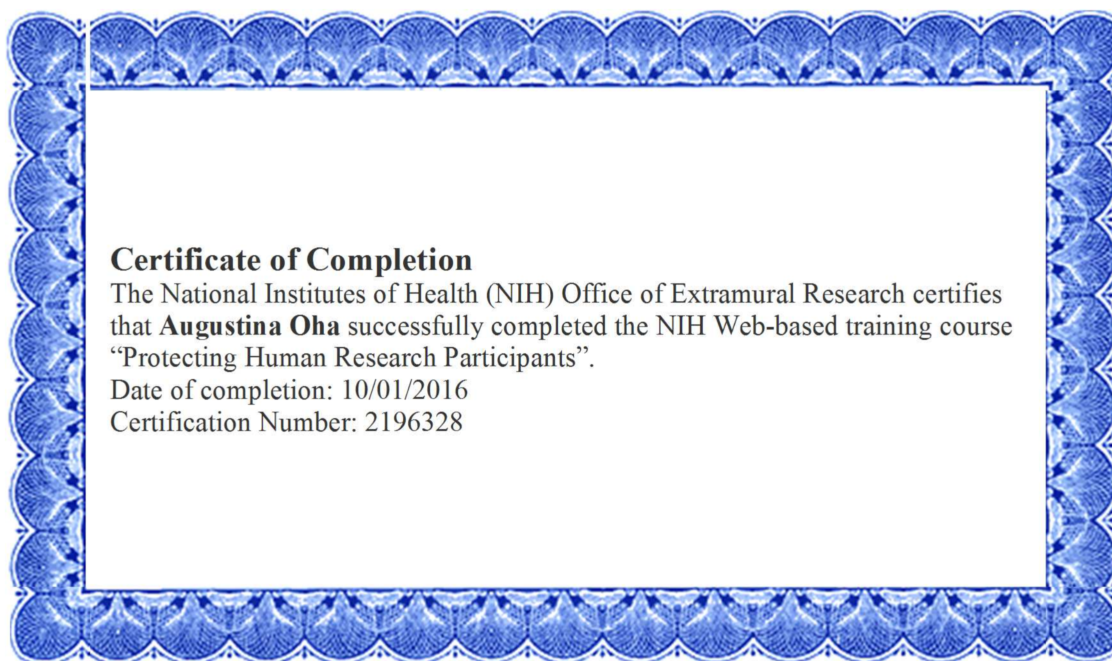
Researcher's Signature ______________________________

Appendix D: Interview Questions

1. Do you have any religious/family beliefs that affect the management of your disorder?
2. What are the challenges or barriers you face trying to manage your diabetes?
3. How do you perceive your diabetes?
4. How does your diabetes interfere with your daily life, hobbies or recreational activities?
5. How often do you check your blood sugar?
6. Does any other member of your family have diabetes?
7. Do you have easy access to health care?
8. Do you manage your type 2 diabetes with Medication? If so, what type of medication
9. How does Type 2 diabetes affect your choices of food?
10. Have you had any type two complications since you were diagnosed?
11. How do you think the health care access and utilization affect your self-management?
12. What do you do to self-manage your diabetes?
13. What are your experiences living with type 2 diabetes?
14. How does your perception about type 2 diabetes affect your self-management?
15. How does your Type 2 diabetes affect your family and your loved ones?
16. Do you have access to education on self-management of Type 2 diabetes?
17. Do you manage your Type 2 diabetes with medication?

18. Please describe anything you believe hinders your Type 2 diabetes self-management
19. What do you think can be done to improve your self-management care for Type 2 diabetes for you to overcome the impediments?

Appendix E: National Institute of Health Certificate



Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Augustina Oha** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 10/01/2016

Certification Number: 2196328

Appendix F: Confidentiality Agreement

Name of Signer:

During the course of my activity in collecting data for this research: **"Impediments of Self-Managed Type 2 Diabetes in Mgbidi Women, in Nigeria**" I will have access to information, which is confidential and should not be disclosed. I acknowledge that the information must remain confidential, and that improper disclosure of confidential information can be damaging to the participant.

