2017

Breaking the Silence: Postpartum Depression Among Reproductive-aged Women in Akwa Ibom State, Nigeria

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Walden University
2017

Abstract

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BSC, University of Phoenix, 2007

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Dissertation Submitted in Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

August 2017

Abstract

Postpartum depression (PPD) is internationally recognized as one of the most prevalent and severe but neglected maternal mental health complications of childbirth. Previous studies have indicated that there is a high burden of disease associated with PPD in both developed and developing countries. However, there remain gaps in the current literature regarding the recognition and management of PPD in remote parts of the developing world. Therefore, the purpose of this study was to understand the perceptions, attitudes, and beliefs of health professionals towards PPD and examine the factors that either facilitated or hindered its recognition and management in a remote setting in Nigeria. The pen-3 cultural model was the conceptual framework used in this study. The study focused specifically on professionals with regard to the recognition and management of PPD in a rural hospital in Nigeria. Ten semi structured qualitative interviews were conducted with doctors and nurses from a rural hospital in Nigeria. Data were analyzed via phenomenological interpretative analysis. Results from the study revealed that health professionals in a remote setting in Nigeria have a working knowledge of PPD and perceived the condition as a serious public health concern, but were faced with numerous barriers from the institutional, organizational, and community level that hindered their ability to recognize and manage PPD in a timely manner. These results make an important contribution to the existing literature and can enhance social change initiatives through the enhancement of awareness of PPD, and the need for improvement of policies on comprehensive maternal mental health in remote parts of Nigeria.

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Acknowledgments

The writing of this dissertation has been a long journey and an excellent learning experience. I wish to acknowledge that the completion of this journey was possible with the support of several people. I would like to express my sincere gratitude to all of them. First of all, I would like to thank God Almighty for grace and strength that carried me through this journey even in the face of many obstacles and difficulties. Secondly, I must acknowledge my chair, Dr. Fraser, for her support, guidance, patience, and suggestions which were very helpful and appropriate. I will also like to express my gratitude to Dr. Panas for his assistance. I am very thankful to my family and friends for their continuous love, support, and encouragement, especially during this journey.

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Chapter 1: Introduction to the Study

Introduction

The World Health Organization (WHO, 2010) described mental health as representing a significant indicator of human development. Mental health serves as an important determinant of well-being, quality of life, and hope (WHO, 2010). Mental health has an impact on different developmental outcomes and forms the basis for social stability (WHO, 2010). The WHO (2010) defined maternal mental health as a state of well-being in which a mother realizes her own abilities, is able to cope with the normal stresses of life, is able to work productively and fruitfully, and is able to make a contribution to her community (WHO, 2008a). Maternal mental health refers to the health of women during pregnancy, childbirth, and the period following childbirth (WHO, 2008b).

According to Rahman, Patel, Weiss, Maselko, and Kirkwood (2008), mental health is not the same as the absence of mental illness, but reflects a capacity to adapt and cope. The WHO (2012) described depression and anxiety as common disorders of maternal mental health occurring during pregnancy and following childbirth. It is estimated that one in three to one in five women in developing countries, and about one in ten in developed countries, have a significant mental health problem during pregnancy and after childbirth (WHO, 2012). High rates of maternal mental health conditions, such as depression during pregnancy and following childbirth, have been reported in many countries in Africa including Ethiopia, Nigeria, South Africa, Uganda, and Zimbabwe (WHO, 2008c).

The process of transitioning to motherhood is experienced by many reproductive-aged women. A woman does not just become a mother; she transitions into a mother (Tedeschi & Calhoun, 2004). The transition to motherhood occurs in three stages: pregnancy, childbirth, and the period following childbirth (Tedeschi & Calhoun, 2004). The process can be an exciting experience for some women and a challenge for others (Tedeschi & Calhoun, 2004). For many women, childbirth can be a joyful event, producing happiness and a sense of fulfillment (Tedeschi & Calhoun, 2004). Conversely, childbirth can adversely affect some women's mental health, arousing emotions such as anxiety, sadness, depression, guilt, anger, and a yearning for the past (Tedeschi & Calhoun, 2004). Tedeschi and Calhoun (2004) further stated that the transition to motherhood could be seen as a growth process, which can be described as positive psychological changes in response to changing circumstances. Becoming a mother involves moving from a known, current reality to an unknown, new reality (Meleis et al., 2000). Growth requires adaptive resources and challenges the way people understand the world and their place in it (Tedeschi & Calhoun, 2004). Becoming a new mother can be challenging, especially if the new mother does not have the necessary resources to deal with the added responsibilities (Tedeschi & Calhoun, 2004).

Background of the Study

Over the years, maternal mental health has received increasing attention, and different organizations have undertaken actions to emphasize the recognition of maternal health as an important public health concern. For example, in 1987, the WHO released the first global estimate of maternal mortality. Prior to this time, there was little awareness of the risks associated with pregnancy and childbirth in developing countries (WHO, 1987). The report also revealed that globally, half a million women died every year from complications of pregnancy and childbirth; 99% of these women lived in developing countries (WHO, 1987). In September 2000, the United Nations (UN) Millennium Declaration was signed, committing world leaders to be interested in the well-being of their citizens. Eight international Millennium Development Goals (MDG) were officially established; each goal had a specific target. Three out of the eight goals specifically targeted maternal mental health (WHO, 2000). All 191 UN member states (including Nigeria) were signatories to this declaration (WHO, 2000).

Postpartum depression (PPD) falls under the WHO's diagnosis category of maternal mental health, and is considered a significant aspect towards attaining five of the eight MDGs (WHO, 2000). Therefore, the WHO encourages international agencies and governments to take immediate actions in handling maternal mental health as part of health services (WHO, 2007). However, there are limited data from Nigeria on access to maternal mental health care during pregnancy and following childbirth (Iheanacho et al., 2014). Mental health care during pregnancy and after delivery is scarce and limited to urban cites in Nigeria (Iheanacho et al., 2014). This has resulted in reproductive-aged women in rural parts of the country resorting to seeking and receiving services in non-medical settings, usually from untrained and unregulated birth attendants and traditional healers (Iheanacho et al., 2014). Therefore, in the proposed study, I will shed light on maternal mental health in a rural setting in Nigeria. I specifically focused on the perceptions, beliefs, and attitudes of health professionals with regard to the recognition and management of PPD in a rural hospital in Nigeria.

The year 2015 was set as a deadline for the member nations to achieve all the MDGs (WHO, 2000). The factors used in evaluating the MDG in each country included the level of progress made, major challenges faced, supportive environments, priorities for development assistance, and capacity for monitoring progress (WHO, 2002). The WHO (2014) revealed that globally, the maternal mortality ratio dropped by 45% between 1990 and 2013, from 380 to 210 deaths per 100,000 live births. Worldwide, almost 300,000 women died in 2013 from causes related to pregnancy and childbirth. Conversely, a review of Nigeria's journey towards achieving the goals revealed mixed results; according to the WHO (2013), Nigeria has made very slow progress towards the 2015 MDG target to improve maternal health. The maternal mortality rate in Nigeria currently stands at 350 per 100,000 live births against the target of 250 per 100,000 live births (WHO, 2013). The proportion of births attended by skilled health professionals is currently 53.6% against the target of 100% and prenatal coverage (at least one visit) is 67.7% (WHO, 2013).

Diagnosis

PPD can be diagnosed using either the American Psychiatric Association's (APA) Diagnostic & Statistical Manual of Mental Disorders fifth edition (DSM-V, 2013) or the 10th edition of the International Classification of Diseases (ICD-10), published by the WHO (2010). Under the DSM-V specification, an episode of depression is specified as postpartum if it occurs within the first 4 weeks after childbirth (APA, 2013). The ICD-10 stipulates that the depressive episode must be diagnosed within a main diagnostic category with a specifier to indicate an association with childbirth (WHO, 2010). Other instruments for assessing postpartum depression include the Edinburgh Postnatal Depression Scale (EPDS); the Beck Depression Inventory (BDI); the Zung Self-Rating Depression Scale, the Kessler Psychological Distress Scale (K10), and the Self-Regulation Questionnaire (SRQ-20).

PPD is the most common complication with childbearing and represents a considerable public health problem affecting reproductive-aged women and their families (Stewart, Robertson, Dennis, Grace, & Wallington, 2003). PPD has profound effects on the quality of life, social functioning, and economic productivity of women and their families (Babatunde & Moreno-Leguizamon, 2012). The effects of PPD on the mother, her marital relationship, and her children make it a significant condition that should be prevented, diagnosed, and treated (Robertson et al., 2003).

Conflicting reports have been published concerning the prevalence of PPD. For example, the WHO (2007) estimated the prevalence of PPD as being 12–13%

internationally. However, the prevalence of PPD may be as high as 15–28% in many countries in Africa and Asia, 50% in Bangladesh, 28–57% in Pakistan, and 35–47% in Latin America (Wachs, Black, & Eagle, 2009). After studying a wide range of reports on PPD, Halbreich and Karkun (2006) concluded that the widely cited mean prevalence of PPD as 13% is not representative of the actual global prevalence and magnitude of the condition. The authors also determined that the inconsistency in reporting PPD might be due to cross-cultural variables, reporting styles, differences in perception of the condition, and the stigma associated with PPD (Halbreich & Karkun, 2006). Other reasons include differences in socio-economic status (e.g. poverty, levels of social support, nutrition, stress), and biological vulnerability (Halbreich & Karkun, 2006). Gjerdingen and Yawn (2007) stated that PPD occurs in 10 to 20% of women who have recently given birth.

Health System

The WHO (2010) described a good health system as one that delivers quality services to every citizen, when and where needed. Different countries may organize their health care systems in different ways; however, the WHO (2010) stipulated that basic universal requirements for a good health system include: a) a reliable financing mechanism, b) a well-trained and adequately paid workforce, c) reliable information on which to base decisions and policies, and d) well-maintained facilities and logistics to deliver quality medical care and technologies. The WHO (2010) uses five primary indicators to assess health systems: a) the overall level of population health, b) health inequalities (or disparities) within the population, c) the overall level of health system responsiveness (a combination of patient satisfaction and how well the system functions), d) distribution of responsiveness within the population (how well citizens of varying economic status find that they are served by the health system), and e) the distribution of the financial burden of health care within the population. In addition, the WHO (2000) identified four key functions of the health system of any country: (a) stewardship (often referred to as governance or oversight), (b) financing, (c) human and physical resources, and (d) organization and management of service delivery. The stewardship or governance function reflects the fact that citizens entrust both their lives and their resources to the health system. The government in particular is called upon to play the role of a steward, because it spends revenues that citizens pay through taxes and social insurance (WHO, 2000). The WHO also (2000) stated that the government makes many of the regulations that govern the operation of health services. Ogbimi (2007) explained stewardship to imply that when the government of any country is entrusted with something of value such as the health of its citizens, there is an obligation not only to preserve it but also to improve on it.

Nigerian Health System

Findings from the assessment of the Nigerian health system reveal that the system still lags behind in each of the four key functions of the health system identified by WHO (Gilbert et al., 2008). The WHO's (2000) international ranking of health systems revealed that Nigeria ranked 187 out of 191-member nations. The Nigerian health care system is underserved and poorly funded; for example, in 2006, Nigeria allocated only

5.6% of its total budget to health care (Welcome, 2011). In addition, health facilities, health care professionals, and medical equipment are disproportionally distributed (Welcome, 2011).

Reproductive-aged women in both developed and developing countries may view PPD as a daily life challenge rather than an illness, thus suffering in silence (Msiqwa, 2010). Many women may be unaware of the symptoms of PPD or may be receiving less than proper medical diagnosis and treatment for the condition (Msiqwa, 2010). Oates et al. (2004) confirmed the global recognition of PPD as a universal condition affecting reproductive-aged women from different cultural, ethnic, and socioeconomic backgrounds. In spite of such recognition, in Nigeria and other developing countries, PPD is still not recognized as a health condition that requires immediate attention (Chaaya et al., 2002; O'Hara, 2009).

In Nigeria, healthcare providers may not be able to recognize the signs of PPD or take the time to ask about women's emotional struggles and relationships, both within and outside their households (Robertson et al., 2003). Health professionals could be dismissive about women's emotional problems in pregnancy and following childbirth (Jarret, 2008). Conversely, the women may sometimes feel ashamed to discuss their problems with health professionals (Jarret, 2008). On the part of the health professionals, the literature addresses various factors that could contribute to the lack of awareness, late diagnoses, and undetected case of PPD (Jarret, 2008). Such factors include beliefs, perceptions, and attitudes held by the health professionals (Babatunde & Moreno-Leguizamon, 2011).

Problem Statement

PPD remains understudied, under-documented, and poorly understood and managed in Nigeria and other developing countries (Msiqwa, 2010). The symptoms of PPD have mainly been described from a western point of view (Robertson, Celasun, & Stewart, 2003). Reproductive-aged women in Nigeria and other developing countries may perceive the signs and symptoms of PPD in a different way and may use different terminologies to describe their symptoms (Robertson et al., 2003). The way people perceive and understand their health is related to the subjective cultural experience in their society (Babatunde & Moreno-Leguizamon, 2011). The literature on mental health illness addresses the fact that people from diverse cultural backgrounds might display different types of mental health illness and therefore various ways of handling and coping with it (Babatunde & Moreno-Leguizamon, 2011). Babatunde and Moreno-Leguizamon (2011) found that mothers from different cultural backgrounds may display culturally explicit behaviors and actions when suffering from depression.

PPD carries with it societal stigma as well as beliefs, perceptions, and attitudes which may have negative impacts and hinder people’s abilities to reach out and offer the needed help and assistance to women who may experience symptoms of PPD (Annet, 2004). In addition, persistent societal and cultural stigma attached to PPD may prevent women who may be experiencing the signs and symptoms of PPD from speaking out and seeking assistance (Annet, 2004). Negative beliefs, perceptions, and attitudes held by health care professionals towards PPD in Nigeria may hinder their ability to recognize and appropriately manage the signs and symptoms of PPD (Annet, 2004). Many women in Nigeria and other developing countries may not be aware of the maternal health care services available in their communities, and may not have access to such resources (Annet, 2004). Negative attitudes and perceptions held by health professionals may hinder the ability to educate and encourage reproductive-aged women to seek professional assistance (Annet, 2004). These issues can be addressed by conducting qualitative studies to determine the barriers to proper identification, documentation, diagnosis, and treatment of PPD in Nigeria and other developing African countries (Msiqwa, 2010).

Purpose of the Study

The purpose of this study was twofold. First, I examined the factors that facilitate or hinder the recognition and management of PPD in a rural setting in Nigeria. Second, I examined the impact of the perceptions, beliefs, and attitudes of health professionals on the recognition and management of PPD in a rural setting in Nigeria. Health care professionals work in a variety of settings including the maternity wards where their responsibilities include the provision of prenatal and postnatal care to reproductive-aged women (Yelley, 2012). Health care professionals working in the maternity unit are also expected to assist reproductive-aged women to access and obtain available resources (Yelley, 2012). Finally, the health care professionals should be able to educate and support women who may present with symptoms of PPD (Yelley, 2012). However, evidence suggests that many vulnerable women do not always have access to or demand available services (Yelley, 2012). Women's inability to access available services may be due to the fact that the symptoms of PPD are either overlooked, endured in silence by the women themselves in some cases, or are not noticed by the health professionals in other cases (Babatunde & Moreno-Leguizamon, 2012).

Research Questions

The following research questions guided this study:

RQ1: What do health professionals define as the barriers and facilitators to the recognition, diagnosis, and treatment of symptoms associated with PPD among reproductive-aged women in rural Nigeria?

RQ2: What are health professionals' beliefs, perceptions, and attitudes towards PPD, its diagnosis, and clinical management?

Conceptual Framework

The conceptual framework for this study was the PEN-3 cultural model. The PEN-3 model was designed as a culturally relevant framework for the development of health education strategies and programs. It was originally developed for use in African countries and since has been adapted for use with African Americans in the United States (Airhihenbuwa, 1995; Airhihenbuwa & Webster, 2004). It is composed of the cultural identity, expectation and relationship, and cultural empowerment domains.

According to Airhihenbuwa (1989), culture plays an important role in influencing the health and health seeking behaviors of individuals, families, and communities. The values of extended family members and community leaders significantly influence the health choices of individuals (Airhihenbuwa, 1989).

The interventions used in addressing health issues in different cultures have been developed based on western cultures and values (Youssefi, 2012). However, the application of western values for health interventions in different cultures may result in overlooking the issues of embedded cultural practices, and may produce failed strategies (Youssefi, 2012). Conversely, incorporating cultural values and practices of a specific population as part of health program planning may yield promising results (Youssefi, 2012).

Applying the Pen-3 Cultural Model

Pérez and Luquis (2015) explained the importance of developing culturally appropriate programs in order to reach every segment of the populations of any society. The authors further stated that fundamentals such as religion, socio-cultural traditions, values, morals, decision-making, perceptions, risk- taking, and knowledge about health and illness all interrelated with cultural background and are reflected in people's attitudes and health-related behaviors.

There is a lack of recognition of reproductive health by the health professionals as well as by the Nigerian society at large (WHO, 2009). The lack of awareness has resulted in women who experience symptoms of PPD considering their problems to be normal

(WHO, 2009). The social stigma attached to the expression of emotional distress and mental health problems leads women to accept them as part of being female and fear being labeled as abnormal if they are unable to function (WHO, 2009). Each domain of the Pen-3 cultural model and their relative elements were applied in assessing the attitudes, beliefs, and perceptions of health professionals towards the recognition and management of PPD in a remote setting in Nigeria.

According to Airhihenbuwa and Webster (2004), researchers first applied the Pen-3 cultural model to assess how culture influences health choices and program planning. The PEN-3 model has been applied in assessing knowledge, attitudes, and beliefs of an identified population about a particular health issue. For example, the pen-3 cultural model was applied by Melancon, Oomen-Early, and Del Rincon (2009) to examine the level of understanding, perceptions, and practices of women of Mexican descent who resided in the northern part of Texas with regard to type 2 diabetes. The use of the pen-3 cultural model in this study was based on functions of its domains (Figure 1).

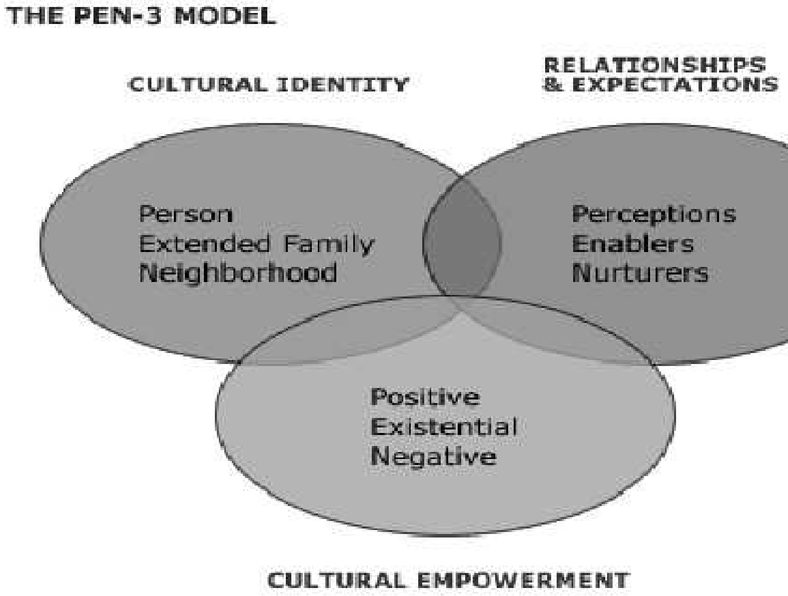

Figure 1. The pen-3 culture model. From "Health and Culture: Beyond the Western Paradigm," by C. Airhihenbuwa, p. 30. Copyright 1995 by Sage Publications. Used by permission of the publisher.

Nature of the Study

The choice of a qualitative phenomenological approach for this study was made because very few studies have been conducted on PPD in Nigeria, and even fewer of those studies used the qualitative approach. Researchers apply the phenomenological approach in exploring a specific phenomenon through the perceptions of the actors in a particular situation (Lester, 1999). In the human sphere, the phenomenological approach involves using an inductive qualitative methodology to collect information and perceptions and present them from the perceptions of the study participants (Lester, 1999). The phenomenological approach is based on a model of personal knowledge and individual reality (Lester, 1999). In addition, the phenomenological approach emphasizes the importance of personal perceptions and interpretations (Lester, 1999). Therefore, the researcher can effectively apply the phenomenological approach to understand subjective experiences, and to gain insights into people's motivations and actions (Lester, 1999).

By using the phenomenological approach, the researcher attempts to understand people's perceptions, perspectives, and understandings of a particular situation (or phenomenon). The researcher assumes a readiness to listen to the descriptions of the lived experiences as described by the participants. The researcher analyzes the descriptions given by participants and divides them into meaning-laden statements, gathering those meanings that are essential to the construct of the phenomenon being studied (Penner & McClement, 2008).

While the phenomenological approach allows for the understanding of individuals' perceptions of a particular phenomenon, it is important to understand the role culture plays on individuals' beliefs and perceptions of health and illness. All cultures have systems of health beliefs to explain what causes illness, how it can be cured or treated, and who should be involved in the process (McLaughlin & Braun, 1998). Matsumoto (2001) described culture as a dynamic yet stable set of goals, beliefs, and attitudes shared by a group of people. According to Daley (2002), it would be a mistake to assume that treatment approaches developed in the west can be blindly generalized across the world. The pen-3 model is a culturally relevant model which centers on the function played by culture as a link for shaping and defining people's opinions, experiences, and behaviors concerning health (Airhihenbuwa, 1995). Airhihenbuwa (1995) acknowledged the fact that such opinions and behaviors are important components for the formation of health views which are duplicated to articulate individuals' cultural views. The author also attested to the fact that the pen-3 cultural model presents a structuring framework to place culture as a central point during the processes of defining health problems and planning for interventions (Airhihenbuwa, 1995).

Data for this study were collected using semi structured individual interviews. The study participants comprised of health professionals who work directly with pregnant and postpartum women at a remote General Hospital, in Akwa Ibom state, Nigeria. The participants included doctors and nurses. There are about 15 doctors and 170 nurses at the remote General Hospital working directly with pregnant and postpartum women. The sample size consisted of 10 participants (five participants from each group). After receiving approvals from both Walden University and the remote General Hospital, I travelled to Nigeria to conduct the interviews. The main criterion for inclusion was the number of years of practice. Each participant was expected to be working with pregnant and postpartum women for at least 5 years at the time of this study, or to have worked with pregnant and postpartum women for at least 3 years within the past 5 years.

Definition of Terms

For the purpose of this study, I have chosen the following definitions of the terms related to the study:

Access: According to the WHO (2004), access is the ability of an individual or a defined population to obtain or receive appropriate health care. Access involves the availability of programs, services, facilities, and records (WHO, 2004).

WHO (2004) further explained that access can be influenced by such factors as finances (insufficient monetary resources), geography (distance to providers), education (lack of knowledge of services available), appropriateness and acceptability of service to individuals and the population, and sociological factors (discrimination, language or cultural barriers). The beliefs, attitudes, and perceptions held by health professionals can help in encouraging reproductive-aged women in rural parts of Nigeria gain knowledge on how to access available health services.

Attitude: Forsyth (2003) defined an attitude as a structure made up of three components (feelings, cognition, and behavior) in an integrated affect-cognition behavior system. Each component has an influence on other components, as well as on the entire attitude structure as a whole (Forsyth, 2003). Attitude is a complex and dynamic structure, and therefore, if one component changes, then the entire attitude structure is influenced (Forsyth, 2003). Fielding (2004) also defined attitude as a mixture of components: cognitive (beliefs), emotional (feelings), and behavior (predispositions to act). The attitude of health professionals towards the recognition and management of PPD may influence their ability to encourage reproductive-aged women to seek professional help and support when needed.

Community: A community can be described as a group of people, often living in a defined geographical area, who may share a common culture, values, and norms, and are arranged in a social structure according to relationships, which the community has developed over a period of time (WHO, 2004).

Community Empowerment (CE): This involves individuals acting collectively to gain greater influence and control over the determinants of health and the quality of life in their communities. Community empowerment is an important goal for health (WHO, 2004).

Enabling: Taking action in partnership with individuals or groups to empower or encourage them, through the mobilization of human and material resources, to promote and protect their health (WHO, 2004). The beliefs, attitudes, and perceptions held by health professionals can either empower reproductive-aged women to seek and obtain professional help or hinder them from doing so.

Gatekeeper: A health professional who may be a medical practitioner, nurse, or other professional who has the first encounter with an individual and controls the individual's entry into the health care system (WHO, 2004).

Health knowledge: Healthy People (2010) described health knowledge as including an understanding of the definition of culture and its relationship to health, health disparities, disease incidence and prevalence for specific communities or ethnic groups, and the historical factors that might shape the health behavior of a community. The WHO (2009) stipulated health knowledge to include knowledge of health and medical vocabulary, concepts such as risk, and the organization and functioning of healthcare systems.

Mental illness: All forms of illness in which psychological, emotional, or behavioral disturbances are the dominating feature. The term is relative and variable in different cultures, schools of thought, and definitions. It includes a wide range of types and severities (WHO, 2004)

Well-being: The WHO (2004) described well-being as a dynamic state of physical, mental, and social wellness. Well-being is a way of life, which equips the individual to realize the full potential of his/her capabilities and to overcome and compensate for weaknesses (WHO, 2004). It recognizes the importance of nutrition, physical fitness, stress reduction, and self-responsibility (WHO, 2004). Well-being has been viewed as the result of four key factors over which an individual has varying degrees of control: human biology, social and physical environment, health care organization (system), and lifestyle (WHO, 2004).

