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Coping Mechanisms of Sub-Saharan African Female Immigrants with Breast Cancer

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2017

Abstract

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BSN, Washington Adventist University, 2007

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Coping mechanisms of breast cancer is a public health problem among African females, particularly, the Sub-Saharan African female immigrants. The purpose of this qualitative study was to explore the coping mechanisms of the research group that could be used to develop and implement an intervention program to promote the quality of adaptation to improve the quality of life. The study achieved the objective by the use of 1-to-1 interviews of purposive samples of 2 and 12 using Roy Adaptation Model. Interviewed data were collected from females diagnosed with breast cancer, in treatment, and with remissions. The pilot study (*n* = 2) result was used to appraise the method of the primary study. The primary study sample (N = 12) data were thematically analyzed using a grounding approach. Summary of the primary copings identified in the study was crying, religion, family support, social support networks, problem-focused, emotion-focused, and relaxation techniques. The rest were positive reappraisal, health insurance/medical staff, and prevention. The findings could not be generalized to the general female immigrant population because of the sample size. However, the study has added to the knowledge and understanding of the coping mechanism of the study population. Coping mechanisms, detecting breast cancer early, and education, constitute the primary interventions that may bring significant social change in the study population.

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Dedication

I dedicate my dissertation to my uncle, Kofi Kwateng, my mother, Amma Duffie, and my nuclear family, Dora Opoku Agyeman, Dr. Eillen Opoku Dankwaah, James Opoku Kwateng and Anna Gifty Opoku-Agyeman. They each provided me with support and encouragement throughout the dissertation process, and for this, I am deeply appreciative. I am also indebted to my uncle, who provided me with support in my primary education. My sweet mother, Amma, who sacrificed her life for me, but died at the beginning of my course work.

I cannot enough express enough gratitude for my wife, who kept me physically fit and sacrificed so much as I worked on my dissertation. I also thank Dora Opoku Agyeman her care, concern, and support. I thank my daughter, Dr. Eillen Opoku Dankwaah, who looked after my health while I was preparing this dissertation. I thank Anna Gifty Opoku-Agyeman, who assisted with the typing and my daughter, Eillen, and son, James Kwateng for their encouraging words each time they visited my home.

I thank Ms. Yaa Brenyah, who was the foundation and inspiration of my education in the United States of America (USA). I also appreciate the African women who volunteered for this study, particularly Mrs. Ify, (AWCC Director) who supported Sub-Saharan African female immigrants with breast cancer survivors group. Finally, thanks to God Who has led me thus far.

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I am indebted to many of the faculty and staff whose guidance, counseling and insights during academic counseling at residencies have led me up to this point. I also acknowledge Dr. Raymond Panas (Chair) and Dr. Jennifer Oliphant (committee member) for their coaching, correction, and counseling to bring this dissertation to a reality.

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Chapter 1: Introduction to the Study

The interest in coping mechanisms concept assessment has risen in the field of nursing, medicine and public health. Females adapt differently with breast cancer and use different coping mechanisms to deal with psychosocial and physical challenges at diagnosis, treatment, and remission. Coping mechanisms have been documented to be applied in diverse ways by females with breast cancer to reduce distress (Kim, Han, Shaw, Mctavish, & Gustafson, (2010). Per Helgeson and Cohen (1996); Uchino, Cacioppo, and Kiecolt-Glaser (1996); and Kim et al. (2010), coping mechanisms positively influenced the physical and psychosocial well-being of people with a chronic disease.

Chapter 1 consists of the outline, introduction, background, problem statement, and purpose of the study. The other main sections in the chapter are the research questions, the theoretical foundation and the nature of the study. The rest are the definition of terms, assumptions, scope and delimitations, limitations, significance, and summary.

Background

Research Topic

In 2010, 206,966 females diagnosed with breast cancer, and 40,966 died from the disease (Centers for Disease Control [CDC], 2016). Breast cancer was the most common cancer among women, second to skin cancer (CDC, 2016). The CDC (2016) and Fregene and Newman (2005) reported that African American females have the highest breast cancer mortality rate, and were 40% more likely to die of breast cancer than their Caucasian counterparts. No Sub-Saharan African female breast cancer case reported to the CDC report.

Many females in the Sub-Saharan population are unfamiliar with the term *breast cancer coping*; yet, many females in this community diagnosed with breast inflammation, otherwise known as breast cancer and used coping mechanisms to deal with the challenges (Forouzanfar et al., 2011; Odigie et al., 2010). Limited knowledge and awareness of the breast cancer coping mechanisms of these population were not known and had led to high morbidity and mortality among Sub-Saharan females (Wiafe-Addai, 2009) and African immigrants (Beyene, 1999). Cultural stigma ascribed to diagnosis and lack of training by physicians to make correct diagnoses and render appropriate treatment have contributed to an increased morbidity and mortality female breast cancer in the region (Odigie et al., 2010; Wiafe-Addai, 2009).

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As western medicine was introduced to Sub-Saharan countries, breast cancer became more readily identified and thus the number of persons diagnosed with breast cancer increased.

Even with this increase in diagnosis, the mortality rate has been on the rise (Edmund, Naaeder, Tettey, & Gyasi, 2013; Odigie et al., 2010; Olopade, 2005). According to the CDC (2012), although breast cancer mortality rate has declined in the Caucasian population in the USA, this has not extended to the minority community, particularly, females of African origin.

