2016

What Are the Perspectives of Osteoporosis Screening Among Black Women?

Angela Alsberry Wilkins
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral dissertation by

Angela Wilkins

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Diane Cortner, Committee Chairperson, Health Services Faculty
Dr. Cheryl Anderson, Committee Member, Health Services Faculty
Dr. Vincent Agboto, University Reviewer, Health Services Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2016

Abstract

Perspectives of Osteoporosis Screening Among Black Women

by

Angela Alsberry Wilkins

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

School of Health Sciences

Walden University

February 2016

Abstract

Osteoporosis is a serious disease which often brings pain, disability, hospitalization, and even death. An increasing number of studies have been conducted on the prevention and treatment of osteoporosis in White women, yet a paucity of research exists to explain disparities in screening and treatment of osteoporosis in Black women. This narrative study describes the perspectives of Black women regarding individual barriers to osteoporosis screening. The purpose of this study was to better understand the perspectives of Black women regarding prevention of and screening for osteoporosis. Selections included purposive, criterion sampling of 10 Black women who were 50 years and older, could speak and write English, and lived in Southeastern Virginia. Recruitment flyers were distributed to Black women who were members of 3 local churches. The conceptual framework for this study was the behavioral model of health services, which holds that individual's acceptance to use health service is partly controlled by that individual's predisposing, enablement, and need. Data were collected by in-depth face-to-face interviews and analyzed using open, axial, and selective coding. Four major themes emerged in this study including awareness of osteoporosis, knowledge of the screening, health beliefs, and sharing of information. While the narratives indicated positive effects from engaging in osteoporosis screening, there was a discrepancy in understanding the disease and explanations of screening results. This study addresses social change by identifying how awareness and knowledge may help Black women become more effective when they engage in osteoporosis screening, which can help to ensure health and a better quality of life.

Perspectives of Osteoporosis Screening Among Black Women

by

Angela Alsberry Wilkins

Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
School of Health Sciences

Walden University
February 2016

Dedication

This dissertation is dedicated to those I love and have been instrumental in my life. First and foremost, I give honor to my Lord and Savior, Jesus Christ, for without Him, this work would not have been possible. “I can do all things through Christ which strengtheneth me”. (Philippians 4:13, (KJV).

For my one and only true love of a lifetime whose sacrifices, prayers, and encouragement kept me going through this journey. To my wonderful husband, Olric, I thank you for your love and support. I will forever remember and cherish the times that you checked on me, gave me space, fed me meals, provided comfort and would not let me give up. You were there for me during this journey and held my hand as my mother left us to join her heavenly father.

To my parents, Mr. Jordan Alsberry & Mrs. Roberta Adams Alsberry who now reside in heaven, I dedicate this doctoral research study to both of you with love. I know you are watching me from heaven. You were amazing parents who taught me the love of God and to always do my very best above all obstacles. I miss you both very much. You have both earned PhDs through me.

To my entire family of Adams’s, Alsberry’s, and Wilkins’s, I love you all. To Bishop Anne Gimenez, Founding Bishop, Rock Church International, you are a true woman of God and have been my inspiration throughout this journey. God Bless you.

Acknowledgements

There have been so many people who have cheered me on throughout this process, and now, I would like to take this time to acknowledge them. To my sister Kathy, thank you for calling and texting me late at night to see how I was doing. You have been a source of caring, encouragement, and understanding through these years and I am truly grateful. Thank you. To my sons, Ricky for encouraging me and always telling me what a great thing I'am doing. David, for your expertise and help during all of my computer challenges, you were always there for me. To my nephews Torrance and Kevin. It is sure nice to have college graduates (Kevin MBA) in the younger generation who still love their Auntie and helping me out.

To Dr. Diane Cortner, my doctoral chairperson, I will forever be grateful for your guidance and direction. Your words of support and gentle guidance gave me the encouragement needed to complete my journey. You always believed in me and encouraged me to find my own personal "scholarly voice". You and I will always have a bond of serving in our great military and I salute you. Thank you for your dedicated service to our country. You are now, and always will be, the very best. Thank you. To Dr. Cheryl Anderson, my committee member, thank you for your guidance and helpful directions. Dr. Vincent Agboto, my URR, thank you for the comments that enhanced my work.

Table of Contents

Chapter 4: Results

List of Tables

Chapter 1: Introduction to Study

A woman's risk of breaking a hip is equal to her combined risk of being diagnosed for breast, uterine, and ovarian cancer (National Osteoporosis Foundation [NOF], 2013). Osteoporosis is a silent disease of the bone that is not evident until a fracture occurs as a result of minimal trauma. It affects over 33.6 million adults, predominantly men and women over the age of 50, who have low bone density (NOF, 2013). In the United States, the risk of osteoporosis is much higher among women than men, with an estimated 10 million women and 1.3 million men having reported an osteoporosis diagnoses (Department of Health and Human Services [DHHS], 2013)**.** Screening is for prompt osteoporosis diagnosis, and is directly related to better survival outcomes.

Despite the prevalence of osteoporosis and increased methods for screening, Black women remain at risk and experience greater mortality than White women after sustaining complications from a hip fracture (Miller et al., 2005; Hamrick et al., 2012). Fewer Black women are referred by healthcare providers for osteoporosis screening, and fewer are prescribed medications after diagnosis compared to White women (Henderson, 2012; Miller et al., 2005). Some researchers have attributed this disparity this is disparity to the fact that Black women lack sufficient knowledge about screening services to detect low bone density and osteoporosis (Hamrick et al., 2012). I used narrative inquiry to explore the influence of disparity, personal barriers, beliefs, stereotypes, culture, and attitudes of Black women in regards to osteoporosis screening.

Although conservative efforts such as providing osteoporosis information depicting Black women help to reduce disparities, studies regularly fail to identify screening practices for specific ethnic groups and result in these groups being measured by the same criteria as those for groups at less risk. Black women are known to have a higher morbidity and mortality rate after suffering osteoporotic fracture and subsequent complications of hospitalizations, despite having a lower occurrence rate (Jefferies, 2012; Shibli-Rahal, Vaughan-Sarrazin, Richardson, & Cram, 2011). Hamrick et al. (2012), has noted that only one fourth of women in the United States are screened for osteoporosis and that the number of women from ethnic and racial minorities who receive screening is even lower. The goal of this study is thus to understand perceptions of osteoporosis screening among Black women. Few studies have been conducted to explore why Black women are grouped with White women and other ethnicities when it comes to identifying factors that are specific to this group of women. Studies have regularly neglected topics such as stereotypes, perceptions, beliefs, and cultural difference that may impact awareness, treatment, and demographics. Even fewer studies have addressed the specific targeting of Black women for osteoporosis screening.

Positive social change may result when Black women understand the barriers to osteoporosis screening and prevention, and seek to change their own osteoporosis screening practices in conjunction with healthcare providers. I used narrative inquiry to explore the influence of personal barriers, stereotypes, knowledge, discrimination, and beliefs, on the outlook in regard to osteoporosis screening. My findings may enhance interventions by increasing preventive screening opportunities and access to care for Black women.

Osteoporosis is a serious disease which often brings pain, disability, hospitalization, and even death (Cosman et al., 2014). An increasing number of studies have been conducted on the prevention and treatment of osteoporosis in Caucasian women (Cosman et al., 2014), yet a paucity of research exists to explain disparities in screening and treatment aimed specifically at Black women. Despite a surplus of research on osteoporosis, the condition remains asymptomatic, undiagnosed, and untreated (Nayak, Roberts, Chang, & Greenspan, 2010; Pervanas et al., 2012). Researchers Kling, Clarke, and Sandhu (2014) stated with the increasing age of the current population, by the year 2025, the costs of osteoporotic fracture-related morbidity and mortality will considerable encumber health care resources. However, screening rates among Black women are low, and no studies have explored how perceptions, barriers, beliefs, attitudes, trust, and knowledge affect the behaviors of Black women and preventive methods for osteoporosis. Without research examining these factors, planned efforts to expand this health service may be futile. This dissertation addresses this knowledge gap.

In Chapter 1, I present the barriers to osteoporosis prevention experiences by Black women, the research problem statement, the purpose of the study, and the research questions. I used a narrative study approach for research to better understand the individual, professed barriers to osteoporosis screening among Black women age 50 and older and why osteoporosis is considered low risk by researchers. In this chapter, I also detail the significance of this study and its implications for social change, and I offer the description of operational definitions, delimitations, assumptions, and limitations.

Background

Osteoporosis is considered by researchers to be a silent killer and the associated risk of bone fracture, is rapidly becoming a serious health concern (Kruger et al, 2012). Osteoporosis affects nearly 200 million people worldwide with an estimated prevalence of 30% in postmenopausal women (Kruger et al., 2012). Not enough women are being screened and treated for osteoporosis, and rates of screening for Black women are far lower than those for White women (Hamrick et al., 2012). The risk of hip fracture caused by osteoporosis has a higher mortality rate for Black women compared to Caucasian women, while the reasons for this remains under-researched (Cauley, 2013). Limited research has addressed disparities in osteoporosis screening and treatment (Hamrick et al., 2012).

Although advances have been made in awareness, prevention, diagnosis, and treatment of osteoporosis, racial and ethnic minority groups continue to remain undiagnosed in the United States (Thomas, 2007), which has resulted in disparities in incidence, awareness, diagnosis, treatment and clinical outcomes in these groups. Early detection of the risk level of osteoporosis by measuring bone mineral density (BMD) for women may lower incidence of the disease (Deo et al., 2013). Results of bone mineral density measurement can lead to behavioral changes in women (Deo, et. al., 2013) to change their health behavior to prevent fractures. Black women on an average have higher bone mineral density than White women and are therefore not likely to benefit from screening according to the U.S. Preventive Services Task Force (2010).

Compared with White women, Black women have far more preconditions for chronic diseases that result in morbidity and mortality (Brandon & Proctor, 2010). Many hypotheses have been made as to why Black Americans are more vulnerable to chronic diseases including genetics connected to race, access to care, socioeconomic status, environmental exposures, dietary patterns, low physical activity participation, and less healthy lifestyle choices (Brandon & Proctor, 2010). Unfamiliarity with ethnic beliefs may cause misinterpretations and misunderstandings and therefore may influence interactions between Black women and their healthcare providers, resulting in disparities in older Black women's health and well-being (Sims, 2010).

Despite the fact that osteoporosis is considered a major health problem that places women at risk, screening for bone mineral density (BMD) is underused (Davisson, et. al., 2009). Cancer, cerebrovascular disease, heart disease, and diabetes are four serious health threats associated with Black women (Sadler et al., 2005). According to Davisson et al (2009), the overall screening for osteoporosis was 42.9% with highest rates noted in gynecology practice (72%), compared to family medicine 42%, general medicine 36% and the Veterans Administration practice 30%. The proportion of higher BMD testing is higher with female providers (54%) compared to male providers (31%). Raising the awareness for osteoporosis screening to a life threatening disease requires attention to advance the health and well-being of Black women.

Although osteoporosis occurs in in all racial groups, White postmenopausal women are considered to be at a higher risk as compared to Black women for getting osteoporosis (Kidambi, et al., 2005), but Black women have a higher rate of mortality when they do incur a fracture. Because of certain diseases such as sickle-cell anemia and systemic lupus erythematosus are more prominent in Black women. A perception shared by both health care professionals and Black women themselves is that osteoporosis is less frequent or less important in this group (Kidambi et al., 2005). This perception indicate the need for osteoporosis education and preventive strategies among Black women. However, there is a gap in the research literature, and there has been little focus on experiences of osteoporosis screening practices among Black women. This study addressed that gap pertaining to the perceptions of osteoporosis screening of Black women age 50 years and older in the Tidewater area of the U.S. state of Virginia.

Problem Statement

Osteoporosis screening is an important predictor of an individuals' future health status, as well as a key indicator for postmenopausal women age 50 years and older who will have an osteoporosis-related fracture during their lifetime (Crandall, Larson, Gourlay, Donaldson, & LaCrois, 2014). Despite a lower prevalence of osteoporosis in Black women, they remain at risk and may have limited knowledge about their own risk. (Morgan, 2010). According to a recent study, Black women have the highest or near-highest rates of most major chronic conditions and risk factors for poor health (Jeffries, 2012). The problem this study addressed is that Black women, in general have less access to information and screening, which results in a significantly lower incidence of? screening and thus increased preventable mortality and morbidity.

Purpose of the Study

The purpose of this qualitative study was to understand the perspectives of Black women regarding osteoporosis screening. The findings of this study could provide Black women and healthcare providers with information about how osteoporosis screening can enhance prevention, resulting in a better quality of life. Using a narrative approach, I encouraged Black women age 50 years and older to share their stories. In the process I identified common themes of awareness, knowledge, beliefs, and information sharing.

Research Questions

The questions I designed for this study include one overarching question and two sub-questionsThe overarching question was:What are the perspectives of Black women toward osteoporosis screening? The sub-questions were: (1) What are the perceived barriers to osteoporosis screening among Black women? and

(2) What are the perceived facilitators for osteoporosis screening among Black women?

Conceptual Framework

The conceptual framework for this study is the behavioral model of health services (BMHSU) (Andersen, 1995). This model was widely used in the 1960s to explain the use of health care services by families. Andersen (1995) explained that the model initially was designed to describe the use of formal personal health services rather than to focus on the interactions that occur when people accept health care.

Researchers use the components of the BMHSU namely predisposing, enabling, and need factors to understand how perceptions affect health service. These factors are indicators of the likelihood that people will need health care services. Key points that define and determine a person's access to care include demographics, position in the social arena, health beliefs, and psychosocial characteristics (Andersen, 1995). The model also describes factors that inhibit or facilitate access to health care. Population characteristics and health behaviors indicate how patients and environment impact outcomes. By bringing these components of the BMHSU together in this qualitative narrative, I studied the lived stories of ten Black women.

Nature of the Study

For this study, I used a qualitative approach to explore the perceptions of Black women concerning the effect of personal barriers, attitudes, beliefs, culture, and socioeconomic factors involving screening for osteoporosis. I interviewed ten Black women age 50 years and above. My goal was to better understand their perceptions and health behaviors in relation to osteoporosis screening. I selected the BMHSU as the conceptual framework (Andersen, 1995). The BMHS model was developed to ascertain the reasons families select health services and why they choose to do so. The BMHSU has been used in several areas of health service and in relation to very different disease (Birgit, Gohl, & von Lengerke, 2012), and has thus proven useful for my study's focus on osteoporosis.

Definitions

Bone Mineral Density: The diagnostic measurement that determines the difference between osteopenia and osteoporosis.

Dual Energy X-ray Absorptiometry (DXA): the method of choice to assess the fracture risk associated with osteoporosis (Malabanan et al., 2013).

Osteopenia: A term used to indicate that bone density that is not normal but also is not as low as osteoporosis. Osteopenia occurs when the bone densitometry reading is T score -1 to -2.5 (Karafuzel & Holick, 2011).

Osteoporosis: A term used to indicate that bone density is below normal. Osteoporosis is said to occur when bone densitometry reading is T score is at -2.5 or lower (Karafuzel & Holick, 2011.

Assumptions

I made the following assumptions in my study:

(a) The 10 Black women participants living in Norfolk and Virginia Beach, Virginia, would be motivated to participate in the study; (b) all participants would be truthful in their responses; (c) all participants would have some knowledge of osteoporosis; and (d) I also assumed that I conducted the study without bias.

Delimitations

The primary delimitation of this study was that it was limited to interviews with Black women in churches from within the cities of Virginia Beach and Norfolk, Virginia. Thus, rural Black women were excluded from the study, as were women of other races and ethnicities. I also did not take into consideration the educational level of each participant.

Limitations

I used purposive sampling for this study. Because I used this qualitative sampling method, the generalizability of my study is limited to this sample only. The participants selected from Virginia Beach and Norfolk, Virginia may not represent the overall population of Black women. In addition, some of the participants may have been screened for osteoporosis and others may not have been screened. The researcher could only presume that there was a good mix of both groups.

Significance

The purpose of this study was to help identify perspectives of Black women regarding barriers to osteoporosis screening. Recognizing these barriers may help increase the number of Black women screened for osteoporosis. It is widely accepted that screening for osteoporosis at menopause leads to early detection, decreasing the number of fractures, disabilities, and mortality related to osteoporosis. My study may result in positive social change by providing clarity regarding the possible barriers to access for osteoporosis screening and treatment experienced by African American women in Virginia Beach and Norfolk, Virginia.

Summary

Osteoporosis is the leading cause of musculoskeletal disorders affecting men and women in the United States. Black women have a higher bone mineral density than other ethnicities; yet, there is a higher rate of mortality associated with complications that occur after a fracture has occurred. (Tyler, Zyzanski, Berkley, & Panaite, 2009). In addition, Black women are included with all other ethnicities in published research studies, guidelines, and treatment for osteoporosis (Hamrick, Cao, Agbafe-Mosley, & Cummings, 2012). The findings and conclusions of this study are likely to provide important knowledge related to perceptions, beliefs, and attitudes of Black women regarding screening, and may lead to changes in screening protocols, and ultimately to the prevention of morbidity and mortality and improved well-being of Black women.