Assumptions

Assumptions in a study are things that are somewhat out of the researcher's control, but if they disappear, the study would become irrelevant. Leedy and Ormrod (2010) posited that, "Assumptions are so basic that, without them, the research problem itself could not exist" (p. 62). For example, if a researcher is conducting a survey, he or she needs to assume that people will answer truthfully. A researcher cannot just state that there are assumptions that he or she is making; the assumptions must be justified (Leedy & Ormrod, 2010).

In this study, my assumptions were that the study participants would: be highly qualified and experienced health professionals; and would answer truthfully and accurately to the interview questions based on their expertise and personal experiences. Participants’ confidentiality will be preserved by safekeeping of all identifiable information. In addition, participation would be voluntary and participants may withdraw from the study at any time and with no ramifications.

Scope and Delimitations

Simon and Goes (2013) described the scope of a study as the parameters under which the study was conducted. The problem that the researcher seeks to study should fit within certain parameters (Simon & Goes, 2013). Scope is the extent of the study and contains measurements. In a qualitative study, the scope would include the number of participants, the geographical location, and other pertinent data (Simon & Goes, 2013).

As stated in the statement of the problem, this study focused on the attitudes, perceptions, and beliefs of health professionals on the recognition and management of postpartum depression (PPD) in a rural setting in Nigeria. The study background revealed that there is a high prevalence of PPD in Nigeria. Ten study participants (five doctors and five nurses) were interviewed for data collection.

Delimitations are the definitions set as the boundaries of the dissertation, so delimitations are in the researcher’s control (Simon & Goes, 2013). Delimitations are set so that the goals of the study do not become impossibly large to complete. Delimitations can also be described as limitations on the research design imposed deliberately by the researcher (Simon & Goes, 2013). Examples of delimitations include objectives, research questions, variables, theoretical objectives that the researcher has adopted, and populations chosen as targets to study (Simon & Goes, 2013).

The first delimiting step was the choice of problem, implying that there were other related problems that could have been chosen but were screened from view (Simon & Goes, 2013). In this study, the problem of choice is PPD among reproductive-aged women in Akwa Ibom State, Nigeria. The problem is further narrowed to focus on the perceptions, attitudes, and beliefs of health professionals (including doctors and nurses) in this setting in Nigeria regarding the recognition and management of PPD.

Limitations

Limitations are weaknesses in the study that are out of the researcher's control. Limitations can limit the extent to which a study can go, and can sometimes affect the end results and conclusions drawn from the study (Simon, 2011). Every study, no matter how well conducted and constructed, has limitations. For these reasons, it is not advisable for researchers to use words such as prove or disprove with respect to research findings (Simon, 2011). In addition, there is always the possibility that future research on the same subject matter may cast doubt on the validity of any hypothesis of conclusions drawn from a study (Simon, 2011).

Being a qualitative study, data collection and analysis were both time-consuming and expensive, as I had to travel to Nigeria for the data collection. English is the official language of the government in Nigeria, and there was no need for a translator. Secondly, I involved a relatively small number of participants, which might make it difficult for other academic researchers, health professionals, and policy makers to apply the results in other settings.

Another limitation associated with qualitative studies is related to validity and reliability. As explained by Patton (2001), validity and reliability are two factors which any qualitative researcher should be concerned about while designing a study, analyzing results and judging the quality of the study. According to Le Comple and Goetz (1982), validity in research is concerned with the accuracy and truthfulness of findings. A valid study should demonstrate what actually exists and a valid instrument should accurately measure what it is supposed to measure (Le Comple & Goetz, 1982). Validity can be either internal or external. Internal validity is the term used to refer to the extent to which research findings are a true reflection or representation of reality (Campbell & Stanley, 1966). External validity addresses the degree or extent to which the representations or reflections of reality are legitimately applicable across groups (Campbell & Stanley, 1966).

Reliability is concerned with the consistency, stability, and repeatability of the informants' accounts as well as the researcher's ability to accurately collect and record information (Selltiz, Wrightsman, & Cook, 1976). Brink (1993) stated that reliability refers to the ability of a research method to yield consistently the same results over repeated testing periods. Reliability requires that a researcher using the same or comparable methods obtained the same or comparable results every time he or she uses the methods on the same or comparable study participant (Brink, 1993). Lincoln and Guba (1985) raised a question on how an inquirer can persuade his or her audience that the research findings of an inquiry are worth paying attention to. Perry (2000) tried to provide an answer to the question by stating that the quality of a study in each paradigm should be judged by the terms of such a paradigm.

In this study, I remained mindful of the factors that pose risks to the validity and reliability of study findings and planned and implemented strategies to avoid or counter such factors. One of the factors affecting validity and reliability is error (Brink, 1993). Error is an integral part of all investigations and is inversely related to validity and reliability (Brink, 1993). The greater the degree of error, the less accurate and truthful the results (Brink, 1993).

In a qualitative study, the researcher is the data-gathering instrument. Therefore, questions concerning researcher bias and researcher competency, if unchecked, may influence the trustworthiness of data considerably. I conducted this study with no personal bias by creating and maintaining a distance between my personal opinions about PPD and my interactions with the study participants. In addition, I remained objective at all times by adhering to the rules for administering the interview questions and by avoiding any personal reactions to responses provided by the study participants.

The very presence of the researcher may affect the validity of the data provided by the study participants. Secondly, the study participants may seek to reveal themselves in the best possible light or withhold or distort certain information. To prevent this potential error, I first built a trust relationship with the institution (the hospital) and the study participants. Trust can be described as a relational notion (interpersonal trust) between people and organizations (institutional trust) and people and events (Gilson 2003; Goudge & Gilson, 2005).

There are five commonly described interconnected attributes of trust, including fidelity/dependability (also known as agency/fiduciary) which is the obligation of the trusted to act as an agent and for the best interests of the trustor (Gilson, 2006; Goudge & Gilson, 2005; Mechanic & Meyer, 2000). This study was carried out in an institution (hospital); therefore, I first had to gain the trust of the hospital administration by obtaining their approval in conjunction with the approval from Walden University. By application, as the researcher, I was the trusted and the hospital was the trustor. Therefore, one of my responsibilities was to effectively communicate and explain the scope of my study to the hospital administration and seek and obtain their permission to conduct the study in their institution. I carried out the study while respecting the institutional rules and guidelines of the hospital.

Other attributes of trust are honesty and confidentiality (Gilson, 2006; Goudge & Gilson, 2005; Mechanic & Meyer, 2000). This study involved individuals who voluntarily participated in the study. I ensured that the participants were very clear on the nature of the study, including why I was there, the purpose of the study, the method of data collection, and how the data would be used. Data were only collected after seeking and obtaining consent from the participants. Participants' personal information were kept confidential, and individual responses to the interview questions were not shared with other participants. Audio recording was part of the consent, and was only carried out with participants' permissions.

Al-Busaidi (2005) described qualitative research as a method of choice when the research questions require an understanding of processes, events, and relationships in the context of a social and cultural situation. The qualitative method is commonly used for providing in-depth description of procedures, beliefs, and knowledge related to health issues, such as exploring the reasons for certain behaviors including opinions of respondents about particular issues (Al-Busaidi, 2005). As this was a phenomenological study, I was mindful of the fact that human behavior is almost always a function of the interaction of person and situation. In addition, human behavior occurs in connection to four aspects of human existence (individuality), and essence (significance or meaning): relationships to things, people, events, and situations (Al-Busaidi, 2005).

Like phenomenology, existence represents what is real to each individual, and essence represents scientific, objectivity, and facts. The importance of focusing totally on the individual perspectives in a phenomenological study means recognizing the individual nature of experience in relation to an objective, and scientifically oriented society. Therefore, in interviewing the health professionals, I tried to understand their world through their eyes and experiences as far as possible.

According to Zohrabi (2013), the researcher should consider the validity and reliability of data before and after data collection. To ensure the validity and reliability of data, I used interviews to collect data for this study. The use of interviews enabled me to get firsthand information directly from health professionals as knowledgeable informants. As explained by Burns (1999), “interviews are a popular and widely used means of collecting qualitative data” (p. 118).

In this study, I used the phenomenological approach; hence the potential limitations included the subjectivity of the data which may lead to difficulties in establishing reliability and validity of approaches and information. It may be difficult to detect or to prevent researcher induced bias. To prevent this from happening, I ensured that the same interview questions were used with every participant.

There may be difficulty in ensuring pure bracketing, which may lead to interference in the interpretation of the data. Carpenter (2007) described bracketing as a methodological tool for carrying out a phenomenological inquiry that requires deliberately putting aside one’s own belief about the phenomenon under investigation or what one already knows about the subject prior to and throughout the investigation. Researchers should make every effort to put aside their knowledge, beliefs, values, and experiences in order to accurately describe participants’ life experiences (Chan, Fung, & Chein, 2013). I carried out this study with no prior knowledge of the attitudes, beliefs, and perceptions of health professionals towards PPD. Therefore, there were no difficulties in ensuring bracketing and interpreting the data.

Qualitative data may not produce generalizable results; this study was conducted in a natural setting, and therefore one of the difficulties will be replicating the study. The knowledge produced might not generalize to other health professionals or other settings (i.e., findings might be unique to the relatively few participants included in the research study). The participants may have difficulties expressing themselves; study participants need to be interested and articulate (Simon & Goes, 2013). The reasons associated with participants' difficulty in expressing themselves may include age, language barrier, and feelings of embarrassment. The interview questions were formulated in simple, plain English set at the level of a fifth grader (Offredy & Vickers, 2013). English is the official language of spoken in Nigeria.

Significance of the Study

It is my hope that results from this study could demonstrate that PPD in the rural Nigerian culture goes beyond clinical screening. PPD, like other health conditions, is an expression of the cultural context in rural parts of Nigeria related to women's reproductive and maternal mental health. The findings from this study also contribute to existing literature on the prevalence of PPD in Nigeria and other developing countries. The data collected for this study serve in identifying patterns of thought, influences of prevailing attitudes, perceptions, and beliefs on population involvement with the recognition and treatment of PPD in rural parts of Nigeria.

The use of the pen-3 cultural model for data collection and analysis in this study demonstrates the model's usefulness in research deeper than just serving as a tool to classify data as negative or positive. The application of the pen-3 cultural model in this study demonstrates the importance of using a culturally appropriate framework for the implementation of health intervention programs. The fact that the pen-3 cultural model is useful in research should encourage researchers to look past the superficial appearances of culturally based habits or practices that appear to be either right or wrong, and should enable researchers to write about cultural support for research recommendations.

Significance to Practice

The data from this study could serve in identifying the prevailing perceptions, beliefs, and attitudes of health professionals in the recognition and management of PPD in rural parts of Nigeria. Different ideas from the study participants would help in understanding and perceiving what is known in rural Nigeria concerning PPD. It is hoped that the results of this study could encourage health professionals to adopt responsibilities and practices that could promote maternal mental health. Future studies could be able to benefit from this study by giving more credence to what health care professionals think and feel concerning women's reproductive health and maternal mental health.

Significance to Social Change

The basic benefits of this study can extend to health educators and planners in rural, regional, and national areas of Nigeria, and can be used by health professionals for planning health education and interventions programs. In addition, the results from this study can be used to increase awareness concerning PPD, using community leaders; (such as religious leaders), to disseminate to information on PPD to members of their congregations. This would be since such leaders would have already gained the trust of their followers.

Findings from this study demonstrated the lack of maternal mental services within the community, as well as an inadequately equipped hospital. These findings could be used in providing the needed equipment to hospitals for proper assessment and timely management of PPD. In addition, these findings could be used in improving policies on maternal mental health, integrating maternal mental health as integral part of the health system, and providing maternal mental health services within the remote setting in Nigeria. Implications for social changes are further discussed in chapter 5.

Summary and Transition

In Chapter 1, I discussed the importance of maternal mental health and its impact on women's health, children's health, and societal health in general. The focus of this chapter was PPD as it affects reproductive-aged women in Nigeria. In this chapter, I also discussed the significance of the study, as well as the research questions. The remaining chapters of this study are organized in the following manner: in Chapter 2, the reviews of the literature on PPD in Nigeria and other developing countries are presented. In Chapter 3, the study methodology, including development of questionnaires, the selection of sample participants, the data collection, and the variables, are discussed. In Chapter 4, I present the study findings as well as the qualitative (narrative) data. Finally, in Chapter 5, the study is concluded by interpreting the findings discussed in Chapter 4, describing the limitations of the study as well as recommendations for possible future research.

Chapter 2: Literature Review

Introduction

According to the WHO (2008a), there has been a growing global recognition of maternal health as an important public health concern. Maternal mental health is an essential right for every woman and significant for the psychological well-being of the women and their children. In spite of the global recognition, maternal mental health has not been a priority on the health agenda of Nigeria and other developing African countries (WHO, 2008a).

The WHO (2008b) explained that the definition of maternal mental health can be broken down into the following components: a) the physical element (working productively and fruitfully), b) emotional element (realizing one's abilities), c) mental element (coping with normal stresses of life), and d) the social component (contributing to the community). Maternal mental health is considered an important aspect towards attaining five of the eight MDGs (WHO, 2010). The WHO (2008c) identified common perinatal mental disorders (CPMDs) as being comprised of depression, anxiety and somatic disorders. They further classified CPMDs as one of the leading causes of disability during and after pregnancy. CPMDs affect the quality of life of both mother and child (WHO, 2008c). Perinatal depression is one of the most prevalent and severe complications of pregnancy and childbirth (WHO, 2009).

Within the first three months after childbirth, approximately 14.5% of women have a new episode of major or minor depression, and 10% to 20% of mothers are believed to suffer with depression sometime during their postpartum course, making PPD the most common serious postpartum disorder (Gjerdingen & Yawn, 2007). Despite the potentially serious consequences of PPD, the rates of diagnosis and treatment of this serious problem are low, primarily because of lack of recognition (Gjerdingen & Yawn, 2007). There is a lack of recognition of PPD in Nigeria even among health professionals, prompting the need to update knowledge and management of the condition (Owoeye, Aina, & Morakinyo, 2004).

In this study, I focused on the recognition and management of PPD in a rural Nigerian setting. I examined the factors that hinder or facilitate the recognition and management of the symptoms of PPD. The purpose of this review is to describe what the literature has shown about PPD in rural Nigerian communities and other developing African countries, and the recognition and management of PPD among reproductive-aged women in Nigeria. To provide clarity, the following sections include a description of the pen-3cultural model as the conceptual framework and its application for this study, the prevalence of PPD with an emphasis on the high prevalence of PPD in Nigeria and other developing African countries, the recognition and management of PPD in Nigeria, and the beliefs, attitudes, and perceptions of health professionals related to the recognition and management of PPD. Finally, there is a summary of the chapter.

Literature Search Strategy

Electronic database searches were carried out from Medline PubMed, PsycINFO, CINAHL Plus, the Web of Science (at a glance), EMBASE, and the WHO Reproductive

Health Library. Major search terms used included *postpartum depression, postnatal depression, mental health and maternal mental health, health professionals, attitudes, beliefs,* and *perceptions towards PPD.* Search terms were used within these databases individually and in various combinations to identify key and appropriate literature for this review.

Gray Literature

A search of gray literature was also conducted to identify additional articles in academic journals. Such materials included dissertations and other work carried out and published as reports by governments and non-governmental organizations (NGOs), charities, and on-going projects and initiatives. The gray literature search included publications and information from relevant psychiatric, psychological, nursing, and medical organizations.

Criteria for Selection and Inclusion

This search was confined to studies conducted in Nigeria and other developing African countries. Inclusion criteria included articles published in English or with sufficiently detailed English abstracts to enable comparison of the methods and main findings. Such studies must have focused on PPD in Nigeria and other African countries. The articles should have been published within the last 5 years. However, some older sources were also used because in some cases those are all that exist. The articles of choice were those that included the recognition and management of PPD and the perceptions, beliefs, and attitudes of health professionals towards the recognition and management of PPD.

Literature Review about PEN -3 Cultural Model

The pen-3 cultural model is a culturally-appropriate health model, which was developed by Airhihenbuwa in 1989, and later modified in 2004 (Airhihenbuwa & Webster, 2004). Pen-3 cultural model offers an organizing framework to centralize culture when defining health problems and framing their solutions (Airhihenbuwa 1995, 2007a, 2007b). In addition, the pen-3 cultural model points to the fact that health solutions should be framed to encourage and reward positive values, which are better sustained, rather than focusing only on negative values. (Airhihenbuwa 1995, 2007a, 2007b). The identification and use of culturally appropriate terminology for postpartum depression may be helpful in improving the levels of recognition and treatment (Patel, 2001).

A gap in the professional literature exists in applying a culturally appropriate model to examine knowledge, attitudes, and beliefs held by health professionals regarding the recognition and management of PPD. Against this background, and with the permission obtained from Dr. Airhihenbuwa, I employed the pen-3 cultural model as a conceptual basis for this study to examine how the beliefs, attitudes and perceptions of health professionals regarding PPD; its recognition, diagnosis and management are interrelated and interdependent.

Dimensions of the pen-3 model

By application, the dimensions of the pen-3 cultural model; cultural identity, relationships and expectations, and cultural empowerment are used to provide culturally appropriate changes for diverse populations. According to Airhihenbuwa (1999), culture refers as shared values, norms, and codes that collectively shape a group's beliefs, attitudes, and behavior through their interaction in and with their environments. In the pen-3 cultural model, the focus is on the role of culture as a connecting link by which individuals' perceptions and actions regarding health are shaped and defined (Airhihenbuwa, 1995, 2007a, 2007b). The second focus is on relationships at various levels; individual, family and community (Airhihenbuwa, 1995, 2007a, 2007b). It is important to note that both systemic and personal factors play a role in the availability, accessibility, and affordability of maternal mental health services (Kingston et al., 2014).

The significant roles played by health professionals as representatives of the healthcare system as well as members of the larger communities can be explained into each domain of the pen-3 cultural model. Focusing on the health professionals perceived capacity to manage and treat the PPD helps alleviate the social stigma and negative beliefs and perceptions pertaining PPD in a rural Nigerian community (Patel, 2001). This approach provides a reliable framework for shifting the focus of PPD among reproductive-aged women from blame and shame to understanding and empowerment (Patel, 2001).

The First Domain

This is the cultural identity domain, which highlights the entry point of any health intervention program (Airhihenbuwa & Webster, 2004). Under this domain, emphasis is placed on the role of the collective (family/community) in defining the health experiences of individuals, and highlights its importance in influencing health-related decisions.

By application of the cultural identity domain, the individual, the culture, and family are all viewed as intervention points of entry. In addition, the application of this domain focuses on individual empowerment regarding medical decision-making and health seeking processes.

The points of entry may occur at three different levels, each representing the word “PEN”. First, the point of entry can be at the level of person (P) (e.g., the new mothers or health care workers). At this level, the point of entry focuses on individual empowerment (Airhihenbuwa & Webster, 2004). Empowerment can be described as the process of enabling people to increase control over, and to improve their health (WHO, 1986). The perceptions, beliefs and attitudes of health care professionals can either empower or discourage the women with symptoms of PPD to seek and obtain professional assistance when needed.

Secondly, the point of entry can be at the level of the extended (E) family members. The extended family aspect concentrates on the whole family as a unit (Airhihenbuwa & Webster, 2004). When the family unit is able to obtain educational health information from health care professionals, and understands the causes, and symptoms of PPD, as well as the health decision-making process, the family as a unit can better support and encourage the new mother to seek professional assistance (Airhihenbuwa & Webster, 2004). Studies have demonstrated that the decision-making processes among childbearing families are overwhelmingly influenced by the experiences and opinions of friends and family members (Kingston et al., 2014).

Thirdly, the point of entry can be at the level of neighborhoods (n) (communities or villages) (Airhihenbuwa & Webster, 2004). The neighborhood aspect of the domain refers to seeking community approval and acceptance, as well as assistance and support (Youssefi, 2012). The woman with symptoms of PPD looks up to her neighborhood and community for assistance. Health care professionals form part of the neighborhood and the community, therefore, their roles should include educating, empowering, encouraging, and supporting women who may experience symptoms of PPD in seeking and receiving professional assistance.

The Second Domain

The second domain is comprised of relationships and expectations. The notion of this domain is to assess community perceptions (p), enablers (e), and nurturers (n) (Airhihenbuwa & Webster, 2004). A community has enablers that are resource-based, structural-based, and societal-based. The enablers can function as barriers to positive personal, family, or community change. Health beliefs, actions, and attitudes toward PPD risk factors, monitoring, and prevention are encouraged or mediated by the person, family, community, and other societal nurturers (Airhihenbuwa, 1995).

Constructs of the second domain are derived from the precede-proceed model, health belief model and theory of reasoned action (Youssefi, 2012). Perceptions include knowledge, attitudes, and beliefs, which are factors that either inhibit or promote healthy choices (Airhihenbuwa & Webster, 2004). Enablers include available and accessible resources that enable the individuals to achieve good health (Youssefi, 2012). Reproductive-aged women in Nigeria (especially those in rural areas), should be educated on available resources within their community and should be able to access such resources. Nurturers are defined as family members, religious and community leaders, or gatekeepers who provide support for individual’s health choices (Youssefi, 2012). Health care professionals should lead the community when it comes to health issues. As members of the community, health care professionals should be able to build a trusting relationship with reproductive-aged women. In addition, the perceptions, beliefs and attitudes of health care professionals towards PPD should be ones that enable, nurture and encourage the women to seek professional assistance when needed.

The Third Domain

The third domain of the pen-3 cultural model is cultural empowerment. The elements of the cultural empowerment domain are positive (p), existential (e), and negative (n). As explained by Airhihenbuwa (1995), historically, culture and empowerment are not usually used in the same context. The society interprets empowerment as strength, therefore it is important for reproductive-aged women to be empowered and strengthened to seek professional help when necessary (Airhihenbuwa, 1995). The society also interprets culture as a hindrance. The aim of this domain is to ensure that strategies used in health planning not only impact the bad practices, but also promote positive behavior (Airhihenbuwa, 1995).

Airhihenbuwa (1995) considers the third dimension to be the most important of the three dimensions because it examines cultural appropriateness of health behaviors. Positive behaviors towards health encourage the acquisition of knowledge, steps towards reduction of health risks, disease prevention and monitoring practices. These behaviors should be encouraged for persons within families, neighborhoods and communities.

Airhihenbuwa (1995) suggested that positive cultural influences such as enhanced social support should be incorporated in health education programs. Positive attitudes and belief expressed by health professional could be empowering for new mothers who may be experiencing symptoms of PPD. New mothers with symptoms of PPD should be able to belief that health professionals understand their needs and will try to assist them. Existential (pertaining to human existence) cultural influences are practices that pose no threat to health choices. Positive cultural influences promote the ability to achieve healthy choices and should be encouraged (Airhihenbuwa, 1995). On the other hand, negative cultural and societal influences (such as stigmatization) pose barriers to achieving healthy choices and should be discouraged (Youssefi, 2012).

Studies included in this section were those that applied the domains of the pen-3 cultural model in two main ways as it applies to its use in this study: for placing culture as a central point for studies on health performances and for integrating significant elements of culture in developing health interventions and as a guide for collecting and analyzing data, as well as presenting study results and illustrating health behaviors or outcomes (Iwelunmor, Newsome, &Airhihenbuwa., 2014). Also, studies that adapted culturally appropriate solutions by the pen-3 cultural model were given consideration.

Exclusion criteria were lack of information on the application of the pen-3 cultural model as a framework for data collection and analysis, lack of information on the health behavior or health outcome, or target population of interest, and lack of information related to the study results or the use of the pen-3 model in the design of culturally adapted interventions. Many studies applied domains of the pen-3 cultural model for collecting and analyzing data as well as for interpreting the qualitative data. According to Iwelunmor et al., (2014), some of the methods used to analyze data with the pen-3 cultural model included categorization, cross-tabulation, and recontextualization (Iwelunmor al., 2014).

Under categorization, some studies applied the pen-3 cultural model in grouping themes produced from qualitative data into the three different domains (Iwelunmor et al., 2014). Some studies utilized all three domains in categorizing the themes produced from data analysis (Iwelunmor et al., 2014). Other studies applied either a single domain or two domains contingent upon on the type study. For example, for their focus group study on breast and cervical cancer, Erwin et al. (2010) applied the three domains of the pen-3 model to group themes from participants’ focus group responses into distinct categories. Conversely, Iwelunmor, Idris, Adelakun, and Airhihenbuwa (2010), applied just the cultural empowerment domain in examining the positive, negative and existential health views and practices held by mothers with regards to feverish children.

According to Iwelunmor et al. (2014), another method used in applying domains of the pen-3 cultural model in data analysis was to compare two domains and find out how they interacted with each other. The authors further stated that the most frequently used domains were the relationships and expectations (i.e., perceptions, enablers, nurturers) domain and the cultural empowerment (i.e., positive, existential, and negative). Sofalahan et al. (2010) conducted a study on the challenges faced by South African nurses with regard to balancing their personal and professional lives while caring for people living with HIV/AIDS (PLWHA). They cross-examined the themes that emerged from the relationships and expectations domain with those produced from cultural empowerment domain. The cross-examination allowed the researchers to obtain sufficient information about the positive and negative experiences of the nurses (Iwelunmor et.al, 2014).

The goal of recontextualization is to find the themes produced from qualitative data based on the perspectives of recognized doctrine (Morse & Field, 1995). For example, Iwelunmor, Zungu, and Airhihenbuwa (2010) applied the established cultural empowerment domain of the pen-3 cultural model in advancing awareness on how women disclosed their HIV seropositive status by the perspectives of motherhood in South Africa. Kline (2007) in conducting breast cancer education program, targeting African-American women, applied the pen-3 model in identifying descriptions of the three domains of the pen-3 cultural model; cultural identity, relationships and expectations, and cultural empowerment. Finally, the elements of the pen-3 cultural model were utilized to organize emerging themes from qualitative studies. Iwelunmor et al. (2014) stated that three of such emerging and important themes included: a) the importance of background b) the role of the family as an intervention point of entry, and c) the need to explore the positive aspects of culture on health behaviors. These themes help provide a comprehensive understanding of centralizing culture in the study of health performances and health consequences (Iwelunmor et.al, 2014).