Taleghani, Yekta, Nasrabadi, and Kappeli (2006) studied 19 women with breast cancer and noted that understanding how girls cope with their breast cancer was a critical component of the healing process. Knowledge of individual coping mechanisms of Sub-Saharan immigrant women with breast cancer (the study group of this paper and henceforth referred to as the study group) was a critical component in determining the impact of the disease on the patients (Doumit, Huijer, Kelley, Saghir, & Nassar, 2010). The major breast cancer impact on the study group was mastectomy on female's body image, sexual attractiveness, and another psycho-sociocultural factors. Researchers reported that weight changes after mastectomy and breast cancer treatment affected self-esteem, how the females relate to friends, close family, and other people (Lee, Cohen, Edgar, Laizner, & Gagnon, 2006).

Women from the Sub-Saharan Africa with breast cancer has been at high risk of physical and psychosocial distress in diagnosis, treatment or remission. Coward and Kahn (2004), associated diagnosis and treatment of breast cancer with emotions and physical disturbances. As a result, females relied on coping mechanisms to deal with these challenges (Al-Azir, Al-Awisi & Al- Moundhri, 2009).

Coward and Kahn (2004) and Reynolds et al. (2000) showed that breast cancer women experience psychosocial symptoms such as generalized anxiety disorder, depressions, difficulty in concentration and fear of uncertainty with treatment, remission and or death. Breast cancer patients who used coping strategies are characterized as an active problem-solving, and appeared to adapt better to diagnosis (Bloom et al., 2001; Felder, 2004) and treatment.

According to Aschengrau and Seage (2008), immigrant women adopt the incidence rate of the new country. National Cancer Institute's surveillance epidemiology and End Results Program reported that BC is most commonly diagnosed among Whites women, women of high socioeconomic status and women residing in Northeast (Aschengrau & Seage III, 2008). From epidemiological point of view, prevalence of mammography screening remains lower among women with no health insurance, with less education, or living below the poverty level (Remington, Brownson, & Wegner 2010). Remington et al. (2010) noted that breast cancer treatment, require lumpectomy (local removal of cancer), mastectomy (removal of the breast), radiation therapy, chemotherapy, or hormonal therapy, or sometimes two treatment methods were combined, require support group to provide valuable information and support breast cancer patients.

Modern medicine introduced to Sub-Saharan countries, breast cancer became more readily identified and thus the number of persons diagnosed with breast cancer increased. Even with this increase in diagnosis, the mortality rate has been on the rise (Edmund, Naaeder, Tettey, & Gyasi, 2013; Odigie et al., 2010; Olopade, 2005). According to the CDC (2012), although breast cancer mortality rate has declined in the Caucasian population in the USA, this has not extended to the minority community, particularly, females of African origin.

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Females from the Sub-Saharan Africa countries with breast cancer have been at high risk of physical and psychosocial distress in diagnosis, treatment or remission. According to Coward and Kahn (2004), breast cancer is associated with diagnosis and treatment of breast cancer as well as emotions and physical disturbances. As a result, females relied on coping mechanisms to deal with these challenges (Al-Azir, Al-Awisi, & Al-Moundhri, 2009).

Coping mechanisms have been documented to be applied in diverse ways by females with breast cancer to reduce distress (Kim, Han, Shaw, Mctavish, & Gustafson, (2010). Per Helgeson and Cohen (1996); Uchino, Cacioppo, and Kiecolt-Glaser (1996); Kim et al. (2010), coping mechanisms positively influenced the physical and psychosocial well-being of people with a chronic disease.

Coping mechanisms of several ethnic immigrant groups have been studied (Arenal et al., 2006; Beyene, 1999; Tanna, Buijs, & Pitkin, 2011), leaving the coping gap of Sub-Saharan female to be studied. A limited work existed on the coping mechanisms of the study Population. Beyene (1999) documented that African immigrants differed in many ways, and cultural belief has influenced the understanding of health utilization. In views of these, the study explored the gap (coping mechanisms) of the study population.

According to Ben-Zur et al. (2001) and Lazarus, Averill, and Option (1974), coping behavior and mechanisms were cognitive efforts to deal with stressful encounters such as being an African female immigrant with breast cancer. Sub-Saharan African female immigrants with breast cancer stressed that surgery entails disfigurement (Ben-Zur et al., 2001; Lazarus & Folkman, 1984; Salonen et al., 2011), and what would become of her post-treatment. Bigatti, Steiner, and Miller (2012) and Gany, Herrera, Avallone, and Changrani (2006) reported that adjustment to an on-going stressful condition depends on the effectiveness of the coping mechanisms of the patient.

Putting preventive and surveillance measures on monitoring breast cancer patients may reduce incidence of advance breast cancer and reduce application of coping mechanisms (Novick, Morrow, & Mays, 2008). Available sources of information on health needs, such as participants coping mechanisms need to be explored for further epidemiological study on health problems of the females with breast cancer. Evidence in study has showed that breast cancer is a major course of suffering and death to women (Perry et al., 2008).

Problem Statement

Existing literature was elusive as to coping mechanisms of Sub-Sahara female immigrants diagnosed with breast cancer, but established that the research population has a higher mortality rate compared to their Caucasian counterparts. The dearth of coping mechanisms was therefore suggested to be a factor, among others that were responsible for poor quality of life and the unacceptably high rate of mortality due to breast cancer among the study group. By extension, this scenario has prevented the generation of information that was necessary for initiating, developing, adapting, and improving intervention protocol in the management of breast cancer among the study group. These twin challenges were interconnected and regarded as the bane to curbing high mortality of female breast cancer patients of African Sub-Sahara descendants.