Chapter 2 will provide an in-depth review of the literature on the causes, diagnosis, and screening of osteoporosis, and will outline the disparity among Black women in the United States relative to White women and the general population. Chapter 3 will include methodology, research design and data analysis.

Chapter 2: Literature Review

Introduction

Despite the multitude of medications currently available for treatment and prevention of numerous diseases and disorders, there continues to be higher rates of disability, illness, and death particularly among the minority populations in the United States, specifically in Blacks (Brooks, Paschal, Sly, & Hsiao, 2009). Osteoporosis is a skeletal disease characterized by weakening of bone tissue with the probability for fracture (Nielsen, Huniche, Brixen, Sahota, & Masud, 2013). Out of the total population in the United States, 8 million women and 10 million men have low bone mass (osteopenia) placing them at risk for developing a fracture caused by weakening of the bones (Dempster, 2011).

The purpose of this study was to use Andersen's BMHSU (Babitsch, Gohlo, & von Lengerke, 2012) to better understand the perspectives of Black women regarding osteoporosis screening. For my literature review, I gathered empirical data, theoretical literature, and analyses of the perceptions, barriers, and facilitators associated with behavioral concerns and the use of healthcare services. Increasing the numbers of Black women getting screened for osteoporosis is paramount for preventing morbidity and mortality in this population.

Search Strategy

I searched for current literature available at the Walden University library, using such resources as ProQuest. I also searched databases from PubMed and the National Naval Hospital, Portsmouth library. My key search terms included *African American* *women, Negro women, Black women, osteoporosis, osteoporosis screening, perceptions, attitudes, behaviors, stereotypes, hospitalizations, morbidity & mortality, access to care, and barriers to care*. I used these terms in various combinations to obtain related studies, articles, and publications. As I reviewed the literature, I focused on factors associated with the use of osteoporosis healthcare services, screening procedures and the differences in care offered to Black women to other populations. I limited search results to articles published between 2009-2015, and found approximately 100 articles that were relevant to osteoporosis screening barriers and perceptions among Black women.

I organized the literature into six categories: (a) fear; (b) mistrust; (c) lack of knowledge; (d) misinformation; (e) stereotype; and (f) discrimination. These subcategories enabled me to better identify the Black women's perspectives of osteoporosis screening and to better understand the special needs of this ethnic group.

According to Andersen's model, people's use of health care is affected by 3 factors: (1) predisposing (age, ethnicity, education, duration of homelessness, housing status, mental illness, substance abuse, mental illness, and victimization and arrests); enabling factors (monthly income, earnings, panhandling, and donations); and need (health status, chronic illnesses, in poor, good, or excellent health).

Perception

Perception is the process by which organisms interpret and organize sensation to produce a meaningful experience of the world (Borkowski, 2009, p. 51). Individuals interprets the stimuli as something meaningful based on past experiences. However, what the person interprets or perceives may be totally different from reality. Borkowski (2009) had identified the four stages of perception as: stimulation, registration, organization, and interpretation. Borkowski noted that a person's awareness and acceptance of the particular stimuli play an important part in the process of formulating perception. After conducting a free health screening of employees for diabetes, dyslipidemia, and osteoporosis, Pervanes et al. (2012) found that employees that took positive action after receiving test results. A total of 126 employees completed the post screening survey, and 55% stated they were not aware of their high cholesterol and osteoporosis levels and planned to seek additional treatment and counseling from their healthcare providers. The screening changed the participant's perceptions of their health and were encouraged to follow up with their healthcare providers.

How the individual receives the stimuli may be limited by the person's existing beliefs, attitudes, motivation, and personality, and they may primarily select the stimuli that satisfies their current needs. The individual may neglect stimuli that cause anxiety. A process of selective perception occurs when the individual limits the processing of external stimuli by selectively interpreting what the individual sees or hears on the basis of beliefs, experience, or attitudes (Borkowski, 2009). This indicates that Black women may act more positively towards osteoporosis screening as awareness and knowledge of osteoporosis is increased.

Blacks experience a disproportionate burden of illness, disease, and death. Inequalities in health care practices and poor communication between Black patients and their providers contribute to these disparities (Jupka et al., 2008). In a study of 79 Black participants that sought to understand participant's interaction in the healthcare system and their beliefs and opinions regarding the system, Jupka et al. (2008) found 5 major themes: (a) historical and contextual foundations; (b) interpersonal experiences with physicians and other healthcare workers; (c) discrimination; (d) trust, opinions and attitudes, and (e) improving health care experiences. The findings suggested that perceptions of discrimination and racism were prevalent among Black participants in the study and that negative interaction was a barrier to their seeking care (Jupka et al., 2008).

Perception of racial barriers in the health care system could impact patients in various ways such as low satisfaction with health care, non-compliance for recommended medical care, and discouragement regarding the use of the healthcare system (Fowler-Brown, Ashkin, Corbie-Smith, Thaker, & Pathman, 2006). Health perception is an important outcome associated with health-related quality of life, and affects interventions aimed at improving components of health (Cree, Hayduk, Soskolne, & Suarez-Almazon, 2001).

These findings indicate that perceptions can directly affect screening for osteoporosis. Joseph, Burke, Tuason, Barker, and Pasick (2009) concluded research that there are two key behavioral constructs of perception of health and wellness. First is the perception of susceptibility to illness, and the second is perception of benefits of preventive medical care. In my study, I sought to understand susceptibility in Black women by identifying perceived barriers to osteoporosis screening and benefits of receiving that screening to avoid consequences associated with the disease. Sims (2010) believes that the perceptions of older Black women regarding their health stem from non-clinical influences such as cultural differences, individual experiences, and beliefs about being a Black woman. It is important to explore perceptions in more detail to understand its role in the mistrust that many Black women have of the medical system.

Mistrust

Low trust in healthcare providers may partially explain African Americans adverse health outcomes. According to Wiltshire, Person, and Allison (2011), directing policy to improve trust and delivery of health care for African Americans improves health behavior. The researchers conducted cross-sectional analysis of 3649 Black participants using the Community Tracking Study Household Survey. They concluded that Black women were less trusting of doctors and believed that doctors performed unnecessary tests. Low trust in doctors is associated with hesitancy to seek care, dis-satisfaction with care, poor adherence to recommendations, and non-continuity of care. There is a need to improve trust among Black women to address factors contributing to their poor health outcomes(Wiltshire et al., 2011). Women are encouraged to seek health care such as mammograms, pap smears, and prenatal care. The theories of trust may differ from Women's actual practices of using the healthcare system. Therefore, further research is required to understand what specific components increase effectiveness of trust in healthcare providers.

However, studies have shown that mistrust is not simply based on misconception. For instance,Hamrick et al.,(2006) have identified the unequal treatment of people of color in healthcare settings, and have shown that minorities are less likely than Whites to receive needed services. They called for health care providers to be made more aware of racial and ethnic disparities in the care provided. The historic legacy of medical maltreatment of Black peoples in the United States provides some rationale for their distrust of the medical profession, refusal of treatment, and poor adherence to treatment regimens. Trust is not assumed and can be created over time if the health care provider and patient establish a rapport and get to know one another (Shreffler et al. 2009; Efird et al. 2013). Dale, Polivka, Chaudry and Simmonds (2010) explained that when Black women select a provider, race was not a factor, but preferred gender specific of having a female provider to care for them. Trust was identified as awareness of provider body language, interest in the client, and explaining information clearly further emphasize patient-provider trust (Dale et al, 2010; Williams et al., 2013).

Other factors of mistrust may affect adverse healthcare outcomes. Shreffler, McQuillan, Greil, Lacy and Ngaruiya (2009) investigated demographic status, socioeconomic status, health status, and access to care factors to determine how having a regular doctor affected perceptions of care among women of color. They conducted a national survey of 4,520 women ages 25-45, using a logistic regression model to ascertain the relation between having a regular doctor and feeling cared for among Black, Hispanic, and Asian women. Overall, 83% women in the study reported having a regular doctor and 81% reported that their doctor was very caring. The researchers unexpectedly found that Black and White women had the same probabilities of having a regular doctor when socioeconomic variables were held constant. Hispanic women had lower probabilities of having a regular doctor, which may be attributable to language barriers. The perception that one's physician cared was aligned with having a regular physician. Asian and Hispanic women had lower reports of feeling cared for more by their physians than those of White women (Shreffler et al., 2009). Because Shreffler et al.'s study was limited to women of reproductive age (25-45), further studies are required to evaluate older women's perceptions of physician care. Low trust may be the result of misunderstandings between Black women and healthcare providers, and a better understanding of this relationship is needed to improve osteoporosis screening in Black women.

Lack of Knowledge

Tyler, Zyanski, Berkeley, and Panaite (2009) examined existing disparities in osteoporosis preventive care among Black women. When compared to Black women after appropriate adjustments involving additional osteoporosis risk factors, White women had 3 times the odds of discussing osteoporosis with their physician and 2.4 times the odds of the physician recommending to them to take calcium supplements for treatment. Black have limited knowledge about the disease or associated risks involved (Geller & Derman, 2001). According to Tyler et al (2009), few Black women recall having discussions with their physicians about medication available to prevent or treat osteoporosis and were willing to take the medication if it had been recommended by their physician to do so. Osteoporosis preventive behaviors have been associated with perceived risk for osteoporosis (Tyler et al., 2009). Sadler and Huff (2007) acknowledge education about prevention of osteoporosis is at a lesser rate for Black women and that only 1.7% of non-Hispanic Black women were never told they had osteoporosis. Awareness of risks should be a part of each health provider's knowledge and screenings and interventions should be standardized among all women (Sandler & Huff, 2007; Queally et al., 2013).

Black women require clear informative education by their physicians that osteoporosis is an important health issue among Black women and should be offered preventive medication (Tyler, 2009). The researchers conducted a study in northeastern Ohio in 2009 consisting of 160 women aged 19-65. More than half believed their normal dietary intake was sufficient for calcium levels. Establishing standards to review calcium intake requirements with Black women may improve health outcomes associated with osteoporosis.

Warren, Kvasny, Hecht, Burgess, Ahluwalia, and Okuyemi (2010) found that the African American women in their study demonstrated that the internet may be a valuable tool for accessing health information among lower income Black women if barriers are reduced. Eighteen Black women were offered a 3-day session of internet training to access healthcare information in this qualitative study. Self-perceptions of control engage empowerment which in turn enhances awareness and power to take control their personal life. Using the internet in health information seeking showed that cultural identity, racial identity, and socio-economic identity were factors to engage in self-perceptions. Warren et al. (2010) surmised three perceptions of barriers to traditional health information seeking as: (a) secondhand healthcare (b) withholding health information, and (c) tensions in access.

Secondhand healthcare: the participants' beliefs that they receive inferior health care due to racial identity by health professionals. This compromises their ability to obtain the knowledge they need for themselves and for their families. Black women perceive that doctors pacify them by telling them that nothing is wrong, treatment is not required, and that over the counter medication will work just as well. The attitude that the doctors prescribe medicine that is not needed or they are given the same medicine for every ailment leaves the perception for lack of understanding.

Withholding health information: the belief that healthcare professionals and hospitals withheld information based on racial and lower socio-economic identities, and have the tendency to generalize Blacks. A perception in a majority of women is the attitude that doctors prescribe medicine they do not need or give them the same type medicine for everything. There is a general belief that health professionals and hospitals withhold information regarding prescribed medications and its use (Warren et al., 2010).

Tensions in Access: Participants perceive they have limited access due to their membership in a lower income bracket. The general attitude is that accessing healthcare without some type of insurance is difficult. Many Black women had to wait long hours to wait to see the doctor if they did not have insurance and believed that those who have insurance get to see better doctors and receive better care than those who do not. Framing the concepts that contribute to understanding the perception of access to care will augment current research on perceptions of osteoporosis screening among Black women. It is important to explore beliefs and attitudes of healthcare provision to better understand the development of perceptions described by ethnic groups that may prohibit seeking health screening.

Perceptions of Health

Blacks are less likely to perceive their health is good to excellent compared to the perception of Whites (Brandon & Proctor, 2010). The study was designed to compare health perceptions of adults based on race and gender. A stratified random study consisted of 1605 participants that completed the Northern Louisiana Health Survey (NLHS). The total number of Black men that perceived themselves to be in good health was 55.8% compared to 76.6% of Caucasian men. For females 68% of Black women perceived themselves in good health compared to 77.1% of White women. Three quarters of both the Black and White responders stated their health care provider shared information useful for maintaining good health. Sadler and Huff (2007) support the fact that cultural beliefs of religion and folklore impact perceptions of health. The condition of osteoporosis is not a concern in Black women as there are no visible changes in bone deficiency until it is too late to make a change (Sandler & Huff, 2007).

Even though Black men perceive they are in good health, it is not documented how clearly they are aware and understand the incidence of diseases related to race/ethnicity, such as prostate cancer. Brandon & Proctor (2012) reported health perceptions clearly affect health behaviors for Blacks and may be a cause for health disparities. The health perceptions of Blacks are often different than those of Whites and remarkably not consistent with their personal health status. However, the perceptions noted in this particular survey are in agreement with this current proposed study that perceptions appear to influence the value they place on health behaviors which may be partially responsible for health status.

Interestingly, Dean et al. (2014) conducted a study exploring the perceived neighborhood social capital known as perceptions of how tight knit a neighborhood relates to the use of mammography in a Philadelphia black community. There are five indicators that describe group properties that include social engagement, neighborliness, social networks, social support, and perception of the immediate area. Black women who live in a community that is familiar and has strong ties with one another sets the stage in the community for health messages to be disseminated to other women within the community (Dean et al., 2014). Having access to screening alone does not totally prove effective but strengthens the theory that a positive community support leads to better results for Black. Liao et al. (2009) agree minority communities within the same racial/ethnic population provide increased opportunities for screening.

A review of disparities was evaluated to determine the influence of perceived racism and racial identity to evaluate the impact of self-reported health status of Black women. Piertse and Carter (2014) indicated racism related stress does have consequences for Black women. The individual internalizes negative messages connected to one's racial identity. The study also examined the relationship between racial identity and perceived racism as predictors of health status. The 90 study participants were Black females recruited from hair salons in New York City ages 18-67 years. The Health Perceptions Questionnaire (HPQ) was utilized to limit questions related to individual's perceptions of their current health status.

Racial identity theories disclose how individuals identify with their own particular racial group. Black identity consists of four stages now called statuses (Piertse & Carter, 2014). The first is Pre-encounter that involves attitudes of being black and incorporating other dominates cultures such as White or European. The second is the encounter status when the individual has experienced a personal episode or activity of racism. Third and fourth are the Immersion-Emersion statuses that involves the phase in which the individual explores new sides of their identity of being black and this stage may become more negative towards White or other cultures and also where the individual has integrated their Black identity, being appreciative of other racial and cultural groups. Pieterse and Carter (2014) found that racial identity is a psychological construct that is identifiable as an important role in studying health related attitudes and behaviors. Additional studies should be conducted to further understand the depths of racial identity theories that are briefly noted in this survey using a broader number of participants to get a better understanding of their health.

The success of providing the best patient-centered care to Black women is to recognize critical elements in identifying interactions and encounters with this population's medical providers and support staff (Sims, 2010). The perception of race and provision of care impacts their access to care and of screening health exams (Sims, 2010) affecting their health care behavior. Black women age 40 and older outnumber that of Black males and are at high risk for chronic diseases as they advance in age and are being treated differently in the healthcare system.

Sims (2010) conducted a study of 50 Black females in Tucson, Arizona to report firsthand perspectives of older Black women to study their encounters with their healthcare systems to examine their perceptions, expectations, and beliefs about the role of cultural difference within a predominantly White (US) healthcare setting to explore personal experiences. Over one-half (52%) of the women reported they had been either racially profiled or experienced racial bias during their last healthcare encounter, whether it was a screening exam or not. Nine (18%) women reported they were not sure if they had been profiled or discriminated against. The remaining fifteen women (30%) said they had not experienced racial profiling, bias, or discrimination. Some of the perceived or experienced biases identified by the women included gestures of non-verbal communication, avoidance of eye contact, hesitation to touch them, tone of voice or specific types of words used by personnel to address them. Of this small study of 50, 70% felt or suspected they had been racially profiled during their healthcare encounter, affecting quality of care (Sims, 2010; Sadler et al., 2007). This study was able to determine if Black women in a small sample group experienced racial profiling, bias, or discrimination, any of which may prohibit return visits to the healthcare system or provider.

A study group of 1,055 Black women were surveyed and asked to identify the top four medical conditions affecting the health of Blacks. The study was conducted in several beauty salons located in the San Diego, California area. Cancer was Cancer was listed as number one, followed by heart disease, diabetes and cerebrovascular disease (Sadler et al., 2005). The women listed a total of 14 diseases. The remaining ten medical conditions most affecting their health included HIV infection, obesity, stress, sickle cell anemia, malnutrition, fibroids, drugs, lupus, Alzheimer’s disease, and eating disorders completed the list. As a part of the study the women were given a list of health screening and were asked to identify their most recent date of screening. The health screenings listed were physical exam, eye exam, sugar/diabetes, breast self-exam and mammogram. This study suggested the need for opportunities to promote osteoporosis screening to Black women. This proposed study could better explain why osteoporosis is often not thought of as a health factor and why education is needed in this area. It is important to explore the roles of self- reported health status and to better understand the impact it has on the participation of Black women in research studies.