Cultural Context (or Cultural Background)

By application, utilizing the pen-3 cultural model involves placing culture at the center of developing, implementing, and evaluating successful public health interventions (Airhihenbuwa & Webster 2004; Airhihenbuwa 1995, 2007a). Also, this involves focusing on the function of culture as a link for shaping and defining peoples' opinions and behaviors regarding health (Airhihenbuwa 1995, 2007a, 2007b). In addition, it is important to acknowledge that such opinions and behaviors are significant elements in developing health views that are duplicated to articulate people cultural views (Airhihenbuwa 2007a).

Abernethy, Magat, and Houston (2005) applied the cultural empowerment domain of the pen-3 cultural model to highlight the significance of knowing how the long-established beliefs of masculinity impact men's opinions of their health, especially in African-American communities. Garcés, Scarinci, and Harrison (2008) applied the pen-3 cultural model as an essential framework for studying type 2 diabetes among British Bangladeshis in the United Kingdom, and found that many long-established social customs and expectations conceivably interfered with attempts to accomplish health-related lifestyle change.

Concerning HIV and AIDS, the pen-3 cultural model was applied in examining the impact of a cultural framework for the explanation stigmatization and the disclosure of HIV in South Africa. In exploring how people living with HIV experience othering, Petros et al. (2006) applied the pen-3 model. They discovered that a great portion of the current blame and othering of HIV and AIDS could be tracked back to the country's complicated history of racism, patriarchy, and homophobia (Petros et al., 2006). Petros et al. (2006) concluded that South Africans from different races and backgrounds blamed one another for either being the source of HIV or being responsible for spreading the disease. Similarly, by applying the domains of the pen-3 cultural model, Iwelunmor et al. (2010) concluded that the discussion on motherhood in South Africa could not be isolated from the history of institutional discrimination. The authors noted that the effects of apartheid might affect traditional and societal expectations of mothering particularly concerning disclosing seropositive status.

Culture and Family as Intervention Points of Entry

With the pen-3 cultural model, the emphasis is on the function of the aggregate (family/community) in explaining the peoples' health experiences and highlights the importance of collectiveness in impacting health-related decisions. In his study on screening for breast cancer among Native Hawaiian women, Ka'opua (2008) discovered that responsibility to the family impacted the women's decisions. In a similar study, among Latinas, Sheppard, Figueiredo, Cañar, Goodman, Caicedo, Kaufman, Norling, and Mandelblatt (2008) concluded that members of the family were significant nurturers in impacting women’s decision to seek and receive treatment for breast cancer.

Scarinci, Bandura, Hidalgo, and Cherrington (2012) recognized unique cultural aspects considered crucial to the Latino culture that may play a function in the prevention of cervical cancer. For example, the authors noted that family (familiarismo) is one of the important Latino values deeply depended upon when dealing with problems and difficulties such as health problems.

The family was centrally important in cancer intervention for diverse Latinas. Erwin, Treviño, Saad-Harfouche, Rodriguez, Gage, and Jandorf (2010) concluded that family; both nuclear and extended took priority in discussing ways to produce positive screening behavioral change in subgroups of Latinas (Iwelunmor et al., 2010). Garcés, Scarinci, and Harrison (2006) applied the pen-3 model in highlighting the significance of family support concerning health maintenance and health care-seeking practices among Latina immigrants. The authors also reported the need and motivation to keep families healthy (Garcés et al., 2006).

Positive, and Negative Aspects of Culture

As suggested by Airhihenbuwa (1998; 2007), in planning and implementing health intervention programs, health professionals should consider the three components of culture; positive (to be encouraged), existential (to be acknowledged) and negative (to be changed). The essential aspect of the pen-3 cultural model deals with the fact that it gives researchers, and interventionists a strategy to identify and encourage positive health behaviors (Airhihenbuwa & Webster, 2004). Positive cultural empowerment refers to those factors cultural practices that promote healthy behaviors.

Scarinci et al. (2012) applied this aspect of the cultural empowerment domain in identifying unique cultural aspects considered essential to the Latino culture. Such cultural elements may play a significant function in the prevention of cervical cancer. For example, Scarinci et al. (2012) noted that family is one of the important Latino values heavily depended upon when dealing with problems and difficulties including health issues (Scarinci et al. (2012).

Positive aspects of culture can help in promoting healthy behaviors that lead to improved health outcomes. Ka'opua (2008) utilized talk story, which is a culturally familiar style of discussion to encourage women to participate in a dialogue on the importance of screening for breast cancer. Similarly, in describing breast cancer treatment experiences, Sheppard et al. (2008) noted that cultural values such as personalismo (establishing pleasant, and personal relationships with individuals). Clinicians were central in enabling Latinas to expand their knowledge of treatment options and create a better understanding and willingness to take chemotherapy.

Negative aspects of culture should be changed to achieve any positive change in behavior through public health interventions. Ochs-Balcom, Rodriguez, and Erwin (2011) applied the pen-3 model in identifying the positive and negative themes relevant for establishing community partnership to optimize recruitment of African-American women in a breast cancer epidemiology study. Ochs-Balcom et al., (2011) used the result in tailoring their overall recruitment and study protocol, the authors reinforced positive themes and revised negative ones in a variety of ways.

Within the pen-3 cultural model framework, it could be said that a pregnant or postpartum woman's views and intentions regarding maternal mental healthcare are shaped by the perceptions and views of significant other people in her life as well as prevailing societal views, and these in turn can influence her decisions and actions regarding seeking and receiving professional help. Therefore, the application of the pen-3 model as a conceptual framework for assessing the beliefs, attitudes and perceptions of health professionals in a rural setting Nigeria regarding PPD, helped in identifying barriers towards recognizing and managing the symptoms of PPD among reproductive-aged women in rural Nigeria.

Literature Review Related to Postpartum Depression

Postpartum affective illnesses fall under the WHO's (2010) diagnostic category of maternal mental health. It is important to differentiate between the three common forms of postpartum affective illness: a) the blues (also known as baby blues, maternity blues); b) postpartum (or postnatal) depression (PPD); and c) puerperal (postpartum or postnatal) psychosis (PPP). Each of these illnesses differs in its prevalence, clinical presentation, and management.

Postpartum Blues (PPB)

PPB is described as a common disturbance in mood. Postpartum blues may occur within the first three to four days after childbirth and can last for a few hours or days and tend to reoccur within one or two weeks (Manjunath, Venkatesh & Rajanna, 2011). Postpartum blues affect about 60-80% of reproductive-aged women. Approximately 20% of women with PPB may develop major depression in the first year after delivery (Manjunath et al., 2011). The manifestations of postpartum blues are mood swings with symptoms such as mood lability, irritability, tearfulness, and generalized anxiety, sleep and appetite disturbances. PPB do not carry any psychiatric significance and do not appear to be related to psychiatric history, environmental stress or personal characteristics such as parity (Manjunath et al., 2011).

Postpartum Depression

The two most widely accepted standard definitions of PPD are those provided by the American Psychiatric Association Diagnostic and Statistical Manual of Mental Health Disorders fifth edition (DSM-V), and the 10th edition of the International Classification of Diseases (ICD-10) published by WHO. The American Psychiatric Association (APA) defines postpartum depression as a sub-category of major depression. The symptoms of PPD include; a sad mood lasting at least two weeks accompanied by at least four other symptoms such as crying spells, insomnia, depressed mood, fatigue, anxiety, and poor concentration and starts within four weeks of delivery (APA, 2013).

The ICD-10 classifies PPD as a depressive episode with three different stages: a) mild (four symptoms); b) moderate (five symptoms); or c) severe (at least five symptoms, with agitation, feelings of worthlessness or guilt or suicidal thoughts or acts) (WHO, 2010). The WHO (2010) stipulates that PPD must be diagnosed within a primary diagnostic category with a specifier to indicate an association with childbirth. Other definitions of PPD include a nonpsychotic depressive episode beginning in or extending into the postpartum period (Cox, Murray & Chapman, 1993; O'Hara, 1994; Waston et al., 1984). Finally, PPD can be described as a clinical and research construct used to describe an episode of minor or major depression arising after childbirth (Cox, 1994; Epperson, 1999; Paykel et al., 2002).

PPD usually begins within the first six weeks after childbirth and in most cases, requires treatment by a health professional. The signs and symptoms of PPD are generally the same as those associated with major depression occurring at other times (i.e. unrelated to childbirth). The signs and symptoms of depression include unexplained physical symptoms, such as tiredness, aches and pains, dizziness, palpitations and sleep problems (Katon, 2002). In addition, PPD is characterized by symptoms such as tearfulness, hopelessness, emotional lability, feelings of guilt, loss of appetite, and sleep disturbances (Robertson, Celasun, & Stewart, 2003). There are also the feelings of being inadequate and unable to cope with an infant, poor concentration and memory, fatigue and irritability (Robinson et al., 2003). Some women might progress from the mild symptoms of postpartum blues to a more severe stage resulting in PPD. Women may experience a period of wellbeing after delivery followed by a gradual onset of depression (Robinson et al., 2003).

The standard methods for diagnosing PPD are the American Psychiatric Association's Diagnostic & Statistical Manual of Mental Disorders fifth edition (DSM-V, 2010); and the 10th edition of the International Classification of Diseases, (ICD-10), published by the World Health Organization (2010). The third method of diagnosis is the Research Diagnostic Criteria (RDC), which is commonly used in research studies as a means of classifying psychiatric disorders (Spitzer et al., 1978). PPD can be assessed clinically or through the use of screening instruments such as a) the Edinburgh Postnatal Depression Scale (EPDS) (Cox & Holden, 1996; Holden, and Sagovsky, 1987); b) The Beck Depression Inventory (BDI-11) (Beck et al., 1996); c) The Zung Self-Rating Depression Scale (Zung, 1971); d) The Kessler Psychological Distress Scale (K10) (Kessler et al., 2002); and e) the Self-Regulation Questionnaire (SRQ-20) (Harding et al., 1980). The EPDS can reliably and validly measure the severity of perinatal depression symptoms or screen for probably postnatal depression in African countries. However, more validation studies on other instruments are needed (Tsai et al., 2013). In addition, more qualitative research is required for proper characterization of local understandings of perinatal depression-like syndromes in different African contexts (Tsai et al., 2013).

Puerperal or Postpartum Psychosis (PPP)

PPP is the most severe and uncommon form of postpartum affective illness. The symptoms of postpartum psychosis can manifest within 48 to 72 hours after childbirth;

most episodes develop within the first two weeks after delivery (Stewart et al., 2003). The presenting symptoms of PPD include depressed or elated mood, disorganized behavior, mood lability, delusions and hallucinations (Stewart et al., 2003).

Prevalence of PPD

Available data and estimates of PPD vary widely in terms of data quality as well as socio-demographic or geographical representations (Annet, 2004). Based on statistics provided by WHO (2009), about 10-15% of women in industrialized countries, and between 20-40 % of women in developing countries experience depression during pregnancy or after delivery. Few studies conducted in Nigeria and other African countries have shown a high prevalence of postpartum depression. According to Atwoli (2011), a 2005 study in Nigeria reported a postpartum depression prevalence rate of 14.6%. Ebeigbe and Akhigbe (2008) found a higher prevalence of 27% in the western part of Nigeria. A similar study carried out in a Zimbabwean random sample of postpartum women indicated that 33% of the participants met the DSM-V criteria for depression (Chibuanda et al., 2010). Kathree, Selohilwe, Bhana, and Petersen (2014) conducted a study in South Africa and found high prevalence rates of PPD; 16.47% of mothers in a peri-urban settlement, and 39% in an informal settlement.

Oates et al. (2004) examined the universal and cross-cultural nature of PPD. The primary objective of the study was to explore the universal recognition, attribution, description, and perceptions of remedies and services for PPD within the context of local services. Data were collected and analyzed for three different groups of informants chosen from 15 different health centers, from 11 different countries. Oates et al. concluded the universal nature and cross-cultural equivalence of PPD as an illness that requires interventions by health professionals.

Adewuya, Fatoye, Ola, Ijaodola and Ibigbami (2005) used different instruments of measurements in carrying out a controlled study to compare the prevalence of PPD among reproductive-aged women in Nigeria at six weeks after delivery. The tools included the Beck's Depressive Inventory (BDI) and locally translated versions of the EPD. Study participants consisted of 876 postpartum women and a comparison group of 900 non-postpartum women (Adewuya et al., 2005). In addition, PPD was diagnosed using the modified non-patient version of Structured Clinical Interview for DSM-III-R (SCID-NP) (Adewuya et al., 2005). The results revealed a significant difference between the two groups, with the postpartum women having higher scores for both EPDS and BDI respectively concluding the comparable prevalence of PPD in Nigeria with that of the developed world (Adewuya et al., 2005).

Abiodun (2006) conducted a two-stage screening procedure in a developing society in Nigeria. The objective of the study was to determine the prevalence and associated factors for postnatal depression in primary health care (PHC) centers. The incidence of postnatal depression in the primary care populations studied was 18.6%. The procedure involved the use of the 10-item self-reporting Edinburgh Postnatal Depression Scale (EPDS) and the Present State Examination Schedule. The authors suggested incorporating the EPDS into the maternal and health care programs of Primary Health

Care centers in developing countries like Nigeria for early detection and intervention of PPD.

Recognition, Diagnosis and Management of PPD

The barriers towards the recognition and management of PPD in Nigeria and other developing African countries include stigmatization, public attitudes, religious beliefs, health-seeking behaviors and cultural factors (such as the practice of traditional medicine) (Msiqwa, 2010). These barriers can exist at the level of individuals (including reproductive-aged women), as well as among health care professionals (Msiqwa, 2010). The barriers can also exist within the local communities.

Stigmatization

Globally, stigmatization and discrimination in mental health (including maternal mental health) is a matter of public health concern (Corrigan & Watson, 2002). Many people with mental health conditions seem to face two different types of challenges. On one hand, they struggle with the symptoms and disabilities that result from the condition itself, and, on the other, they are stereotyped and prejudiced due to misconceptions about their condition (Corrigan & Watson, 2002). Stigmatized attitudes and beliefs towards individuals with mental health conditions are often in the form of social stigma, structured within the general public. Secondly, social stigma or even the perception that the social stigma exists can become internalized by mentally ill individuals (including reproductive-aged women), resulting in self-stigma (Corrigan &Watson, 2002). Finally, another level of stigma is one that is held by health professionals towards their clients (Corrigan & Watson, 2002).

Health professionals are part of the general public; therefore, their attitudes may in part reflect social stigma (Corrigan & Watson, 2002). However, their unique roles and responsibility to help may create a particular barrier (Corrigan & Watson, 2002). In order to support evidence-based policies for the reduction of stigma, a better understanding of its components is necessary (Corrigan & Watson, 2002). The three top elements of discrimination are; shame; ignorance (knowledge), prejudice (attitude) and discrimination (behavior) (Durand-Zaleski, Scott, Rouillon & Leboyer, 2012).

Dako-Gyeke and Asumang (2013) conducted a qualitative study using phenomenology to study the lived experiences of persons with mental health conditions. The study had three major objectives; a) to find out how individuals with mental health conditions are stigmatized and discriminated against by their family members; b) to ascertain how individuals with mental health conditions are stigmatized and discriminated against by the public (friends and neighbors); and c) to determine how persons with mental health conditions are stigmatized and discriminated against by their employers and work colleagues. Dako-Gyeke and Asumang drew two conclusions; the majority of people with mental conditions lost their friends and jobs when their conditions became publicly known once people associate disclosing mental health conditions with negative consequences, they are likely to conceal their conditions from others (Dako-Gyeke & Asumang, 2013).

Attitudes and Belief towards Mental Health

In most parts of Nigeria, people's attitudes towards mental health (including maternal mental health) are still convincingly influenced by traditional beliefs in supernatural causes and remedies (Katung, 2001). Kabir, Zubair, Abubakar and Aliyu (2004) carried out a cross-sectional study on the perception of mental illness among adults in Karfi village, northern Nigeria. The study results revealed the need to educate members of the community on mental health, and clarify the myth surrounding mental illness (Kabir et al., 2004).

Gureje, Lasebikan, Ephraim-Oluwanuga, Olley and Kola (2005) conducted multistage studies with clustered samples of household respondents in three states in the southern part of Nigeria (representing 22% of the national population). The aim of these studies was to determine the knowledge and attitudes of the representative samples towards mental health. An analysis of the collected data demonstrated that there was widespread stigmatization of mental illness in the Nigerian community (Gureje et al., 2005). Community ideas and attitudes toward health and disease affect the way people utilize health services because such ideas and beliefs provide an ideological basis for the healthcare system (Omotosho, 2010; WHO, 2002). In Nigeria, and in many developing countries, the factors that commonly affect the way rural dwellers shop for health include the following.

Religious Beliefs

The search for health can easily shift into issues of morality and religion, which is an important aspect of social life (Asu, Gever & Joshua, 2007). Faith-based organizations play a significant role in the belief systems of Nigerians towards health and illnesses (Asu et al., 2007). Members of religious groups look up to their religious leaders and respect their opinions and attitudes towards health, illness, healing and recovery. Therefore, the views of religious leaders could have an impact on how the people of a particular religion view and handle mental health (Asu et al., 2007).

Igbinomwanhia, James and Omoaregba (2013) conducted a cross-sectional survey to examine the attitudes of religious leaders representing both the Christian and Islamic faiths in three local government areas in Nigeria towards mental health. The study revealed different levels of stigmatization, beliefs and opinions among different leaders (Igbinomwanhia et al., 2013). Most (71.1%) of the leaders were of the view that people who have any type of mental health issues were different from ordinary citizens (Igbinomwanhia et al., 2013). Sixty two percent of the religious leaders held the view that persons with mental health problems need to be controlled and treated like children (Igbinomwanhia et al., 2013). More than 80% of the participants stated that such individuals should live in isolation, in areas secluded from other people (Igbinomwanhia et al., 2013). However, another 63% of respondents were of the opinion that the people should be treated and not punished for their conditions (Igbinomwanhia et al., 2013).

Health-Seeking Behavior

Asu, Gever and Joshua (2013) explain health-seeking behavior as all those things people do to prevent diseases and to maintain health. The authors also stated that that every individual desire a healthy living and society. Thirdly, they acknowledged that cultural practice as a way of life, determines the health condition, strength and activities of the citizens in both developing and developed societies (Asu et al., 2013).

In spite of the high rates of PPD, very few pregnant and postpartum women proactively seek help or engage in treatment and less than 15% of pregnant and postpartum women receive needed mental healthcare (Kingston et al., 2014). Personal barriers such as views of mental health and its treatment have been cited as significant deterrents of obtaining mental healthcare (Kingston et al., 2014). The division of Nigerian societies into large rural sectors and small urban communities provides the basis for the inadequate provision of health infrastructure and services (Ewhrudjakpor, 2008; Olujimi, 2006; Omotosho, 2010). For example, more than 65% of the Nigerian population living in the rural areas are mostly neglected and deprived of modern healthcare services (Ewhrudjakpor, 2008; Olujimi, 2006; Omotosho, 2010). These services and supports are critical for maintaining and promoting good health (Ewhrudjakpor, 2008; Olujimi, 2006; Omotosho, 2010).

Adewuya and Makanjuola (2008) carried out a cross-sectional survey to evaluate the patterns and correlates of lay beliefs regarding the causes of mental health conditions in South-Western Nigeria. They drew three conclusions from the study: a) beliefs in supernatural factors and misuse of psychoactive substances were most prevalent; b) urban dwelling, higher educational status and familiarity with mental health correlated with belief in biological and psychosocial causation; and, c) rural housing and lack of familiarity were associated with a belief in supernatural causation (Adewuya & Makanjuola, 2008). Educational status had no effect on the belief in supernatural causation (Adewuya & Makanjuola, 2008).

Individuals make health decisions in ways that are influenced by their immediate physical environments, social rootedness, lifestyles, religious beliefs and their general outlooks on life (Norman & Bennet, 1996; Orubuloye, 2003; WHO, 2002). Rural dwellers find themselves in a diverse medical environment. In such circumstances, care seeking decisions; including place and type of care, are influenced by factors relating to the person, the facility and the socio-cultural environment (Ademuwagun, 1998; Aregbeyen, 1992; Egunjobi, 1983; Fabrega, 1973; Orubuloye, 1992; Tanahashi, 1978).

Adamu (2011) carried out an analytical, ecological study design, which involved the analysis of secondary data on utilization of maternal health services based on Andersen's health-seeking behavioral model. The primary objective of the study was to explore the differential factors affecting use of maternal health services across the six geopolitical zones of Nigeria. Adamu concluded that education, family wealth index and place of residence are reliable predictors of service utilization in all the regions (Adamu, 2011).

Ononokpono and Odimegwu (2014) asserted that decisions to seek maternal health care are not solely dependent on individual characteristics; therefore, it is imperative to examine community conditions, such as social factors and the location of services that can interact with individual preferences or choices to influence delivery care utilization (Ononokpono & Odimegwu, 2014). Ononokpono and Odimegwu (2014) used multilevel analysis to identify community factors related to the use of delivery care. The aim of the study was to examine the contribution of community factors in explaining variations in the use of maternal health services in Nigeria. Study participants consisted of 17,542 women aged 15-49 years who had given birth in the last five years before the study. The study results showed that in addition to several individual factors, region of residence was significantly associated with facility delivery. Ononokpono & Odimegwu (2014) concluded that community factors were significantly associated with the use of maternal health care. Interventions aimed at promoting the use of maternal health care should not only be implemented at the individual level but tailored to the community level as interventions conceived without consideration for community context are likely to have limited impact (Ononokpono & Odimegwu, 2014).

Understanding community factors associated with maternal health-seeking behavior is important. This is because individuals reside within communities and their health-related behavior can be influenced by the characteristics or conditions of the community in which they live (Ononokpono, 2013). In a different study, Ononokpono (2013), analyzed data from the 2008 Nigeria Demographic and Health Survey. The study participants were reproductive-aged women, ages 15-45 years, who had given birth within the past five years of the study. The purpose of the study was to understand how maternal health-seeking behavior in Nigeria is influenced by a combination of individual, household and community conditions. The study results indicated a significant variation in maternal health-seeking behavior across communities. The variations were attributed to both the characteristics of the individuals residing within communities and the characteristics of the communities of residence; community factors were significantly associated with maternal health-seeking behavior (Ononokpono, 2013).

Babalola and Fatusi (2009) collected and analyzed data from the 2005 National HIV/AIDS and Reproductive Health Survey. The aim of the survey was to identify individual, household and community factors significantly associated with utilization of maternal care services (Babalola & Fatusi, 2009). Study participants consisted of 2148 women who had given birth during the five years preceding the survey (Babalola & Fatusi, 2009). The three indicators of maternal health service use included; a) educational status at the individual-level. b) Socio-economic status at the household (family) level and c) urban residence and community media saturation the community level (Babalola & Fatusi, 2009). The results revealed that about three-fifths (60.3%) of the mothers used antenatal services at least once during their most recent pregnancy (Babalola & Fatusi, 2009). Forty three percent of the women had skilled attendants at delivery, and 41.2% received postnatal care (Babalola & Fatusi, 2009). The conclusion was that factors influencing the use of maternal health services operate at various levels including individual level, household level, community level, and state level (Babalola & Fatusi, 2009).

Traditional African Medicine (TAM)

Cultural factors may impede women from seeking medical care for PPD symptoms leading to delays in or even lack of clinical diagnosis and appropriate management of PPD (Annet, 2004). Similarly, the literature on mental health illness addresses the fact that aspects such as perceptions and attitudes towards depression in different cultures may affect help-seeking behavior and access to treatment (Babatunde & Moreno-Leguizamon, 2011). TAM has been with the rural dwellers of African countries for many generations; modern medicine is often in short supply (Katung, 2001). Therefore, the first approach of the rural residents in times of ill health is towards TAM (Katung, 2001). The hospital (or professional care) is usually a last resort (Katung, 2001). Essential elements of managing illness under TAM include confession, ritual sacrifices, incantations and potions made from plant and animal parts (Sallah, 2007). The primary objective of TAM is to restore the patient to a harmonious relationship with the environment and to counteract the effect of evil forces (Sallah, 2007).

In Nigeria, the number of health professionals responsible for delivering orthodox health care is inadequate (Imogie, Agwubike & Aluko, 2002). For example, 80% of the population lives in the rural areas. About 75% of Nigerian conventional and paramedical personnel are concentrated in the urban areas with modern health facilities (Imogie et al., 2002). Many rural residents have not been exposed to the benefits of current changes in orthodox medicine (Imogie et al., 2002). Therefore, the rural residents prefer the services of traditional birth attendants (TBAs) (Imogie et al., 2002).

Imogie et al. (2002) conducted a study to assessing the role of traditional birth attendants in modern health care delivery in a state in Nigeria. Study participants included TBAs, childbearing women, medical and paramedical professionals. Imogie et al. concluded that rural dwellers prefer to use the services of TBAs compared to their urban counterparts. Reasons for the preference included availability, accessibility, costs and the rural resident's faith in the effectiveness of the TBAs services (Imogie et al., 2002).

A vast majority (approximately 70%) of mental health service provision Nigeria is delivered through non-orthodox means such as religious organizations and traditional healers (Adelekan, Makanjuola & Ndom, 2001). The authors further suggested the relevance of research into these services and their implications for psychiatry (Adelekan et al., 2001). A direct assessment of the role of traditional therapists in mental health intervention revealed that they were able to recognize symptoms of severe mental health (Adelekan et al., 2001). However, they expressed a strong belief in supernatural factors as a cause of adverse mental health (Adelekan et al., 2001).