Recent American Cancer Surveillance and Health Services Research Report on breast cancer in 2014 showed breast cancer distribution among major and minor ethnic groups, African immigrants were not represented (DeSantis, Seigel &. Jemal, 2015). Similarly, District of Columbia surveillance report mentioned the minorities in District of Columbia, but no Sub-Saharan African female with breast cancer was mentioned (Gray, Garcia, & Kharfen, 2015). Given these limitations, there were gaps left to fill. The gaps were data sources of Africans immigrants on several diseases including sun-Saharan African female immigrants with cancer data. For instance, there has not been studying, or data on Sub-Saharan African female immigrants with breast cancer coping mechanisms recorded in any journal. As a result, the study was planned to explore the coping mechanisms of the research group.

The phenomenological strategy was designed to explore the breast cancer experiences and the coping mechanisms used to neutralize or reduced or control the experiences of sub-Saharan African females with breast cancer. The research problem addressed in this study is the coping mechanisms for the study population.

Purpose of the Study

Female immigrants with breast cancer from Sub-Saharan Africa countries faced physical, psychological or psychosocial challenges during diagnosis, treatment, and remission or death (Al-Azri, 2009; Coward & Kahn, 2004). Per Khakbazan, Taghipour, Roudsari, and Mohammadi (2014) seeking for step by step help was the synthesis of repeated concepts like symptom detection, first sign interpretation, symptom monitoring, social interaction and emotional reaction. The rest were the priority of medical help, appraisal of health services and personal environmental factors. According to Vaida, Todor, Bertossi and Claudia, (2015), the study of coping mechanism is characterized with the perception of severity of disease varied by degree of physiological damage, personal variables and death rate. The social and cultural consequences such as diagnosis of breast cancer, treatment, and social isolation are among the major course of patient stress (Vaida, Todor, Bertossi & Claudia, 2015). Females used coping mechanisms to resolve these psychosocial and problematic issues (Al-Azri, 2009). The purpose of the study was to explore the coping mechanisms of the Sub-Saharan African female immigrants with breast cancer (the Study group) in the United States.

Research Questions

RQ1. What are coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer diagnosis?

RQ2. What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer treatment?

RQ3. What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer remission?

Theoretical Foundation

Roy's Adaptation Model

Roy was a professor and a nurse theorist at Connell School (Roy, 1970). Roy was known for work on Roy Adaptation Model (RAM) of Nursing. Roy's work and the conceptualizing of coping, developing the philosophical basis for adaptation model, and epistemology of nursing brought her name in the list of nursing theorists. Roy (1970) was challenged to develop a nursing model for the nursing institution. She started the theory in 1964 at the University of California during her master's program and spent over 17 years to develop the adaptation model. The model and the patterns in the Adaptation Model explain how individuals maintain integrity in the face of the environment (Roy & Andrews, 1999). According to Philips (2010), the goal of RAM was to foster successful adaptation.

The ability to adjust (cope), is an important step to control stress. Participants cope with stress by applying different types of coping mechanisms. Coping, in this context, means using any positive approach to prevent and adjust to the stressful intensity of the disease environment (Vaida et al., 2015). RAM has identified coping as one of the processes of adaptation. Given this, it was appropriate to look for the coping mechanisms for each, ethnic group, culture and community for prevention and intervention of breast cancer. Per Roy and Andrews (1999) and Naga and Al-Khasib (2014), adaptation was the process of an outcome whereby thinking and feeling persons as individuals, group or class used conscious awareness and choices to create human and environmental integration. Furthering the definition, Roy and Andrew (1999) stated that adaptation leads to optimal health and well-being, quality of life, and death with dignity.

Participants responded to behavioral change due to stimuli from the external and internal environment during diagnosis, treatment and remission phases. At each of the disease stage (diagnosis, treatment, remission), some degree of the coping-adaptive process took place. Analyzed data showed that different situation required different coping approaches of adaptation. It's consistent with the environmental-coping processes of RAM. The body responded differently with coping processes and adaptation to the situation. Therefore, it may be effective to use this model to explore coping mechanisms the study group at each of the phases (diagnosis, treatment, and remission) of the disease and development.

From the epidemiology perspectives, the three stages were reclassified into primary (diagnosis; secondary (diagnosis & treatment); and tertiary (rehabilitation or remission). Given this, a program could be planned to reduce breast cancer's stresses through proper coping channels.

Conceptual Framework

The description of the Adaptation Model Framework (Figure 1) was the Input (stimuli) and Control processes (coping mechanisms, regulator cognator; Roy & Andrews, 1999). The rest was the Effectors (physiological function, self-concept, role function, interdependence) and Output (adaptive and reflective responses; Roy, 1976). The Roy adaptation model has five major concepts, namely, a concept about a person, environment, health, nursing and adaptation (Roy & Andrews, 1999). Though all the above concepts were important, concepts of person, environment, health and adaptation (Lebowski, 1970) were relevant to the study.

Roy referred adaptation as the process and outcome whereby thinking and feeling persons as individuals or in groups used conscious awareness and chose to create human and environmental integration (Roy & Andrews, 1999). The environment, on the other hand, was the conditions, circumstances, and influences that affected the development and behavior of humans as an adaptive system (Nayback, 2009; Roy & Andrews, 1999). The environment was a stimulus or input that requires a person to adapt. According to Roy and Andrews (1999), the stimuli could be positive or negative. In this context, the stimuli were the breast cancer and its experiences.

Roy's adaptation model was chosen to guide this research because the model has been promoting adaptation through coping mechanisms within the regulator and cognator subsystems coping-adaptive process (Akyil & Erguney, 2012; Baldacchino et al., 2013; Nayback, 2009). The model supported the development of the research instrument and provided the framework in answering the proposed research questions.