Perceptions of Research

A focus group research conducted at the University Hospital in Charlottesville, Va. acknowledged recruiting rural Blacks for research offers special problems (Williams, Utz, Jones, Hinton, Steeves, & Alexander, 2011). Black women are not adequately represented in randomized controlled trials and have been excluded or underrepresented in research, thereby limiting the generalizability of research results (Martin, et al., 2013). Cultural differences, the view of researchers as cultural outsiders, and transportation difficulties add to challenges for recruitment. A convenience sample of 22 adult Black participants, 16 women and 6 men, age 60 and older, was conducted to better understand recruitment in minority communities (Williams et al., 2011). Strategies to overcome barriers to research participation included conducting the research in the community for familiarity, making routine personal phone calls to participants, and involving community organizations.

Hamrick et al. (2006) belief Black women are not part of research for health screening is due to the fact that healthcare providers fail to refer these women for screening. The study performed showed a racial disparity in osteoporosis screening with White women from the same medical care facility were six times more likely to receive screening DXA scan than their Black women (Hamrick et al., 2006). Due to the decreased numbers of Black women participating in research, risk factors specific for this ethnicity have not been clearly defined and are being evaluated with risk factors identified for White women (Hamrick, 2006).

Williams et al. (2011) emphasized development of partnerships with participants to understand what strategies worked and ways to recruit additional participation for future studies in the community. Speaking with the community members about the topic before the research begins, setting up convenient locations and times, and providing incentives all help to establish a trusting research environment Williams et al., 2011). The study concluded without identifying and sharing variables of success of the recruitment. Further studies are needed to ascertain factors that violate the trust of Black communities that inhibit their participation in research studies.

Dale, Polivka, Chaudry, and Simmonds (2010) reported racial disparities in healthcare are improved by establishing trust. Eight focus groups consisting of 40 Black women ages 19-24 were conducted in seven cities in the Ohio region. The participants identified factors in selecting medical providers were trust, body language, interest in the client and caring were critical elements for selecting a medical provider (Dale et al., 2010). Of the 40 participants, almost half (42.5%) received health care from their own private doctor, nurse practioner or physician’s assistant; one third (30%) received care from a clinic, and approximately 18% from urgent care or emergency room.

Not all study groups of Black women are distrustful of research. Brewer et al. (2014) studied an older group of Black women with a median age of 59, professional, and all belonging to a society group called the Links. Of the 381 surveyed, 96% were college educated. Of these women, 24% agreed participation in research was risky; 3% agreed scientists cannot be trusted, and 52% agreed research conducted in the U.S. is ethical (Brewer et al., 2014). The researchers concluded attitudes were generally favorable among professional Black women as evidenced in the study.

Interestingly, in the focus group, the young Black women preferred female providers and the race of the provider was not of essential concern, indicating gender was more of a concern than race (Dale et al., 2010). Future studies are required to focus on the relationships of patient and providers to better understand the real meaning of perceptions. Additional studies are also needed to determine qualities of current healthcare providers and why their patients remain with and trust them.

Lang, Kelkar, Byrd, Edwards, Pericak-Vance, and Byrd (2013) surveyed 700 African American adults regarding their willingness to participate in research. Of the 700 participants, only 16% had been involved in previous research studies and 90% expressed willingness to engage in future research studies. Of the 614 individuals who had never participated in research, 70% expressed willingness to participate in future studies. Those who had participated in research were twice as likely to have a college education compared to those who did not. Barriers identified in this focus group included two main areas of the lack of trust and lack of time to attend required group meetings and testing. Incorporating African American researchers and increased training of minority specialists are needed to assure promote positive influence among the individuals in Black communities (Lang et al., 2010).

Brooks, Paschal, Sly, and Hsiao (2009) examined existing barriers preventing Black women from participating in research. Four structured groups of 29 participants were selected from a church I Kansas City, Missouri, to join in a discussion regarding barriers to research participation. Despite fears discussed of being treated experimentally, 79% of the participants expressed research was important; 17.2% reported never being asked to participate in a clinical trial; and 31% feared being treated like a guinea pig. Of the participants, most said they would participate in research in the future; 24.1% stated they would never participate; and two reported they would participate only in a life or death situation (Brooks, Paschal, Sly, & Hsiao, 2009). The participation of Blacks in research trials is influence by barriers that are special to this ethnic group. Brooks et al. (2005) identified five factors that limit participation of Blacks in research.

The first factor is fear and not knowing the consequences of the research and how it may affect their bodies. Secondly was mistrust of the medical community, in general, to include distribution of misinformation. Third, lack of knowledge about the clinical trials. Fourth, the possibility of relating to previous experiences of family members and friends being used. The fifth and final barrier was misinformation. This focus group concluded that the barriers were derived particularly from the individuals themselves and after the session almost half of the study group stated they would take part in future research. This study would have benefited well by allowing the participants to discuss in their own words what would be required to assure their participation in research and also views of family members. Additional studies are needed to assure perceived barriers are communicated to ensure optimal health benefits of Black women.

Coker, Huang, and Kashubeck-West (2009) explored literature related to Black women as research participants, reflect on their past experience, and challenges faced during data collection. Historical findings included evidence of cultural stereotyping and racism when investigating and interpreting Black behavior. Obstacles facing Black research participation include lack of knowledge, distrust, poor recruitment techniques by researchers, perceived social stigma and researcher's lack of preparation for the encounter (Coker, Huang, & Kashubeck-West, 2009).

Perceived feelings that privacy will be invaded, or confidentiality will be exposed, are factors that may lead to a decline in the number of respondents who start out as a part of a study, especially in Black women (Coker et al., 2009). They feel vulnerable, culturally isolated, and threatened when approached to participate in research studies (Coker et al., 2009). Researchers reported literature reviewed regarding a young group of Black women located on a predominantly white college campus shared that they felt a lack of compassion and offense by being asked to participate in a survey linked to the well- known Survey Monkey as a racially intended statement. Blacks have been, and still are referred to in some arenas as "monkeys", and were not used in good sound judgment when seeking participants of Blacks for a study.

The researchers conclude that this particular group of Black females felt vulnerable to their gender and race and that these feelings may keep them from participating fully in research studies (Coker et al., 2009). Integrating cultural diversity programs into healthcare systems and teaching the content of these programs to healthcare workers would provide opportunities to learn about diversity and assist in promoting trust in Black women.

Black and Hispanic women are two minority groups that are less likely to be screened in comparison to White women to receive early diagnosis and treatment of chronic diseases due to health disparities (Wallace & Bartlett, 2009), and left out of research studies. In addition, the lack of involvement of Blacks in research has been the result of mistrust, misinformation, insufficient understanding of various procedures associated with research, racism, and poor recruiting efforts. Societal barriers of Blacks include language differences, such as those living in the north and south, stereotypes, prejudices, and the failure to educate and inform minority leaders to understand the importance of research and screening that are important exclusively for this ethnic group. Successful screening and participation relies heavily on promoting trust, communication, and emphasis on cultural understanding of the participants (Wallace & Bartlett, 2009).

Recruitment of Blacks involves strategies of intervention (Williams, et al., 2011) to capitalize on cultural beliefs, trust, healthcare practices, and religious beliefs. Barriers to screening can be overcome by reaching out to the community and including the residents in the recruitment of family, friends, and colleagues, developing a partnership with communities to minimize the recruiter outsider perception. The study includes the importance of getting Black community members actively engaged in screening by allowing them to assist with the project further building trust and opening doors for health screening. It is important to explore the role of research in more detail to better understand its role if any in perceptions of stereotypes.

Perceptions of Stereotypes

Abdou and Fingerhut (2014) stated stereotype threat among Black women in health care settings is one social barrier to osteoporosis screening. The study was aimed at understanding cognitive adaptations that facilitate information processing and broader functions related to perceived survival when placed in a stereotype threat condition (Abdou & Fingerhut, 2014). A total of 162 women qualified for the study, 94 Black women and 68 White women. The women completed an on-line virtual study that placed each participant in a healthcare waiting room. Each participant was exposed to information on displayed on walls and magazines, depicting Black women in negative stereotypes situations such as unplanned pregnancy of a young black female, Black baby on HIV/AIDS poster, etc. The participants were evaluated on the New York Anxiety Scale to assess level of anxiety. The Black participants reported a significant greater anxiety in the experiment whereas the White women reported lower anxiety levels in the overall ethnic identification relative to the Blacks being portrayed in the waiting room area. Thus, the perceived stress may result from stereotype threat (Abdou & Fingerhut, 2014). This study portrayed a narrow view of two different races. Additional studies are necessary to assess other cultures to demonstrate responses from other ethnic groups to compare anxiety and stress levels as a result of negative portrayal and stereotypes.

Perry, Harp, and Oser (2011) investigated the effects of gendered racism and other stressors that can be assessed using four indicators. Severe anxiety, life satisfaction, health concerns, and functional limitation are gendered racism factors that impact mental and physical health that results in social inequality and barriers to health (Perry et al., 2011). A survey of 204 Black women was studied to compare racism and stressful events. Six social roles revealed that social network loss, motherhood, employment and finances, personal injury and accidents, and adult victimization are all events that affect adverse health outcomes (Perry et al., 2011).

In a study conducted by Aronson, Burgess, Phelan, and Juarez (2013), defined stereotype threat as a disruptive psychological situation experienced by people when they feel at risk in a negative position defending their social identity such as their race, gender, ethnicity, social class, and so on. Black patients seem to be less active in their role of health care compared to whites. This may be attributed to the barrier of negative cultural stereotypes that frequently confront Black and minority patients when they relate to their health care providers (Aronson et al., 2013).

Gaston-Johansson, Hill-Briggs, Oguntomilade, & Mason (2007) stated implementing new designs and initiatives in health care often overlook the issues of racial and ethnic disparities that directly affect them as a group. Also, stereotype can poses barriers when identifying and selecting providers, poor service delivery from medical staff, the inefficiency of medical visits, provider communication, and cultural competence barriers, and stressful treatment settings (Gaston-Johansson, 2007). Dis-agreeing with stereo-typing (Kessenicha, 2000), believes osteoporosis is an equal opportunity disorder and overlooking the basis for risk factors for Black women is an outdated practice and can be potentially harmful to these women who can benefit from early detection and prevention.

According to Aronson et al. (2013), stereotype threats propose risks complicating social interactions and relationships between patients and providers. Minority group members who perceive discrimination in unpleasant social climates have higher levels of mistrust are more likely to miss medical appointments thus avoiding health care. People avoid situations where they feel unwelcome or devalued resulting in risk for treating a medical condition as it becomes more serious overtime.

Stereotype threats hinder communication with medical providers (Aronson et al., 2013). A research conducted by the authors stated interviews for Whites and Blacks who interviewed for a job tended to be briefer, less warm, and less comfortable for interracial interviews compared to same race interviews. Stereotype threat causes arousal and anxiety impairs cognitive responses and memory, decreasing the communication process and hindering effective communication in the minority patient (Aronson et al., 2012). An earlier study conducted by Bogart (2001) stated out of a group of 59 Black women were recruited to examine stereotypic beliefs about physicians and health care related behaviors and cognitions. The women were asked about health care utilization, satisfaction, and intentions of their healthcare provider. Overall, the participants perceived physicians positively, competent, warm, and reported greater health care utilization and higher satisfaction with their current health care, resulting in perceived general health status (Bogart, 2001).

Perception of Discrimination

Mouton, Carter-Nolan, Makambi, Taylor, and Palmer (2010) perceived discrimination has been shown to be related to health screening behavior. Discrimination is a process in which a member or members of a socially defined group are treated differently because of their membership within the group. Perceived prejudice is noted as a factor explained in variables related to access to care and stressful events resulting in gender racism for Black women (Mouton et al., 2010; Perry et al. (2011). Goodwin and Engstrom (2002) associate self- perceived health disparity is associated with personality characteristics involving gender and race in clinical settings.

Unexplained persistent racial disparities exist in osteoporosis screening referral and treatment between Black and White postmenopausal women do exist (Hamrick, Cao, Agbafe-Moseley & Cummings, 2012). Fuller-Rowell, Evans and Ong (2012) reported social-class discrimination is one important ingredient that lies behind the influence of poverty on physical health. Data collected to calculate accurate numbers of Black women being screened and treated for osteoporosis and osteopenia are limited especially in primary health care clinics and those diagnosed are not adequately documented for follow up care (Hamrick et al., 2012). Discrimination and racism was described in a group of Blacks as they discussed interaction with their beliefs and opinions of the healthcare system and healthcare professionals. Five main themes were identified: (1) historical and contextual foundations; (2) interpersonal experiences with physicians and ancillary staff; (3) discrimination; (4) trust, opinions and attitudes, and (5) improving health care experiences. Hunt, Wise, Japp, Cozier & Rosenberg (2007) used data collected from

42,445 Black women involved in the Black Women's Health Study that indicated perceived racial discrimination was measured in two ways. The first was in every day settings in which the participants were treated as if they were dishonest. The second was lifetime occurrences in which discrimination took place on the job, in housing, and by police.

Media messages can be attributed to discrimination in health messages. According to Davis-Carroll (2011), media messages directed to Black women are more likely to include health content that emphasizes negative outcomes or sexual stereotypes. Instead of positive messages, the undertone of the messages is suggestive of Black women's bodies to carriers of disease. Black and Hispanic women's magazines were exposed to proportionately few in number health promoting advertisements and more health-diminishing advertisements as compared to more popular and mainstream magazines. Photographs of Black role models are noted to be in more advertisements that promote products with negative health outcomes while the reverse is true for White role models. These adverse health messages could be associated to disparities in health outcomes for Black women. The researcher concluded Black women are more likely to receive and seek screening when they receive messages of hope in disease diagnosis and management (Davis-Carroll, 2011). Goodwin and Engstrom (2002) attested to this as well in stating the perception of poor health is a stronger determinant of mortality than physician assessment of risk in certain populations. Additional research is necessary to determine factors that discrimination is indeed perceived or actually exists.

Screening for Low Bone Density

Screening for low bone mineral density testing can decrease the occurrence of osteoporosis by testing women age 50 to 65 (Crandall, et al., 2014). Women were tested using the Fracture Risk Assessment Tool (FRAX) used by U.S. Preventive Task Force (USPSTF) that is without cost. Additional pre-screening that is not of cost includes the Osteoporosis Self-Assessment Tool (OST) and the Simple Calculated Osteoporosis Risk Estimate (SCORE) used to assess bone density and not currently used by the USPSTF. The OST is based on weight and age and the SCORE tool is based on race, rheumatoid arthritis, history of non-traumatic fracture, age, prior estrogen treatment, and weight. Women age 65 and younger are at increased risk for osteoporosis (Davisson et al., 2009). Testing for bone mineral density is underused, and screening for osteoporosis and follow up treatment do not conform to standard guidelines. Bone mineral testing is a specialty of gynecology and other female medical practices; however, female medical providers are more prone to offer testing more frequently than their counterparts. The older population receives less testing and preventive care than the younger population.

There is a notable disparity between individuals who have a commercial insurance plan compared to those who are lacking (Davison et al., 2009), being an indicator for socioeconomic status. Interestingly, this study had a majority population of women 65 and older and less than half had been screened. Medicare (2014) will pay for BMD as a preventive service when ordered by a medical provider and the patient meets at least one of the required criteria.

The Veterans Administration (VA) Healthcare System is the largest incorporated delivery system worldwide delivery system. Evaluation and treatment of osteoporosis of individuals with fractures is sub-optimal even in a health system of this size (Shibli-Rahhal et al., 2011) and has a predominantly male population. Hip fractures in the age group of 50 to 75 years resulted in low impact trauma implying underlying untreated and undiagnosed osteoporosis. This study also proposes that the under treatment of osteoporosis validates the lack of screening for osteoporosis in the private sector. This phenomenon is also present in the VA healthcare system and may lead to high mortality and high morbidity, if osteoporosis is not treated. The Department of Veterans Affairs Office of Inspector General (2010) stated women are more appropriately managed for osteoporosis compared to men. The mortality rates occurring one year after hip fracture is 25.1% and occurrence of vertebral fractures is 14.4%. The Under Secretary of Health supports guidelines within the VA for evaluation and treatment for osteoporosis.

Quality of Care

Sims (2010) acknowledged that despite advances in healthcare and technology, Black women ages 40 years and older continue to outnumber White women in developing disease, in poorer health, use fewer health services, disability, and premature death. These health inequities (disparities) are a result of perceptions, expectations, and beliefs assumed by both patients and healthcare providers. Encounters that are perceived as hostile/disrespectful to Blacks lead to ambivalent feeling about healthcare. Patient centered perspectives look at how patients interact with the healthcare system and how the system supports patients while including cultural traditions, personal preferences and values, family situations and lifestyles. To improve quality of care for older black women (Sims, 2010), includes six domains of quality: access to care, communication, and quality improvement, coordination of care, care management, and self-management. This can be done by implementing health interventions, education and promotion efforts to understanding this population.