Medical professionals should be in a position to educate the public on issues of maternal mental health. However, there is a high percentage of the health professionals themselves who are not quite knowledgeable on matters of maternal mental health especially in developing countries (Msiqwa, 2010). Owoeye et al. (2004) carried out a cross-sectional descriptive study among medical professionals at the Island Maternity Hospital, Lagos, Nigeria. The objectives of the study were two-fold: to explore the recognition and management of PPD by the obstetric team and to find out the rate of PPD among reproductive-aged women per the hospital’s record. The results revealed that the prevalence of PPD was greater than 12%. The medical professionals expressed different opinions concerning PPD (Owoeye et al., 2004). Forty three percent of the respondents admitted to not being able to recognize symptoms of PPD and 19% were doubtful of the ability of the obstetric team to manage PPD (Owoeye et al., 2004). Eighty one percent of the respondents were concerned about the stigma influencing the referral of PPD to the psychiatrists for proper management (Owoeye et al., 2004). Seventy seven percent of those interviewed suggested the establishment of consultation-liaison services in the hospital (Owoeye et al., 2004).

Summary and Transition

PPD has been extensively studied from the perspectives of the women who experienced the symptoms of the condition. In addition, many qualitative studies on PPD have been conducted among reproductive-aged women in developed countries. On the other hand, only few qualitative studies on PPD have been conducted in Nigeria and other developing countries. Most importantly very few culturally appropriate studies have been carried out to examine the beliefs, perceptions and attitudes of health professionals regarding the recognition and management of PPD.

In this chapter, I reviewed the scholarly literature and articles that identify a need for continued research to examine the perceptions, attitudes, and beliefs of health professionals regarding the recognition and management of PPD in remote settings in Nigeria. In addition, in this this chapter, I reviewed articles on the prevalence of PPD in Nigeria. Finally, I reviewed articles the factors that prevent health professionals from being able to recognize and manage PPD in a timely manner.

The conceptual framework used for this study was the pen-3 cultural model and provided the background for understanding the effects of culture in health decision making and health seeking processes. In this chapter, I discussed the appropriateness of the pen-3 cultural model in studying an individual or groups of individuals with regards to health practices and health intervention results, by reviewing previous studies that utilized the model. The present study will contribute to the extension of knowledge on the relationships between the beliefs, perceptions and attitudes of health professions and the recognition and management of PPD as a major public health issues. Secondly, this study will contribute to the application of a culturally appropriate framework in examining the barriers associated with the recognition and management of PPD in rural Nigerian settings. A preview of a plan for how the basic research study was conducted will be discussed in the following section. Chapter 3 discusses the methodologies used to understand perceptions, attitudes, and beliefs of health professionals regarding the recognition and management of PPD in remote settings in a remote setting in Nigeria.

Chapter 3: Research Methods

Introduction

PPD is a common complication of childbearing, and has been identified as a major public health problem (Fitelson, Kim, Baker & Leight, 2010). Mental health is often not prioritized as a problem in developing countries like Nigeria (Fitelson et al., 2010) but the evidence suggests that PPD may be more common and graver for women in developing countries (Fitelson et al., 2010). In spite of such supporting evidence, the symptoms of PPD often go unrecognized and consequently untreated (Fitelson et al., 2010). The purpose of this qualitative phenomenological study was to examine the beliefs, attitudes, and perceptions held by health care professionals towards the recognition and management of PPD in a selected rural setting in Nigeria.

The purpose of this study was to understand the factors that either facilitate or hinder the recognition and management of postpartum depression in rural Nigeria from the perspectives of health professionals. The key components of this chapter are the research design and rationale, research questions, research methodology and the justification for its use, the population to be used for the study, the recruiting and inclusion criteria, methods of data collection, methods for data analysis and synthesis, ethical considerations, issues of trustworthiness, and a chapter summary.

Research Design and Rationale

Burns and Grove (2003) defined a research design as “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings" (p. 195). Parahoo (1997) described a research design as an outline for describing the sequences of events about data collection and analysis. These would include the sources of data, the setting for the data collection, the timeframe for collecting data, and the methods used in collecting and analyzing data. Conversely, Polit, Beck and Hungler (2001) stated that a research design consists of the procedures used by the researcher to either address the research questions or test research hypothesis

De Vaus (2006) described the research design as the overall strategy that a researcher chooses to integrate the different components of the study in a coherent and logical way, thereby ensuring that the research questions will be effectively addressed. Research design constitutes the blueprint for the collection, measurement, and analysis of data (De Vaus, 2006). Van Wyk (2009) stated that the research design articulates what data is required, what methods are going to be used to collect and analyze the data, and how all of this is going to answer the research questions. Both data and methods, and the way in which these will be configured in the research project, need to be effective in producing the answers to the research questions while taking into account practical and other constraints of the study (Van Wyk, 2009).

The phenomenological approach was used for this study. Phenomenology is the collection and analysis of people's perceptions related to a specific, definable phenomenon (Laureate Education Inc., 2013). The focus of phenomenology is on understanding how individuals perceive an experience (Merleau-Ponty, 2012). Therefore, my choice of using the phenomenological approach was to enable me to gain an understanding of the perceptions of health professionals in a rural Nigerian hospital towards the recognition and management of PPD. The phenomenological approach allows for the interpretations of experiences by listening to the different stories of the participants (Bound, 2011). In phenomenology, a phenomenon is examined through the subjective eyes of the participants (Bound, 2011). Consequently, the phenomenological approach was ideal for understanding the beliefs, attitudes, and perceptions of health professionals regarding the recognition and management of PPD in a rural setting in Nigeria.

Research Questions

Maxwell, (2008), explained that research questions serve two main functions: to help the researcher focus the study (the questions' relationship to the goals and conceptual framework) and to give guidance for how to conduct the study (their relationship to methods and validity) This study was guided by the following questions:

RQ1: What do health professionals define as the barriers and facilitators to the recognition, diagnosis, and treatment of symptoms associated with PPD among reproductive-aged women in rural Nigeria?

RQ2: What are health professionals' beliefs, perceptions, and attitudes towards postpartum depression, its diagnosis, and clinical management?

Research Paradigm and Tradition

According to Husén (1997), a paradigm determines the criteria according to which one selects and defines problems for inquiry and how one approaches them theoretically and methodologically. Shrestha (2015) described the research paradigm as a broad framework of perception, understanding, and belief within which theories and practices operate; it pre-structures perceptions, conceptualization, and understanding. Some of the paradigms used in qualitative research include post positivism and interpretivist/constructivist paradigms (Mackenzie & Knipe, 2006). The interpretive research paradigm was used in this study. Beck, Bryman, and Liao (1993) described the interpretive paradigm as a study of social phenomena that requires understanding of the social world that people live in. Therefore, the use of an interpretive paradigm in this study enabled me to understand the perceptions of health professionals concerning PPD as a social phenomenon. Bryan (2001) explained that interpretivism is associated with qualitative research and is used to obtain an understanding of the world from an individual perspective.

According to Henning (2004), the interpretive paradigm places emphasis on experience and interpretation. The interpretive paradigm is concerned with meaning and it is used to uncover the way members of society understand given situations (Henning, 2004). This goal fits with the philosophy, strategies, and intentions of the interpretive research paradigm. The choice and application of the interpretive paradigm for this study was based on some of its features which include seeking an understanding with a focus on subjective meanings and interpretation and data collection carried out in a setting of everyday life; the use of qualitative methods (including in-depth interviews) is high on validity as it draws on the understandings of research subjects and relies on the interpretations of the participants (Rubin & Rubin, 2005).

Role of the Researcher

According to Creswell (1998), the researcher is an instrument of data collection. The researcher “gathers words or pictures, analyzes them inductively, focuses on the meaning of participants, and describes a process that is expressive and persuasive in language” (Creswell, 1998, p. 14). Since this was a phenomenological study, my role as the researcher was to gather, organize, and analyze data from health care professionals regarding the recognition and management of PPD in a rural setting in Nigeria. To fulfill my role as a researcher I followed the ethical guidelines which included the following: informed consent, privacy and anonymity, and confidentiality. Prior to the beginning of data collection, I explained the ethical procedures and established common understandings with the study participants.

Methodology

Myers (2009) described research method as a strategy of enquiry, which moves from the underlying assumptions to research design and data collection. Although there are other distinctions in the research modes, the most common research methods are qualitative and quantitative (Thomas, 2010). In this study, I used the qualitative research approach. De Vos, Strydom, Fouché, and Delport (2002) described qualitative research as that which brings out the participants’ accounts of meaning, experiences or perceptions, and produces descriptive data in the participants’ own written or spoken words. The purpose of a qualitative study is not necessarily to predict what might occur, but rather to gain an understanding of the characteristics of the situation and the meaning brought by the study participants (Patton, 2002). According to Creswell (1994), qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting.

The four major types of qualitative research are phenomenology, ethnography, grounded theory, and case study. In this study, I used phenomenology. The phenomenological tradition can be classified into three major headings: transcendental phenomenology, hermeneutic phenomenology, and existential phenomenology (Kafle, 2011). Hermeneutic phenomenology was used in this study. Hermeneutic phenomenology is a qualitative research methodology with an emphasis on the philosophy of understanding (Geanellos, 1998). According to Van Manen (1997), the goal of hermeneutic phenomenological research is to develop a rich or dense description of the phenomenon being investigated in a particular context. This implies using an appropriate method to recruit study participants in order to obtain information-rich cases for detailed study (Denzin & Lincoln, 2000; Patton, 2002). In hermeneutic phenomenology, interviews are often used for data collection. Creswell (2007) described in-depth interviews as the primary means of collecting information for a phenomenological study, with a selection of individuals. Therefore, in this study, phenomenological strategies were an appropriate approach for data collection, data analysis, and interpretation, with consideration for the holistic theme (Smith et al., 2009; van Manen, 1997).

Justification for Using the Qualitative Approach

Creswell (1998) outlined the rationale for undertaking the qualitative research study to include: (a) research questions that begin with how and what, (b) the research topic requires exploration because of multiple variables or a lack of theory, and (c) a natural setting is required for the research study. In addition, qualitative studies are concerned with opinions, feelings, attitudes, and experiences (Joubish, Khurram, Ahmed, Fatima, & Haider, 2011).

Qualitative studies describe social phenomena as they occur naturally; the researcher makes no attempt to manipulate the situation (Joubish et al., 2011). In a qualitative study, the researcher is interested in understanding and describing the situation (Joubish et al., 2011). The researcher seeks to gain an understanding of a phenomenon by taking a holistic approach rather than looking at a set of variables (Joubish et al., 2011).

Thomas (2010) explained that the aim of a qualitative study is to explore and discover issues concerning a problem about which little is known. The author further stated that there is usually uncertainty about the dimensions and characteristics of the problem. Qualitative research is naturalistic; it attempts to study the everyday life of different groups of people and communities in their natural setting (Domegan & Fleming, 2007). Consequently, the qualitative approach was ideal for understanding the beliefs, attitudes, and perceptions held by health professionals with regards to the recognition and treatment of PPD in a rural setting in Nigeria.

According to Newman, Ridenour, Newman, and DeMarco Jr. (2003), qualitative research is designed to address questions of meaning, interpretation, and socially constructed realities. Miles and Huberman (1994) described qualitative data as a source of balanced, valuable narrative and details of activities in recognizable community settings from which the researcher can maintain sequences of events, see exactly which event led to which consequences, prompting productive explanations. Polit and Hungler (1999) maintained that a qualitative method is especially useful for exploring the nature of a little-understood phenomenon.

PPD is globally recognized as a major public health condition which affects reproductive-aged women worldwide, and is both preventable and treatable (Stewart et al., 2003). Health professionals have a major role to play in the recognition and management of symptoms of PPD. However, in many rural parts of Nigeria, the symptoms of PPD are often unrecognized and reproductive-aged women who may experience the symptoms of PPD are often untreated. In addition, little is known concerning the beliefs, attitudes, and perceptions held by health professionals with regard to the recognition and management of PPD in rural parts of Nigeria.

Location/Setting

Akwa Ibom state is one of Nigeria’s 36 states, and is the tenth largest state in the country with 31 local government areas (Ekpo, 2002; Ekpo & Umoh, 2005). According to the 2006 National Population Census (NPC, 2007), Akwa Ibom State had a total population of 3,920,208 persons out of which 87.89% constitutes the rural population while 12.11% forms the urban population. Akwa Ibom State covers a total area of 7,246.499 square kilometers and has a population density of about 475 people per square kilometer (Ekpo, 2002; Ekpo & Umoh, 2005).

Currently, Akwa Ibom state is the highest oil and gas producing state in Nigeria (Ekpo, 2002; Ekpo & Umoh, 2005). In spite of its oil wealth, rural communities in Akwa Ibom state do not enjoy modern health care services since 90% of hospitals and clinics are located in urban centers (Ekpo, 2002; Ekpo & Umoh, 2005). Akwa Ibom state has many indigenous languages. However, English is the official language for business and government affairs, and therefore the health professionals and the participants of this study wrote, understood, and spoke English. Akwa Ibom State is located in the South-South region of Nigeria as shown in figure 2.

Figure 2. Map of Nigeria. The highlighted area is Akwa Ibom State. (Used under Creative Commons Attribution-Share Alike 3.0 Unsupported license).

Participant Selection Logic

According to Parahoo (1997), population is the total number of units from which data can be collected, such as individuals, artifacts, events or organizations. Gay (1987) described a research population as generally a large collection of individuals or objects that is the main focus of a scientific query. It is for the benefit of the population that research is done (Gay, 1987). However, collecting and analyzing data from every individual in the population could be too expensive and time-consuming causing researchers to rely on sampling techniques (Gay, 1987). Burns and Grove (2003) describe a population as all the elements that meet the criteria for inclusion in a study. The total population of relevant participants of this hospital was 15 medical doctors and 170 nurses, out of which about 30 nurses work directly with pregnant and postpartum women.

Sampling Strategy

Landreneau and Creek (2004) describe sampling strategy as a plan set forth to ensure that the sample used in a research study represents the population from which the sample is drawn. Cohen, Manion and Morrison (2007) and Silverman (2005) stated that, in qualitative research, sampling can be based on either probability (random) or non-probability (purposive) sample. In this study, I used the non-probability sampling strategy. The non-probability sampling strategy requires the researcher to purposely recruit a section of the wider population to include in the study because they illustrate some features or processes that the researcher is interested in with the aim of the sample representing itself rather than seeking generalizability (Cohen et al., 2007; Silverman, 2005). The three methods of non-probability sampling are convenience, quota, and purposive.

In this study, I used the purposive sampling method. Purposive samples are the most frequently used form of non-probability sampling in qualitative research (Miles & Huberman, 1994). Purposive sampling techniques allow researchers to use their judgment to choose cases that will best answer the research question(s) and meet the objectives of the study (Saunders, 2012). Purposive sampling techniques are normally used to choose a relatively small number of participants, such as those that are particularly informative (Neuman, 2005).

Champion (2002) stated that purposive sampling is used when there “are clear criteria for recruiting the participants for the sample group to be studied” (p. 62).

Purposive sampling involves recruiting research participants according to the needs of the study (Champion, 2002). Purposive sampling involves the identification and recruitment of individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest (Cresswell & Clark 2011). In addition, I used the six attributes for evaluating sampling strategies as suggested by Miles and Huberman (1994):

1. The sampling strategy should be relevant to the conceptual framework and the research questions addressed by the research. This may imply considering whether sampling is intended to provide cases in categories which are relatable to a pre-existing conceptual framework for the research, or how far the choice of cases might affect the scope for developing theory inductively from the data.

The conceptual framework for this study was the pen-3 cultural model developed by Airhihenbuwa (1995), consisting of three domains: cultural identity; relationships and expectations; and cultural empowerment. In the pen-3 cultural model, the community is comprised of the personal, extended family, and neighborhood (Airhihenbuwa, 1995). Perceptions are viewed as encompassing the sum of knowledge, attitudes, values, and beliefs that are supported by the culture (Airhihenbuwa, 1995). The sampling strategy was intended to provide cases in categories relatable to elements found in the pen-3 cultural model. In addition, the sampling strategy was relevant to the research questions for this study.

2. The sample should be likely to generate rich information on the type of phenomena which need to be studied. Miles and Huberman (1994) phrase this in terms of whether the phenomena of interest in the research are likely to appear in the interviews.

The goal of hermeneutic phenomenology is to develop a rich or dense description of the phenomenon being investigated in a particular context (Van Manen, 1997). In addition, the purposeful recruitment of participants enabled the collection of rich information. The participants recruited for this study were those who were able to illuminate the phenomenon of study, and provided information-rich responses (Denzin & Lincoln, 2000, Patton, 2002).

3. The sample should enhance the generalizability of the findings. For qualitative samples, the researcher is concerned with analytic generalizability rather than statistical power to make statements about a general population on the basis of a sample. According to Mays and Pope (1995, 2000), in terms of sampling, the researcher can achieve a degree of generalizability by ensuring that the research report is sufficiently detailed for the reader to be able to judge whether or not the findings apply in similar settings. Detailed description should reveal the social relations that underpin study (Wainwright, 1997). Schofield (1993) explains that generalizability may be enhanced by choosing a research site on the basis of typicality. Osherson and Smith (1997) describes typicality as the extent to which objects are good examples of the concepts of the study. Therefore, the research site for this study was a rural hospital, where the participants are good examples of health professionals working in rural health settings in Nigeria.

4. The sample should produce believable descriptions/explanations (in the sense of being true to real life). One aspect of the validity of qualitative research relates to whether it provides a convincing account and explanation of what is observed. This criterion may also raise issues of `reliability' of the sources of information, in the sense of whether they are complete, and whether they are subject to important biases which would influence the type of explanation to be based upon them. My written report provides clarity and relevance of the study.

5. The sampling strategy should be ethical. Miles and Huberman (1994) suggest that the researcher may consider whether the method of recruitment permits informed consent where this is required; whether there are benefits or risks associated with recruitment for and participation in the study, and the ethical nature of the relationship between researcher and informants. In this study, informed consents were obtained from the recruited participants, and other ethical guidelines were followed as described later in this chapter.

6. The sampling plan should be feasible. Miles and Huberman (1994) encourage the researcher to consider feasibility in terms of the resource costs of money and time, the practical issues of accessibility and whether the sampling strategy is compatible with the researcher's work style.

Sample Size

A total of 10 (five doctors and five nurses) participants were recruited for this study. In phenomenological studies, it is appropriate to use a small sample size (Marshall et al., 2013). As explained by Patton (1990), in determining sample size for qualitative studies, there are no hard and fast rules. However, there are at least two considerations (Patton, 1990). First, the researcher should use a sample size that will reach saturation or redundancy by considering how large the sample should be to allow for the identification of consistent patterns. With 10 participants, I was able to identify consistent patterns emerging from data analysis and coding processes.

The sample size should be large enough to leave the researcher with nothing left to learn (Patton, 1990). With 10 participants, after the tenth interview, I realized that there were no new concepts emerging or that there are no overlaps; at this point the concepts, and themes began to be redundant, therefore, there was no need for more interviews to be conducted. Secondly, the sample size should be enough to represent the variation within the target population; the sample should be large enough to allow for assessing an appropriate amount of diversity (Patton, 1990). With five doctors and five nurses, the sample size for this qualitative study was large enough to represent the variation, and assess an appropriate amount of diversity within the target population.

Procedures for Recruitment

According to Elide (2008), in qualitative inquiry, recruitment refers to the process whereby the researcher identifies and invites (recruits) participants to join the study. Qualitative researchers strive to include participants who meet the study criteria and who represent the richest and most complex source of information (data) relevant to the phenomena being studied (Elide, 2008). For this study, I recruited five doctors and five nurses in order to gain validity through increasing the number of viewpoints collected (King, 2004). The participants were recruited from a local hospital in a rural setting in Akwa Ibom state, Nigeria through collaboration with my main contact person who is the Chief Nursing Officer (CNO) at the selected study site. My contact acted as the gatekeeper because he is known and trusted by the potential participants. Collaborating with health care providers and community gatekeepers trusted by the participants is a successful recruitment strategy (Felsen et al., 2010; Porter & Lanes, 2000; Renert et al., 2013; Spratling, 2012).

Saunders (2006) describes the gatekeeper as a person who controls the researcher's access to the study site. Gaining permission to a study site may require negotiations between the researcher and the gatekeeper (Krathwohl, 1998). Prior to my study, my discussions with the gatekeeper included timing, the purpose of my study and how the results or outcomes of my study would be used. I explained to the gatekeeper that the study is mainly educational in nature. The gatekeeper had a full understanding of the purpose of my study and assisted me in advertising my study to the doctors and nurses at the study site, by organizing a meeting, formerly introducing me to potential participant, and offering me an opportunity to speak to the potential participants.

Recruitment Criteria

Burns and Grove (2003) describe eligibility criteria as a list of characteristics that are required for the membership in the target population. The recruitment of participants has implications for both data collection and the data that are available for analysis

(Burgess, Pole, Evans, & Priestley, 1994) and helps to define the limits for generalizing the findings (Eisenhardt, 1989). Sargeant (2012) stated that identifying appropriate participants is the most important task in the design phase of a study. The author further explains that discussions regarding study participants are based on the research questions, theoretical perspectives, and evidence informing the study. The participants in this study were recruited using purposive sampling (Cohen et al., 2007; Patton, 2002; Silverman, 2005). The criteria for participation were doctors and nurses currently working with pregnant and postpartum women for at least five years, or having previously worked with pregnant and postpartum women for at least three years within the past five years.

Participation

The participants for this study were recruited based on their eligibility and availability while taking their job schedules into considerations. Participation in this study was voluntary, based on knowledge of PPD, and the experience of working or having worked with pregnant and postpartum women. In addition to knowledge and experience, Bernard (2002) expresses the importance of availability and willingness to participate, as well as the ability to communicate experiences and opinions in an articulate, expressive, and reflective manner. Therefore, the participants for this study were able to understand and speak English fairly well.

Data Collection Plan

After receiving approval from Walden University, and permission from the local hospital, I collected data from 10 health professionals in a remote setting in Akwa Ibom state, Nigeria between September and October 2016. Data collection was carried out using the open ended, semi-structured interview guide that I created (Appendix C).

I conducted individual interviews with each of the recruited participants. Each interview session was designed to last for approximately 60 minutes, plus an additional 30 minutes to review audio recordings for verification and possible corrections. The duration of data collection was six weeks. With the permission of the participants, discussions and interviews were digitally recorded for later transcriptions. Audio recordings did not begin until the participants had given consent and participants' names were not recorded. Permission to record was part of the consent process. I led all the interviews sessions.

Instrumentation

I collected the data for this study using open-ended semi-structured interviews. Many scholars (Creswell, 2009b; Locke, Silverman, & Spirduso, 2010; Marshall & Rossman, 1999) have attested to the fact that the common sources of data collection in qualitative research are interviews, observations, and review of documents. In hermeneutic phenomenology, the interview serves very specific purposes. First interviews are used as a means for exploring and gathering of narratives (or stories) of lived experiences. Second, interviews are a vehicle by which to develop a conversational relationship with the participants about the meaning of the experience. Interviews allow the study participants to share their stories in their own words. Interviews, are believed to provide a deeper understanding of social phenomena (Stewart, Treasure & Chadwick

(2008). Interviews are consistent with the interpretivist paradigm, in that they aim to record the types of data that will enable the researcher to reflect on subjective meanings and interpretations; the social and culturally embedded nature of individual experiences (Rubin & Rubin, 2005).

There are various ways of conducting research interviews, including structured, semi-structured and unstructured interviews (Minichiello, Madison, Hays, Courtney, & St. John, 1999). However, in this study I used open- ended semi-structured questions as the data collection tool (Appendix C). Stewart, Treasure and Chadwick (2008) describe semi-structured interviews as consisting of many key questions that help to define the areas to be explored, and also allows the interviewer or interviewee to diverge in order to pursue an idea or response in more detail. Semi-structured interviews and unstructured interviews are widely used in qualitative research (Stewart et al., 2008).

A semi-structured interview format is used most frequently in healthcare, because it provides participants with some helpful guidance on what to talk about (Stewart et al., 2008). This interview approach consists of a list of open-ended questions based on the topic areas the researcher intends to study (Stewart et al., 2008). The open-ended nature of the questions provided opportunities for me (the interviewer) and the participants (the interviewees) to discuss certain topics in more detail. If the interviewees had any difficulties answering a question or hesitated to answer any question, I provided probes to guide the participants (Stewart et al., 2008). In addition, the flexibility of semi-structured interviews allows for the discovery or elaboration of important information that may not have been thought of as pertinent (Stewart et al., 2008). Stewart et al. also attested to the fact that interviews are believed to provide a deeper understanding of social phenomena.

Protecting Privacy and Confidentiality

Between privacy and confidentiality, confidentiality is considered to be more important in any research. Privacy can be easily assured with proper consent procedures. On the other hand, confidentiality of data takes more effort to maintain. All information gathered in a research study should be considered information that an individual has disclosed in a relationship of trust, and participants have the right to expect that their information will not be divulged without their permission. Burns and Grove (2005) stated that all study participants have the right to privacy, anonymity and confidentiality; however, they also stress that true anonymity exists only if the participant's identity cannot be linked to the data, even by the researcher. In this study, privacy was considered in two ways; institutional and individual. Since my study was conducted in an institution (hospital), I will use caution in publishing any type of information that could reveal the institution. Secondly, I have removed all identifiers of the individuals who participated in this study.