Ramini, Brown, and Bucker (2008) recommended Roy's Adaptation Model in the study of breast cancer support groups, and the interdependence of members of these groups. Rogers and Keller (2009) helped Roy's model in a study of aging and physical activity among sedentary older adults. As a result of the literature reviewed, the study explored the coping mechanisms of the study group and identified the different ways participants coped with breast cancer experiences

Ganz et al. (2002) and Lopez-Class et al. (2011) acknowledged coping mechanism deficits in immigrants diagnosed with breast cancer because they did not have adequate knowledge of the disease. According to Lopez-Class et al., the females felt socially isolated when there were no family supports. Lopez-Class et al; Hussanein, Musgrove, and Bradbury (2005); and Radina and Fu (2012) supported the view that there were significant coping challenges for female immigrants with breast cancer in the United States because they have limited social and emotional support systems.

Coping mechanisms have contributed to psychological and emotional adjustment (Ganz et al., 2002; Manne et al., 2005; Pistrang & Barker, 1995). Hamilton, Miedema, Macintyre, and Easley (2011), and Mitchell and Bruen (2008) showed that coping mechanisms, such as positive self-talk in cognitive psychology, was used to stop negative cognitions that caused anxiety, depression, and pessimism. Hamilton et al. indicated that “coping mechanisms enhanced motivation and positive thoughts and emotions” (p. e-46). I explored the coping mechanisms as were used by Sub-Saharan African female immigrants with breast cancer during, diagnosis, treatment, and remission.

Nature of the Study

The phenomenological strategy chosen was to supplement the process of RAM, and to relate coping mechanisms at the diagnosis, treatment, & remission phases of the disease (Harvey, Ahmed, & Amsellem, 2012; Kunkel, Emmie, & Titus, 2002). According to Ray, Lindop, and Gibson (2009) coping were the action directed to resolve unwanted situations. The phenomenological strategy was used to generate the experiences at the various phases of breast cancer, whereas the RAM was used to determine the coping mechanisms strategy applied to neutralize the issues. The method of data collection was the 1-to-1 interview. According to Bender and Ewbank (1994), Creswell (2009), Issel (2009), and Kreps (2008), 1-to-1 conversation dynamics usually lead to discussions that yield relevant information. The study population was the Sub-Saharan African female immigrants with breast cancer. Excel software was used to summarize the demographic data and tables cluster whereas the pilot and the main study were thematically analyzed.

Per Institutional Review Board (IRB; Approval Number11-18-15-0183692) recommendation, I declined to use pregnant women or women with comorbidities from the study. The anticipated participants who were going to be emotional distress in the study were informed about medical support at the local counselor or online counselor where the cost of care was less than institutional health care centers’.

I interviewed 14 participants: pilot (*n*=2) and original study (*n*=12). One-to-one interviews provided in-depth information about the individual with breast cancer (Marczak & Sewell, 2015). The study population was the Sub-Saharan African female immigrants with breast cancer, specifically females from West African countries with breast cancer. The selected population for the study was because of the cultural practices similarity across Sub-Saharan African countries.

The study population lived in Washington, DC/Baltimore, Maryland/Virginia metropolitan areas. Participants for the study were breast cancer patients diagnosed between January 1, 2000, and December 31, 2012. The age limitation ranges between 25 years and 65 years. Participants were volunteers (Ben-Zur et al., 2001). The proposed targets for recruiting volunteers for the study were breast cancer treatment centers, support groups, and the indigenous churches. Data analyses began concurrently with the interview process, by gathering data together, summarize reports, transcribed data from digital records, and formed demographic information (Bradley, Curry, & Devers, 2007). In the final analysis, words, context, internal consistency, accurate responses, and findings were qualitatively valuable to the study.

Operational Definition

Adaptation: The process of responding to and satisfactorily coping with environmental changes (Gbobbo, 2008, p. 55).

Breast cancer: According to Remington, Brownson, and Wegner (2010), breast cancer develops as cells lose their normal regulatory control and transition from carcinoma in situ, to noninvasive cancer, to invasive cancer, and finally metastatic disease (p. 446). The most widely used method for classifying stages of breast cancer was the TNM systems. T is Tumor size (0 cm<T<2cm). N is Lymph node status (2 cm<N<5 cm). M is Metastases (M>5cm) and has spread beyond the breast (Komen, 2016).

Coping mechanisms: The ways to which external or internal stress is managed, adapted to or acted upon (Sincero, 2012).

Environment: The viewed the situation as all conditions, circumstances, and influences that surround and affect the development and behavior of human adaptive system, considering particularly, the person and earth resources (Lopes, Pagliuca, & Araujo, 2006, pp. 261- 262)

Interpersonal: Resources that come from other people (e.g. family, friends, and colleague; Ginter & Braun, 2014) such as instrumental, information & emotion resources. Intrapersonal: Intrinsic resources such as faith, or finding something to live for; or health literacy (Ginter & Braun, 2014).

Sub-Saharan female immigrants: Female who have citizenship in one country, but who have entered a different country to set up permanent residence (Immigration and Visa Information, 2014).

Assumptions

Indigenous people believed that breast cancer was not curable, due to witchcraft, or the result of a curse (Wiafe-Addai, 2009). Traditionally, adult females of the study population do not disclose any private information with independent male counterpart (undocumented fact). Private conversations could only be made with a spouse or disclosed to the closed relationship such as mother, mother-in-law or close friend, but rarely to father-in-law (undocumented).

According to Huo et al. (2009), indigenous Sub-Saharan African females in West Africa were at a high mortality risk of invasive breast tumors. Eley et al. (1994) and Curtis, Quale, Haggstrom, and Smith-Bindman (2008) attributed the high risk and poor survival rate to socioeconomic factors such as traditional beliefs and lack of education or support.