In summary, the literature provides support for the use of the health service model to evaluate the variables for seeking understanding perceptions of osteoporosis screening and predictors for utilization of these services. The variables chosen for this study relate to the perceived health status, evaluated health status, and consumer satisfaction components of the model.

Andersen's Behavioral Model of Health Services Use

African American women can take charge of their own health screening when programs are set up for healthcare providers to assess every woman that enters the healthcare system to measure bone strength, take appropriate action for the results and provided follow up care. A conceptual framework focusing on a health service model used for this study is Andersen's Behavior Model of Health Services Use (BMHSU).

This model has been used extensively in studies investigating the use of health services for a variety of diseases. Although this model was developed in the 1960's, the 1995 version is most widely used in health services studies. Variables used in this model include age, marital status, gender/sex, education, ethnicity, income/financial situation, health insurance, having a source of care/physician, all as enabling factors. As need factors, most of the studies included variables of evaluated health status, and self -

reported/perceived health in a wide range of disease processes (Babitsch, Gohl, and von Lengerke, 2012).

For the purpose of this study, I examined perspectives of Black women to determine how they view screening practices for osteoporosis and how perceptions may become barriers to preventive healthcare practices. Preparing a study of this nature could change the way Black women perceive osteoporosis health screening and take ownership for their care. The study could also implement change within the healthcare system to target Black women in specialized approaches to promote preventive osteoporosis screening.

The basic components, primarily predisposing, enabling, and need factors were used to predict personal health practices, which includes health services to families and individuals (Andersen, 1995). Determinants of who seeks medical care is guided by social structure, health beliefs, and enabling resources. A component of the model identifies three subdivisions that represent the understanding of: *perceived health status, evaluated health status, and consumer satisfaction.* For this study, the health service model is most applicable to use to understand the perceptions of Black women. The first component, perceived health status, defines the perceptions and barriers of osteoporosis screening. The second component, evaluated health status, is the Black women who not received or accepted access to care for screening. The third component, consumer satisfaction, is the participation in screening as the healthcare system is accessed. The result of these three components is an increase in osteoporosis screening for Black women and a decrease in the diagnosis and complications associated with osteoporosis.

Andersen’s framework is particularly applicable to vulnerable populations to define and determine predictors of the course of health utilization and physical health outcomes. Gelberg, Andersen, & Leake (2000) concluded in a study using the framework that homeless persons are willing to acquire care if they believe that it is important. The framework supported the inception of extended modalities such as this same group of people at the same time can find permanent housing and help for substance abuse and mental illness.

Qualitative Research

Qualitative research involves methods of finding out what people do, know, think, and feel by having the researcher to observe, interview, and analyze documents (Patton, 2002). Qualitative researchers use evidenced-based research for conducting and evaluating qualitative inquiry (Denzin, 2009). This analytic method involves identifying relationships between variables, patterns, themes that gradually result in generalizations formalized into constructs or theories (Miles & Huberman, 1994). This data places emphasis on people’s lived experiences allowing for meaning people place on events, processes, and structures of their lives, identified as perceptions, assumptions, prejudgments, presuppositions **(**van Manen, 1977). Narrative research uses participant actions to understand and explain the physiological, psychological and spiritual status of the participant. The narrative is a social communicative process and the interview is the co-construction of the narrative (Harter, Jape, & Beck, 2005). From this perspective health organizations serve not only as repositories but become repositories themselves as part of the research process (Harter et al., 2005).

Qualitative Methods

The qualitative approach to research study will provide a first-hand account to the present state of osteoporosis among Black women and how they perceive barriers to osteoporosis screening. By interviewing Black women about screening for osteoporosis, a qualitative study will increase the understanding of what factors contribute to non-participation in screening programs. According to Patton (2002), qualitative interviewing is to allow the researcher to enter into the other person's perspectives and that the perspective of others is meaningful, knowable, and able to be made clear. Creswell (2007) focuses on the researcher's learning the meaning that the participants hold about the problem or issue, not the meaning that the researcher brings to the research. These meanings on behalf of the researcher are the perceptions involving life situations reflective of the everyday life of individuals, groups, societies, and organizations Huberman (1994), represents a firsthand encounter with the experience of interest. Narrative inquiry is the best technique to use when the area of interest can be used first hand.

According to Ulin, Robinson, and Tolley (2004), qualitative researches use interviews guided by a few main topics rather than detailed questionnaires creating a structure allowing open exchange that is the hallmark of most qualitative techniques. Janesick (2004) expressed interviewing as am advantage of qualitative research and defined it as a meeting of two persons to exchange ideas through questions and responses, resulting in communication and joint construction of meaning about a particular topic. This manner will provide rich data for my research; however it is important to maintain a sense of understanding for the feelings of the participants to allow them to freely share their thoughts and experiences without feeling uncomfortable toward the researcher. Therefore, it is best for the researcher to learn which questions are better suited for the study, under what conditions, and when to use particular types of questions (Janesick, 2004).

The qualitative approach will allow me to be more creative and literary style of writing. With much of the study relating to the perceptions of osteoporosis screening, qualitative research allows for a search of personal interests that would make for positive changes for osteoporosis screening for Black women age 50 years and older.

To explore the problem, qualitative researcher will go to Black women and interact directly with these women to better understand barriers to screening.

Summary and Conclusion

Osteoporosis screening is the safest means to detect osteoporosis at an early age. The primary method to detect osteoporosis is by measuring bone mineral density (BMD). African American women have greater BMD at a younger age compared to White women, but decreases at a greater rate during menopause. Mortality rates are greater in Black women after suffering hip fracture and associated complications as compared to any other group of women. Such disparities in osteoporosis incidence and mortality can be attributed to various barriers to preventive health care for Black women, including factors related to lack of knowledge, mistrust, and perceptions of health (Sims, 2010). Healthcare providers need to provide avenues to fill this health gap by devising ways to inform Black women about osteoporosis and the importance of diet, exercise, and bone screening and providing them with appropriate care. By addressing issues related to cultural diversity, osteoporosis screening can be better served to all Black women.

By identifying and targeting women for screening prior to the age of menopause to measure health bone or osteopenia (prior stage to osteoporosis), the silent disease can be prevented (Crandall et al., 2014). Strategies for reformation include provisions for placing osteoporosis on the routine admissions check-list that women complete when filling our medical questionnaires such as the women's last colonoscopy, breast exam and mammogram prompting the healthcare provider to provide education, consultation for test, and follow-up. However, more study is essential to better understand the barriers to osteoporosis screening in this population and help eradicate disparities due to race and ethnicity, to prevent pain, suffering, and death.

Conceptual frameworks can be simple, theory-driven or commonsensical, descriptive or causal (Miles & Huberman, 1994). I used a conceptual framework to identify perceptions of osteoporosis screening in Black women. Trying to understand how many the women understood the disease of osteoporosis by using a narrative approach made it easier for me to ask in-depth, probing questions during the interview. The goal is to inform and share osteoporosis screening procedures with Black women to decrease rates of disability and mortality.

Chapter 2 supported the need for this study by the discussion of the literature that identified the need to examine components of health perceptions that influence women to change their behavior towards screening. Chapter 3, I describe the research design and provide details about the selected methodology and participants for the study.

Chapter 3: Research Method

Introduction

Understanding Black women's perceptions of osteoporosis screening may increase the use of osteoporosis screening for the general population as a whole. The purpose of this chapter is to describe the methodology. In this qualitative study I explored Black women's professed personal barriers, beliefs, knowledge, behaviors, stereotypes, mistrust, experience of discrimination, and considered how these elements may determine practices for osteoporosis screening. I chose a qualitative methodology because it allowed me to find out what people do, know, think, and feel, by observing, interviewing, and analyzing documents (Patton, 2002).

Osteoporosis is identified as a potential public health problem in women that may lead to diminished quality of life, disability, and even death (Dempster, 2011; Jefferies, 2012). Although great advances have been made in education and screening practices for osteoporosis detection and treatment, there remains a disparity in screening with considerably fewer Black women having been screened, and thus a greater likelihood of their being underdiagnosed and undertreated (Hamrick, 2012; Singer et al., 2015). Osteoporosis is not perceived as an important risk by many women, particularly in comparison to other health concerns such as cancer, cardiovascular disease, and stroke (Singer et al., 2015). However, this perception is potentially dangerous given that a woman reaching the age of 50 has a 40% lifetime risk of a fracture that is associated with the highest morbidity and mortality, and about 20% of those women die and 50% become institutionalized for care within the first year of having a fracture (Byszewski et al., 2011).

In this chapter, I describe the process used for my study of Black women's perspectives of osteoporosis screening and include a description of the participants, my inclusion criteria, and my credibility, and trustworthiness. In the next sections, I explain the research design and rationale; my role as researcher; and the study's methodology, sampling, and data collection and analysis procedures.

Research Design and Rationale

This study explored the perceptions of osteoporosis screening among Black women age 50 years and older. According to the National Osteoporosis Foundation ([NOF], 2014), fracture risk guidelines should include information for prevention, risk assessment, diagnosis and treatment for osteoporosis in postmenopausal women and men age 50 and older. This recommendation includes counseling advice about dietary calcium intake, weight-bearing and muscle-strengthening activities, fall risk, cessation of tobacco use, excessive alcohol intake, and annual height measurement. My decision to study Black women age 50 years and older was based on NOF recommendations as to the average age of cessation of menses cycle leading to menopause. The understanding of these risk factors may help to reduce the incidence of osteoporosis in Black women age 50 years and older. When beginning my study, I hoped that the narrative research method I chose would provide insight into the individual experiences of Black women and their perceived personal barriers that may influence the likelihood of osteoporosis screening. I also hoped to assist healthcare providers expand provision of healthcare services that to close the racial gap in healthcare.

A qualitative approach enables the researcher to study normal life situations, produce results that are reflective of the everyday lives of individuals, groups, societies, and organizations, and locate the meanings people place on perceptions, assumptions, prejudgments, and presuppositions (Miles & Huberman, 1994). An additional rationale for my use of qualitative methodology is that narrative analysis allows for the inclusion in-depth interview transcripts, life history narratives, historical memoirs, creative nonfiction and personal narratives that reveal cultural and social patterns through the lens of individual experiences (Patton, 2002). Perceptions, beliefs, knowledge, and culture are all aspects that need to be open to analysis.

Since the focus of my study was on perspectives of osteoporosis screening among Black women, the narrative proved to be the best option. Given that the narrative research collects and analyzes subject's accounts experiences, it provides an opportunity to explore personal experiences beyond the boundaries a questionnaire and allows for insight into decisions involving health treatment, screening, and other health practices, that can help guide how health services are developed and provided (Overcash, 2003). According to Creswell (2007), narrative research is both a product and a method. It is a "story of stories" or "narrative of descriptions" of a series of events that accounts for human experiences (p.234). In conclusion, I selected the narrative research method in order to provide insight into the individual experiences of Black women and their perceived personal barriers that may influence the likelihood of their being screened for osteoporosis. Further, I hoped to assist healthcare providers expand provision of healthcare services to Black women in order to close the racial gap in healthcare.

Role of the Researcher

According to Hoepfl (1997), a research must do three things in a qualitative study: (a) Develop the research posture of a natural scientist; (b) develop the level of skill needed to collect and interpret data; and (3) prepare a research design that uses strategies required for the study. Researchers are responsible for environmental cues and must be able to interact with the situation. They also must have the ability to collect information at multiple levels simultaneously, provide immediate feedback, request additional data, perceive situations holistically, and explore atypical responses (Hoepfl, 1997). In my study, I was the sole researcher who recruited participants, and collected and analyzed all data according to procedures approved by the Walden University Institutional Research Board (IRB).

Narrative research involves studying one or a few individuals and reporting their individual experiences (Patton, 2002). In qualitative inquiry, the researcher is the instrument that controls the credibility of the methods used. Consequently, the inquiry Relies on the skill, competence, and accuracy of the person conducting the fieldwork. Patton (2002) cautions that the researcher must be cognizant distractions that may be taking place within their own life during the research. My role as researcher included establishing a professional rapport with the participants; providing my full attention; and providing a pleasant, safe, and comfortable atmosphere for the interview. Prior to the interview, I greeted each participant, re-confirmed that their participation in the study was voluntary, and addressed any concerns they had. I had each participant sign the consent form (Se Appendix D) and audio-recorded each interview. I made the transcript of the audio recording available to each individual to allow for member checking, and to further establish the credibility of data collected. I reviewed the purpose of my study with each participant and explained that anytime during interview, they may request to exit the interview without any repercussions. At the end of the interview, I thanked them for their time, escorted them to the door, and assured them that I would not contact them in the future.

I protected participant identity by using code names such as participant 1 (P1), participant 2 (P2), and so on. I stored the information collected from the interviews electronically on a password-protected computer that I stored in a locked filing cabinet accessed only by me. I explained this procedure to each participant to assure confidentiality and professionalism. A researcher participant relationship is established on trust by maintaining confidentiality and anonymity of the participant (Janesick, 2011). This trust allows for greater access to sources, and ensures full involvement from participants, thus, allowing participants to tell their stories and experiences and letting their voices be heard (Janesick, 2011). Part of the process of establishing this trust and my credibility was to secure IRB approval and obtain and obtain written consent prior to each interview. I served as the primary instrument of data collection in my role as interviewer, recorder, and observer, and I worked to stay on cue for signs of distress, concerns, or worry by the participant.

The researcher should be a neutral medium through which questions and answers are conveyed. The researcher's presence should not affect the participant's perception of a question or influence the answer given (Babbie, 2007). The researcher must be relaxed and friendly without being overly casual. In addition, because the participants are volunteering their time, they deserve the most enjoyable experience the researcher can provide (Babbie, 2007). Bias may arise within interview-based research as a consequence of the particular kind of questions asked in an interview, the way the questions are asked, or how the researcher adopts the perceptions of the participant. As the researcher, it was my responsibility to avoid bias by controlling the particular questions asked, and the manner in which they were asked, and being cognizant of my relationship with the participant.

Differing Methodologies

Creswell (2007) has described narrative structures of design as diverse and varied. The narrative writing structures are fundamentally related to data analysis procedures in narrative studies, and thus may lead to difficulties into separating activities such as data collection, analysis, and reporting. According to Patton (2002), the central idea of narrative analysis that stories and narratives offer especially transparent windows into cultural and social meanings, and much of the methodological focus concerns the nature of the researcher's interpretation. This idea of stories can then be further developed by the researcher. I chose a narrative approach for the study because it allowed me to explore experiences and perceptions of a cultural group of Black women. Ulin et al. (2004) have noted that qualitative researchers must listen carefully to language, verbal and non-verbal, as participants relay their experiences without constraints. Using participants' narratives as raw data assumes that participants have related their ideas and experiences in ways that have provided their personal insight into concepts and questions (Ulin, 2004).

When conducting a qualitative study, a researcher relies on checking for consistent patterns of themes, dimensions, codes, and categories within the collected data (Creswell, 2007). In analyzing narrative data, it is the researcher's responsibility to let the voices of the participants come through and shape the interpretation of the results (Creswell, 2007). Accuracy is the key to qualitative research. My interviews with Black women elicited multiple responses that lead to various themes and patterns that may be reflective of reasons for the lower rates of osteoporosis screening in this ethnic group.

Methodology

The study participants were recruited from churches in the Virginia Beach, Va. area that has large congregations of Black women age 50 years and older. Age 50 is targeted because menopause begins during this time with the cessation of the menstrual cycle has occurred. Ten interviews were completed until appoint of saturation was reached (Morse et al., 2002; Walker, 2012). The inclusion criteria identified include (a) Black women age 50 years and older, and (b) ability to speak English.

Participants were Black women who were willing to share their perceptions, beliefs, experiences and attitudes of osteoporosis screening and how these elements affect health. Preparation for conducting the interview includes posting of flyers in the churches, church bulletins, and placing in church announcement.

Measures

The purpose of this study was to understand Black women's perceptions of beliefs, attitudes, stereotype, culture, and how these elements affect osteoporosis screening. The research consists of 1 main question and two sub questions.

RQ: What are perspectives of Black women toward osteoporosis diagnosis and screening?

Sub Q 1: What are the perceived barriers toward osteoporosis screening among Black women?

Sub Q 2: What are the perceived facilitators toward osteoporosis screening among Black women?

Ethical Protection of Participants

Maintaining ethical practices is an important issue in planning and conducting research. Prior to instituting the study, I obtained IRB Approval Number 10-22-15-0109747 from Walden University. The interviews were conducted at a public place where a private interview room was reserved in a public library. At the arrival of the participant, introductions were conducted. The consent form was signed by the participant and researcher and all questions answered prior to beginning the interview. Participants were reminded that they may exit the interview at any time. The interviews took approximately 20-35 minutes each. Prior converting audio transcript to word document, all participant names and identifying factors were removed to maintain confidentiality. All data is maintained in my home office in a file cabinet, accessed only by the researcher.