Protecting Privacy

Protecting the privacy of study participants meant giving them control over the information that they share with me. To ensure the protection of study participants, I asked for their permission and got their consent to conduct the study procedures with them, I allowed them to refuse to answer any questions or complete any section of the study that they may found objectionable, and ensured that the study was run in a private place. I used anonymous data and/or data stripped of identifiers to ensure that the privacy of participants was protected

Informed Consent

Participants of any research study have a reasonable expectation of being informed of the nature of the study. In addition, participants have the right to choose whether or not to participate in the study. In this study, participants were fully informed prior to the study about the extent and nature of the study, as well as any potential risks and procedures involved. My first responsibility as a researcher was to obtain informed consents from the participants and make sure that the participants fully understood the study and their voluntary participation in the study. Written consent was obtained prior to participation in the interviews (Appendix B). The data collection at all stages of the research project took place in the participants' own environment. Participants were free to withdraw from the study at any time without consequences. Consent for the study was an ongoing process. I explained to the participants that they had the right to refuse participation at any time, regardless of the fact that they had already signed the consent form. I continually ensured that each participant was freely and voluntarily consenting to all study tasks. The participants were aware of the fact that they had the right to stop the study at any time or to skip any question or portions of any questions that they would prefer not to answer.

Confidentiality

Polit and Beck (2006) describe confidentiality as the protection of study participants such that individual identities are not linked to information provided and are never publicly divulged. Individuals taking part in any type of research study have reasonable expectations that the information they provide to the researcher will be treated confidentially, and will not be shared with anybody else. In this study, I assured the participants that their names will not be used in connection with the information they provide. Assuring participants of their confidentiality is important in earning their trust and eliciting good data (Mack, Woodsong, MacQueen, Guest & Namey, 2005).

In this study, confidentiality guidelines were part of discussions during the consent process. To further ensure the protection of participants' confidentiality, data was collected in a confidential manner, with no connections to any type of information that could be used to identify individual participants. In addition, the following steps were taken:

Data Storage

Proper storage of study data is important for protecting confidentiality. Confidentiality can be ensured by having appropriate plans to house and organize data. After obtaining consent from the participants, audio recording was done using a Philips portable digital audio recorder. In addition, I took notes during each interview session. I kept these notes confidential by uploading them directly to Google Drive, they are physically stored in a locked cabinet at my home, where I will be the only one with access to the materials.

It is important for me to keep the research records and data organized, not only for the purpose of making the research process more efficient, but also for documenting that I followed my protocol. Data collected for this study were confidential data; stripped of identifiers, therefore, I do not have any identifiable information to store, nor do I have the ability to reconnect data with identifiers. Due to ethical issues concerning exposure of participants' identity, Bird (2005) advises the researcher to assign a pseudonym to the participants' names. In this study, each participant was assigned a unique pseudo identification number. Participants' assigned identification numbers were written on the interview forms, in notes taken, and were used to name audio files and transcript documents. The doctors were assigned D1-D5, and the nurses N1-N5 respectively. In addition, I stored the consent forms so that I could document that all of my participants were properly consented.

It is important for the researcher to explain what will happen to the data and other research materials when the study has concluded. Considerations will be given to the destruction of the interview recordings and transcribed data, as well as notes taken during the interview sections. Audio recordings, field notes, and paper copies of interview transcripts will be stored in a locked filing cabinet. I will be the only one with access to the raw data from the study. The raw data will be kept for 5 years, as recommended by Walden University IRB, before being destroyed.

Pilot Study

Prior to the actual study, I conducted a pilot test with participants that had similar interests as those that participated in my study, but who were not part of my participants. Participation in the pilot study was based on the same inclusion/ exclusion criteria as the main study. Using the purposive sampling strategy, I recruited two participants (one doctor and one nurse) both of who had previously worked with pregnant and postpartum women for at least three years within the past five years. Participants for the pilot study were recruited from the same pool of the target population, from the same setting and location (Rural hospital in Nigeria) for the main study. In addition, personal information of participants for the pilot study were treated under the same ethical considerations as the participants of the main study.

In the pilot study, I used the same set of questions that I used for main study participants. The main objective of the pilot study was to assess the appropriateness of the interview questions. The pilot study assisted me in determining if there are flaws, limitations, or other weaknesses within the interview questions and allowed me to make necessary revisions prior to the implementation of the study as needed (Kvale, 2007). The data from the pilot study were used in testing adequacy of the study instruments and were not used in the data analysis of this study.

Creating the Interview Guide

Patton (2002) identified three types of open-ended interviews as basic approaches to collecting qualitative data: the informal conversational interview; the general interview guide approach, and the standardized open-ended interview. Each serves a different purpose and differs in the extent to which interview questions are determined before the interview occurs. The qualitative research interview generally uses an interview guide rather than a formal schedule of questions to be asked verbatim in a pre-determined order (King, 2004). The interview guide contains a list of topics and suggests probes, which may be used to promote further detail from participants, and may be modified through the use probes or whole topics being added as they emerge during the interview process. The guide may include questions rather than topics and is designed to help participants focus on concrete examples, an important principle in qualitative interviewing (King, 2004).

In this study, I employed the general interview guide approach to ensure that the same basic line of inquiry was pursued with each participant. A set of issues to be explored with each participant was determined before the interview; however, I was open to explore previously unconsidered topics that may be introduced by the interviewees. This was achieved through establishing a conversational style interview. The interviews were “co-elaborated acts on the part of both parties” (Miles & Huberman, 1994, p. 8) and not just a gathering of information by the researcher. By delimiting the issues to be explored, the process was systematic and comprehensive and made best use of the limited resources available (Miles & Huberman, 1994).

Data Analysis Plan

In qualitative research, data analysis is defined as the process of systematically searching and arranging the interview transcripts, observation notes, or other non-textual materials that the researcher accumulates to increase the understanding of the phenomenon (Wong, 2008). Basically, data analysis involves making sense of large amounts of data by reducing the volume of raw information, followed by identifying significant patterns, and finally drawing meaning from data and subsequently building a logical chain of evidence (Wong, 2008).

The researcher should give a careful description of the data and development of categories in which to place patterns, followed by an evaluation to see how the patterns fit or fail to fit these categories (Hartley, 2004). In addition, the researcher should be mindful that categories may need refining or events need to be interpreted differently (Hartley, 2004). In this study, I used interpretative phenomenological analysis (IPA). IPA is a bottom-up analysis in that the researcher generates codes from the data, rather than using a pre-existing theory to identify codes that might be applied to the data (Smith et al., 2009). IPA encourages an open-ended dialogue between the researcher and the participants (Smith et al., 2009). Additionally, IPA requires a combination of phenomenological and hermeneutic insights. Without the phenomenon, there would be nothing to interpret and without the hermeneutics, the phenomenon would not be seen (Smith et al., 2009). Therefore, in this study I used phenomenological strategies during the process of data analysis.

Phenomenological Strategies

According to van Manen (1997), the aim of phenomenological data analysis is to “transform lived experience into a textual expression of its essence in such a way that the effect of the text is at once a reflexive re-living and a reflective appropriation of something meaningful" (p. 36). Text may be viewed as both the data and the product of phenomenological research (Smith, 1997). The focus of analysis of phenomenological data is on an understanding of the meaning of the description (Waters, 2013). To get at the essential meaning of the experience, a common approach is to abstract out the themes; themes are essential aspects without which the experience would not be the same (Waters, 2013). Creswell (1998) stated that phenomenological data analysis proceeds through the methodology of reduction, the analysis of specific statements and themes, and a search for all possible meanings.

The first principle of analysis of phenomenological data is to use an emergent strategy, to allow the method of analysis to follow the nature of the data itself (Waters, 2013). As soon as the interviews were conducted I immediately processed the information and recorded detailed notes. These notes included time/date details as well as other observations and highlights from the interaction. It was important to do this while the interaction was still fresh in my mind so that I could record my thoughts and reactions as accurately as possible. It was helpful to make a reflection sheet template that I carried with me and completed after each interaction so that it was standardized across all data collection points. Qualitative data analysis should begin as soon as data are collected; therefore, I transcribed the interviews immediately and began reviewing the data.

First, I listened attentively and repeatedly to the audio recording of the interview for each participant to become very familiar with the text set (van Manen, 1997). During this stage, texts will be constructed for each participant from the interview recordings, with the goal of getting a sense or preliminary interpretation of the texts, which will then facilitate coding (van Manen, 1997).

Secondly, I transcribed the audiotapes of each interview into written text, while checking for accuracy, before saving them in appropriately named folders. I kept all typed records in password protected computer hard drives and in a password-protected back-up drive. I applied standardized layout to all transcripts to enable the comparison of data at the analysis stage (McLellan-Lemal, 2008). All interviews were transcribed immediately after they were conducted.

Data Analysis. Transcribed data were imported into NVivo 10 for analysis. NVivo is a computer-assisted qualitative data analysis software (CAQDAS) developed by QSR International (2010). It is used for coding and analysis which can be used to organize and analyze qualitative data including interviews, field notes, textual sources, and audio (QSR International, 2013). The steps involved in computer-assisted qualitative data analysis are similar to those used traditionally to analyze text such as notes, documents, or interview transcripts: preparation, coding, analysis, and reporting (Engel & Schutt, 2014). I used NVivo software for both data management and data analysis because it assisted me in adding theme labels to text for easy retrieval.

Coding in NVivo Using Coder

Bazeley (2007) describes coding as a well-established method for identifying themes in a text. Coding can be done with pre-constructed coding schemes where the nodes are first created using the node explorer followed by coding using the coder. Alternatively, a bottom-up approach can be used where the researcher reads the documents and codes the nodes as they become obvious in the text. These nodes eventually led to themes. Codes can be inductive, as in grounded theory. In this study, codes were dictated by the conceptual framework and the research questions.

Nodes are containers for coding; the use of nodes allowed me to gather related material in one place so that I could look for emerging patterns and ideas. In this study, I used the bottom-up approach. Phenomenological qualitative data analysis involves such processes as coding (open, axial, and selective), categorizing and making sense of the essential meanings of the phenomenon of study (Kleinman, 2004). I was responsible for the analysis of data and conclusion drawn from the analysis.

Level 1 Coding: Open coding

Open coding is a process of reducing the data to a small set of themes that appear to describe the phenomenon that is under investigation (Kleinman, 2004). During open coding, the data were divided into segments, based on the interview questions and were then be scrutinized for commonalities that could reflect categories or themes (Kleinman, 2004). Codes were assigned to segments associated with responses to specific interview questions with the goal of organizing data and linking the codes to appropriate excerpts of text (Strauss & Corbin, 1998). This approach works for data collected using structured or semi-structured interview or focus group guides that have discrete questions and probes that are repeated across multiple files in a data set (MacQueen & Milstein, 1999).

I collected data for the study using semi-structured interviews with discrete questions and probes.

As the analysis developed, I made a list of the emerging codes, and subsequently begun to look for patterns in the codes. These patterns are called themes. Themes are recurring patterns of meaning (ideas, thoughts, and feelings) throughout the text. Themes are likely to identify both something that matters to the participants (i.e. an object of concern, topic of some import) and also convey something of the meaning of that thing, for the participants. This constituted the initial coding process.

Level 2: Axial Coding (or Thematic Coding)

Axial coding relates categories to subcategories, specifies the properties and dimensions of a category and reassembles the data fractured during open coding to give coherence to the emerging analysis (Charmeaz, 2006). Axial coding generally follows open coding and involves putting data together in meaningful new ways by looking for connections among the categories, and is based on themes arising from open coding (Strauss & Corbin, 1990). During axial coding, I reexamined the concepts and categories created during the open coding to confirm that they accurately represent interview responses. In addition, I explored how the concepts and categories are related.

Level 3: Selective Coding.

Strauss and Corbin (1990) describe selective coding as “the process of selecting the core (main) category, systematically relating it to other categories, validating the relationships, and filling in categories that need further refinement and development” (p.116). During the process of selective coding, I combined the categories and their interrelationships to form a storyline that describes what happens in the phenomenon that is being studied (Kleinman, 2004). At this stage, I carefully looked-for data that are contradictory, as well as confirmatory, as it is important not to be selective in choosing data (Strauss & Corbin, 1990).

Making and Using Memos

In analyzing qualitative data, pieces of reflective thinking, ideas, theories, and concepts often emerge as the researcher reads through the data (Welsh, 2002). NVivo allowed me the flexibility to record ideas about the research as they emerged in the memos. I prepared short descriptive memos to document initial impressions of topics and themes and their relationships and to define the boundaries of specific codes (i.e., the inclusion and exclusion criteria for assigning a specific code). Memos are ways of summarizing where the researcher is during data analysis and the potential interpretations the researcher may have about the data (Hesse-Biber, 2010).

Creating Attributes

Attributes are characteristics (e.g. age, marital status, ethnicity, educational level) that the researcher associates with a document or node (Welsh, 2002). NVivo made it possible for me to assign attributes to either a document or node. I was able to add, remove, or rearrange items in attributes to help me in making comparisons. Attributes are also integrated with the searching process; for example, linking the attributes to documents enabled me to conduct searches pertaining to documents with specified characteristics.

Theoretical Constructs and Narratives

Following the coding process, themes were developed which were then related to the theoretical model. In confirming with the pen-3 cultural model, I examined the final themes within the context of the three domains; relationship and expectation domain, cultural empowerment domain, and the cultural identity domain, Relationship and expectation domain with subdomains consisting of opinions(perceptions) or sentiments (attitudes) concerning health problems, the community or operational resources including health care services for the promotion or discouragement of health decision-making, and health-seeking processes (Airhihenbuwa, 1995, 2007a, 2007b).

Under the cultural empowerment domain, a person's health practices are viewed as positive, existential or negative. Positive health practices are encouraged, those practices that seem to have neither negative nor positive effects on the health of the citizens are left unchanged, and negative practices are discouraged (Airhihenbuwa, 1995, 2007a, 2007b). The planning and implementation of health intervention programs should focus on every aspect of cultural practices and not just the negative aspects.

Cultural identity domain is made up of the persons (immediate family or health professionals); extended family members (grandparents and other relatives) and neighborhood (communities or villages, and organizations) (Airhihenbuwa, 1995, 2007a, 2007b). Codes associated with participants' responses to interview questions (including quotes) would reflect the perceptions, attitudes and beliefs of the health professionals. In addition, such reflections would be related to each domain of the pen-3 model.

Issues of Trustworthiness

Trustworthiness consists of the following components: credibility; transferability; dependability; and conformability (Lincoln & Guba, 1985).

Credibility

Guba and Lincoln (1985) describe credibility as being parallel to internal validity. Credibility refers to whether the findings are well presented and meaningful. The focus of credibility is more on establishing the match between the constructed realities of study participants and those realities as represented by the researcher and attributed to various stakeholders (Guba & Lincoln, 1985). Credibility is arguably the most important criterion for assessing the quality and integrity of a qualitative inquiry (Guba & Lincoln, 1985). Credibility contributes to a belief in the trustworthiness of data through the following attributes: prolonged engagement; persistent observations; triangulation; referential adequacy; peer debriefing; and member checks. For the purpose of this study, I utilized member checks.

Member checks, also known as informant feedback or respondent validation, is a technique used by researchers to help improve the accuracy, credibility, validity, and transferability of a study (Morse, 1994). Member checks occur when the researcher asks participants to review both the data collected by the interviewer and the researchers' interpretation of that interview data (Guba & Lincoln, 1985). At the end of each interview session, I checked for accuracy with each participant as we both listened to the recordings. This helped the participants to review the data in order to validate and clarify their responses. The member check process provides the study participants a chance to verify their statements (Guba & Lincoln, 1985).

Transferability

Transferability refers to the extent to which findings can be transferred to other settings or groups (Guba & Lincoln, 1985). Transferability is defined as the extent to which evidence generated in one context holds true in another context (Haregu, 2012). In this study, to enhance transferability, I maintained detailed information on the number of participants involved in the study; the data collection methods that was employed; the number and length of the data collection sessions; and the time period over which the data was collected.

Dependability

Dependability refers to demonstrating that the findings are consistent and could be repeated with other participants (Lincoln & Guba, 1985). They further stated that dependability deals with the stability of the data over time and conditions, which can be ensured by stepwise replication and inquiry audit. In this study, I established the process of dependability first by maintaining an audit trail. Guba and Lincoln (1985) described an audit trail as an important technique for assessing dependability.

I kept detailed and accurate records of everything I did as a researcher to describe the processes; including data collection, and data analysis, and support the product; the research findings. Secondly, in Chapter 3 of this study, I clearly stated the methodology used for the study, the logic used to recruit the study participants, and the sample size. This was followed by a description of and the ethical procedures followed before and during the data collection process including the protection of participants' identifiable information.

Thirdly, an audio recording device was used to capture verbatim what each study participant stated during each interview session. The use of the recorder produced a more reliable account of the data collected and created a permanent recording of the interview for my review during data analysis. Permission to audio record each interview session was granted from each participant. The responses to the interview questions may be different if repeated with other participants in different settings. However, the methods used for this study could easily be replicated.

Conformability

Conformability is the need to show that data, interpretations and outcome of inquiries are rooted in contexts and persons apart from the researcher's and are not simply figments of the researcher's imagination (Guba & Lincoln, 1985). Conformability of qualitative inquiry is achieved through an audit trial, reflexive journal and triangulation (Bowen, 2009; Koch, 2006; Lincoln & Guba, 1985). According to Bowen (2009) an "audit trail offers visible evidence; from process and product, that the researcher did not simply find what he or she set out to find" (p. 307).

Audit trails document the course of development of the completed analysis. In developing an audit trail, a researcher provides an account of all research decisions and activities throughout the study (Koch, 2006). The researcher makes explicit all decisions taken about theoretical, methodological and analytic choices and examines the research process and the product of inquiry to determine the trustworthiness of the findings (Koch, 2006). In order to develop a detailed audit trail, I maintained a log of all research activities, developed memos, maintained research journals, and documented all data collection and analysis procedures throughout this study (Creswell & Millar, 2000).

Summary and Transition

This phenomenological qualitative study was designed to explore the perceptions, attitudes, and beliefs of health professionals towards the recognition and management of postpartum depression (PPD) among reproductive-aged women in a rural setting in Nigeria. This chapter focused on the context of the study, the participants' selection process including inclusion and exclusion criteria, the role of the researcher, the measures taken to protect the participants' confidentiality, and the data collection and analysis processes. 10 health professionals participated in the study. After obtaining signed consents from the participants, I conducted 10 open-ended individual interviews to understand their perceptions, attitudes, and beliefs towards the recognition and management of PPD. All data were transcribed and uploaded in to NVivo 10 for data management and analysis. Chapter 4 discusses the actual data analysis and findings from this study

Chapter 4: Results

Introduction

In this chapter, I present findings from in-depth interviews with 10 health professionals regarding their attitudes, perceptions, and beliefs towards recognizing and managing PPD. The data were collected and then processed in response to the problems posed in Chapter 1 of this dissertation. This study and the data analysis were driven by two main research questions focused on understanding the perceptions, attitudes, and beliefs of health professional towards PPD, and to determine how those perceptions, attitudes, and beliefs influenced their ability to recognize and manage symptoms of PPD. These objectives were accomplished, as demonstrated by the findings presented in this chapter. Interpretation of data is discussed in Chapter 5.

In the first section of this chapter, I discuss the pilot study and the processes involved. The second section deals with data collection, beginning with a brief description of the participants' characteristics including age range, educational backgrounds, marital status, and years of experience. The next section focuses on data management which encompasses the processes used for data storing and protecting data. This section also focuses on data analysis by discussing the process used in moving data deductively to categories and themes. The fourth section of the chapter is concerned with the discussion of findings in relation to the domains of the pen-3 cultural model. This chapter concludes with discussions on evidence of trustworthiness covering areas such as processes of credibility, transferability, conformability, and reliability.

Research Questions

The following research questions guided this study:

RQ1: What do health professionals define as the barriers and facilitators to the recognition, diagnosis, and treatment of symptoms associated with PPD among reproductive-aged women in rural Nigeria?

RQ2: What are health professionals' beliefs, perceptions, and attitudes towards PPD, its diagnosis, and clinical management?

Purpose of the Study

The purpose of this phenomenological study was to examine the factors that facilitate or hinder the recognition and management of PPD in a rural setting in Nigeria, understand the perceptions, attitudes, and beliefs of health professionals with regards to the recognition and management of PPD, and examine the impact of the perceptions, beliefs and attitudes of health professionals on the recognition and management of PPD in a rural setting in Nigeria.

Pilot Study

Prior to the actual study, I conducted a pilot study with two participants who had similar interests as those who participated in the study. Participation in the pilot study was based on the same inclusion/exclusion criteria as the main study. Using a purposive sampling strategy, I recruited two participants (one doctor and one nurse) from the same setting and location (a rural hospital in Akwa Ibom state, Nigeria) for the main study. The demographic data of the participants for the pilot study consisted of one male and one female. Although both participants currently work with HIV/AIDS patients, they both previously worked with pregnant and postpartum women for 7 years. In addition, personal information of participants for the pilot study was treated under the same ethical considerations as the participants of the main study.

The goal of the pilot study was to justify the use of the survey interview guide as my data collection instrument. The pilot study allowed me to evaluate the interview guide to ensure that it (a) was understandable, (b) was at an appropriate level of literacy, (c) was culturally appropriate, and (d) used the participants' preferred language. The setting for the pilot study was a quiet room in the hospital, and resembled the setting used for the main study. In addition, the procedure for the pilot study followed the study design described in Chapter 1 of this study.

In the pilot study, the participants were asked the same set of interview questions that were designed for the main study participants in order to assess the appropriateness of the interview questions. The outcome of the pilot study was divided into two categories related to the goals of the pilot study: First, practical considerations included the setting of the study and the time limit per interview session. The information gained about practical considerations confirmed the choice of the hospital environment as a convenient setting for conducting the interview sessions for the main study.

Second, the use and application of the interview questions as an instrument for data collection did not need any revision, as the two participants found the interview questions appropriate and felt comfortable in providing answers to each interview question.

Conclusively, there were no adaptations concerning the outcomes of the pilot study that were applied to main study.

Setting

The participants were all interviewed in one of the rooms at the hospital. The setting was familiar to the participants and provided a safe and private environment for the interviews. The hospital provided the setting for the interviews; however, the hospital management did not influence the study participants during the interview process. In addition, the hospital management did not have access to any data or information about the participants.

Demographic Data

The participants consisted of 5 male doctors and 5 female nurses. This provided a large enough sample size to address the research questions and I reached saturation with 10 participants. Four participants were single, five were married, and one was divorced. The educational levels of the participants varied from associate degree to bachelor's degree and BSN. Participants' ages ranged from 30-55 years.

The Participants

Table 1 presents participants' details on their sex, age, qualifications, marital status, and years of experience.

Table 1

Demographic Profile of Participants

Participants' ID	Sex	Age	Marital Status	Qualifications	Years of Experience

N1	Female	40	Single	Associates (Nursing)	6
N2	Female	30	Married	Associates (Nursing)	5
D1	Male	55	Divorced	BSC (MD)	7
N3	Female	45	Single	Associates (Nursing)	6
D2	Male	35	Married	BSC (MD)	5
D3	Male	47	Single	BSC (MD)	6
D4	Male	42	Single	BSC (MD)	6
N4	Female	37	Married	Associates (Nursing)	5
N5	Female	50	Married	BSN (Nursing)	7
D5	Male	53	Married	BSC (MD	7

Data Collection

I used purposeful sampling techniques to recruit participants who met the inclusion criteria. The participants for this study were recruited from a local hospital in Akwa Ibom state, Nigeria. The study eligibility criteria as described in Chapter 3 were health professionals currently working with pregnant and/or postpartum women for at least 5 years, or having worked with pregnant and postpartum women for at least 3 years within the past 5 years with the ability to understand and speak English well.

The chief nursing officer (CNO), who was my gatekeeper, organized the initial meeting at the hospital during which I was introduced to some of the doctors and nurses working in the hospital. In addition, the CNO assigned an administrative assistant to take me on a tour of the hospital, and introduced me to other nurses and doctors who could not attend the meeting. To ensure no coercion of the study participants, I presented the central purpose of the study and the criteria for participation as well as my contact information specifically to the doctors and nurses who worked in the obstetric unit of the hospital so that they could contact me later if they had any questions or were interested in participating in the study.

I was contacted by a total of 14 potential participants; however, four of the potential participants only had 2 to 3 years of experience and so did not meet the inclusion criteria. I invited the 10 participants who met the study criteria to participate in the study (five doctors and five nurses). As stated in Chapter 3, I used open ended semi-structured interviews based on the interview guide that I created (in Appendix C). I conducted a total of 10 semi-structured face-to face interviews. At the beginning of each interview session, participants were given an overview of the study and its importance, and were assured of their confidentiality. In addition, participants were given the consent form to read and sign, which they did without any hesitations. Each participant was given a copy of the consent form at the time of signing.

I conducted all the interviews, and they were all in English. The questions were asked in the same order, as in the guide in a conversational style. I used probes and follow-up questions to seek deeper meanings when necessary.

Each interview session was scheduled to last for approximately 60 minutes, plus an additional 30 minutes during which both participants and the researcher listened to the audio recording for verification and possible corrections. However, interview sessions for two participants (D3 and D5) each lasted for about 45 minutes; they responded to the interview questions a bit faster than others. All participants participated in the complete interview and answered all the questions contained in the interview guide. Participants were offered a 2,500 Naira local currency gift card (an equivalent of $5 USD) upon completion of the interview.

With permission from the participants, each interview was audio recorded using a Philips audio recorder. Field notes were taken at the end of each interview and at the end of each day to capture participants' nonverbal reactions and my overall perceptions during interviews. The interview questions for this study were structured to facilitate asking the participants the same questions, in order to gather sufficiently rich data, and reach saturation. Saturation is defined as the point at which the data collection process no longer offers any new or relevant data.

Fusch and Ness (2015) stated that data saturation is reached when there is enough information to replicate the study, when the ability to obtain additional new information has been attained, and when further coding is no longer feasible. According to Selden

(2005), eventually, after a period of data collection, a point is reached where no new data result from additional data collection. This is a point of saturation: “one keeps collecting data until one receives only already known statements” (Seldén, 2005, p 124).