I further showed that quality health care services and unstructured coping mechanisms were not there to support the breast cancer candidates during diagnosis or interventions such as surgery. Few female breast cancer studies in Africa have publications on coping mechanisms related to breast cancer. Elsheshtawy, Sen, Koga, and Conroy (2014) assumed that there existed coping mechanisms the female breast cancer patients might use. Similarly, Gonzaga (2013) and Mukwato et al. (2010) documented a few but recommended the need to find an effective coping mechanism for Sub-Saharan African female breast cancer patients.

Saati (2013) documented that knowledge of individual culture and ethnicity were significant assumptions to consider when dealing with coping mechanisms. Willingness to participate in the breast cancer study could have been difficult to achieve, because the cultural and traditions of the Sub-Saharan African female with breast cancer may be barriers for women to participate in the study. Purposive samples of two and 12 participants were for the pilot and main studies respectively. Participants answered openly and honestly to the question(s) presented.

Scope and Delimitations

University medical care centers in the Sub-Saharan countries have initiated cancer registries (Jedy-Agba et al., 2012; Olopade, 2005). Researchers who studied cancer in Sub-Saharan African females have examined cervical cancer and genetics studies of breast cancer (Fregene & Newman, 2005; Ogunbode, Fatiregun, Ogunbode, & Adebusoye, 2013). Per Ogunbode et al. (2013) and Olopade (2005), the incidence rate of breast cancer in the Sub-

Saharan West African region was 27.8 /100,000, and the mortality rate was 19.2/100,000 compared with incidence and death rates of 99.4/100,000 and 19.2/100,000 for North America.

However, less knowledge was known about the psychosocial needs of Sub-Saharan females with breast cancer. The National Cancer Center and States' registries have no detailed data specifically on Sub-Saharan African female immigrants with breast cancer (Beyene, 1999; Sammarco & Konecny, 2007) in the United States of America.

Several conducted studies on female minorities with breast cancer and coping mechanisms (Livaudais et al., 2010); yet, no data were available for Sub-Saharan African women with breast cancer. Studies and observational inquiries made showed that they were probably mixed with other ethnic groups, leaving a gap to be filled (Beyene, 1999; Olopade, 2005). The study did not consider "what" caused, or "why" the coping, instead the study was focused on what were the coping mechanisms and when the participants were applied.

The study population was the Sub-Saharan African female immigrants, particular from Ghana and Nigeria with breast cancer living in the United States. The cultural and demographic characteristics of the participants in the Sub-Saharan African region appeared similar.

Limitations

Some of the restrictions were selection bias, sample size and interview bias (Abramson, 1988; Boyce & Neale, 2006; Gatto, 2009). “The ‘special’ nature of the study population does not lead to bias” (Abramson, 1988, p. 220) because the study was interested only in the population. The relatively small sample limited the study for generalization (Creswell, 2008; Joulaee, Joolaee, Kadivar, & Hajibabaee, 2012). I checked biases by controlling the environmental influence of the interviewee.

Similarly, interview guides were reviewed to control question biases. For instance, there were no leading questions. The same question formats for all participants. Answers were probed or checked for clarifications. The subjectivity of the data led to the difficulty of establishing positive and validity findings (Pope & Mays, 1995). Pope and Mays (1995) noted that it was difficult to detect and prevent a researcher's induced bias. Nonetheless, with the use of Guba's (1981) criteria of trustworthy in the study, researcher bias was controlled.

Significance

The study added to the knowledge base in the field of public health, and to literature on the topic, specifically the study population. The study provided an objective analysis of Sub-Saharan African female immigrants' coping mechanisms. The results of the study added information to cultural practices of the Sub-Saharan female immigrants with breast cancer. Professionals could use the results of the research to encourage the use of culturally sensitive coping strategies to promote adaptive coping (Mukwato et al., 2010). Professionals' application of knowledge of culturally sensitive coping mechanisms of study group may impact psychosocial factors and the physiology of the individual females with breast cancer (Antoni & Lutgedorf, 2007; Lie, 2013). Understanding the coping mechanisms of the Sub-Saharan female immigrants with breast cancer was a milestone in development to improve the lives of breast cancer patients.

The results of the study could also be used to improve public health programs about Sub-Saharan female immigrants with breast cancer both at home and abroad. The knowledge of the coping mechanisms would contribute to the identification of psychosocial and informational needs of the Sub-Saharan female immigrants with breast cancer (Napoles-Springer, Ortiz, O'Brien, & Diaz-Mendez, 2009). The study added to the prior research of Edwards (2010), McCoy (2005), and Ashing-Giwa et al. (2004) by addressing coping mechanisms, focusing specifically on the study group.

Summary

Chapter 1 was a presentation of the overview of the introduction and the purpose of the research. The section described the theoretical framework, method, and sample to explore the coping mechanisms of Sub-Saharan females with breast cancer. Chapter 1 included the conceptual framework of the study, nature of the investigation, and definitions of some terminologies. The last section was the assumptions, summary, and transition to the next chapters.

In Chapter 2, I reviewed the literature on breast cancer, coping mechanisms, and theoretical framework. In Chapter 3 is a discussion of research design, the study population, participants, instrument for data collection and analysis, as well as the steps to protect the members. Chapter 4 is a description of data collection, analysis of the results, the answers to the research questions, and the findings. Chapter 5 is a presentation of the discussion, the interpretation of the findings, the implications or social change, proposed future studies, and the conclusion of the research.

Chapter 2: Literature Review

Introduction

Coping has been used interchangeably with terms such as *adaptation, resiliency, management,* and *adjustment* (Henderson et al., 2003). Knowledge of coping mechanisms may improve the quality of life (Stanton et al., 2000) of Sub-Saharan female immigrants with breast cancer. The research problem was that there was no known documented data of coping mechanisms for Sub-Saharan African female immigrants. The purpose of this study was to explore the coping mechanisms of a study group and to generate appropriate coping mechanisms for interventions.