Instrumentation

For this study I recruited ten Black women age 50 years and older. Hoepfl (1997) believes saturation is the guideline to stop data collecting. Criteria includes emergence of regularities in the participants responses. In addition, saturation is a tool used to ensure that the researcher has ensured that adequate data are indeed enough to support the intended research study (Walker, 2012). I reached saturation at interviews 9-10. The interviews were scheduled at the convenience of the participant between the hours of 9 am to 5 pm. The interview slots were for one hour and conducted in public library in a private room to protect confidentiality and identity. All interviews were audio-recorded. Observation and field notes were used to provide additional information for the study. A pilot study was conducted.

Pilot Study

A pilot study was conducted with one volunteer. The pilot study is a crucial element of a good study design and increases the likelihood of success. The pilot study provided valuable insight, saved time, and prepared the researcher for any potential problems of the interview process. The study was conducted in the same manner as for the volunteer participant. The pilot study allowed the researcher to present a professional and well prepared interview session. The data collection from the pilot study is not included into the final research study.

Exiting the Study

The participants were informed prior to the study that the interview was voluntary and they could choose to exit the study at any time. All of the participants completed the study and all data was collected.

Data Analysis Plan

Inductive data analysis is used frequently by qualitative researchers, meaning that the critical themes emerge out of data (Hoepfl, 1997). Qualitative analysis calls for the researcher to conduct thorough analysis by listening to and observing the participant. Hoepfl (1997) describes three processes for inductive analysis: (a) identification of themes emerging from raw data; (b) re-examination of categories identified; and (c) researcher must translate the conceptual model into the story line that closely resembles the reality it represents. Induction allows analysis to emerge from patterns without presuming in advance what the dimensions will be. Theories about what is happening are grounded in direct field experience that involves direct observation and interviews with participants (Patton, 2002). Upon completion of the interviews, I reviewed the audio recording and transcribed the collected interviews for data analysis. I listened to each audio recorded interview..

NVivo data analysis is software management tool was used to organize, analyze and store the data. NVivo was used with the goal of data analysis, to interpret research findings that assist in providing a visual picture of codes and themes that can be continually moved around and reorganized under new categories (Creswell, 2007). The NVivo software facilitated the relationship of themes and provide notes or comments for the codes and categories identified. Once themes have been identified, sub-themes will be labeled. Coding will be specified for identifying areas such as osteoporosis, personal risk of osteoporosis, DXA scan screening, factors affecting screening, decision making, and osteoporosis recommendations. Coding can be done in various forms of communication as oral, written, and other to classify according to some conceptual framework (Babbie, 2007).

Issues of Trustworthiness

The basic question addressed by the notion of trustworthiness, according to Lincoln and Guba (1985), identified four aspects to persuade audiences that particular research inquiries are worth paying attention to four criteria: credibility, transferability, dependability, and confirmability. Qualitative research is responsible for ensuring verification strategies integral and self-correcting during the conduct of the study itself (Morse et al., 2002). To demonstrate trustworthiness in my study, I ensured that the experiences shared with me from the participants will be precise. Trustworthiness will be confirmed by having the participant to review word document to assure all information is truthful and accurate. As the coding individual, I collected all data.

There are four criteria that used to measure data trustworthiness (Morse et al., 2002):

Credibility

Credibility depends less on sample size than on the richness of the information and on the abilities of the researcher. It can be improved though triangulation of data.

Patton (2002) identifies four types of triangulation: (a) methods of triangulation; (b) data triangulation; (c) triangulation through multiple analysts; and (d) theory triangulation. In addition, techniques for addressing credibility can include having others to analyze the raw data and having member checks to corroborate findings (Hoepfl, 1997). In qualitative research, credibility and transferability are parallel concepts of internal and external validity when used in quantitative research. Criteria for credibility include varied field experience, time sampling, reflexivity, triangulation, peer examination, member checks, interview technique, establishing authority of the researcher and structural coherence (Krefting, 1990).

My information resources include participants experienced through in-depth interviews and literature reviews. Study biases on behalf of the researcher will be closely monitored. Each participant will be provided ample time to complete the interview. I allowed the participant to speak freely and remained in charge of the interview. I conducted the interview with an open mind without speculation or assumption about the participant and what they may have to say. I was cognizant of my body language to not self-impose my feelings or reactions to the participant’s responses and comments. Without rigor, research is futile. Challenges to rigor in qualitative research are lacking the certainty of specific numbers and values resulting in a crisis of confidence (Morse et al., 2002).

Summary

I analyzed, categorized, and coded the data to develop themes. The results might help to determine the efficiency of osteoporosis screening information to improve bone health in Black women. The following chapter presents the results of this study.

Chapter 4: Results

Introduction

The primary purpose of this study was to assess the knowledge, attitudes, and behaviors of Black women regarding screening for osteoporosis. In this chapter I describe the collected data and the process by which I collected it. This chapter also includes information about the pilot study and its contribution to this study.

Pilot Study

I conducted a pilot study to (a) determine the efficacy of the research process and whether the interview questions would produce the information required to answer the research questions, and (b) ensure that the environment and technical equipment would support the goals of my study and (c) determine that 1 hour would be sufficient time to conduct my interview. I created a flyer to recruit potential participants and distributed at several large churches in the area that had large numbers of Black women in the congregations. My pilot participant was a well-versed entrepreneur who holds a PhD and is interested in furthering research. She signed the consent form and I conducted the interview. All of the technical equipment worked well and the interview went well. The participant brought to my attention that some candidates may not understand the term osteoporosis, and this prompted me to use probing as I interviewed future participants.

I needed to clarify which of the 5 libraries in the city. There were two central libraries that were convenient to each participant to meet me. For each interview I arranged for a private study room to ensure privacy.

Setting

The first library that I used had two study rooms and one meeting room. The the morning, so I had ample time to get to the library and wait in line for the doors to open in order to secure a study room. For two interviews, I arranged to reserve the meeting room for a small fee for 1 hour. The second library had 4 study rooms with the same arrangement which worked out well.

Research Background

I conducted this narrative inquiry study to examine perspectives of osteoporosis screening among Black women age 50 years and older. Ten Black women volunteered to join the study and share their perspectives regarding osteoporosis screening. Eight of the women ranged from ages 58 to 74 years. Two of the volunteers wished to express their ages as 50 plus. At the time of the study, each woman was able to navigate independently without any assistance and drove themselves to the interview. The study was guided by one research question: What are the perspectives of Black women regarding osteoporosis screening? I divided this question into two sub-questions: (a) What are the perceived barriers to osteoporosis screening among Black women?; and (b) What are the perceived facilitators for osteoporosis screening among Black women? I used 30 open-ended interview questions. However, the amount of detail in the responses varied based upon the participant’s perspectives and experiences, so I did not need to ask all of the questions for each participant.

Narrative methodology involves having participants tell their own stories in their own words and upon completion, analyzing these stories (Patton, 2002). Narrative research focuses on describing the lives of the individuals, their particular experiences, and how they interpret the meanings of these experiences. The central idea is that personal stories and narratives provide the researcher the opportunity to look into cultural and social meaning (Patton, 2002).

In this narrative study, I worked to collect Black women's perspectives regarding the efficacy of osteoporosis screening as a tool for improving bone health in this cultural group. Narratives studies rely on everyday language and thought, and are suitable for many topics (See Appendix D). The questions best suited for narrative methodology have to do with the nature of the individual experiences and the meaning of those experiences (Laureate Education, Inc., 2013). In Chapters 4 and 5, I identify each participant with the capital letter P and a number (P1-P10).

Data Collection

The Black women in the sample were representative of the target population in the Hampton Roads area of Southeastern Virginia. Interviews were scheduled at two of the five city community libraries. I audio-taped the one-on-one interviews using an audio recording device, and placing each interview on a separate recording cassette. I arranged to use either one of the study rooms or the large meeting room that I had reserved.

Each interview lasted approximately 25-40 minutes. All of the participants were Readily offered their many perspectives on osteoporosis screening both during and after the formal interviews. The interviews went smoothly, and I made sure to provide short pauses to allow the participant to complete their thoughts. I did not ask all of the questions because some of the answers were included in responses to other questions. I made every attempt to make sure that each question was answered fully.

Data Analysis

Transcribing each interview took approximately 2 to 3 hours. I listened to the cassette, re-round and re-listened for clarification, wrote out the responses verbatim, and then typed them into a Microsoft Word document. I read over each interview for clarity and accuracy. I was careful not to interject any of my own thoughts or words. The themes started emerging once I had completed transcribing interview 6. I noticed developing themes as I re-read the transcripts many times. Reading the transcribed interviews multiple times was important to obtaining the essence of each participant's response. After becoming more familiar with the data, I was able to generate themes. I compiled them into a template that I used to compare the responses of each participant to make it easier to read and code into the software program. I reached saturation of repeating themes reached with P9 and P10.

Four major themes (Table 1) and seventeen subthemes (Table 2) emerged from the participants' responses. Creswell (2009) outlined data analysis in qualitative design to include: transcriptions from audio recordings and excerpts (See Appendix D), reducing data into usable meaningful themes, and then presenting the data in several different formats (e.g., figures, tables, and/or discussions). The second step in data analysis is identifying second order constructs then checking any unintended effects. I discuss a composite of each theme in this chapter. I used the NVivo10 program to import, store, and organize data into manageable files. The program helped me to identify themes and and to relate each research question to each participant's experience.

Themes and Results

Four themes emerged from this narrative study: perspectives of awareness, perspectives of health information, confidence in health care providers, and knowledge. The study was guided by one research question: What are the perspectives of osteoporosis screening among Black Women?

(See Tables 1 & 2).

Table 1

Emergent Themes

Initial 17 Subthemes	**Final 4 Themes**
Have some knowledge	Osteoporosis awareness
Ask questions	
Read information	
Lack of knowledge of the disease	
On-line	Knowledge of osteoporosis screening
Subscription to health magazines	
Learn while on job	
Listen to healthcare provider	
Testing is easy	
Bones become brittle	Health beliefs (of osteoporosis)
Body shape humped over	
Hip breaks	
Need more information	
Not as important as other diseases	Sharing of information
Black women need to know	

Knowledge is key
Community outreaches

Table 2

Major Themes	**Theme Support**
Theme 1: Awareness of osteoporosis	P1, P2, P3, P4
Theme 2: Knowledge of Screening	P2, P3, P5, P6, P8, P9, P10
Theme 3: Health beliefs of osteoporosis	P2, P4, P5, P7, P8
Theme 4: Sharing of information	P1, P4, P5, P8, P9, P10

Theme 1: Awareness of Osteoporosis

The Black women in the study did not perceive osteoporosis awareness as a priority in their family and community settings, did not see osteoporosis as a threat to their health in general. The major barriers to screening identified by the study participants were the lack of available resources to address the disease in healthcare environments, and the lack follow-up care when diagnosed. These barriers to implementing awareness had to do with the absence of information provided by healthcare providers aimed specifically at Black women, and the lack of preventive care services that would identify, treat, and establish routine follow-up care.

For instance, P1 commented:

> You know I did not think about testing my bones for osteoporosis and those we can
>
> get it. I have several aunties who complained of bones aching and hurting and this could be the reason. They both are now taking Boniva for their bones. My

> grandmother fell and broke her hip and I don’t know if she was taking medicine to strengthen her bones. I don’t think she was ever tested. The sorority I belong to do different kinds of health screenings but have never had bone screening testing set up for the members. Bringing it up in clubs, organizations, and churches are good places to talk about it and expose them to educational materials on prevention. I know my church is big on getting information out to Black women. When health fairs are done at my church, they gather up all of the women and tell them to get this checked and that and then ask them their evaluation numbers after the fair is over. This really works and osteoporosis screening needs to be added to health fairs.

P3 and P7 also both reported having osteoporosis screening education at health fairs.

According to the participants, osteoporosis awareness could be more effective by promoting programs that instruct Black women on bone health and that add osteoporosis to the list of other major health screenings (i.e., mammograms, pap smears) as recommended by their insurances and places of employment. The participants described seeing T.V. commercials and general bone health information portraying other cultures and assumed that they were not at risk for the disease.

P10 commented:

> We’ve ignored it and not thought we are capable of getting it especially the older ones. We have always been out there working on the farm and I just knew I was strong. My doctor did my bone density some years back and said my bones are thin. A couple of years ago my gynecologist said I needed to take calcium.

P8 commented:

> I don’t know much at all about it”. I had a bone test some time back. No follow up was done after my test. I don’t really do anything to protect my bones. I don’t have a clue if I’m at risk. The bone test was done because my legs were hurting. I never really heard anything about osteoporosis. I don’t do anything to protect myself. I would like to know more about it.
>
> I have never received preventive measures or education from her health providers. My routine screenings include mammograms, colonoscopy and cholesterol. I feel comfortable going to my doctor to get information. The healthcare provider listens and follows suggestions to my health care. Osteoporosis screening is covered by my insurance.

Theme 2: Knowledge of Screening

Participants 1-10 all had the experiences of having an osteoporosis screening done at least one time in their lives. During the interviews the participants describe the lack of explanation for having the screening, follow up information with test results, what they need to do for their health after the testing is done, and when to re-schedule the next screening.

P4 commented:

> I am very fortunate. I get a lot of bone information from my son who is a Chiropractor. My screening showed that I have bone loss and was started on Fosamax to help with the loss. I take a lot of calcium on my own. I’m also a distributor for several herbal remedies and natural supplements so basically I’m self-taught. I don’t rely on the doctors to tell me everything.

> I don’t really trust him. As black women at the menopausal age, we should be made aware of the screening and have more information distributed. We should be focusing on women such as me who has traits of American Indian in her family history.

P8 commented:

> I really don’t know anything about osteoporosis screening. My doctor ordered one for me a long time ago because I was having leg pain. I went to the hospital. It was an easy test and was not painful at all. I just laid on a table and a machine overhead just floated over my body. The people were really nice. The doctor did not give me any information and did not call me back with any results. I haven’t had a test since. I don’t know anyone with osteoporosis and I have not heard anyone speak of it. I really don’t know anything.

P3 commented:

> Osteoporosis screening is very important. Doctors are ordering tests now and are so busy. They will explain what things are only if you ask and challenge them. I never really thought that it was important to me until I retired and started being concerned about my health. I have to be the one to take control.

P6 commented:

> I had the osteoporosis screening about two years ago. I was told by my doctor to have it because of my age. I didn’t hear anything back from him so I guess the results were ok.

The participants had concerns about the depth of osteoporosis screening for Black women. Osteoporosis screening, although broadly defined by individual participants, was considered this process as an opportunity to ensure prevention of the disease. However, because of the participants' personal osteoporosis screening concerns, they realized that the education and knowledge would be an on-going evolution.

Theme 3: Health Beliefs

The participants believed that having routine health screenings are important to their continued health and osteoporosis should be included in the list of those offered to them. P4 stated, "When I was in my 30s, I realized I wanted to use these bones for a long time and make them as strong as I could. Now at my age, I've gotten more concerned about it". Having osteoporosis screening is as important as having your teeth screened to stay healthy. P5 stated, "I have a physical every six months to a year. I keep a watch on changes in my body. When I notice a change, I set up an appointment with my doctor to discuss it". P7 and P9 asserted health information is obtained not only from your healthcare provider currently but also includes health information such as newsletters, magazines and retiree health medical information sent out electronically by health insurance companies and places of employment to remind people of their health screenings and testing, including osteoporosis.

Theme 4: Sharing of Information

P1-P10 described different ways in which they obtain health information.

> During the interviews, the participants described the lack of health information located in medical waiting areas and examination rooms, churches, community health organizations, and other public domains. All participants offered

> recommendations to disseminate information.

P1 stated:

> Sometimes you are put on a medicine and you don’t know what it is for. “The key is to having education about it, taking notes from your doctor and being exposed to educational materials”. It should be talked about at sororities, women’s groups and even within your family.

The participants described the beliefs that if there were more information being produced for Black women more health information would be accepted and utilized as preventive health. The more information the better health care will be. Once the information is there, it can be shared with and passed on to others who are unaware.

P9 stated:

> I have not specifically seen information on osteoporosis for Black women. “I get the AARP magazine where articles talk about things prevalent to different backgrounds. My doctor normally provides me with a website where you get more information than he has in his office. He’s done that several times for me when I’ve asked him questions”.

P4: stated:

> Women should be made aware with emphasis that screening for osteoporosis is just as important as having teeth check-ups. The information should be there as we become menopausal so that screening can be scheduled and that” preventive care will give them a longer quality of life”.

P7: stated:

> "I think you can target predominantly black churches and community groups". Ensuring that health fairs have information on osteoporosis because usually there is not a health table with this type of information.

Summary

All of the participants had their own ideas and views of about Black women and osteoporosis screening. There was a unanimous agreement of P1 – P 10 that Black women did not have adequate information of osteoporosis and the screening process and that there is work to be done to get the information to those who are unaware. All participants were interested and each had ideas of what can be done to improve the quality of life and preventive measures that can be taken to avoid getting osteoporosis.