By signing this Confidentiality Agreement, I acknowledge and agree that:

1. I will not disclose or discuss any confidential information with others, including friends or family.
2. I will not in any way divulge copy, release, sell, loan, alter or destroy any confidential information except as properly authorized.
3. I will not discuss confidential information where others can overhear the conversation. I understand that it is not acceptable to discuss confidential information even if the participant's name is not used.
4. I will not make any unauthorized transmissions, inquiries, modification or purging of confidential information.
5. I agree that my obligations under this agreement will continue after termination of the job that I will perform.
6. I understand that violation of this agreement will have legal implications.
7. I will only access or use systems or devices I'm officially authorized to access and I will not demonstrate the operation or function of systems or devices to unauthorized individuals.

Signing this document, I acknowledge that I have read the agreement and I agree to comply with all the terms and conditions stated above.

Signature: **Date:**

ST. BENEDICT
CATHOLIC CHURCH
Mgbidi, Awgu Local Government Area of Enugu State.
☎: 08035817753

3rd March, 2017

The Catholic Priest,
St. Benedict Catholic Church,
Mgbidi, Awgu Local Government Area,
Enugu diocese,
Enugu State, Nigeria

Dear Augustina Oha,

LETTER OF COOPERATION FROM A COMMUNITY RESEARCH PARTNER

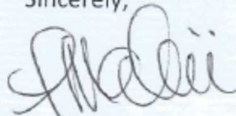
Based on my review of your research proposal, I give permission for you to conduct the study entitled "Impediments of Self-Managed Type 2 Diabetes in Mgbidi Women, Nigeria" within the vicinities of St. Benedict's Catholic Church. As part of this study, I authorize you to recruitment, data collection, member checking, and results dissemination activities. Individuals' participation will be voluntary and at their own discretion.

We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,



CHARLES MADUJI
Authorised Signature

ST. BENEDICT'S CATHOLIC CHURCH
MGBIDI, AWGU

Traditional Ruler

OF UWAKPU VILLAGE

Mgbidi, Awgu Local Government Area of Enugu State.

☎: 08080915979

March 2, 2017

Chief Martin C. Kanueze
The Traditional Ruler of Uwakpu Village
Mgbidi, Awgu Local Government Area,
Enugu State, Nigeria

Dear Ms. Oha,

LETTER OF COOPERATION FROM A COMMUNITY RESEARCH PARTNER

Based on my review of your research proposal, I give permission for you to conduct the study entitled"Impediments of Self-Managed Type 2 Diabetes in Mgbidi Women, Nigeria" within the vicinities of St. Benedict's Catholic Church. As part of this study, I authorize you to recruitment, data collection, member checking, and results dissemination activities. Individuals' participation will be voluntary and at their own discretion.

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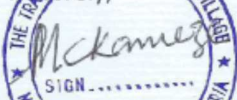
Sincerely,



Chief M. C. Kanueze
The Traditional Ruler of Uwakpu Village,
Mgbidi

IGWE P. D. Uzochukwu

Mgbidi, Awgu Local Government Area of Enugu State.
☎: 08037502881

March 1st, 2017

His Royal Highness,
Igwe P. D. Uzochukwu of Mgbidi,
Awgu Local Government Area,
Enugu State,
Nigeria, West Africa

Dear Ms. Oha,

LETTER OF COOPERATION FROM A COMMUNITY RESEARCH PARTNER

Based on my review of your research proposal, I give permission for you to conduct the study entitled "Impediments of Self-Managed Type 2 Diabetes in Mgbidi Women, Nigeria" within the premises of St. Benedicts Catholic Church, Mgbidi. As part of this study, I authorize you to use the church premises for recruitment, data collection, member checking, and results dissemination activities. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include: the use of the conference room and free counseling that will be provided to the participants by the priest if there is need for that. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

H. R. H. Igwe P. D. Uzochukwu