Knowledge of the coping mechanisms of females with breast cancer was critical for breast cancer intervention (Doumit et al., 2010; Gonzaga, 2013; Ohaeri, Ofi, & Campbell, 2012). Researchers have examined the coping mechanisms and the impact on minority immigrant population (Gonzaga, 2013; Maskarinec et al., 2011); however, there was limited information about the coping mechanisms for the study group. Further research about the coping mechanisms of minority females with breast cancer was needed because Stanton et al. (2000) showed that active coping mechanisms promoted positive adaptation to emotional and adjusting breast cancer patients. Chapter 2 is a literature review, literature search strategy, and the research theory.

Literature Search Strategy

The search was conducted using the following databases: ProQuest Central, Science Direct, Allied Health Literature (CINAHL), and Psychological Literature (PsycINFO). Health Resources (US Nursing Academic Resources and other Nursing Resources from countries outside the shores of the US), academic dissertations relating to coping mechanisms, Medline, PubMed literature materials and NIH Academic Access were among the data resources used. The rest of the literature sources were PsycNET, GLOBOCAN, National Cancer Society, SEER, World Health Organization (WHO, 2013) publications, African periodicals and bibliographic databases. Google search engine was used to look for resources on the study group and coping mechanisms. There was no data on coping mechanisms about the study group.

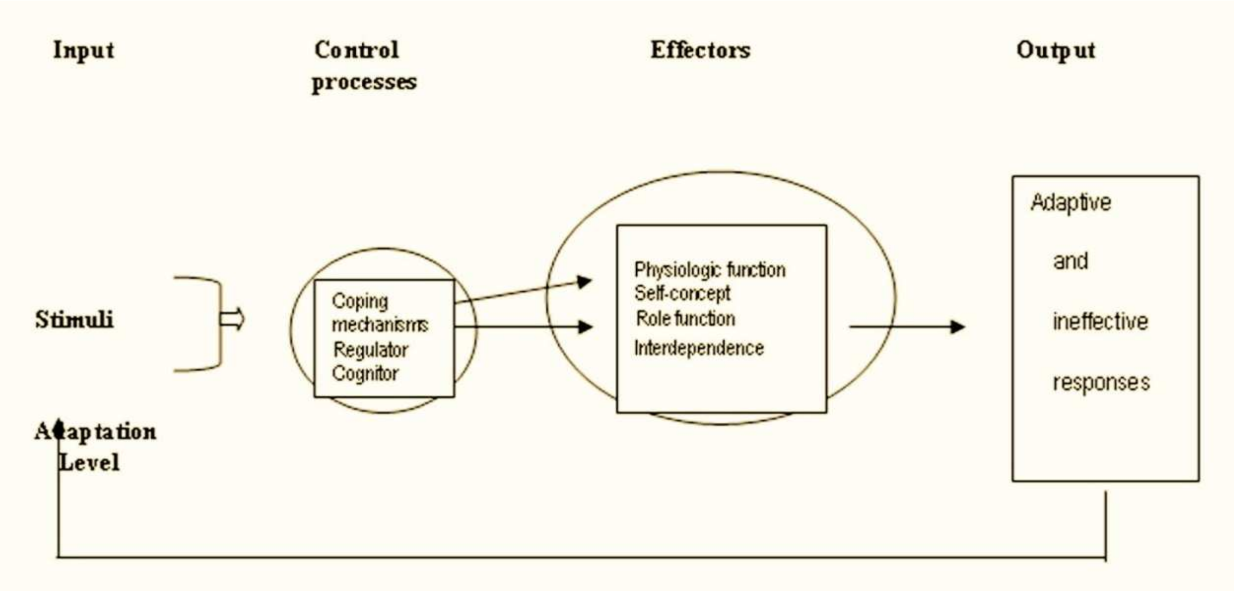
The term *coping mechanisms* yielded over 1,000 results distributed over 100 diseases in periodicals and books. However, when the terms *coping mechanisms* and *breast cancer* were used, the results produced less than 1,000 literature reviews and journals. When coping mechanism and study group was applied, the results were less than 50 articles. The research was limited to sources published in the English language between 1950 and 2014. Out of about 50 peer-reviewed sources about study group, less than 10 mentioned coping mechanisms about breast cancer, and none said coping mechanisms of Sub-Saharan African female immigrants.

Research Theory

Roy's Adaptation Models and Origin

Roy began developing her theory in 1964 at the University of California when she entered into her master's program (Roy, 1986). Roy spent over 17 years to develop the adaptation model (Roy, 1986). The choice of RAM became necessary in this study because of the concept of coping and adaptation as explained in Lopes, Pagliuca, and Araujo (2006), and Roy (Roy & Andrews, 1999) . The model encountered variations of definitions, though the themes were based on person, environment, health and nursing. See the model below:

Figure 1. Roy’s adaptation model. Adapted from The Ry’s adaptation model, by C. Roy and H. A. Andrews, 1999. Copyright 1999 by Appleton and Lange (per permission of C. Roy, Appendix F).



The content of Roy Adaptation Model was made up of abstract concepts of environmental stimuli to explain the concept of coping and adaptation. However, Fawcett (2005) summarizes the RAM (Figure 1). The environmental stimuli were focal, contextual and residual. She believed they were constantly changing forces that affect individuals or groups.