When asked about the perspectives of Black women toward osteoporosis prevention by way of screening tests, the women believed that it did not matter who got the information out to those who were lacking, just that it needed to be done. Participants felt that the information being displayed in magazines, television, and pamphlets, that osteoporosis were essentially geared to other cultures and races. The participants who were screened for osteoporosis did not receive follow up on their test results. They were either not contacted by their medical provider at all and assumed the test was good if they didn't hear anything. All participants have experienced the opportunity of having an osteoporosis screening. The participants shared unique accounts and descriptive narratives of their encounters.

When asked about their perspectives of osteoporosis screening among Black women, the participants believed that it was important for all Black women to be aware of the screening and be offered the opportunity to have it done. Most participants felt that screening is not offered to all Black women as a part of the healthcare evaluation or appointment to see a healthcare provider. All participants agreed the test is easy, simple, and painless and other Black women would benefit from having it. Most participants felt that having a strong relationship with your healthcare provider could provide better opportunities to improve their future health status. What was identified as a potential way to implement osteoporosis screening was to have educational materials posted where Black women receive health and presenting the information to churches where a large number of Black women of all ages and economic status attend.

A very important point of view was expressed about perspectives of osteoporosis screening among Black women. The participants felt that if other Black women are not aware of the screening, they would be at risk for the things that could happen to them due to getting osteoporosis. Black women who do not have educational resources might not understand the connection between having the screening done as a source of diagnosis or prevention. The participants were concerned with the lack of educational materials, lack of screenings being done and getting the information out to the younger generation of Black women.

Healthcare systems have many responsibilities. The burden of providing medical care that addresses the patient, education, and follow up care during the time allotted for the appointment. Although the participants had a plethora of ideas to develop ways to disseminate osteoporosis screening to other Black women, they were not in a position to promote or implement change. They each had female family members and friends that they plan to share the information with after the interviews. One participant asked about information regarding male family members and osteoporosis. All of the participants acknowledged the need to promote healthy lifestyles to ensure bone health by being equipped with knowledge. Finally, all of the participants acknowledged the importance that osteoporosis screening has upon the quality of life of Black women. They recognized the connection between osteoporosis screening and their future as health Black women. In Chapter 5, I continue the discussion, present a conclusion, an offer recommendations based upon the results of the narrative qualitative data. I also compare findings to the literature review.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

There has been a paucity of research on ways to implement osteoporosis screening among Black women. The purpose of this study was to better understand the perspectives of Black women regarding prevention and screening for osteoporosis. I obtained data from one-on-one interviews with ten participants. The participants represented a selection of women residing in the Hampton Roads area of Southeastern

Virginia. Patton (2002) has asserted that interviews present the understandings of people being interviewed. These understandings are how individuals interface with their day to day lives and how they choose to react to their experiences.. To explain further, I chose a narrative approach to find out how the participants made meaning of their experiences. Obtaining their perspectives during the individual interviews helped me to identify themes related to implementing osteoporosis screening.

Interpretation of the Findings

I collected and analyzed data for this narrative research study using the Hoepfl (1997) method that supports qualitative research. Hoepfl's method supports understanding and extrapolation to similar situations instead of illumination. My goal was to capture the personal experiences of the participants and describe their responses. I transcribed each interview and re-read them several times to themes, and used NVivo 10 to analyze interview content. Once the emerging themes were established, I analyzed and reviewed the content again. The following discussion is a brief summary of the findings.

The four emergent themes were: awareness of osteoporosis, knowledge of screening, health beliefs regarding

osteoporosis, and sharing of information.

Theme 1: Awareness of Osteoporosis

Despite an increasing number of research studies being conducted on the prevention and treatment of osteoporosis in White women, a paucity of research exists to explain disparities in screening and treatment aimed specifically at Black women (Cosman et al., 2014). The participants of my study regularly noted a lack of resources about osteoporosis screening and treatment aimed specifically at Black women. All ten participants were not aware of any osteoporosis resources or programs disseminated for Black women located in their healthcare providers' office waiting area or exam room. All ten participants acknowledged that pamphlets were available, but were geared to the general audience. Health care systems have traditionally been designed on the basis that their purpose is to teach and educate their patients by maintaining health screenings to detect diseases. Participants in this study admitted even though information on osteoporosis screening and treatment was seen advertised in magazines, medical office waiting rooms, and health magazines, they did not see information geared specifically to Black women.

Health information has expanded beyond the office of the medical provider. The participants gave examples to show that if Black women are to have access to osteoporosis information, it may be acquired through electronic magazines, electronic newsletters, and through their jobs. However, some Black women do not have access to these forms of information.

Theme 2: Knowledge of Screening

The lack of knowledge was a recurring theme. Tyler, Zyanski, Berkeley, and Panaite (2009) examined existing disparities in osteoporosis screening preventive care among Black women and found that White women had 3 times the odds of discussing osteoporosis with their physicians and 2.4 times the odds of physicians recommending medication treatment. According to Tyler et al (2009), few Black women recall having discussions with their physicians about medication available to prevent or treat osteoporosis, but were willing to take the medication if it was indicated by their medical provider. All of the participants identified the need to be properly treated for the disease or to be prescribed preventive medication. Finding ways to incorporate osteoporosis screening into routine screening programs will be the most expedient and efficient way to ensure that all Black women have access to this health information.

The significance of including osteoporosis health screening into routine health screenings was recognized not only by participants but also by Queally et al. (2013), who reported that awareness of risks of osteoporosis should be a part of each health provider’s knowledge, and that screenings and interventions should be standardized among all women. Black women require clear education by their healthcare providers that osteoporosis is an important health issue among Black women, and they should be offered preventive medication.

If osteoporosis screening were to become a component of every health evaluation, knowledge of the disease could help Black women deal with the many issues associated with the disease, and may be more likely to receive early intervention. Knowledge of osteoporosis empower women who in turn enhances awareness their ability to take control of their personal lives. The participants in this study also asserted that the consequences of not knowing about the osteoporosis screening for Black women places them at risk for a poor quality of life as they age.

Theme 3:Health Beliefs regarding Osteoporosis

The responses from the participants aligned regarding the notion that all Black women need osteoporosis screening. According to the participants, Black women need screening, especially in their age group of 50 years and older. The participants were also concerned about the remaining Black women who were not currently enrolled in a healthcare system or those who cannot afford to be, and all agreed that they should be afforded the opportunity to be screened. Piertse and Carter (2014) indicated ethnic disparities can be predictors of health status in Black women.

Each participant had a private healthcare provider and received osteoporosis screening, and each believed their provider treated them professionally and would answer all of their questions. Sims (2010) acknowledged that Black women over the age of 40 continued to outnumber White women in developing disease, are in poorer health, use fewer health services, are more likely to be disabled, and suffer from premature death. Warren et al. (2010) identified three prevalent beliefs of Black women regarding healthcare. The first is that Black women believe they receive second hand or inferior health information. The second is that Black women believe healthcare providers withhold information from them based on their socioeconomic identities. The third is that Black women believe they cannot access care because of insufficient insurance and finances.

Theme 4: Sharing of Information

The participants believed that Black women needed to receive information about osteoporosis and how screening can impact their health. Black women need to have programs and avenues to receive this information. Andersen (1995) has contended that basic components of predisposing, enabling, and need are used to predict personal health practices, which includes health services to families and to individuals. The participants believed that implementing various ways of disseminating information geared to their learning styles was of key importance. The barrier to such programs lies within the healthcare organizations that provide routine healthcare and treatment to Black women.

Limitations

There were some limitations to the study. The sample was limited to 10 participants who were Black women age 50 years and older. The small sample size limits the study’s generalizability. As the researcher, I had to recognize my own limitations for conducting this narrative study and my limited knowledge of the health lifestyles of some of the participants.

Recommendations

Researchers have acknowledged the lack of research conducted specifically for Black women. Healthcare facilities could be more pro-active in the advancement of osteoporosis education to advance health care. Therefore, the perspectives of Black women are needed to increase bone health awareness in this population. Participants expressed the need to develop ways of increasing the knowledge base and awareness of osteoporosis. However, they shared differences on the best way to educate Black women and promote the information both in health care facilities and communities. Until the healthcare industry takes on this portion of education, Black women need to be informed of the disease and understand the impact that it may have on their quality of life. Black women can be made aware of the disease and take the initiative to approach their healthcare providers.

Introducing osteoporosis programs into Black communities such as churches, communities, and public outreach programs will empower Black women to ensure their own positive outcomes. Black women are receptive to learning about their health. When they can read, attend health fairs, and see television advertisements, they enhance their healthcare knowledge. Healthcare facilities can design screenings, diagnoses, and follow-up care campaigns. Black women need more than merely screenings. They need to be educated on what the test results mean, the treatment plan, and specific times for follow up testing to track progress. Public health and community efforts can use this design to reach and share with Black women who have not been exposed to the importance of osteoporosis screening and treatment.

Implications for Positive Social Change

Understanding Black women’s perspectives regarding osteoporosis screening can help to close the disparity by having Black women screened for more than mammograms and heart disease. Expanding health education to include osteoporosis information throughout healthcare facilities could be the catalyst to promote awareness and get more Black women screened. Increased knowledge of osteoporosis among Black women could help curb the disparity in prevention and treatment.

The results can help Black women share, or at least understand, how and why they should incorporate osteoporosis screening into their routine visits with their healthcare providers in order to be proactive in their health and well-being. The results should be used to discuss ways to infuse osteoporosis screening as a constant in all patient care appointments of Black women. Even though osteoporosis screening is not part of the current regulated routine medical screenings, Black women can become more aware of its importance and are in a position to schedule screenings and request follow up testing results and dates for future screenings.

Conclusion

This study was designed to examine perspectives of osteoporosis screening among Black women. Overall, the study succeeded in allowing me to collect and analyze the experiences of ten Black women, and to identify specific barriers and facilitators associated with osteoporosis screening. Originally, I assumed that all of the Black women would be positive and would appreciate the importance of osteoporosis screening. Although many of the women did not know the results of their osteoporosis screening tests, they were all appreciative for having had the experience and knowledge of the testing. I believe this information will shed light on how Black women perceive future osteoporosis screenings, and on how they share the information with their family and communities.

References

Abdou, C. M., & Fingerhut, A.W. (2014). Stereotype threat among black and white women in health care settings. *Cultural Diversity and Ethnic Minority Psychology, 20*(3), 316-323. doi:10.1037/a0036946.

Abel, W. M. & Efird, J. T. (2013). The association between trust in health care providers and medication adherence among Black women with hypertension. *Journal of Frint Public Health,* 1:66, doi:10.3389/fpubh.2013.00066.

Agency for Health Care and Research and Quality (2012). Reducing the risk of bone fracture: A review of the research for adults with low bone density. Retrieved from http://www.ncbi.nlm.gov/

Al-Dabagh, H., Archer, J., Newton, & M., Kwagyan, J. (2009). Osteoporosis awareness protocol for patients with fragility fractures. *Journal of the National Medical Association*, *101*(2), 145-50.doi.org/10.1016/s0027-9684(15)30827-0.

Alele, J., Kamen, D., Fernandes, J., & Eberling, M. (2009). The prevalence of significant left-right hip bone mineral density differences among black and white women. *Osteoporosis International, 20*(12), 2079-2085.doi.org/10.1007/s00198-009-0915-0.

Andersen, R., & Newman, J. F. (2005). Societal and individual determinants of medical care utilization in the United States. *Milbank Quarterly,* 83: On-line only. doi:10.1111/j.1468-009.2005.00428.x.

Association of Rehabilitation Nurses. (2014). Osteoporosis – a preventable epidemic. *Journal of Internal Medicine, 22*(8), doi:10.1007/s11606-009-1031-8.

Babatunde, O., Dodor, B. & Wood, D. (2014). Understanding osteoporosis knowledge and health-beliefs of African American seniors in rural southeastern north Carolina. *Journal of the Academy of Nutrition and Dietetics*, *114*(9), A99.doi.org/1016/j.jand.2014.06.339.

Babbie, Earl. (2007). *The Practice of Social Research*. Belmont, CA. Thompson and Wadsworth.

Babitsch, B., Gohl, D., von Lengerke, T. (2012). Re-visiting Andersen's behavioral model of health services use: a systematic review of studies from 1998-2011. *Journal of Psychosocial Medicine*, *9*(11), 2-8. doi:10.3205/psm000089.

Beck, T., Petit, M., Wu, G., Cauley, J., & Chen, Z. (2009). Does obesity really make the femur stronger? BMD, geometry, and fracture incidence in the women's health initiative-observational study. *Journal of Bone Mineral Research, 24*(8), 1369-1379. doi:10.1359/JBMR.090307.

Bogart, Laura. (2001). Relationship of stereotypic beliefs about physicians to health care relevant behaviors and cognitions among African American women. *Journal of Behavioral Medicine, 24*(6), 573-586.

Borkowski, N. (2009). *Organizational Behavior, Theory, and Design in Health Care*. Boston, MA: Jones and Bartlett Publications.

Brandon, L. & Proctor, L. (2010). Comparison of health perceptions and health status in African Americans and Caucasians. *Journal of the National Medical Association, 102*(7), 590-597.

Brewer, L., Hayes, S., Parker, M., Balls-Berry, J., Halyard, M., Pinn, V. et al. al. (2014). African American women's perceptions and attitudes regarding participation in medical research: the Mayo Clinic/the Links, incorporated partnership. *Journal of Women's Health, 23*(8), 681-7. doi:10.1089/jwh.20144751.

Brooks, M., Paschal, A., Sly, J., & Hsiao, T. (2009). African American women and clinical trials: perceived barriers to participation and potential solutions. *American Journal of Health Studies, 24*(2), 298-305. doi:10.1111/phn.12014.

Burgess, D. J., Warren, J., Phelan, S., Dovidio, J., & van Ryn. M. (2010). Stereotype threat and health disparities: what medical educators and future physicians need to know. *Journal of General Internal Medicine, 25*(2), 169-177. doi:10.1007/s11606009-1221-4.

Cauley, J. (2011). Defining ethnic and racial differences in osteoporosis and fragility fractures. *Journal of Clinical Orthopedics and Related Research*, *469*(7), 1891-1899. doi:10.1007/s11999-011-1863-5.

Centers for Disease Control (2011). *Calcium and Bone Health.* Retrieved from http://www.cdc.gov/nutrition/everyone/basics/calcium.html

Centers for Disease Control and Prevention (2013). Examples of important health disparities. *National Vital Statistics Reports, 62*(6), 31. Retrieved from http://www.cdc.gov/.../nvsr62_08.

Cheng, H., Gary, L. C., & Curtis, J. R. (2009). Estimated prevalence and patterns of presumed osteoporosis among older Americans based on Medicare data. *Osteoporosis International, 20*(9), 1507-1515.doi.org/10.1007/s00198-009-0835.

Coker, A., Huang, H., & Kashubeck-West, S. (2009) Research with African Americans: lessons learned about recruiting African American women. *Journal of Multicultural Counseling and Development,37*,153-163.doi.1002/j.2161-

1912.2009.tb0009.

Crandall, C., Larson, J., Gourlay, M., Donaldson, M., LaCrois, A., Cauley, J., et al. (2014), Osteoporosis screening in postmenopausal women 50 to 64 years old: Comparison of US preventive task force strategy and two traditional strategies in the women's health initiative. *Journal of Bone and Mineral Research, 29*(7), 1661-1666. doi:10.1002/jbmr.2174.

Cree, M., Hayduk, L., Soskolne, C. L. & Suarez-Almazor, M. (2001). Modeling changes in health perception following hip fracture. *Quality of Life Research Journal, 10*(8): 651-9.

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches (2*nd ed.). Thousand Oaks: Sage.

Creswell, J. W. (2003). *Research design, qualitative, quantitative, and mixed methods approaches* (2nd. Ed.) Thousand Oaks: Sage.

Cosman, F., deBeur, S. J., LeBoff, M. S., Lewiecki, E. M., Tanner, B., Randall, S., and Lindsay, R. (2014). *Clinician's guide to prevention and treatment of osteoporosis, 25*(10): 2359-2381. doi:10.1007/s00198-014-2794-2.

Curtis, J., McClure, L., Detzelle, E., Howard, V., Orwoil, E., Saag, K., et al. (2011). Population-based fracture risk assessment and osteoporosis treatment of disparities by race and gender. *Journal of Hospital Medicine, 6*(9), 507-512.

Dale, H., Polivka, B., Chaudry, R., & Simmonds, G. (2010). What young African American women want in a health care provider. *Qualitative Health Research, 21*(11), 1484-1490. doi:10.1177/1049732310374043.

Davis-Carroll (2011). An ethic of resistance: Choosing life in health messages for African American women. *Journal of Religious Health, 50*: 219-231. doi: 10.1007/s10943-010-99434-8.