After conducting in-depth individual one-hour interviews with 10 participants over a six-week period, and collecting the similar information from the participants over and over again in relation to the interview questions, I was confident that further interviews would not lead to more information. Therefore, my data collection ended with the 10th interview. Researchers are allowed to stop sampling data and to round off their analysis when saturation has been reached (Bowen, 2008).

Samples for qualitative studies are generally much smaller than those used in quantitative studies. Ritchie, Lewis, and Elam (2003) noted that the reason for this is that there is a point of diminishing return to a qualitative sample; as the study goes on, more data do not necessarily lead to more information. In addition, to ensure saturation, I was not only concerned with the size of the sample but also with the appropriateness and adequacy of the sample (Bowen, 2008; O’Reilly & Parker, 2012).

Data Management and Data Analysis

Data management involves preparation, data organization, and data analysis/dissemination (Tavakoli, 2006). Each stage of data management is equally important to the study outcomes, and specific activities are required at each stage to ensure the integrity of the data management process (Tavakoli, 2006). In this study, I used NVivo 10 for managing and analyzing my data. NVivo is computer-assisted qualitative data analysis software (CAQDAS) developed by QSR International.

Data Management

The data used for the analysis in this study were the transcripts from 10 semi-structured interviews with health professionals in a rural hospital in Akwa Ibom State, Nigeria. Data collected were confidential as no participants' names or identifiable information was used in the data analysis. Participants were assigned unique predetermined identification numbers as described in Chapter 3. For example, D1 was the first doctor to be interviewed and N1 was the first nurse interviewed respectively. The predetermined participants' numbers were used in audio recording, the transcription process, and data analysis process. Details about the interviews are presented in Table 2.

Table 2

Interview Details

Participants' ID	Date Responded	Date of Confirmation of Study Criteria	Date Interviewed
N1	09/10/16	09/10/16	09/11/16
N2	09/12/16	09/12/16	09/14/16
D1	09/12/16	09/12/16	09/15/16
N3	09/12/16	09/12/16	09/16/16
D2	09/17/16	09/17/16	09/19/16
D3	09/17/16	09/17/16	09/22/16
D4	09/17/16	09/17/16	09/23/16

N4	09/18/16	09/18/16	10/02/16
N5	09/18/16	09/18/16	10/07/16
D5	09/18/16	09/18/16	10/11/16

Interview forms and recording equipment were kept in a locked briefcase while in the field. Upon return from the field, all the tape recorder and digital files were kept in a locked cabinet in my room. All interviews, original consent forms, and backup copies of digital audio files are stored in a locked file cabinet in my home. My committee and I are the only people who have access to the data. All data are scheduled to be destroyed the last week of December 2021.

Data Analysis Plan

The process of analyzing qualitative data involves coding or categorizing the data. Qualitative data analysis involves making sense of large amounts of data by reducing the volume of raw information, followed by identifying significant patterns, and finally drawing meaning from data and subsequently building a logical chain of evidence (Wong, 2008). As described in Chapter 3, in my data analysis, I used an interpretative phenomenological analysis (IPA), which is a bottom-up approach that allowed the data to generate codes rather than using a pre-existing theory in identifying codes (Smith et al., 2009). As suggested by Smith et al., I used a combination of phenomenological and hermeneutic insights for better understanding and interpretation of the data.

Phenomenological strategies aim at transforming lived experience into textual expressions in a way that represents a reflective re-living and a reflective assumption of something meaningful (Manen, 1997). Benner (1985) describes hermeneutic phenomenology as being concerned with identifying, describing and interpreting everyday lived experiences (in context), with the goal of discovering meaning and achieving a sense of understanding. The common principles for analyzing qualitative date collected through interviews include transcribing the interviews, immersing oneself within the data to gain detailed insights into the phenomenon being explored; developing a data coding system; and linking codes and units of data to form overreaching themes and concepts (Noble & Smith, 2013).

The Process

My first approach was to get familiar with the data by reading and re-reading the field notes, listening to the audio recordings several times, and writing down my impressions. This was followed by transcribing the data. The transcribed data were then imported into NVivo 10 for further analysis and coding.

Transcription and Digitalization

As explained by Sandelwoski (1995), for audio recorded data, the process of identifying themes probably begins with the act of transcribing the audio tapes. Therefore, after reading the field notes and listening to the audio recordings I transcribed each interview verbatim into written text. During transcription, I reviewed written notes and added reflective notes. Transcribed texts were cleaned by reviewing the quality of the text against the original audio. Finalized text was saved as a Word document processing on a password protected computer.

The focus of data analysis was to examine how all participants responded to each interview question. Therefore, I organized the data by the research and interview questions to look across all respondents and their answers to identify consistencies and differences. Before importing data into NVivo 10, I applied paragraph styles (i.e. heading 1 for interview questions and heading 2 for participant answers) to the interview transcripts using Microsoft Word to differentiate between questions and participants' responses. I used a uniform transcription format and style for all transcripts. In addition, I made sure there were no names or identifiable information attached to any of the participants before importing textual data files into NVivo and before any coding was carried out.

Data Analysis Process using NVivo

The data analysis was based on the five basic functions of NVivo; importing file documents into NVivo; analyzing data; organizing cases and characteristics; visualizing findings and exporting findings. First, I imported the transcripts into NVivo 10 for further analysis. The transcripts were stored in sources. I carried out the initial analysis by running queries on word frequency as well as text frequency. The results of the word frequency queries were visualized in words clouds, which revealed the most frequently occurring words and phrases in the data. The results of the text frequency queries were visualized in the word tree which revealed the context surrounding the words and phrases from across the data, as well as recurring words and phrases.

Coding in NVivo Using Coder

Coding or categorizing the data is the most important stage in the qualitative data analysis process. Coding simply involves subdividing the huge amount of raw information or data, and subsequently assigning them into categories (Wong, 2008). Saldana (2005) describes a code in qualitative inquiry as often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data. Saldana further explained that a code can sometimes summarize or condense the data, not simply reduce it. The bottom-up phenomenological approach involves processes such as coding (open coding, axial coding and selective coding), categorizing and making sense of the phenomenon being studied.

First Level Coding: (Open Coding)

I carried out content analysis by reducing the data into small segments based on interview questions. Data reduction is the process of selecting, focusing, abstracting and transforming data to make them more manageable and intelligible in terms of the issues they address (Miles & Huberman, 1994). Using the features in NVivo, I created nodes. A node is a container that allows relevant material to be gathered together in one place in a way that allows the researcher to look for emerging themes and ideas (Kleinam, 2004).

With the research questions in mind, I identified relevant statements, key words and phrases from participants' responses that were associated with each interview question and put them into the nodes I created. Contents of the nodes represented the central ideas as they related to the research questions. The frequency of each central idea provided an understanding of the importance it had among the study participants.

Responses to the interview questions were analyzed and compared for relevance to the research questions. A total of 56 central ideas were identified during this process, and were grouped into 22 codes. This served as the initial coding process. This was an iterative process; therefore, my initial list of codes changed several times as I worked with the data. Once a new code was identified or deleted I went back to each transcript to re-read the data and make the necessary changes, and checked for accuracy.

Emergent Categories

Coding is a process that enables one to organize and group similarly coded data into segments, groups or families because they share some characteristics (Saldana, 2005). From the results of the open coding, I carried out cluster analysis which allowed me to visualize the similarities and differences in the data and group similar and regularly occurring codes into groups to allow for the emergence of nine categories; family, relations, faith/religion, traditional birth attendance, knowledge, specialists, equipment, community, and government. When codes are clustered together according to similarities and regularities, they facilitate the development of categories (Saldana, 2005).

The categories were developed based on the representation of four or more similar ideas for a particular question. From 22 codes developed during the initial coding process, nine categories emerged. See Table 3 for these details.

Second Level Coding (Axial coding)

Charmeaz (2006) stated that axial coding relates categories to subcategories, specifies the properties and dimensions of a category and reassembles the data fractured during open coding to give coherence to the emerging analysis. This was supported by Strauss and Corbin (2007) who describe axial coding as referring to a set of procedures whereby data are put back together in new ways after open coding.

During axial coding, I used the codes and categories I identified during open coding, to create relationships. I re-read the text for two main reasons: 1) to confirm that the identified concepts and categories accurately represent interview responses; and 2) to explore how the codes and categories are related. Axial coding is a more directed approach for looking at data to help ensure that all the important aspects have been identified, and areas have been highlighted for possible revision and/or addition.

Third Level Coding (Selective Coding)

Selective coding refers to the final stage of data analysis to be completed after core concepts emerging from the coded data categories and subcategories have been identified through both open and axial coding processes. During selective coding, I re-examined previously identified discrete concepts and categories to determine how they are linked, and further defined, developed, and refined them and then I put them back together to tell a larger story.

Emergent Patterns

After organizing into categories, I began to see patterns and connections both within and between the categories. This was both natural and deliberate; natural because there were mostly repetitive patterns and consistencies in participants' responses and deliberate because one of my primary goals was to find these repetitive patterns of responses and consistencies in participants' responses. For example, the first pattern that emerged in relation to the first research question was knowledge of PPD at both professional and personal levels, and the different explanations from the study participants. Most of the participants attested to the fact that they had knowledge of PPD and recognized the condition as a major public health concern.

After identifying the patterns, the next step was to identify all data that related to each pattern; all of the responses that fit under the specific pattern were identified and placed with the corresponding pattern. I examined the similarities or differences in participants' responses by assembling all the data pertaining to a particular category, examined the key ideas being expressed within the category, the similarities and differences in the way participants responded, and wrote down a summary for each category.

To show which categories appeared to be more important, I counted the number of times a word or phrase came up, or the number of unique respondents who referred to certain words or phrases. These counts provided a very rough estimate of relative importance, and helped in revealing general patterns in the data.

Emergence of Themes

Themes are patterns across data sets that are important to the description of a phenomenon and are associated with a specific research question (Braun & Clark, 2006). Saldana (2005) describes a theme as an outcome of coding, categorization, and analytic reflection, not something that is, in itself coded. Following the data analysis and the categories and patterns that emerged, five themes were developed: (a) professional, (b) personal, (c) family/relationship, (d) organizational/institutional, and (e) community/neighborhood). These five themes were developed from the initial 56 central ideas, which were grouped into 22 codes, and the clustering of similar codes resulted in the emergence of nine categories. The repetitive patterns of responses and consistencies in participants' responses found in the distinct categories eventually became themes. I examined each theme for relevance to the study, presence across questions, thickness and duplication. I repeated this process until I was satisfied that all data could be interpreted within the themes.

Table 3

Development of Themes

Central Ideas	**Codes**	**Categories**	**Themes**

Working knowledge of PPD	Awareness at the level of the health professionals	Knowledge	Theme 1: professional
Knowledge based on what was learnt in school			
Recognizing PPD as a public health concern			
Reading about PPD			
Hearing about PPD	Gaining knowledge Updating knowledge		
Talking about PPD			
Attitudes towards PPD			
Beliefs about PPD			
Attending professional workshops			
Attending professional seminars			
Awareness of PPD symptoms by the woman			
Personal beliefs about mental health			
Personal attitudes towards mental health	Beliefs Practices	Knowledge	Theme 2: Personal
Source of health education			
Illness seen as punishment for wrong doing	Church Church as family Spiritual healing Spiritual leaders		
Church as second family			
Church members offer help and support			
Source of illness and the healing process			
Confidence in spiritual leaders			
Discussing illness with spiritual leaders			
Delivering in the church			

The presence of family Family members moving in to help Family expectations Family beliefs and practices Illness only discussed within family Family involved in decision-making process Family involved in health-seeking process Family Identity Family Reputation Not bringing shame on family Protecting family name	Family	Family Relationship	Theme 3: Family/Relationship
Lack of equipment No proper assessment or diagnosis of PPD Working with what is available Poorly equipped hospital No trained psychologist No maternal mental health services in the hospital No government funded maternal mental services in the community Hospital poorly funded by government	Tools No trained psychologists attached to the hospital	Equipment Specialists	Organizational/Institutional
Lack of awareness Societal Beliefs Misconceptions about mental illness Illness may come from evil forces	Choice of where to deliver Preference of Delivery places Trust issues	Community Government Traditional Birth Attendants	Theme 5 Community/Neighborhood

Mental illness not discussed openly
Lack of Maternal Mental health services in the community
Community Resources
Alternative delivery places
Availability
Accessibility
Affordability

Previous successes
Community Practices
Traditional Medicine
Stigmatization
sources of illness
The healing processes

Theme 1: Professional

In this theme, knowledge, awareness, and perceptions of health professionals with regard to PPD were examined. This theme also included the steps taken by health professionals to update their knowledge of PPD.

Theme 2: Personal

Theme 2 dealt directly with the reproductive-aged women. The theme revealed the women's ability or inability to recognize the symptoms of PPD as well as their ability to seek appropriate medical help. The presence of awareness was considered as positive, and the lack of awareness considered as negative

Theme 3: Family/relationship

Under this theme, the participants discussed the important roles played by family members, family support was considered as positive. Conversely, the lack of family support was considered as negative. Under this theme, participants also discussed family beliefs and practices that can either positively or negatively influence the women's ability to seek and obtain professional help.

Theme 4: Organizational/institutional

Theme 4 dealt with government policies on maternal mental health; funding of rural hospital where this study was conducted; the availability, accessibility, and affordability maternal mental health services in rural communities. The presence of government policies, and maternal mental health services were all considered as positive. On the other hand, the lack of government policies, and poor funding of the rural hospital were considered as negative. This theme also dealt with the organization and management of rural hospital where this study was conducted. Considerations under this theme included equipment for accurate assessment, diagnosis and management of PPD. The theme also dealt with the issues of trained personal, qualified to handle cases of PPD. The availability of equipment and trained personals were considered positive, and the lack of equipment and trained personal were considered to be negative.

Theme 5: Community/neighborhood

Under Theme 5, considerations were given to structural and maternal mental health services available within the community. Alternative structures and services were also discussed including church and other religious organizations, traditional medicine, and traditional birth attendants. The mere presence of these alternatives in itself was not considered to either negative or positive, but just existential. However, the lack of awareness, misconceptions, and stigmatization, were all considered negative.

The concluding section of this analysis involves the construction of a written narrative of the themes in relation to the research questions and the conceptual framework as part of the research findings. In addition, Chapter 5 provides further narratives of the themes.

Making and Using Memos

At the end of the first interview session, I wrote down my impressions. For example, the first participant stated that she sees postpartum depression a health concern, but quickly mentioned that she has not come across any diagnosed cases of PPD. I found it interesting that she went straight on and told me upfront that she had yet to come across cases of PPD.

As I continued with the interview sessions, I kept adding onto my memos, and quickly realized that most of the participants shared the same views and told the same story about the fact that they have not yet seen any cases of PPD. Reflecting back on my memo, I noticed that only one out of the ten participants acknowledged seeing cases of PPD, although at a different setting and not at her current place of work where the data for this study was collected.

I kept adding onto, correcting and reflecting on my memos as I analyzed and coded my data. In addition, I wrote down the physical appearance of the setting where I did my data collection. This became very useful as the participants kept referring to how poorly equipped the hospital was, and one of them challenged me to a tour and see things for myself.

Other important elements of my memos were how often the participants said things in common, such as references to family, traditional birth attendants and spiritual leaders, all of which became very useful during data analysis. I also used memos to keep track of the pacing and sequencing of my study. I imported my memos into NVivo and could keep referring back to them, and adding onto them.

Creating Attributes

Attributes are characteristics (e.g. age, marital status, ethnicity, educational level) that the researcher associates with a document or node (Welsh, 2002). Having written a description of the study participants (including a table; see Table 1), I imported it into NVivo under case classification, and typed in their attributes using the same pseudo identifications shown in Table 1. Having the attributes in the NVivo made it possible for me to connect responses of each interview question to a participant.

Research Findings

Research Question 1

The data collected from 10 interviews addressed the two research questions. The first question was what are the health professionals' beliefs, perceptions and attitudes towards PPD; its diagnosis and clinical management. To answer this question, I asked a series of open-ended interview questions (Appendix E).

Theme 1: Professionals

A common thread through the various narratives of the participants was their implicit and explicit references to their working knowledge of PPD, their perceptions and their attitudes towards PPD.

The perceptions held by health professionals concerning PPD; its risks, outcomes, prevention and management could explain their practices towards recognizing and managing cases of PPD. To determine a baseline of health professionals' beliefs about PPD, I asked them about their perceptions, attitudes, and beliefs towards the recognition and management of PPD. All 10 participants acknowledged that they had knowledge about PPD as a public health concern. "I do see PPD as a concern I know it is real (N1). D2 described depression in general as being of major concern. "Depression is a serious condition that can prevent anybody from carrying out their daily responsibilities; especially taking care of a new born baby" (D2).

D1 started out by expressing no interest in PPD, "I am not even sure that I have ever come across a case of PPD, or that I am even interested in such cases". However, with a follow up question "Why are you not interested in PPD"? D1 explained having knowledge of PPD, but has never seen a case of PPD. "Don't get me wrong, I think depression of any kind is a very serious condition. I know about depression generally, I know about PPD, but I have not had the opportunity of witnessing PPD itself".

After gaining an understanding of how health professionals perceived PPD, I asked the participants about the factors that influenced their personal attitudes towards PPD. This question drew many answers and responses in different directions. Respondents' responses varied from not seeing diagnosed cases of PPD to the fact that women have other options of where to deliver their babies.

All the respondents attributed their attitudes towards PPD, to the fact that they have not seen cases of PPD. For example, N1 explained that one must see cases to be able to manage them. “The more one sees a case, the more one knows about the case and how to handle it, without which one cannot have the knowledge of how to deal with such a case” (N 1).

Seven out of the 10 participants attributed their attitudes towards PPD to the fact that there was no specialist in the facility to assist in assessing, diagnosing and subsequently treating. “We have doctors and nurses here, but no psychologist to handle cases like depression affecting women who have just given birth” (N 2).

Theme 2: Personal

One interview question was- How do you help reproductive-aged women gain knowledge of PPD? Some study participants explained that the women are encouraged to come to the hospital and discuss their feelings with the health professionals. However, women themselves may not be aware of their feelings. “Some women may not even be aware of their symptoms, they may not associate their feelings with childbirth, but rather they may think that what they feel is associated with witchcraft or spiritual attacks” (D4).

Issues of mental health are sensitive and some women prefer to keep the discussions within the family, or with their spiritual leaders. “Some of them may prefer keeping such feelings to themselves, talking to family members or spiritual leaders about their feelings” (N3).

D3 expressed frustrations over the fact that women are not speaking out about their feeling, for fear of being labelled. “The difficulty is that the women themselves are not really talking to us about it, I would like to see the women being more outspoken about their feelings” (D3).

Research Question 2

The second research question was what do health professionals define as the barriers and facilitators to the recognition, diagnosis, and treatment of symptoms associated with PPD among reproductive-aged women in rural Nigeria?

To get adequate responses from the participants, I asked a series of interview questions. First, I asked the participants the factors that make it difficult for them to manage PPD. The responses ranged from the women themselves not speaking out, the sensitive nature of the condition, to lack of specialists and equipment

Theme 3: Family/Relationship

The World Health Organization (1998) described family as the fundamental unit of the society, where people first learn to play, to share, to help and to love, adding that the rights, capabilities and responsibilities of family must be respected.

The roles of the family were discussed in terms of support, beliefs and practices, as well as medical decision making which is viewed as a collective issue to be handled within the family. Some participants spoke about the presence of strong family dynamics and the willingness of family members to assist the new mother in different ways. “Once the woman is pregnant, as she gets closer to delivery, at least one family member moves in to stay with her and help her take care of the baby” (N1). This was echoed by other respondents. “Also, there is a strong family dynamic here. Families are always ready to step in and help the woman and her new baby; this reduces the pressure on the woman” (N2).

Family beliefs and practices concerning illness, disease and healing were presented as barriers preventing health professionals from being able to recognize and manage PPD. For example, N3 stated that people still think of depression as a mental illness that should be discussed with family members and spiritual leaders only to avoid embarrassment. While N1 mentioned that talking about cases of depression may be viewed as bringing shame to the family. “You know, people are still shy to talk about depression, they do not want to bring shame on their family” (D1). Yet D5 spoke about people’s views concerning PPD “feelings of depression, especially after childbirth may be associated with something other than a medical condition; it may be considered a spiritual attack or punishment for bad behavior”

Theme 4: Organizational/Institutional

Naude (2005) stated that the hospital is a social institution that materially contributes (a) to the community by keeping the population it serves in good health (b) to public welfare; by contributing to public health through improved techniques of tracking the sick, better medical and nursing services, better organization, and better equipment, and (c) to the advancement of civilization by being dynamic and changing both its tradition and customs to meet social needs.

Most of the respondents attributed the difficulties in recognizing and managing PPD to the fact that the hospital is not adequately equipped to assess, diagnose and treat cases of PPD.

In a more civilized environment it could be easy and possible to recognize and manage the symptoms of any disease, but in an environment like this, with very little or nothing to work with it is very difficult or almost impossible to do so (N5).

Respondent D2 challenged me to take a walk around the hospital and see things for myself. “If you walk around here, you will notice that this place is very poorly equipped with tools”.

D5 thought that both the government and the hospital management should share the blame for the poor state of the hospital. “I think that the blame could be shared between both the government and the hospital management. I am sure that working around the hospital, you must have noticed how poorly equipped it is” (D5).

Theme 5: Community/Neighborhood

Mental health (including maternal mental health) disorders are still heavily stigmatized in many cultures, including the African culture. Because of social and societal stigma, the reproductive-aged women and their families may be reluctant to seek help from health professionals, and may prefer to manage the illness without any outside interferences.

The Centers for Disease Control and Prevention (CDC, 2004) broadly defined community asset or resource, as anything that can be used to improve the quality of community life. The CDC further explains that community assets can be person(s), physical structure or place or community services. Therefore, it is important for members of the community (including reproductive-aged women) to be aware of the resources available within the community in which the live.

Some respondents did not think the government was doing enough in the area of maternal mental health. Respondent N3 stated: "I don't think the government is doing much when it comes to mental health in general; like the issue of maternal mental health. This is an important health issue and should be addressed as such".

The lack of appropriate resources in the community designed to meet the needs of the reproductive-aged women, has resulted in women in rural parts of Nigeria seeking help from readily available alternatives such as the traditional medicine and traditional birth attendants. This was confirmed by evidence from previous studies as well as responses from study participants as noted below.

It is estimated that about 75% of the Nigerian populace (especially rural dealers) still prefer to solve health problems by consulting traditional healers (Adefolaju, 2014). The rising costs of modern medicine pose a big problem. In addition, many rural communities have great faith in traditional medicine (Adefolaju, 2014). “They may seek traditional treatment, go to their spiritual leaders or churches for healing rather than seek medical attention” (D3).

Traditional birth attendants (TBA) are seen as traditional healers and occupy a prominent position in Nigeria because 60-85% of births delivered in the country and especially, in the rural communities are by the TBAs (Adefolaju, 2014). He also explained that traditional medicine is affordable, accessible and considered efficient by the people

Study participants pointed to the presence of TBA in the communities as an alternative (or preferential) place of delivery for the women. “There is a growing number of traditional birth attendance in the community, a lot of women go there to have their babies” (D3).

Health professionals have the unique responsibility of rendering care and health services to individuals and families where and when needed. My final interview questions were aimed at understanding the practices of health professionals when it comes to rendering care and services to reproductive-aged women who have been diagnosed with PPD.

All 10 participants responded that they had not come across a diagnosed case of PPD in their current work setting. Some of the respondents stated that, although they would love to help the women obtain the types of help they would need, they had not yet seen diagnosed cases of PPD. N2 stated that some of the women may not even come back to the hospital after delivery.

> That is the problem. The women may not even come here to have their babies, some of them may go to traditional birth attendants, and some may go to the church to have their babies. In those places, if anything goes wrong it is said to be from an evil spirit or it is the will of God. For those who may choose to come and have their babies here, some of them may come back for their 6 weeks' checkup after delivery. But to this day I have not seen or heard of any diagnosed case of PPD in this hospital.
>
> I am yet to see one. I mean my job here is to help those women, their child and their families stay as healthy as they possibly can. I would love to help them; the problem is that I have not yet seen those cases (N 4).

D2 was confident that he would be able to help if he came across a diagnosed case of PPD and refer the woman to where she could receive help.

> I am yet to see any diagnosed cases of PPD, hopefully, with my knowledge of depression, if and when I come across women with symptoms of PPD, I will be able to offer them the type of help they might need, and if possible refer them to the appropriate professionals who might be able to help them (D2).

D3 also stated that he would be able to render help if he saw a diagnosed case of PPD "I am sure that if and when I come across any case of PPD, I will be able to offer them the help and assistance they need and deserve".

"I have not yet seen diagnosed cases of PPD, but I am sure I will be able to help them when it is necessary" (D4).

> I am yet to come across one, but I think talking to them to get to the root cause of their feelings would be a good start. Sometimes all they need is to talk to somebody, and have someone listen to them, especially the single ones who may feel overwhelmed with the responsibilities of taking care of the child without a man to help them out (D5).

Theoretical Constructs and Narratives

The five themes that emerged from the data analysis were examined within the context of the three domains of the pen-3 cultural model as stipulated by Airhihenbuwa (1995); (1) cultural identity, (2) relationships and expectations, and (3) cultural empowerment. Each domain has three domains is consists of three different factors as discussed below. The first letters from each factor when put together forms the acronym PEN (Airhihenbuwa (1995)

The cultural identity domain has three factors: person, extended family, and neighborhood. The relationship and expectation domain has three factors; perceptions concerning health, illness and the healing process, enablers, and nurturers. The cultural empowerment domain has three factors: positive, existential and negative.