> The focal stimulus was immediate confronting a person or group; the contextual stimuli were all other incentives that contributed directly to the individual responses. Whereas the residual stimuli were the unknown factors that affected the person or group. Residual stimuli become contextual or focal when discovered. Environmental stimuli were directly related to coping process, and both were, directly and indirectly, related to the modes of adaptation. The was a relationship between environmental stimuli and the modes of adapting mediated by the coping processes. Individuals used to cope means to filter environmental stimuli (Figure. 1, the cognator & regulator subsystems). Whereas the

regulator coping process encompassed primary neural, chemical, and endocrine channels that processed stimuli in an automatic, unconscious manner, cognator comping process included four cognitive channels for stimulus processing: perception/information processing, learning judgment, and emotion. Groups used stabilizer coping process and innovator coping processor to filter environmental stimuli. Where the stabilizer dealing process accomplished the purpose of the group through the utilization of the group structure, values, and usual activities, the innovator coping process focused on the mechanisms by which the individual or group changed and worked.

The four modes of adaptations expressed were the response to environmental stimuli in people's behavior. The physiological model of adaptation (as shown in Figure 1) included individual's biological behavior (e.g. vital signs, and laboratory values); physical mode of adaptation focused on basic physical needs (air, food, shelter, etc.) to function. The self-concept mode of adjustment included the needs to feel about the body and personal self. The group identity mode of adaptation emblazed how the members of the group viewed themselves (Fawcett, 2005).

The role function mode of adaptation attention was on individuals' or groups' performance or persons' role in the society. The interdependence mode of adaptation looked at an interpersonal relationship, giving and receiving social support. Roy focused on managing the focal stimulus and took the contextual discussions into account.

Theoretical Proposition

The 12 propositions of RAM centered on thinking and feeling that mediated human action, when system relationships used acceptance and protection, to foster interdependence

(Gonozala, 2011; Roy & Andrews, 1999). From Roy (1976), the system was a set of connected parts that function to produce a common purpose. Roy compensatory compromised changing points. Focus, contextual, and residual stimuli were environmental factors within which the human system live (Roy, 1976). Roy's were principles of the coping process based on the innate or the acquired ways of interacting with the changing environment. According to Roy, the natural coping mechanism was genetically determined by the species and was viewed as an automatic process, whereas coping mechanisms develop throughout life.

Roy (1976) explained that a regulatory system (Figure 1) was a coping process involving the neural, chemical, and endocrine systems. Roy also mentioned the cognator subsystem (Figure 1) as a process that included four cognitive, emotive channels: the emotive channels were perceptual, information process, learning, judgment, and emotion. The integrated life process referred as adaptation or person making worked to meet individual's needs (Roy & Andrews, 1999). The self-concept particular identity model (Figure 1) consisted of coping mechanisms such as the psychological and the spiritual aspects of human systems (Roy, 1976); and the unknown coping mechanisms of individual persons were the hindrance to effective intervention. The study explored the unknown coping mechanisms of study group using the above model. Given that, the human nature within the milieu of the environment needed additional resources to resolve the confronting issues. Effective responses observed when individuals were aware and knowledgeable of self and environment (Gonzalo, 2011). Knowledge of the person coping provided mutual understanding when providing interventions.

Literature and Research-Based Analysis

Worldwide, there are an estimated 12 million new cases of breast cancer in 2008, and 7.6 million reported deaths in 2008; 26.4 million may be diagnosed with breast cancer by 2030, with 7 million deaths (DeSantis, Siegel, & Jemal, 2013; Ward et al., 2004). The incidence rate for breast cancer varied globally from region to region, from Eastern to Western, or among racial /ethnic groups (Cunningham, Montero, Garrett-Mayer, Berkel, & Ely, 2010). The differences may be due to genetic, socioeconomic, educational, geographical location or cultural differences (Cunningham et al., 2010; WHO, 2013). According to WHO (2013), female Blacks were at greater risk of contracting breast cancer, and that mortality was high among the Black race.

Elsheshtawy, Sen, Koga, and Conroy (2014), Gonzaga (2013), and Mukwato et al. (2010) mentioned that an effective coping mechanism was important to females with breast cancer in Sub-Saharan Africa. There were no effective coping mechanisms in place for the study population in the literature reviewed, and as documented by these authors (Ali-Azri, Al-Awisi, & Al-Moundhri, 2009; Mukwato, 2010). Nonetheless, there were studies on coping mechanisms of the European Americans, African Americans, and Asian Americans. The rest of the studied females' populations were South Americans, Europeans, Russians, and Australian female immigrants (Forouzanfar et al., 2011; Kamath et al., 1999; Schleicher, 2007). There was an existing gap to investigate.

Obajimi et al. completed a (2013) cross-sectional study of 818 female participants and showed that the level of awareness of breast cancer was small, and the female population required breast cancer promotion and education on mammogram screening, coping, and support. In a similar study conducted with 93 married women in Ahmadu Bello University Hospital, Zaria, Northern Nigeria, Odigie et al. (2010) noted that the females faced psychosocial effects related to mastectomies, particularly, physical, emotional, and social changes. Gonzaga (2013) observed that in the journey from diagnosis through treatment to survival or death, there was no coping mechanism in place to support the females with breast cancer. Gonzaga supported or acknowledged coping mechanisms for breast cancer patients was critical and probably nonexistence. Elsheshtawy et al. (2010) documented that coping mechanisms, such as cultural sensitive therapeutic groups, were essential for both the individual patient and her family, particularly, for long-term health, and for a quality of life.

In a study of 124 patients at the College of Medicine, Lagos State University, Nigeria, Popoola and Adewuya (2012) observed the association of lack of knowledge about coping mechanisms and emotional problems was with depression related to females who went for mastectomy. Popoola and Adewuya further noted that single women with breast cancer perceived a lack of social support and experienced a high incidence of depression. Clinicians lacked the psychosocial knowledge, therefore, could not provide the needed education that might positively impact on the female breast cancer patients (Gonzaga, 2013; Popoola & Adewuya, 2012). Ohaeri et al. (2012) studied 63 participants, with an average age of 49.9 years and found that a greater number of the studied population had no knowledge of cancer, coping mechanisms, or resources; instead, their biggest concerns were anxiety and death.