Davisson, L., Warden, M., Manivannan, S., Kolar, M., Kincaid, C., Bashir, S., et al. (2004). Osteoporosis Screening: Factors associated with bone mineral density testing of older women. *Journal of Women's Health, 18*(7)*, 989-994,* doi: 0.1089/wh.2008.1138.

Dean, L., Subramanianb, S. V., Williams, D. R., Armstrong, K., Charles, C. Z., & Kawachi, I. (2014). The role of social capital in African-American women's use of mammography. *Social Science & Medicine, 104*, 148-156.doi:10.1016/jsocscimed.2013.11.057.

de Azevedo, M., Nunes, J., Pasqualette, H., Tuma, M. & Nunes, L. (2009). Bone mineral density at 45 years of age, before menopause. *Journal of the National Medical Association,101*(8), 788-792. Retrieved from http://www.ncbi.nlm.gov.

Dempster, D. (2011). Osteoporosis and the burden of osteoporosis-related fractures. *The American Journal of Managed Care, 17*(6), 164-169.

Denzin, N. K. (2009). Qualitative Research. (2009). *The elephant in the living room: or extending the conversation about the politics of evidence.* Retrieved from http://qrj.sagepub.com/content/9/2/139. doi:10.1177/14687494108098034.

Deo,P., Rajesh, N., & Jigar, R. (2013). Women's attitudes and health beliefs toward osteoporosis screening in a community pharmacy. *Journal of Osteoporosis,* (2013)*,1-8.* doi*:10.1155/2013/650136.*

Department of Health and Human Services (2014). Minority women's health. African American. Retrieved from http://womenshealth.gov/minority-health/african-Americans/

Department of Health and Human Services (2011). HHS action plan to reduce racial and ethnic health disparities. A nation free of health disparities in health and healthcare. Retrieved from http://minorityhealth.hh.gov/npa/files/plans/hhs_plan_complete.pdf

Fletcher, H., Bennett, F., Simms-Stewart, D., Reid, M., Williams, N., & Wharfe, G. (2013). Bone mineral density in Jamaican black women after hysterectomy and bilateral oophorectomy: an observational study. *The West Indian Medical Journal,62*(7), 593-598. doi:10.7727/wimj.2013.182.

Fowler-Brown, A., Ashkin, E., Corbie-Smith, G., Thaker, S., & Pathman, D. E. (2006). Perception of racial barriers to health care in the rural South. *Journal of Health Care of the Poor and Underserved, 17*(1): 86-100. Retrieved fromhttps://rti.pure.elsevier.com/…/.

Fuller-Rowell, T.E., Evans, G.W. & Ong, A.D. Poverty and health: the mediating role of perceived discrimination. (2012). *Psychological Science*, *23*(7), 734-739. doi: 10/1177/0956797612439720.

Gaston-Johansson, F., Hill-Briggs, F., Oguntomilade, L., Bradley, V. & Mason, P. (2007). Patient perspectives on disparities in healthcare from African-American, Asian, Hispanic, and Native American samples including a secondary analysis of the Institute of Medicine focus group data, *Journal of National Black Nurses Association, 18*(20), 43-52. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/18318331.

Gelberg,, L., Andersen, R. M., & Leake, B. D. (2000). The behavioral model for vulnerable populations: Application to medical use and outcomes for homeless people. *Health Services Research, 34*(6), 1273-1302. doi: 10.1177/1359105307080612.

Geller, S. E. & Derman, R. (2001). Knowledge, beliefs, and risk factors for osteoporosis among African-American and Hispanic women. *Journal of National Medical Association, 93*(1), 13-21. Retrieved from http://www.ncbi.nlm.nih/govpmc/articles/PMC2640611/.

Giusti, A. & Bianchi, G. (2014). Treatment of primary osteoporosis in men. Clinical Interventions in Aging, 10, 105-115. doi: http://dx.doi.org/10.2147/CIA.s44057.

Gourlay, M. (2009). Osteoporosis screening: Mixed messages in primary care, *American Family Physician, 79*(3) 89-190. http://www.soportestesis.com

Gourlay, M. L., Fine, J. P., Preisser, J. S., May, R., & Li, V. (2012). Bone-density testing interval and transition to osteoporosis in older women. *The New England Journal of Medicine,* 225-33. doi:10.1056/NEJMoa1107142.

Graneheim, U. H. & Lundmas, B. (2003). Qualitative content analysis in nursing research: concepts, procedures, and measures to achieve trustworthiness. *Nurse Education Today,* (2004) 24, 104-112.

Hamilton, K., Fisher, G., Roy, J., Gower, B., & Hunter, G. (2013). The effects of weight loss on relative bone mineral density in Premenopausal women. *Journal of Obesity*. *21*(3), 441-448. doi/10.1002/oby.20052.

Hamrick, I., Cxao, Q., Agbafe-Moseley, D., & Cummings, D. (2012). Osteoporosis healthcare disparities in postmenopausal women. *Journal of Women's Health*, *21*(12), 1232-1236. doi:10.1089/jwh.2012.3812.

Hamrick, I., Steinweg, K., Cummings, D., & Whetstone, L. (2006). Health care disparities in postmenopausal women referred for DXA screening. *Family Medicine, 38*(4)*, 265-269.* Retrieved from http://www.ncbi.nlm.nih.gov/.

Harter, L. M., Japp, P. M. & Beck, C. S. (2005). Narratives, Health, and Healing: Communication Theory, Research, and Practice. Mahwah, New Jersey: Lawrence Erlbaum Publications. doi.org/10.10810730701441371.

Hatch, J. A. (2002). *Doing qualitative research in education settings.* New York, NY: State University of New York Press.

Henderson, D. (2012). Disparities remain in osteoporosis screening and management. *Journal of Women's Health,* (12):1232-1236.

Hoepfl, M. C., (1997). Choosing qualitative research: a primer for technology education researchers. *Journal of Technology Education, 9*(1), 47-63. doi.org/10.1177/174498719700200305.

Holloway, I., & Biley, F. C. Being a qualitative researcher. (2011). *Qualitative Health Research,* 21(7), 968-975. doi:10.1177/1049732310395607.

Ho-Pham, L., Nguyen, N. D., Lai, T. Q., & Nguyen, T. V. (2010). Contributions of lean mass and fat mass to bone mineral density: a study in postmenopausal women. *BMC Musculoskeletal Disorders, 1159, 1-10. doi:10.1186/1471-2474-11-59.*

Hough, S. (2012). The diagnosis of osteoporosis. *Journal of Endocrinology, Metabolism & Diabetes of South African, 17*(2), 67-68.

doi.org/10.1080/22201009.2012.10872278.

Hsu, M. & McCormack (2010). The experience of applying a narrative research approach with older people. *Journal of Nursing Research, 18*(4), 249-257. doi.org/10.1097/jnr.ob013e3181fc669e.

Hunt, M. O., Wise, L. A., Jipguep, M., Cozier, Y. C., & Rosenberg, L. (2007). Neighborhood racial composition and perceptions of racial discrimination: Evidence from the Black Women's Health Study. *Social Psychology Quarterly, 70*(3), 272-289. doi.org/10.1177/01902725070700306.

Ilich, J., Lemacks, J., & Ralston, P. (2012). Disparities in osteoporosis screening between Caucasian and African American women in US. Bone, *50*(1), 148.70 doi: http://doi.org/10.1016/j.bone.2012.02.461.

Janesick, V. J., (2011). Stretching exercises for qualitative researchers, 3rd. ed., Los Angeles, CA: Sage.

Jeffries, T. (2012). Co-morbidity and other complexities affecting black women's health. *The Review of Black Political Economy,*(39),335-340. doi.org/10.1007/s/2114-012-9131-9.

Joint Commission (2013). Improving and Measuring Osteoporosis Management. Retrieved from http://www.jointcommission.org/improving_and_measuring_osteoporosis_management/

Jones, C., Smith, H., Llewellyn, C. (2014). Evaluating the effectiveness of health belief model interventions in improving adherence: a systematic review. *Health Psychology Review,8*(3), 253-269. doi.org/10.1080/17437199.2013.802623.

Joseph, G., Burke, N. J., Tuason, N., Barker, J. C., & Pasick, R. J. (2009). Perceived susceptibility to illness and perceived benefits of preventive care: an exploration of behavioral theory constructs in transcultural context. *Journal of Health education & behavior,* 36, 71-90. doi.org/10.1177/1090198109338915.

Jupka, K., Weaver, N., Sanders-Thompson, Vetta, L., Caito, N. M., & Kreuter, M. W. (2012). African American adults' experiences with the healthcare system: In their own words. *Journal of Health Disparities, 2*(3), 17-32.

Kamienski, M., Tate, D., & Vega, M. (2011). The silent thief. Diagnosis and management of osteoporosis. *Orthopedic Nursing*, *30*(3), 162-171. doi:10.1097/nor.ObO13e318219ab9de.

Karaguzel, G. & Holick, M. (2010). Diagnosis and treatment of Osteopenia. *Reviews of Endocrinology Metabolic Disorders*, 11:237-251. doi.org/10.1007/s11154-010-9154-0.

Kessenicha, C. R. Osteoporosis and African-American women. (2005). *Women's Health Issues, 10*(6), 300-304. doi.org:10.1016/s1049-3867(00)00065-7.

Kidambi, S., Partington, S., & Binkley, N. (2005). Low bone mass prevalence and osteoporosis risk factor assessment in African American Wisconsin women. *Wisconsin Medical Journal, 104*(8)*:* 59-65. Retrieved from http://www.ncbi.nlm.gov/pubmed/16425924.

King, A. & Fiorentino, D. (2011). Medicare payment cuts for osteoporosis testing reduced use despite tests' benefit in reducing fractures. *Health Affairs, 30*(12), 2362-70. doi.org/10.1053/j.gastro.2005.08.026.

Kling, J. M., Clark, B. L., & Sandhu, N. P. (2014). Osteoporosis prevention, screening, and treatment: a review. *Journal of Womens Health, 23*(7), 563-572. doi: 101089/jwh.2013.4611.

Kinzie, M. (2005). Review: instructional design strategies for health behavior change. *In Patient Education and Counseling, 56*(1), 3-15. doi.org/10.1016/j.pec.2004.02.005.

Krefting, L. (1990). Rigor in qualitative research: the assessment of trustworthiness. *The American Journal of Occupational Therapy, 45*(3), 214-217. doi.org/10.5014/ajot.45.3.214.

Kruger, I. M. and Doak, C. M. (2012). Cut-off values of distal forearm bone density for the diagnosis of central osteoporosis in black postmenopausal South African women. *Journal of Endocrinology, Metabolism and Diabetes of South Africa, 17*(2), 78-83. doi.org/10.1080/2220/009.2012.10872281.

Kushel, M. B., Perry, S., Bangsberg, D., Clark, R., & Moss, A. R. (2002). Emergency department use among the homeless and marginally housed: Results from a community-based study. *American Journal of Public Health, 92*(5),778-784. doi.org/10.2015/ajph.92.5.778.

Lang, R., Kelkar, V., Byrd, J., Edwards, C., Pericak-Vance, M., & Byrd, G. (2013). African American participation in health-related research studies: indicators for effective recruitment. (2013). *Journal of public health management and practice, 19*(2), 110-118. doi.org/10.1097/phh.ObO13e318257ef.

Lansdown, B., Bennet, B., Thiel, S., Ahmed, O., Dixon, L. & Vokes, T. (2011). Prevalence of vertebral fractures on chest radiographs of elderly African American and Caucasian women. *Journal of Osteoporosis International*, (22), 2365-2371. doi:10.1007/s00198-010-1452-6.

Laureate Education, Inc. (2013). *Narrative Tutorial.* Retrieved from https://Class.Waldenu.edu.

Leigh. W. (2012). The Affordable Care Act and its potential to improve the health of African American women. *The Review for Black Political Economy, 39*(461-464). doi.org/10.1007/s12114-011-9104-4.

Lewiecki, E. M., Laster, A. J., & Miller, J. P. (2012). More Bone Density Testing Is Needed, Not Less. *Journal of Bone Mineral Research*, *27*(4), 739-742. doi: 10.1002/jbmr.1580.

Liao, Y., Bang, D., Cosgrove, S., Dulin, R., Harris, Z., Taylor, A., et al. (2011). Surveillance of health status minority communities-racial and ethnic approaches to community health across the U.S. (REACH US.) risk factor survey, United States, 2009. *Centers for Disease Control and Prevention, 60*(6), 1-44. doi.org/10.1136/jech.2008.084061.

Lincoln, Y.S., & Guba, E. G. (1985). *Lincoln and Guba's evaluative criteria*. Newbury Park, NJ: Sage.

Litwic, A., Edwards, M., Cooper, C., & Dennison, E. (2012). *Geographic differences in fractures among young women.* Journal of Women's Health, *8*(6), 673-684. doi.org/10.2217/whe.12.54.

Melabanan, A., Rosen, H. , Vokes, T. , Deal, C.,, Alele, J., Olenginski, T., et al. (2013). Indications of DXA in women younger than 65 yrs and men younger than 70 yrs: The 2013 official positions. *Journal of Clinical Densitometry, 16*(4),467-471. doi.org/10.1016/j.jocd.2013.08.002.

Martin, A., Negron, R., Balbierz, A., Bickell, N., & Howell, E. (2013). Recruitment of Black and Latina women to a randomized controlled trial. *Journal of Health Care for the Poor and Underserved, 24*(3)*,* 1102-14. doi.org/10.1353/hpu.2013.0125.

McCormack, C. (2001). Storying stories: a narrative approach to in-depth interview conversations. *International journal of social research methodology, 7*(3), 219-236. doi.org/10.1080/13645570210166382.

Miller, P. D. Bone disease in CKD: a focus on osteoporosis diagnosis and management. (2014). *American Journal of Kidney Disease, 64,*(2), 290-304. doi: 10.1053/j.ajkd.2013.12.018.

Miles, M., & Huberman, A. (1994). Qualitative Data Analysis. (2nd. Ed.). (p.10). Thousand Oaks: Sage.

Miller, P. D., (2014). Chronic kidney disease and the skeleton (2014). *Bone Research,*2 (14044), doi:10.1038/boneres.2014.44.

Miller, R. G., Ashar, B. H., Cohen, J., Camp, M., Coombs, C., Johnson, E., et al. C. R. (2005). Disparities in osteoporosis screening between at-risk African American and white women. *Journal of General Internal Medicine, 20*(9)*: 847-51.*doi.org/10.1037/e556422006-014.

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods, 1*(2), 13-32.

Mouton, C. P., Carter-Nolan, P. L., Makambi, K. H., Taylor, T. R., Palmer, J. R., Rosenberg, L. et al. (2012). Impact of perceived racial discrimination on health screening in black women. *Journal for Health Care for the Poor and*

Underserved, 21(1), 287-300. doi.org/10.1353/hpu.0.0273.

Moustakas, C. (1994). *Phenomenological research methods.* Thousand Oaks: Sage.

Nam, H., Kweon, S., Choi, J. & Zmuda, J. (2013). Racial/ethnic differences in bone mineral density among older women. *Journal of Bone and Mineral Metabolism, 31*(2), 190-199. doi.org/10.1007/s00774-012-0402-0.

National Osteoporosis Foundation (2014). (2014). Osteoporosis. Retrieved from http://www.nof.org.

Mudano, A., Casebeer, L., Patino, F., Allison, J., Weissman, N., Kiefe, C., et al. (2003). Racial disparities in osteoporosis prevention in a managed care population. Southern Medical Journal, *96*(5), 445-450. doi.org/10.1097/01.smj.0000053918.93363.60.

Nam, H., Kweon, S., Choi, J., Zmuda, J., Leung, P., Lui, L., et al. (2013). Racial/ethnic differences in bone mineral density among older women. *Journal of Bone & mineral Metabolism, 31*(2), 190-198. doi.org/10.1007/s00774-012-0402-0.

National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institute of Health (2012). Bone mass measurement: what the numbers mean. Retrieved http://www.niams.nih.gov/health_info/bone/bone_health/bone_mass_measure.asp

Nayak, S., Robers, M. S., Chang, C., & Greenspan, S. (2010). Health beliefs about osteoporosis and osteoporosis screening in older women and men. *Health Education Journal, 69*(3), 267-276. doi: 10.1177/0017896910364570.

Nielsen, D., Huniche, L., Brixen, K., Sahota, O., & Masud, T. (2013). Handling knowledge on osteoporosis – a qualitative study. *Scandinavian Journal of Caring Sciences,* 27, 516-524. doi.org/10.1111/j.1471-6712.2012.01055.x.

Nguyen, V. H. (2014). An assessment of osteoporosis health beliefs based on the health belief model. *International Journal of Health Promotion and Education. 52*(2), 105-115. doi.org/10.1080/14635240.2014.893138.

Overcash, J. (2003). Narrative research: a review of methodology and relevance to clinical practice. *In Critical Reviews in Oncology and Hematology*, 48(2),179-184. doi: http://dx.doi.org/10.1016/j.critevonc.2003.04.006.