Table 4

Application of the Pen-3 Cultural Model

Domain	Factors	Positive	Negative	Existential
Cultural Identity Domain	Person	Awareness at the level of the women	Lack of awareness	
	Extended Family	Strong family support system	lack of family support system	
(points of entry for health interventions)	Neighborhood		pervasive beliefs about sources of illness	
Relationship and Expectation Domain	**Perceptions:** Knowledge, attitudes, values, affecting personal, family, community motivation to change	Professional knowledge and concerns for PPD	Lack of knowledge of PPD	
		Personal knowledge and concern for PPD		
		Family knowledge and concerns for PPD	Misconceptions of maternal mental illness	
		Community knowledge and concerns for PPD	Societal stigma	
		Positive family influence and involvement in decision making	Negative family influence and involvement in decision making	
	Enablers:			

Cultural, societal, systemic, structural forces affecting change	Availability of and accessibility to maternal mental within the community	Lack of maternal health services in the community
Nurturers: Degree to which attitudes, beliefs, and actions are influenced, mediated and nurtured by extended family, the church	Government role and policies on maternal mental health	lack of government role and policies on maternal mental health
	Family, friends and community leaders encourage healthy decision-making	Lack of encouragement from family, friends and community leaders

CulturalThe church as an
Empowerment institution
Domain

Family as a unit
of support

Value of the
church as a
support group

Confidence/trust Not knowing
in spiritualwhere to go to
leadersreceive proper
care

Lack of
knowledge
about sources of
illness

Lack of
confidence/trust
in health
professionals

The presence of
churches and/or
other religious
organizations in
the community.

The presence of
traditional birth
attendants in the
community

Traditional
practices to
address illness

Use of
traditional
medicine

The Cultural Identity Domain

This domain highlights the intervention points of entry. The portals of entry may occur at personal levels (such as the levels of the women, or the levels of health professional), immediate or extended family members (spouses, siblings, in-laws), or environs (community or village). The study participants’ responses recognized family dynamics as reliable sources of strength. However, participants also talked about the importance of protecting family identity and reputation by discuss the illness only within the family.

The Relationship and Expectation Domain

The focus of this domain is on the behavior of an individual, and influence of family and friends in making health-related decisions. The domain also focuses on the relationship between an individual and the community, and how such relationship influences the health decision-making process of the individual. The focus is from a point of view of how cultures define the personal functions expectations within the family, as well as personal relationships with the community.

Perceptions

The perceptions construct of the relationship and expectations domain refers to the knowledge, attitudes, values, and beliefs affecting personal, family, and community motivation to change behavior. Positive perceptions are the knowledge, attitudes and/or beliefs that positively influence health decision-making among reproductive-aged women with regard to seeking professional help. Responses that negatively affected health decision-making and health-seeking processes or knowledge, attitudes and beliefs that negatively influenced the women's ability to seek professional help were categorized as negative perceptions.

Enablers

In this study, the enabler construct of relationship and expectations domain is used as defined by Airhihenbuwa (1995) to refer to the cultural, societal, systemic, or structural influences or forces that may facilitate or hinder changes. In this context, enabler would apply to resource availability, accessibility to resources, or referrals. Structural/systemic (or institutional) influences would include things such as government's role and policies on maternal mental health. In the relationship and expectations domain, the societal or structural resources for promoting (enabling) or discouraging individuals' abilities to successful seek and obtain professional medical care are examined. Positive enablers refer to resources and institutional support that are beneficial and support reproductive-aged women in making healthy decisions to prevent adolescent pregnancy, for example, the availability of and access to maternal mental health services at the hospital and community levels. Negative enablers are unsupportive structures for the reproductive-aged women such as the lack of resources, and inability to access resources.

Nurturers

This construct refers to the degree to which an individual's attitudes, beliefs and actions are influenced, mediated and nurtured by extended family, kin, friends and the community. Responses which showed support from family members, church members/leaders and other members of the community regarding health decision-making were classified as positive nurturers. Negative nurturers are the unsupportive family members and significant others who negatively influence healthy decision making. The main people that were found to have significant influence were family members and spiritual leaders.

Cultural Empowerment Domain

This domain is based on the belief that culture represents a range of good (positive), indifferent (existential) and negative factors, therefore interventions should focus not only on the bad influence of culture but also on promoting the good. For example, the study participants talked about the presence of traditional birth attendants and churches in the community which may have neither negative nor positive effect on the health decision-making process of the reproductive women. The church as an institution is an enabler and church doctrines and norms fall under the nurturer construct because of the influence on the individual, family and the community. The church is further classified as both positive and negative under the community empowerment domain.

Evidence of Trustworthiness

Trustworthiness refers to the following issues: credibility, transferability, dependability, and conformability (Lincoln & Guba, 1985). In this study, the main instrument for data collection was semi-structured interviews; therefore, accurate reporting of participants' accounts was very important. Audio recordings were transcribed and reviewed for accuracy, and are stored in a secured manner.

Credibility (Internal Validity)

Credibility (internal validity) refers to confidence in the trustability of findings (Lincoln & Guba, 1985). The credibility of this study involves authentication and accuracy of the data obtained from the participants through the recordings and transcription of each interview. During each interview session, checking was done to verify accuracy. In addition, prompts were used to get additional information where necessary. Interview questions were derived to address the two research questions and covered the three domains of the pen-3 cultural model; health education, educational diagnosis of health behavior, and cultural appropriateness of health behavior

(Airhihenbuwa, 1995). Participants produced similar answers for different questions across the domains, which lead to the achievement of a saturation.

Transferability (External Validity)

Transferability (external validity) refers to the ability to generalize findings to other contexts (Lincoln & Guba, 1985). The transferability of this study is improved by providing clear details on the selection process, participation, data collection, and analysis processes. This study was conducted in a rural area, 10 participants were recruited for the study. The outcome of this study may not be a true representation of perceptions, attitudes, and beliefs of health professionals working in this or other parts of Nigeria. Given the specific nature of the study site and the small number of participants, it is unlikely that these findings are generalizable to other settings.

Dependability

Dependability refers to demonstrating that the findings are consistent and could be repeated with other participants (Lincoln & Guba, 1985). They further stated that dependability deals with the stability of the data over time and conditions, which can be ensured by stepwise replication and inquiry audit. In this study, I established the process of dependability first by maintaining an audit trail. Guba and Lincoln (1985) described an audit trail as an important technique for assessing dependability. I kept detailed and accurate records of everything I did as a researcher to describe the processes; including data collection, and data analysis, and support the product; the research findings.

Secondly, in Chapter 3 of this study, I clearly stated the methodology used for the study, the logic used to recruit the study participants, and the sample size. This was followed by a description of and the ethical procedures followed before and during the data collection process including the protection of participants' identifiable information Thirdly, an audio recording device was used to capture verbatim what each study participant stated during each interview session.

The use of the recorder produced a more reliable account of the data collected and created a permanent recording of the interview for my review during data analysis. Permission to audio record each interview session was granted from each participant. The responses to the interview questions may be different if repeated with other participants in different settings. However, the methods used for this study could easily be replicated.

Conformability

Conformability refers to demonstrating that the findings were directed by the participants and not by the researcher (Lincoln & Guba, 1985). The procedure for member checking for this study has been noted. I was responsible for transcribing audio recordings for this study. Audio files were reviewed and transcripts read to verify accuracy. Themes were initially investigated using NVIVO 10®. Data were coded along major domains of the pen-3 cultural model, and then along the sub-domain which allowed for determining the relationships of the sub-domain through the major domain of the pen-3 cultural model.

Summary

The purpose if this study was to gain an understanding of the perceptions, attitudes and beliefs of health professionals towards the recognition and management of postpartum depression in a rural setting in Nigeria. In this chapter, I have provided an overview of the processes of data collection, data management and data analysis of data collected from the 10 health professionals. In this chapter, I presented the procedures for data analysis and coding. This was followed by a discussion of the categories and subcategories that emerged from the data analysis and coding processes. The section on data analysis ended with a discussion on the subsequent emergence of themes and their relationship to the research questions and the cultural context in which the study was conducted.

The research findings and discussions demonstrated the multidimensional difficulties faced by health professionals in recognizing and managing symptoms of PPD in a rural setting in Nigeria. They also highlighted the concerns and suggestions of health professionals. In this chapter, I also explained the conceptual application of the study to the pen-3 cultural model which was the conceptual framework used for this study. Finally, I discussed the steps taken to ensure the quality of this study in terms of credibility, conformability, and dependability. Chapter 5 offers an interpretation of the study findings, limitations of the study, recommendations, and social change implications.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The first main purpose of this phenomenological qualitative study was to understand the perceptions, attitudes, and beliefs held by health professionals towards postpartum depression (PPD) in a rural setting in Nigeria. The perceptions, attitudes, and beliefs held by health professionals can impact their ability to recognize and manage symptoms of PPD. The second purpose of the study was to understand the factors that either facilitated or hindered the ability of health professionals to recognize and management symptoms of PPD.

Over the years, researchers have presented sufficient evidence to support the fact that PPD is one of the most common conditions affecting women globally from diverse cultural backgrounds in the months following childbirth. There is also considerable evidence that PPD continues to be highly under-recognized and under-treated especially in developing countries like Nigeria. Most importantly, although the early postpartum period is a crucial time to improve the health and survival of both the newborn and the mother, the WHO (2008) reported that the postpartum period receives less attention from health professionals than the prenatal period.

Most of the previous studies on PPD have been conducted in developed countries, and the target populations have been women who have experienced the symptoms of PPD (Babatunde & Moreno-Leguizamon, 2012). Only a few qualitative research studies on PPD have been conducted in Nigeria and other African countries. A few of these studies have focused on the perceptions, attitudes, and beliefs held by health professionals towards PPD. For example, Owoeye (2004) conducted a cross-sectional descriptive study among health professionals at the Island Maternity Hospital in Lagos, Nigeria. One of the objectives of the study was to explore the recognition and management of PPD by the obstetric team.

Understanding the perceptions, attitudes, and beliefs held by health professionals towards PPD is critical in the recognition of PPD as a major public health problem and in the management of its symptoms. According to Patel (2001), understanding the perceptions and abilities of health professionals to manage and treat PPD could help in reducing the social stigma, negative beliefs, and perceptions towards PPD in rural communities in Nigeria. He further explained that such an approach could also provide a reliable framework for shifting the focus of PPD among reproductive-aged women from blame and shame to understanding and empowerment.

Summary of Study

Phenomenological studies attempt to understand or portray individuals’ common meaning of their lived experiences of a concept or phenomenon using in-depth interviews (Finlay, 2009; Giorgi, 2008; Moustakas, 1994; Starks & Trinidad, 2007). In addition, phenomenology adds to a fuller understanding of lived experiences by focusing on perceptions of beliefs, which may be taken for granted as common knowledge (Finlay, 2009; Giorgi, 2008; Moustakas, 1994; Starks & Trinidad, 2007). The conceptual framework for this study was the pen-3 cultural model designed by Airhihenbuwa (1995).

The main objective of the pen-3 cultural model is to emphasize the importance of a holistic approach and inclusiveness (person, family, neighborhood, and community) in handling health programs rather than focusing on approaching health and disease on an individual basis. The application of a culturally appropriate conceptual framework in understanding health professionals' perceptions, attitudes, and beliefs towards the recognition and management of PPD is important. This study was guided by two research questions:

RQ1: What are health professionals' perceptions, attitudes, and beliefs towards the recognition and management of PPD?

RQ2: What do health professionals define as the barriers and facilitators to the recognition, diagnosis, and treatment of symptoms associated with PPD among reproductive-aged women in rural Nigeria?

The two research questions were largely addressed through an interpretative phenomenological analysis (IPA) and coding of data from the in-depth interviews with 10 health professionals in a rural setting in Nigeria. The interview sessions were audio-recorded to ensure accuracy, and later transcribed verbatim into a textual form to be analyzed. I used the NVivo 10 software for data management and data analysis. The research findings from the data analysis and the coding processes were presented in Chapter 4 of this study.

In this chapter, I present the interpretations of my research findings based on the themes identified in Chapter 4, their substantive significance in relation to the research questions, and their confirmation or disconfirmation of previous studies on the subject matter as discussed in the literature review in Chapter 2 of this study. This is followed by a discussion of the research findings in relation to the pen-3 cultural model which was the conceptual framework used in this study. Lastly, I identify the limitations of the study, social change implications, and recommendations for further studies.

Summary of Research Key Findings

The research findings of this study demonstrated that the health professionals in a rural setting in Nigeria have knowledge of PPD and perceive it as a major public health concern. However, the research findings also demonstrated that these health professionals are faced with many factors that prevent them from being able to recognize and effectively manage the symptoms of PPD.

Interpretation of Findings

After an extensive data analysis, 56 central ideas were identified, grouped into 22 codes, and clustered into nine categories from which five main themes were developed. The next step was to build a valid argument to support the themes by going back and reading the related literature presented in Chapter 2 of this study. Gaining more information from the literature review allowed me to make inferences from the interview sessions and to ensure that the literature is interwoven with the research findings. Secondly, the themes are interpreted to reflect their relationships to the research questions. Furthermore, the data analysis and coding procedures outlined areas of substantive significance in relation to the main categories and themes as outlined in Table

3. Therefore, these interpretations are based on the consistency of responses provided by the study participants despite the variations in age, educational background, and work experience. In determining substantive significance, the findings were interpreted to address the following issues as suggested by Patton (2002): The consistency of the findings, the ways and extent to which the findings increase understanding of the phenomenon under study, the extent to which the findings are consistent with the existing body of knowledge, and the extent to which the findings are useful in terms of contributing to theory-building, informing policy, or informing practice.

Demographics

The participants of this study consisted of five doctors and five nurses. All of the participants provided a brief overview of their life by answering several demographic questions including age, marital status, education level, and years of experience. Participants' demographic information is presented in Table 2.

Interpretations in Relation to Literature

The literature in Chapter 2 reveals the different levels of barriers preventing health professionals from being able to recognize and manage the symptoms of PPD. Such barriers can exist at the level of the health professionals themselves; therefore, my first approach was to find out what they knew about PPD. The first research question focused on health professionals’ perceptions, attitudes, and beliefs towards the recognition and management of PPD. Perceptions include the knowledge, attitudes, and beliefs that may contribute or hinder engagement in a behavior (Airhihenbuwa, 1995).

According to Groh (2013), PPD often goes undiagnosed and untreated because of a lack of knowledge among women and their health-care providers. In addition, societal stigma concerning mental illness influences the ability of women suffering with symptoms of PPD to seek professional help. Durand-Zaleski et al. (2012) described stigma as an overarching term that contains three important elements: problems of knowledge (ignorance), problems of attitudes (prejudice), and problems of behavior (discrimination).

Theme 1: Professional

This theme directly related to the first research question. Based on the data analysis of responses provided by the study participants, the health professionals who participated in this study were knowledgeable about PPD and perceived the condition as a major public health concern. This finding seems to disconfirm the notion expressed by Msiqwa (2010) that there is a high percentage of health professionals who are not quite knowledgeable on matters of maternal mental health especially in developing countries.

In terms of attitudes, findings from this study demonstrated that the participants' attitudes towards PPD were, in large part, based on the fact that they had not yet seen cases of PPD. Findings from this study demonstrated that the participants believed that PPD is a serious maternal mental condition that should be screened, diagnosed, and treated. Seehusen, Baldwin, Runkle, and Clark (2005) found that 73.9% of providers who agreed PPD is serious enough to warrant screening were frequent screeners, while only 37.9% of those who did not agree were frequent screeners.

According to Msiqwa (2010), in Nigeria and other developing countries, barriers towards the recognition and management of PPD can also exist at the level of individuals (including the reproductive-aged woman) as well as among health professionals. Similarly, Babalola and Fatusi (2009) concluded that factors influencing the use of maternal services operate at various levels including individual, community, and state. Though these barriers may exist at different levels, they can directly or indirectly affect the health professionals' ability to recognize and manage PPD in a timely manner. Research Question 2 was related to a range of factors that either facilitated or hindered the ability of health professionals to recognize and manage PPD. Themes 2 through 5 are all related to Research Question 2.

Theme 2: Personal Barriers

This theme directly relates to the reproductive-aged woman as a person. Based on responses from the study participants, three factors were identified to be associated with this theme: the women's lack of awareness of PPD, the women not communicating their feelings with health professionals, and the women's personal faith/religion. Per the study participants, these factors contributed to their inability to recognize and manage symptoms of PPD. The study findings demonstrated that many women may not recognize that the symptoms they are having may represent an abnormal state and therefore it may not occur to them to discuss their feelings with health professionals.

This finding seems to fall in line with Coates et al. (2004), who stated that only 28% of women with symptoms of PPD had ever discussed their symptoms with a health professional and 75% of women with PPD felt that the symptoms they were experiencing were normal. Babatunde and Moreno-Leguizamon (2012) stated that for some women, postnatal depression is not perceived as an illness. Kingston et al. (2014) concluded that only a few postpartum women actively seek help or engage in any type of treatment. The authors further stated that less than 15% of expectant and postpartum women received the needed maternal mental health treatment, citing personal barriers as significant deterrents.

Women who may desire treatment for their symptoms may not know where or who to turn to for help because of conflicting views associated with maternal mental health held by the women themselves. As explained by Asu, Gever, and Joshua (2007), a person's medical decision making can be influenced by his or her moral and religious affiliations, both of which are important aspects of social life. Findings from this study demonstrated that women who may be having symptoms of PPD may attribute such feelings to supernatural factors or evil attacks, and may choose to seek help from their religious leaders and members of their religious organization rather than from health professionals. This finding seems to confirm the findings of Asu et al. (2007) that the views of religious leaders could have an impact on how the people of a particular religion handle mental health issues. This finding also draws from Babatunde and Moreno-Leguizamon (2012) who stated that for some women, postnatal depression is not perceived as an illness, yet they recognize the need to seek spiritual healing.

Theme 3: Family/Relationship as a Barrier

The importance of family cannot be overemphasized. Family provides its members with security, love, identity, and values. In addition, the family is seen as an important source of support. The study findings demonstrated the presence of a strong family dynamic within the community. Study participants repeatedly cited the family's involvement in supporting the women and acting as consultants as well as being part of the medical decision-making process. As a result, the women seem to confide in family members rather than health professionals. Kingston et al. (2014) stated that decision-making processes among childbearing families are influenced by the experiences and opinions of friends and family members.

Family lays the foundation for the lives of their members. Such foundations include a family's values, beliefs, and practices which provide the moral codes for the family members. The research findings demonstrated the importance of family beliefs and practices in relation to the causes and treatments of illnesses, diseases, and the healing process. The study participants stated that families would prefer to keep discussions of mental illness (including maternal mental illness) within the family for reasons of privacy, confidentiality, protection, and preservation of family identity.

Theme 4: Organizational/Institutional Barriers

In order to be able to perform their duties effectively, health professionals would need to be provided with the necessary resources. One of the functions of the hospital management is to ensure that the hospital has the necessary resources and trained personnel to ensure appropriate assessment, diagnosis, and management of diseases. The study participants stated that they lacked the basic resources to assess and manage PPD.

Equipment. The research findings demonstrated that the hospital is inadequately equipped, lacking the tools needed for proper assessment, diagnosis and treatment of PPD. PPD can be assessed through the use of screening instruments including the Edinburgh Postnatal Depression Scale (EPDS), Beck Depression Inventory (BDI) and the Zung Self-Rating Depression Scales and the Self-Regulated Questionnaires (SRQ). Eighty percent of study participants made references to the poorly equipped hospital as contributing to their inability to recognize and manage PPD. This finding seems to confirm Ewhrudjakpor (2008), Olujimi (2006), and Omotosho (2010 who all expressed the notion that the division of Nigerian societies into large rural sectors and small urban communities provides the basis for inadequate provision of health infrastructure and services in rural areas.

Specialists. Reproductive-aged women not only need physical assessment but psychological assessment as well. The study findings demonstrated that the hospital lacked trained specialists such as psychologists or psychiatrists to assess and diagnose cases of PPD. In her study on needs assessment of the Nigerian health sector, Omoluabi (2014) cited insufficient specialist medical personal, and inadequate referral services as some of the major gaps in Nigeria's health infrastructure and human resources.

Theme 5: Community/Neighborhood Barriers

Community Attitudes. Perceptions and attitudes towards depression in different cultures may affect help-seeking behavior and access to treatment. Ononokpono (2013) explained the importance of understanding community factors associated with maternal health-seeking behaviors. Individuals make health decisions in ways that are influenced by their immediate physical environments, social rootedness, lifestyles, religious beliefs and their general outlooks on life (Norman & Bennet, 1996; Orubuloye, 2003; WHO, 2002).

Findings from this study demonstrated that culturally, within the rural Nigerian community, maternal mental illness is attributed to other causes rather than medical causes, therefore, health-seeking for maternal mental illness is directed away from health professionals. These findings seem to be consistent with many previous studies including the analysis by Ononokpono (2013) who demonstrated that community factors were significantly associated with maternal health-seeking behavior in Nigeria. The findings are also consistent with that of Annet (2004) who found that cultural factors may hinder a woman from seeking medical advice for PPD symptoms which might lead to delay or lack of clinical diagnosis and management of PPD. Similarly, the World Health Organization (2002) and Omotosho (2010) both stated that community ideas and attitudes toward health and disease affect the way people utilize health services.

Community Beliefs/Practices. Findings from this study demonstrated that, in many parts of Nigeria, especially in rural areas, people still believe in the supernatural causes of illnesses and diseases and subsequent remedies. The findings seem to confirm the findings of Asu et al. (2013) who discussed that cultural practice as a way of life, determines the health condition, strength and activities of the citizens in both developing and developed societies. The findings also are similar with Ononokpono (2013) who made a broad statement that individuals live within communities, and that their health-related behaviors can be influenced by the characteristics or conditions of the communities in which they live.

Stigmatization. According to WHO (2009b), the social stigma attached to the expression of emotional distress and mental health problems leads women to accept them as part of being female and to fear being labeled as abnormal if they are unable to function. The research findings revealed that maternal mental illness still carries a stigma in Nigerian communities. The study participants cited social and societal stigma towards maternal mental illness as one of the reasons that the women and their families may be reluctant to discuss their feelings and seek professional help. Previous studies with similar conclusions include Corrigan and Watson (2002) who expressed that globally, stigmatization in mental health (including maternal mental health) is a matter of public concern. The authors also stated that stigmatized attitudes and beliefs towards individuals with mental health conditions are often in the form of societal stigma, structured within the general public. Gureje et al. (2005) demonstrated that there was widespread stigmatization of mental illness in the Nigerian community. Owoeye et al. (2004) concluded that 81% of the health professionals interviewed during their study were concerned about the stigma influencing the referral of PPD cases to the psychiatrists for proper management.

Secondly, findings from the study demonstrated that women who may realize that what they are experiencing is abnormal still may not seek help; they may avoid the diagnosis of PPD out of fear of being labeled as having a mental illness. Corrigan and Watson (2002) drew a similar conclusion that social stigma or the mere perception of the existence of social stigma can become internalized. In addition, the finding seems to confirm those by Dako-Gyeke and Asumang (2013) that when people associate disclosing the mental health conditions with negative consequences, they are likely to conceal their conditions from others.

Traditional Medicine (TM). Study participants discussed the presence of TM as one of the resources available in the community, providing an alternative health-seeking avenue for rural dwellers including reproductive-aged women. Katung (2001) stated that traditional African medicine has been with the rural dwellers of African countries for many generations. Adeleka, Makanjuola, and Ndom (2001) concluded that approximately 70% of mental health services in Nigeria is provided by non-orthodox means such as religious organizations or traditional healers.

Findings from the study also demonstrated that some women may first prefer to go to the traditional healers and the hospital is seen as a last resort. This finding seems to be consistent with Katung (2001) who stated that the first approach of the rural dwellers in Nigeria in terms of illness is towards TM; the hospital (or professional care) is usually a last resort. The traditional birth attendants (TBA) are also considered traditional healers. The research findings demonstrated the presence of traditional birth attendants in the community as it relates the health-seeking behavior of the reproductive-aged women. Study participants stated that some women prefer going to have their babies delivered by the TBA, and would only come to the hospital if they had some serious complications that the TBA could not handle. These finding echoes that by Imogie et al. (2002) who concluded that rural dwellers prefer to use the services of TBA because such services were readily available, easily accessible, less expensive, and they had faith in the effectiveness of services they received from the TBA.

Religion and Religious Leaders. The study findings demonstrated the presence of churches and other faith-based organizations within the community and the fact that the women seemed to feel more comfortable discussing their symptoms with their pastors or spiritual leaders than with the health professionals. Asu, Gever, and Joshua (2007) explained that faith-based organizations play a significant role in the belief systems of Nigerians towards health and illnesses. The authors further explained that members of religious groups look up to their religious leaders and respect their opinions and attitudes towards health, illness, healing and recovery.

The research findings demonstrated that, although the health professionals continuously stated that they had not seen any cases of PPD, they were confident that, based on their basic knowledge of depression as a whole, they would be able to recognize and manage PPD. This finding disconfirms that of Owoeye et al. (2004) who stated that

43% of their study respondents, who were also health professionals admitted to not being able to recognize and manage PPD, and another 19% of the respondents were doubtful of the ability of the obstetric team to manage PPD.

Conceptual Framework

I used the pen-3 cultural model as the conceptual framework for this study. Traditionally, health related interventions focus mainly on intrapersonal constructs, with the belief that behavior change stemmed from the individual (McLeroy et al., 1988). However, based on the domains of the pen-3 cultural model, health related interventions focus on intrapersonal, interpersonal, and community/neighborhood constructs with the understanding that behavioral change stems from a collection of factors that influence individual behaviors such as family, culture, and the society.

In this section, I discuss the interpretation of the research findings in relation to the three major domains of the pen-3 cultural model and their associated factors. In addition, the study findings are discussed in relation to previous researches in which the domains of pen-3 cultural model were applied. Some research findings are discussed under more than just one domain.