Patton, M. (2002). *Qualitative Research & Evaluation Methods.* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Perry, B., Harp, K., & Oser, C. (2011) “Still I Rise”: gendered racism, traditional stressors, and the health and well-being of African American women. *Journal of American Sociological Association, 2011 Annual Meeting, p. 1036-1036.*

Pervanas, H., Silva, M., Willett, C., Cooper, M., Durand, C., Belliveau, P., et al. (2012). Health perception changes of state employees following a health screening event. *Journal of Pharmacy and Health Sciences*, *28*(2), 47-50. doi: 10.1177/875512251202800202.

Pieterse, A., & Carter, R. (2012). An exploratory investigation of the relationship between racism, racial identity and health locus of control among Black American women . *Journal of Health Care for the poor and underserved, 21(1), 334-338.* doi.org/10.1037/a0026208.

Pieterse, A. & Carter, R. T. (2010). An exploratory investigation of the relationship between racism, racial identity, perceptions of health, and health locus of control among Black American women. *Journal of Health care for the Poor and Underserved, 21*(2010): 334-338. doi.org/10.1353/hpu.0.0244.

Plawecki, K. & Chapman-Novakofski, K. (2013). Effectiveness of community intervention in improving bone health behaviors in older adults. *Journal of Nutrition in Gerontology and Geriatrics,* 32, 145-160. doi: 10.1080/21551197.2013.781421.

Polkinhorne, D. E. (1995). Narrative configuration in qualitative analysis. In J. A. Hatch & R. Wisnuewski: (EdS.), Life history and narrative (pp. 5-23), Bristol, PA: Falmer. doi.org/10.1080/0951839950080103.

Queally, J. M., Kiernan, C., Shaikh, M., Rowan, F., & Bennett, D. (2013). Initiation of osteoporosis assessment in the fracture clinic results in improved osteoporosis management: a randomized controlled trial. *Osteoporosis International,* 24, 1089-1094. doi: 10.1007/s00198-012-2238-9.

Riessman, C.K. (1993). Qualitative research methods, Newbury Park, CA: Sage

Rudestam, K., & Newton, R. (2001). *Surviving Your Dissertation,*(3rd ed.), Los Angeles, CA: Sage

Sadler, C., & Huff, M. (2007). African-American women: Health beliefs, lifestyles, and osteoporosis. *Orthopaedic Nursing, 26*(2), 96-101. doi.10.101097/01.nor.0000265865.62856.9e.

Sadler, G., Escobar, R. P., Ko, C. M., White, C. M., Lee, S., Neal, T. et al. (2005). African-American women’s perception of their most serious health problems. *Journal of the National Medical Association*, *97*(1): 31-40.

Schafer, M. & Gopalakrishman, G. (2011). Osteoporosis: screening, evaluation, and monitoring. *Journal of Medicine and Health.* Retrieved from http://web.a.ebscohost.com.ezp.waldenulibrary.org

Shen, W., Chen, J., Gantz, M. & Punyanitya. (2012). Ethnic and sex differences in bone marrow adipose tissue and bone mineral density relationship. *Journal of International Osteoporosis Foundation and National Osteoporosis Foundation*, *23*(9), 2293. doi:10.1007/s00198-011-1873-x.

Shibli, A., Vaughan-Sarrazin, Richardson, K., & Cram, P. (2011). Testing and treatment for osteoporosis following hip fracture in an integrated U.S. healthcare system. *Osteoporosis International,* 22, 2973-2980. doi:10.1007/s00198-011-1536-y.

Shreffler, K. M., McQuillan, J., Greil, A. L., Lacy, N. L., & Ngaruiya, C. (2009). Odds of having a regular physician and perceptions of care: Ethnic patterns for women ages 25-45. *Family Medicine, 41*(4), 271-276. Retrieved from http://www.ttuhsc.edu/....4/lacy.

Sims, C. (2010). Ethnic notions and healthy paranoias: understanding of the context of experience and interpretations of healthcare encounters among older black women, *15*(5), 495-514. doi:10.1080/13557858.2010.491541.

Singer, A., Exuzides, A., Spangler, L., O'Malley, C., Colby, C., Johnston, K. et al. (2015). Burden of illness for osteoporotic fractures compared with other serious diseases among postmenopausal women in the united states. *Journal of Mayo Clinic Proceedings, 91*(1), 53-62. doi:10.1016/j.mayocp.2014.09.011.

Snyman, L. (2014). Menopause-related osteoporosis, *South African Family Practice*, *6*(3), 174-177. doi:10.1080/20786204.932549.

Sugarman, D. T. (2014). Osteoporosis. *Journal of the American Medical Association, 311*(1), doi: 10.1001/jama.2013.283009.

Thomas P. A. (2007). Racial and ethnic differences in osteoporosis, *Journal of American Academy Orthopedic Surgery, 15*(1), 26-30. Retrieved from http://www.aaos.org/

Tyler, C. V., Zyanski, S. J., Berkely, M., & Panaite, V. (2009). Calcium supplement use by African American women. *Journal of the National Medical Association, 101*(6), 588-592. doi:10.1016/s0027-9684(15)30945-7.

Ulin, P. R., Robinson, E. T., & Tolley, E. E., (2004), Qualitative methods in public health, San Francisco, CA: Jossey- Bass.

Varacallo, M. A., & Fox, E.J. (2014). Osteoporosis and its complications. *Medical Clinics of North America, 98*(4), 817-31. doi:10.1016/j.mcna.2014.03.DD7.

Walker, J. L., (2012). The use of saturation in qualitative research. *Journal of Cardiovascular Nursing, 22*(2), 37-46. Retrieved from http://www.ncbi.nlm.nih.gov/.

Wallace, D., & Bartlett, R. (2012). Recruitment and retention of African American and Hispanic girls and women in research*, Public Health Nursing, 30*(2), 159-166. doi:10.111/phn.12014.

Warren, J. R., Kvaskny, L., Hecht, M. L., Burgess, D., Ahluwalia, J. S., & Okuyemi, K. S. (2010). Barriers, control and identity in health information seeking among African American women. *Journal of Health Disparities Research and Practice, 3*(3), 68-90. Retrieved from http://digitalscholarshipuniv.edu/jhdrp/vol3/8iss3/5.

Williams-York, B., Montgomery, V., Emerson, P., McCall, J., & Spencer, W. (2013). Perception of body composition and health status among college-aged African American women, *Journal of Best Practices in Health Professions Diversity: Education, Research & Policy, 6*(1), 918-923.

Williams, D. R. (2003). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health, 93*(2): 200-208. doi:10.2105/ajph.93.2.200.

Williams, I. C., Utz, S. W., Jones, R., Hinton, I., Steeves, R., & Alexander, G. (2011). Recruitment of rural African Americans for research projects: Lessons learned. *Southern Online Journal of Nursing Research, 11*(1), Retrieved from http://www.resourcecenter.net/images/SNRS/Files/SOJNR_articles2/Vol11Num01ARTo8.

Wiltshire, J., Person, S., & Allison, J. (2011). Exploring differences in trust in doctors among African American men and women. *Journal of the National Medical Association, 103*(9-10), 845-851. doi:10.1016/s0027-9684(15)30439-9.

Appendix A: Interview Protocol

Interview Protocol for Dissertation Research

Date: Time:

Interviewee: Coder:
AW___________

Age: Sex:

Contact Info for follow-up:

Opening Remarks/Description of Project:

Thank you for your valuable time and participation

The purpose of this study is to

I will ask you a series of questions to gain a better understanding of your personal experience in osteoporosis screening – there are no right or wrong answers

Questions:

1. Tell me what you know about osteoporosis and how you first heard about it?
2. Can you tell me who gets osteoporosis?
3. Have your beliefs changed since you became aware of osteoporosis?
4. Can you give me an example?
5. Are there things that you do to protect your bones that you did not do earlier in life?
6. Has this change taken place for a specific reason?

   Let's talk about your medical care:

7. What health screenings do you take part in?
8. What screenings were offered by your health care provider?

9. Do you maintain your screening exams?
10. Do you believe you may or may not be at risk for osteoporosis?
11. Have you ever been offered a bone screening test by your healthcare provider?

Let's discuss health information:

12. How do you receive health information?
13. Have you ever heard Black women talking about osteoporosis?
14. Have you experienced or heard of osteoporosis screening being performed in your community, organizations, etc. other than in medical departments?
15. Have you seen information, flyers, or brochures aimed at Black women to be concerned about osteoporosis?
16. Is osteoporosis screening covered by your insurance or place of work?
17. Have you ever heard older women in your family speak of osteoporosis?
18. Is osteoporosis spoken of during family gatherings, or church activities?
19. Do any of the females speak of being on a regimen or treatment plan for osteoporosis?
20. Have you ever brought up the subject of osteoporosis to anyone to share what you have heard or know?
21. Is osteoporosis spoken of as less or more important than cancer or heart disease in your family circle?

Let's talk about your healthcare provider:

22. Does this person provide ample time for your visits?
23. Do you ask questions there?
24. Is there osteoporosis information in the waiting area aimed specifically to African American women?
25. Does your provider respond to you professionally?

26. If you asked, would your healthcare provider spend time to explain osteoporosis and offer a consultation for screening?
27. When you leave, what percentage of information that the healthcare provider gave you do you remember?
28. Do you trust your healthcare provider?
29. Are Black women aware of complications associated with osteoporosis?
30. What would you recommend to get information about osteoporosis to Black women?

Are there any final thoughts related to screening for osteoporosis to your experiences and that of other family members and friends that you wish to share at this time?

Thank you very much. This concludes my interview.

Appendix B: Participant Introduction/Flyer

Interview Study/Flyer

We are looking for volunteers to take part in an interview

Angela Wilkins is a Doctoral student at Walden University and is asking for your help if you are:

African American Female

Age 50 years or older

Speak English

Interested in osteoporosis screening

No gifts or money will be given for being interviewed.

For more information about this study, please contact: Angela Wilkins at XXX-XXX-XXXX or E-mail: angela.wilkins@waldenu.edu

This study has been reviewed by, and received ethics clearance through Walden University and your facilities.

Appendix C: Informed Consent

CONSENT FORM

You are invited to take part in a research study of the perceptions of osteoporosis screening among African American women age 50 and older. You were chosen for the study because you meet the following criteria: (a) African American woman (b) age 50 or above (c) you have never been screened for osteoporosis (d) you have been screened for osteoporosis. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Angela Wilkins, who is a doctoral student at Walden University. Angela Wilkins is a registered nurse specializing in health services and has worked as a nurse for over thirty years. She has served with the United States Navy with a background in emergency, intensive care, and ambulatory nursing.

Background Information:
The purpose of this study is to discover and begin to understand: (a) the experience of African American women as they enter healthcare to have screening to measure bone strength (b) the experience of learning how African American perceive the process of osteoporosis screening (c)the experience of their reactions to care that they receive.

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

- Participate in an approximately 60 minute face to face interview about your experiences as an African American woman that has undergone a bone screening to measure
  Osteoporosis or that has never had a bone screening conducted.
- Agree to have the interview audio recorded
- Verify the transcription of your personal interview to ensure accuracy of the transcript
  Sent to you neither by regular or by email

Voluntary Nature of the Study:

Your participation in this study is totally voluntary. No one will treat you differently if you choose not to participate in the study. Your acceptance will be strictly confidential. If you decide to participate in the study today,
you may stop at any time without restriction. You may skip any questions that you feel are personal or those that make you feel uncomfortable.

Risks and Benefits of Being in the Study:
Minimal risks are involved; participants may experience minimal stress in describing particular clinical descriptions in which they may feel uncomfortable or feel the proper words or terminology are not accurate. In addition, given the personal preference of each participant, it is possible that interviews will be conducted in public places such as a coffee shop and therefore, public observation of the interview in progress possible.
The benefits include information obtained during this study could lead to increased understanding of how African American women perceive the need for preventive measures of osteoporosis screening as part of their physical wellbeing. This increased understanding could lead to a more extensive awareness in the African American community of the importance of bone health and the screening process. In addition, African American women may benefit from increased preventive bone health programs and be included in more research specifically for African American women and osteoporosis.

Compensation:
There is no compensation for participating in this research study.

Confidentiality:
Any information you provide will be kept confidential. The researcher will not use your information for any purposes outside of this research study. The researcher will not include your name or anything else that could identify you in any related reports to this research project.

Contacts and Questions:
You may ask any questions you have now. If you have questions later after the interview is conducted, you may contact the researcher either by e-mail or telephone. If you would like to speak privately about your rights as a participant, you can call Dr. Leilani Endicott at 612-312-1210. She is the Walden University representative who can discuss this with you. My contact number is 757-721-7575. Walden University's approval number for this study is 10-22-15-0109747 and it expires on October 21, 2016.

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

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I am agreeing to the terms described above.

Printed Name of Participant

____

Date of consent

____

Participant's Written Signature

____

Researcher's Signature

____

Appendix D: Narrative Excerpts

Participant 1:

P1 was a dentist who had been practicing over 20 years. This dentist brought a unique perspective to the study because she was a healthcare professional and with her job description, she traveled to many countries and various locations in the United States to treat patients. She had several experiences with osteoporosis screenings and was well versed in what the screening provided. Because she is in the healthcare profession, she is equipped with what questions to ask her provider. She is diligent in sharing the information of osteoporosis screening with other women. The benefit of being a part of health giving gave her perspectives of osteoporosis screening, education, and the future of Black women was invaluable.

Participant 2:

P2 is a Practical Nurse who has a background of working in the healthcare setting. As a nurse, she brought the perspective that she shared working in hospitals and healthcare. Her knowledge afforded her the opportunity to be bold in asking questions about osteoporosis screening and what it means specifically to her. Her knowledge brought an insight of both being a patient and also being on the professional side as a nurse. She shared the experience of having the osteoporosis screening and importance of follow up to the screening for healthy living. This participant is confident in getting more information out to Black women. The knowledge provided by this nurse brought elements into the study that would not be present otherwise.

Participant 3:

P3 is an attorney, pastor, and registered nurse. This aspiring judge brought not only knowledge of legal and pastor care, but also a personal knowledge of being a nurse. By working as a nurse gave her the opportunity to influence Black women in positive ways. At the time of the study, P3 was responsible for a church body that included a number of Black women and was pursuing eligibility qualifications as a judge. Her knowledge and ideas to improve osteoporosis screening among Black women was very fruitful. Because she is a pastor, she approached osteoporosis screening perspectives as a responsibility.

Participant 4:

P4 was a Black female attorney who identified herself as African American with a heritage of additional cultures in her family background. P2 brought a unique perspective to the study with the culmination of various mixed cultures and the impact of osteoporosis screening for different backgrounds. Because she is comfortable with whom she is, P2 brought the perspective of the amount of knowledge available and how it is distributed to Black women. The benefit of having a family member in the healthcare field gave her additional perspectives of osteoporosis screening, education, and follow-up.

Participant 5:

P5 is a retiree who has raised her children enjoying her life to the fullest. This participant was unique in that she spoke of the cultural diversity of medical information being disseminated to Black women as compared to White women. She is also an advocate for women to be prepared to ask medical providers questions and not tom accept things verbatim without additional knowledge and explanation. A strong promoter of women's' healthcare, this retiree provided in-depth solutions to osteoporosis screening measures.

Participant 6:

P6 was active in her healthcare awareness and had a close relationship with her healthcare provider. Her osteoporosis screening was prompted by her healthcare provider because of her age. Before this time she had not heard of osteoporosis and what it can do to impact her health. The knowledge she brought to the study was invaluable because she looked at her health as something that she was in control of . She did not want osteoporosis to impact her walking and other exercises because of the age factor. Her healthcare provider is a Christian and she has faith in him. Her beliefs and insight brought important perspectives to the study.

Participant 7:

P7 worked with healthcare providers to provide preventive health information and coordinating care. This participant brought the perspective of being in the healthcare field and having the opportunities to take advantage of the latest information in preventive health. Because she had several years in the healthcare setting, she approached osteoporosis screening from the perspectives of education, prevention, and future health initiatives. Preventive care by nature, this participant provided in-depth solutions to osteoporosis screening.

Participant 8:

P8 was a retired school teacher. She is active in the community who want to improve health for women. She brings with her the perspective of lack of knowledge in osteoporosis screening. The awareness that she brought was invaluable because she looked at osteoporosis screening from a historical background of years not knowing about the disease. Her truthfulness and insightfulness brought important perspectives to the study.

Participant 9:

P9 confided that she had the same doctor for 17 years. This participant brought a unique perspective of having several osteoporosis screenings over the years and having confidence in her healthcare provider. Because she had been monitoring her healthcare closely, she was up to date on locating additional information about osteoporosis from her doctor, comfortable with asking questions about it, and aware of her health care needs. The benefit of having a specific doctor gave her many perspectives of in depth solutions to osteoporosis.

Participant 10:

P10 was a retired school teacher who now helps seniors to get their GED. This teacher brought an exceptional perspective from the standpoint of education towards osteoporosis screening. Because she is a retired teacher, understanding the importance of osteoporosis screening and her experience with it, provided an enlightening viewpoint.

Her knowledge and ideas to improve the education of osteoporosis screening were very fruitful. This participant also brought forth the importance of educating the aging population of Black women.