Relationships and Expectations Domain

In the relationships and expectations domain, perceptions, enablers, and nurturers of behavior from the cultural point of view are assessed. By application, pen-3 model places culture as the central point of health program, and disease prevention programs (Airhihenbuwa, 2007). Among the three components of this domain, perception consists of the knowledge, attitudes, values, and beliefs that exist within the cultural context and that motivate or inhibit individual or group behavioral change (Airhihenbuwa, 2007). For example, knowledge and cultural beliefs about breast and cervical cancer can influence cancer screening and health and health-seeking behaviors among Hispanic women (Allison, Duran, & Pena-Purcell, 2005; Garcés, Scarinci, & Harrison, 2006; Luquis & Villanueva, 2006).

The Role of the Community as an Enabler or Nurturer. In the pen-3 cultural model, community/neighborhood is used to represent cultural, societal, structural, governmental, institutional, and political boundaries supplying and/or denying health information and other health resources to members of the community. The availability or lack of these factors can influence the ability of the reproductive-aged women to seek and obtain professional help when needed. Positive enablers are resources such as health information, governmental and institutional support, and societal or structural factors that may enhance or support health decisions and actions.

Governmental and institutional support would include health policies and health programs specifically designed to wards maternal mental health. The lack of maternal mental health services, or access and affordability to maternal mental health services within the community are all negative enablers. In addition, the lack of specific government policies on maternal mental health within the community is a negative enabler. These are not beneficial to the reproductive-aged women. Following their studies on H IV, Airhihenbuwa and Webster (2004) demonstrated the importance of governmental support in enabling positive decisions. They made references to the reduction of HIV cases in some African countries as a result of government policies towards HIV.

The research findings demonstrated the lack of maternal mental health services within the community. In addition, the study findings demonstrated the lack of specific government policies on maternal mental health. These findings seem to confirm those of Garcés et al. (2006) who found that lack of information, access to care, and medications prevented Latinas from seeking health services.

Community members can positively or negatively influence health beliefs, attitudes, and actions. Findings from the study demonstrated the presence of churches and other faith-based organizations and their leaders as members of the community. Religious leaders can influence the decisions and actions of the reproductive-aged women, who seem to be more comfortable discussing their health conditions with them rather than with the health professionals. This finding is consistent with Abernethy and colleagues (2005) who identified pastors, church leaders, and community leaders as individuals who can promote prostate cancer screening among African American males.

The Role of the Family as Enabler or Nurturer. For the reproductive-aged women in rural parts of Nigeria, the relationship with family members has a strong influence on health decision-making and health-seeking processes. In this way, family members can either act as positive enablers and nurturers by encouraging the women to seek and obtain professional help when needed or negative enablers or nurturers by discouraging the women from seeking and obtaining professional help. Airhihenbuwa and Webster (2004) described the importance of the cultural practice of caring for family relatives. They stated that the cultural practice of caring for a sick relative at home has become an important aspect of HIV/AIDS care in Africa.

The study findings demonstrated the presence of dynamic family backgrounds and the supportive role played by the family. The findings also demonstrated involvement of family in health decision making and health-seeking processes, which can negatively influence the women's health decisions and actions. In addition, the research findings demonstrated the family perceptions, beliefs and practices, and the impacts they can also have to negatively impact health decision making. This finding seems to draw from Ka'opua (2008) who, after applying the relationships and expectations domain of the pen-3 cultural model, observed that individual obligation to the family impacted the native Hawaiian women's abilities to screen for breast cancer. Among Latinas, Sheppard et al. (2008) found that family members were important nurturers in influencing treatment decision making for breast cancer. In a similar study, Sheppard et al. (2008), concluded that family members played a significant role in encouraging women to make decisions concerning breast cancer treatments.

The Cultural Empowerment Domain

Airhihenbuwa and Webster (2004) described the cultural empowerment domain as an affirmation of the possibilities of cultural influences, which are positive, existential, and negative. By application, the pen-3 cultural model focuses on communal functions (families/communities) in determining peoples' health experiences, and highlighting the significance of wholeness in influencing peoples' abilities to make decisions on health issues. It also emphasizes the relevance of placing cultural perspectives in the center of any study of health practices or health consequences. Culture shapes the perceptions and practices of individuals with regard to health issues and influences the way people respond to health information.

Findings from this study revealed a broad view of the community where both the health professionals practice and the reproductive-aged women live and how culture can influence their behaviors and practices. Furthermore, the study findings demonstrated the various cultural norms, beliefs, practices, and community resources that can affect the health decision-making and health-seeking processes of the reproductive-aged women in rural settings in Nigeria. These same factors can also affect the ability of health professionals to recognize and manage symptoms of PPD in a timely manner. These findings align with those of Abernethy et al. (2005) who in understanding the specific ways by which cultural context shapes behavior, placed emphasis on the relevance of recognizing how customary beliefs regarding masculinity influenced how men viewed their health, especially, in African-American communities.

Positive. Cultural empowerment is positive when it promotes the health behaviors of interest. The study findings demonstrated that family members are willing to support the new mother in taking care of the baby and performing household chores. This is a culturally positive practice that should be encouraged. This finding is consistent with

Scarinci et al. (2012) who identified family (familiarismo) as an important Latino cultural value deeply entrust when dealing with problems and difficulties such as health problems.

Existential. Existential aspects of a culture are those cultural beliefs, practices, and behaviors that are natural to a group and have no harmful effect on health. These beliefs, practices, and behaviors should not be targeted for change and should not be blamed for the failure of health education programs. Health professionals must be aware of these practices and embrace them, because they can help to produce a holistic view that can inform the development of a health education program.

The study findings demonstrated the presence of strong family and relationship among family members. The reproductive-aged woman looks to the family for love and support, while, on the other hand, is expected to respect family values. These on their own are not harmful (existential). Secondly, the study findings demonstrated the existence of tradition medicine (including traditional birth attendants) in the community. This could also be existential. This finding seems to confirm the findings of Garcés et al. (2006) who described the use of alternative and complementary healing practices, such as home remedies, as an existential among Latinas.

Negative. The negative aspects of culture are those based on values, beliefs, and relationships known to be harmful to health behaviors. The study findings demonstrated the influences of family systems and their impacts on health decisions and actions. The findings demonstrated family beliefs and practices as negative enablers towards seeking and obtaining professional help. In addition, the study findings demonstrated the presence of societal stigma towards maternal mental illness which would negatively influences the women's ability and willingness to speak out and/or seek professional health. Social/societal stigma carries a negative impact and should be discouraged. The findings also support those of Grace et al. (2008) who examined the powerful effect of cultural context in their study on type 2 diabetes among British Bangladeshis in United Kingdom and observed that many customary societal customs and assumptions conceivably clashed with attempts to accomplish a healthy lifestyle change.

Cultural Identity Domain

The cultural identity domain in the pen-3 model was used to assess the person (the reproductive-aged woman), family (nuclear and extended) and neighborhood (community and village) as intervention entry points. There may be multiple points of entry for addressing the social context and behavior (Airhihenbuwa & Webster, 2004). In addition, the point of entry at any level, focuses on individual empowerment, because as stated by Airhihenbuwa and Webster (2004), once the intervention entry point has been identified, the cultural identity domain has been identified, the behavior change can be addressed and promoted. The study findings demonstrated how each of these points of entry can help with decision-making and health-seeking process of the reproductive-aged women.

The functions of the reproductive-aged woman as an intervention point of entry. According to Airhihenbuwa (1995), the first point of entry for health interventions is at the level of the person (including the reproductive-aged woman). The World Health Organization (WHO, 2006) describes empowerment as the process of enabling people to increase control over and improve their health. According to Kumar and Preetha (2012), health education is about providing health information and knowledge to individuals and communities and providing skills to enable individuals to adopt healthy behaviors voluntarily. Through health education, the women (as individuals) can be provided with opportunities to acquire information and the skills needed to make quality health decisions appropriate to their roles in their families and community (Airhihenbuwa, 1995).

The study findings demonstrated lack of awareness, (knowledge), personal beliefs, and religious beliefs and practices as major constraints that prevented the women from seeking professional help. The findings also demonstrated the lack of maternal health information and programs within the community. Though the study participants stated that the women do receive health education and health information at the hospital, information on maternal mental health does not seem to be included.

The Role of Family as an Intervention Point of Entry. Consistent with pen-3 cultural model, the whole family is viewed as a unit, and family members as a point of entry; when the entire family as a unit is well informed and educated on issues concerning maternal mental health in general and PPD in particular, the unit can better support and encourage the reproductive-aged woman to seek and obtain professional help when needed (Airhihenbuwa, 1995). The research findings demonstrated the presence of family as a unit and the relationship with family members as the point of entry. This finding is consistent with Erwin et al. (2010) who concluded that family; nuclear and extended, takes priority when discussing measures for producing and promoting positive screening practices among subgroups of Latinas. Garcés et al. (2006) also use the pen-3 cultural model in highlighting relevance of family support in sustaining health, and in seeking health care among Latina immigrants.

The Role of the Community as an Intervention Point of Entry. By application, in the pen-3 cultural model, the community is the third point of entry through which individuals can access and obtain health interventions. Study findings demonstrated the different elements that could hinder the community from acting as a point of entry including community perceptions of PPD, community beliefs and practices concerning the causes of illness, treatment and the healing process, as well as the presence of stigmatization towards mental illness (including maternal mental illness).

As suggested by Airhihenbuwa (1995), in planning and implementing health intervention programs in any community, health professionals should first stress the positive aspects of culture and acknowledge the unique (or existential) aspects while highlighting the need to modify or reduce the negative practices known to be harmful to health. For example, Ochs-Balcom, Rodriguez, and Erwin (2011) utilized the pen-3 model in recognizing positive and negative themes needed to establish community partnerships and enhance the process of recruiting African-American women for their study on the epidemiology of breast cancer. Ochs-Balcom et al., used the outcome of their study to tailor their entire recruiting process and study procedure, by reinforcing the positive themes while revising the negative themes in diverse directions.

The pen-3 cultural model has been applied in studies for centralizing cultural context in health behaviors or health outcomes. For example, in the description of their experiences with treatments for breast cancer, Sheppard et al. (2008) distinguished cultural values such as personalismo (pleasant and personal connections with other individuals) were fundamental in empowering Latinas to enlarge their awareness of treatment choices and creating increased ability and readiness to receive chemotherapy. Similarly, ‘talk story’ is a well-known style of discussion in the Native Hawaiian culture, therefore, Ka’opua (2008) applied this style in engaging Native Hawaiian women in a dialogue on the need to screen for breast cancer.

Limitations of the Study

There were several limitations to this study including a small sample size, sampling design, and specific geographical location. The first limitation was the small sample size of 10 participants. The limited sample size may not truly represent the perceptions and beliefs of health professionals within the larger population in Nigeria or elsewhere.

Secondly, the study was limited to a non-random sampling design, which restricts the ability to generalize the study findings. Thirdly, all study participants worked in a hospital in a rural setting in Nigeria; therefore, the results may not be representative of the geographical makeup of health professionals outside of the study area.

Implications for Social Change

As noted by Merriam (2002), the central features of qualitative research, are the search for meaning and the significance that the research has for individuals, communities, and society. The author also stated that social change is an important component of qualitative research. Creswell (1998) stated that qualitative designs are used when an issue or problem needs to be addressed, when questions are complex and multifaceted, when individuals or groups of people need to be empowered, and when ideas or theories are needed to develop solutions. Each of these purposes is an example of social change, and they illustrate how dynamic the process of social change can be. Social change has been defined in many ways including two of which were adapted for this study.

Ololube (2011) describes social change as the significant alteration of social structures and cultural patterns through time. He further stated that the social structures or patterns are made up of an enduring network of social relationships for constant interaction between people or groups. Social change is a process whereby the values, attitudes, or institutions of society (such as education, family, religion and industry) are modified either through natural processes or action programs initiated by members of the affected community.

Social change can be made in both positive and negative ways. Regardless, of the ways through which social change is made, it is a very powerful tool which can change the beliefs and the lives of individuals. However, for the purposes of this study, social change will be made in positive ways. As noted by Walden University (2012):

> Positive social change is a deliberate process of creating and applying ideas, strategies, and actions to promote the worth, dignity, and development of individuals, communities, organizations, institutions, cultures, and societies in order to bring about the improvement of human and social conditions (vision, mission, and goals section, para. 2).

The findings from this study support positive social change aimed at broadening knowledge and understanding of PPD, which would positively influence women's health decision making and health seeking processes in rural settings in Nigeria. In order to contribute towards positive social change, I will disseminate my findings via multiple publications, avenues, and different locations.

This study was conducted in a rural setting in Akwa Ibom state, Nigeria. Therefore, my intentions are to disseminate the study findings by publishing manuscripts in the Akwa Ibom state Nurses' Journal, Akwa Ibom state Health Educators' Journal, and the Akwa Ibom state Medical Journal. By disseminating within the local Nigerian communities, the findings from the study will contribute to the existing information about the lived experiences of health professionals regarding the recognition and management of PPD, as well as, enhancing awareness of the challenges or barriers they face in a rural setting in Nigeria.

In order to effectively contribute towards positive social change, one has to seek accountability and responsiveness from institutions, including the government, policymakers, health professionals, community leaders, and other entities whose policies and actions affect the lives of individuals (including reproductive-aged women) and communities, at both local and national levels (Hatch, 2002). Therefore, I intend to discuss the finding from this study with individuals at various levels of authority.

First, I intend to discuss the finding from this study with the chief nursing officer of the local hospital where the study was conducted. By discussing the finding of the study with the CNO, they could be used at the institutional/organizational level to implement positive changes such as ensuring that the hospital is well equipped with the tools and trained personnel needed for proper assessment, diagnosis and management of PPD.

Findings from this study have the capability to enhance awareness and understanding with regard to the availability, accessibility, and affordability of maternal mental care services for reproductive-aged women in rural communities in Nigeria. Therefore, I intend to discuss the findings from this study with the local government authorities and policymakers, in the local community where the study was conducted. The objective would be to persuade them to change the current community conditions by improving maternal mental health services and formulating policies on maternal mental health within the local rural community.

The positive social change implications include knowledge useful for health professionals as an educational tool for improving knowledge and understanding of PPD amongst members of the community. I intend to discuss the findings from this study with the health professionals who participated in the study. In this way, the findings could be used to educate the reproductive-aged women, their family members, community leaders, and members of the community.

As explained by Ololube et al. (2013), one of the best ways to contribute towards positive social change is to influence people to want to make a change. Therefore, through education, the reproductive-aged women would gain more knowledge, and would be encouraged and empowered on the importance of recognizing the symptoms of PPD, having the confidence to discuss their feelings with health professionals, and seeking professional help when needed. Airhihenbuwa (1995), in his pen-3 cultural model, indicated that the individual (woman), is the first point of entry for any health intervention program.

Kakepoto, Brohi and Jariko (2014) describe the family as the oldest social institution in the world. They further stated that as an institution, family performs many important functions and valuable tasks, and provides the bedrock for its members. Therefore, using information from the findings of this study to educate family members would enable them to gain more knowledge and understanding concerning PPD and their role in supporting and positively influencing the women's health decision making and health seeking processes. When family members gain a better understanding of the causes, impacts and treatments of PPD, it could help change their perceptions, beliefs and practices, making it easier for them to become proactively involved in effecting positive social change in the community. The family as a unit is the second point of entry for health intervention programs.

Another aspect of contributing towards positive social change is building community-based responses towards underlying social problems. Therefore, at the neighborhood/community level, the health professionals could use findings from this study to educate members of the local community concerning maternal mental health and the need to support the women. Community education could result in changes in perceptions, attitudes, beliefs and practices concerning the causes of illnesses and diseases and the treatment approaches. In addition, educating the community on issues pertaining to maternal mental health could help in reducing or eliminating the societal stigma associated with conditions such as PPD. The community plays a role as an intervention point of entry.

Educating members of the community also reflects on the strengths-based approaches which allow health program developers and health educators to emphasize the skills and strengths of the people and the community. As explained by Ololube et al. (2013), change is more likely and more sustainable when the focus is on community strengths and possibilities rather than on problems and challenges. They also stated that change is dependent on using available strengths and resources. This approach is also supported by Airhihenbuwa (1995) who encouraged health professionals responsible for planning, developing and implementing health intervention programs, to first emphasize and encourage the positive (strength, skills, and resources) of the cultural aspects of the community before trying to modify or reduce the negative aspects.

Health professionals could use findings from this study in a unique way to integrate the social change component in dealing with individuals who are already active in effecting changes in the community. For example, the findings could be used to highlight the characteristics of some community leaders (e.g. religious leaders, traditional birth attendants) and other individuals that make them successful in their roles as leaders, or the preferred health provider. In this way, the findings could be used to gain a better understanding of the relationship between the community leaders, the women, the needs of their communities, and the process of inspiring effective change.

Social changes have relationships with/between sectors of the society. Changes have transfer effect; changes that take place in one aspect of a society often affect other sectors (Ololube et al., 2013). The hospital is part of the society; therefore, a change at the level of the hospital as an institution is part of societal change. In addition, positive social change affecting one local setting could infiltrate into other local settings. and developing a more comprehensive maternal mental healthcare programs for reproductive-aged women living in rural parts of Nigeria.

Positive social change involves changing attitudes, behaviors, laws, policies, and institutions to better reflect the values of inclusion, fairness, diversity, and opportunity. The reproductive-aged women deserve to be included and treated as part of the community. In addition to the local dissemination, I intend to disseminate my study through publication in other peer-reviewed journals. I also intend to make at least one presentation at a professional conference.

Recommendations

The findings of this study contribute to the knowledge base of postpartum depression in general and the perceptions, beliefs and attitudes of health professionals towards PPD in particular. This includes the various factors that influence the ability of the health professionals to recognize and manage symptoms of PPD. At the intrapersonal level, certain factors can offer important information that can be used to change the health-seeking behaviors of reproductive-aged women in rural parts of Nigeria. The assessment of personal knowledge of PPD in this study revealed a need for a comprehensive maternal mental health education for reproductive-aged women in rural parts of Nigeria. In order to reach out to the reproductive-aged women in rural settings in Nigeria, health professionals may have to review maternal mental health programs that have been effectively used in other places and tailor a program to meet the needs of reproductive-aged women in rural Nigerian settings.

Another recommendation is continued research on the factors that may hinder the ability of health professionals to recognize and manage the symptoms of PPD in rural parts of Nigeria. The limited literature available on the subject matter is an indication that few studies have been conducted on PPD in Nigeria, especially in the rural areas. In addition, there is a gap in the literature concerning the perceptions, attitudes and beliefs of health professionals on the recognition and management of PPD.

The findings from this study offer many areas for continued research in various aspects of maternal mental health such as exploring community resources available to reproductive-aged women in rural areas in Nigeria. In addition, research is needed at the organizational/institutional level to explore the distribution, organization, and management of health resources in rural parts of Nigeria, and how their impacts on the abilities of health professionals to perform effectively.

At the community level, further research is needed on how health care services could better be used to benefit the needs of the reproductive-aged women in rural parts of Nigeria. From a policy perspective, there is need for research on how maternal mental health care reform will impact maternal mental health care services for reproductive-aged women in remote parts of Nigeria. And lastly, there is a need for research about using the pen-3 cultural model, a culturally appropriate approach in planning and implementing maternal mental health programs in rural settings in Nigeria.

Summary

In conclusion, based on the data analysis, I was able to determine that health professionals in a rural setting in Nigeria have the basic knowledge and understanding of PPD as a public health problem. Study findings demonstrated that, although the health professionals have not yet seen cases of PPD, they had the knowledge of the condition, and recognized it as a major public health concern.

Research question 1 was related to the perceptions, attitudes and beliefs held by health professionals towards the recognition and management of PPD in a remote setting in Nigeria. The study findings demonstrated that the health professionals who participated in this study had knowledge of PPD and perceived the condition as a major public health concern

Research question 2 was related to the factors that either hindered or facilitated the ability of health professionals to recognize and manage symptoms of PPD in a rural setting in Nigeria. The research findings demonstrated many factors at different levels preventing health professionals in rural settings in Nigeria from being able to recognize and manage symptoms of PPD in timely manner.

The conceptual framework used for this study was the pen-3 cultural model. Health behavior theories used in public health and health promotion are often used to describe poor health outcomes from an individual's action or inaction or unwillingness to heed preventative health messages. However, the pen-3 cultural model is used to describe importance of holistic approach and inclusiveness, by considering the different factors that influence a person's health-decision making and health-seeking processes. The first of such factors emphasized by the pen-3 cultural model is culture, which shapes perceptions and practices of individuals with regard to health and mediates responses to health information. Therefore, a successful health promotion activity targeting individuals or communities must first consider the cultural aspects surrounding both the individuals and the communities. Embedded in the culture are individuals, family units, and the community at large, whose individual and/or collective actions can either positively or negatively influence the health-decision-making and health-seeking abilities of other people.

Lastly, in Chapter 5, I discussed recommendations for future research, and the implications for social change. Findings from this study can enhance awareness of the challenges faced by health professionals in recognizing and managing the symptoms of PPD in rural settings in Nigeria. In addition, the findings from this study, can be used to influence local, state, and federal maternal mental healthcare policies towards developing comprehensive maternal healthcare for reproductive-aged women in rural Nigerian settings.

With the understanding that this study is just a tiny fraction of numerous studies conducted on PPD, findings from this study may not on its own resolve all the issues surrounding PPD. However, it will suffice if the findings from this study possibly call attention to PPD as both a health and a social problem, as well as fostering new policies or studies that may address the recognition and management of PPD in rural parts of Nigeria.

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Appendix A: Consent Form

You are invited to take part in a research study about postpartum depression. I am inviting doctors and nursing who have worked with pregnant and postpartum women to be in the 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 myself, Atim Henshaw; I am a doctoral student at Walden University.

Background Information:

The purpose of this study is to understand the perceptions, attitudes and beliefs of health professionals towards the recognition and management of postpartum depression.

Procedures:

If you agree to be in this study, you will be asked to:

Attend an interview which may last for approximately one hour

I will email the transcripts to the participates to review, confirm and/ or clarify for corrections

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at Walden University and/or Iquita general hospital will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time. The researcher will follow up with all volunteers to let them know whether or not they were selected for the study.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as fatigue, stress or becoming upset. Being in this study would not pose risk to your safety or wellbeing.

There will be no direct benefits to the participants. However, the study will be beneficial to the larger health community in particular and the society in general by helping to gain better understanding of the recognition and management of postpartum depression from the perspectives of health professionals.

Payment:

Participants will be provided local transportation to and from the study location. In addition, participants will receive thank you gift cards at the completion of their interview sessions.

Privacy:

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by password protection, and the use of codes in place of names. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now or if you have questions later, you may contact the researcher via atim.henshaw@waldenu.edu.If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is (+1) 612-312-1210. Walden University's approval number for this study is; **IRB will enter approval number here** and it expires on; **IRB will enter expiration date.** The researcher will give you a copy of this form to keep.

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 B: Interview Protocol

Introduction
Welcome and thank you for your participation today. My name is Atim Henshaw and I am a graduate student at Walden University conducting my study on the perceptions attitudes and beliefs on health professionals regarding the recognition and management of postpartum depression (PPD) in rural Nigeria. This interview will take about 60 minutes and will include 8 questions regarding your experiences and what might affect your ability to recognize and manage symptoms of PPD. I would like your permission to tape record this interview, so I may accurately document the information you convey. If at any time during the interview you wish to discontinue the use of the recorder or the interview itself, please feel free to let me know. All of your responses will be confidential. Your responses will remain confidential and will be used to develop a better understanding of how you and your peers view the recognition and management of PPD.
At this time, I would like to remind you of your written consent to participate in this study. I am the responsible investigator, specifying your participation in the research study: postpartum depression among reproductive-aged women in Akwa Ibom state, Nigeria. You and I have both signed and dated each copy, certifying that we agree to continue this interview. You will receive one copy and I will keep the other under lock and key, separate from your reported responses. Thank you.

Your participation in this interview is completely voluntary. If at any time you need to stop, take a break, or return a page, please let me know. Do you have any questions or concerns before we begin? Then with your permission we will begin the interview.

Appendix C: Interview Guide

Participant IDNO |__|__|__|__|__| Gender Male / Female Researcher

Initials |__|__|__|

Health facility Date |__|__/__|__/__|__|

General purpose of the study

Aims of the interview and expected duration

Who is involved in the process (other participants)

Why the participant's cooperation is important

What will happen with the collected information and how the participant/target group will benefit

Any questions?

Consent

Warm up [demographic & work history]

Let us start by asking some details about you and your job

Job Title ____________________________

Job description

Length of time at job:______________current___________previous

Now I am going to ask you some questions about your experiences as a health professional in this facility and within the community.

Appendix D: Interview Questions

RQ1: What is the health professionals' perceptions and approaches towards PPD?

Or

How do health professionals perceive and handle PPD?

What are your personal attitudes about PPD? Why? (Probe – is PPD a concern? Why or Why not?)

Who or what influences your current attitude about PPD? How? To what extent? Why?

Does the government play a role in shaping your attitudes about PPD? If so, please describe.

RQ2: What do health professionals define as the factors that either enable or prevent them from recognizing, diagnosing, and treating symptoms associated with PPD among reproductive-aged women in rural Nigeria?

What factors help you to manage the symptoms of PPD? Please describe.

What factors make it difficult for you to manage the symptoms of PPD? What could be done to make it easier for you to manage the symptoms of PPD?

What are the factors that may hinder you from gaining knowledge about PPD?

What can be done to help you gain knowledge about PPD?

What factors promote your ability to gain knowledge about PPD?

Do you help reproductive-aged women gain appropriate knowledge about the risks and long-term outcomes of PPD? If so, how do you do this?

How do you help women to reduce the risks and long-term outcomes of PPD? Please describe.

When women are diagnosed with PPD, how do you help them to get the help they need?