The stressful conditions of breast cancer affected the patient's adjustment to the illness (Harrison et al., 1995). Baldacchino et al. (2013) documented that feeling safe and secure in life is achieved by using effective coping mechanisms. According to Baldacchino et al., awareness associated with coping mechanisms may influence illness perception that may promote growth and adaptation. Coping mechanisms were relevant to the study group as they learned to adapt to the disease (Juarez, Mayorga, Hurria, & Ferrell, 2013; Mukwato et al., 2010; Roy, 1976). Stanton et al. (2000) and Sunnquist, Traskman-Bendz, and Westrin (2013) documented that application of coping mechanisms increased the survivors’ life span.

Coping mechanisms, such as social support and spirituality, influence survivorship among low-acculturation survivors (Lopez-Class et al., 2011; Stanton et al., 2000; Sunnquist et al., 2013; White & Boehmer, 2012). Ganz, Desmond, Meyerowitz, and Belin (2002), and Pistrang and Baker (1995) stated that coping mechanisms, such as social support, improve physical and emotional adjustment to breast cancer patients.

Henderson (2003), Manne, Ostroff, Winkel, Grana, and Fox (2005), and White and Boehmer (2012) showed that in stressful and depressive encounters, people drew the variety of resources to aid themselves in the coping and adjustment processes. Some of these resources include family, social support, prayers, intelligence, and personal disposition (Ben-Zur, Gilbar, & Lev, 2001; Lewis, Fletcher, Cochrane, & Fann, 2008). Baldacchino et al. (2013) and Culver, Arenal, Antoni, and Cerver (2002) found that coping mechanisms differ by age, culture, ethnicity, gender, individual and geographical location.

Roy’s Adaptation Model (RAM) and Rationale

In a study of 120 females in Sierra Leone, Shepherd and Mclnerney (2006) claimed about 80% of the women acknowledged the lumps in the breast could lead to death if they do nothing about it. Nevertheless, most of the participants did not know that the lumps could be a sign of breast cancer (Shepherd & Mclnerney, 2006). According to Ijaduola and Smith (1998), and

Shepherd and Mclnerney (2006), African females know the signs and symptoms of breast inflammation and have their ways of coping and declined to seek help from physicians.

According to Vorobiof, Sitas, and Vorobiof (2001), breast cancer ranks 3.4/100,000 in the country. Nonetheless, females in the Gambia were not knowledgeable about breast cancer (Vorobiof et al., 2001). Similarly, Gambian women knew that a lump mostly develops into breast abscess, but did not link it with breast cancer (Vorobiof et al., 2001).

No data existed about breast cancer in Sierra Leone, in that there were no official figures on female patients with breast cancer after the civil war (Limontas-Salisbury, 2014). However, like other West African countries, Sierra Leone women knew that a woman could develop a lump in her breast, but have not linked this symptom to a possible diagnosis of breast cancer and did not know that they must report for treatment (Abdulrahman & Rahman, 2012; Limontas-Salisbury, 2014). Limontas-Salisbury (2014) stated there were no formal organizations such as coping or support groups for breast cancer disease in Sierra Leonean communities.

According to Wiafe-Addai (2009), Ghanaians have myths and misconceptions about breast cancer. Mistakes include the belief that breast cancer was not curable; breast cancer was fat; and breast cancer was due to witchcraft, the devil, or a curse on the family. As the Sierra Leone and Gambia communities, females with breast cancer are stigmatized; hence, women with breast cancer hide the disease and apply their coping mechanisms (Wiafe-Addai, 2009). Wiafe-Addae (2009), noted that some patients have fears and anxieties about a mastectomy because there were no available statistics on the patients’ survival rates or any organized supporting group after the procedure.

According to Wiafe-Addai (2009), barriers to breast cancer care among Ghanaian females include a lack of awareness, counseling, coping strategies and support, accessibility to medical attention, cost, and inadequate treatment. The Sub-Saharan African female population lacked knowledge of the disease and coping mechanisms (Wiafe-Addai, 2009). Sub-Saharan African female immigrants diagnosed with breast cancer may be indecisive about choices of treatments and have no idea about the kinds of treatment available. The Sub-Saharan African female immigrants migrated with their beliefs and traditions that are either positive or negative to cope from the guest country.

However, Shosha and Kalaldeh (2012) noted that Roy's model has two sub-concepts: Cognator and regulator systems were adaptive models to explore coping mechanisms. The adaptive responses, or coping mechanisms, described the personal integrity and the control of a person as an adaptive system (Naga & Al-Khasib, 2014). Per Naga and Al-Khasib adaptation mode was where individuals used the physiological mode and three psychosocial modes (self-concept, role function, and interdependence) in the coping processes. It is important to understand the regulator and cognator coping processes when exploring the coping mechanisms of individuals or groups of females (Roy, 1976). The rationale for the application of RAM was the focus on individuals' adaptation to uncertain environment and guided the assessment of individual adaptation (Roy & Andrews, 1999; Shosha & Kalaldeh, 2012).

Research Question and Theory

Frank and Roesch (2006) noted the different definitions for coping by various coping theorists; however, Roy's (1976) definition for coping mechanisms served as the theoretical framework for the study, in that, the model presents the process of exploring coping mechanisms from individual experiences. The conceptual framework conformed with the concept in the research questions. It seeks for the coping mechanisms the participants used to overcome the experiences at diagnosis, treatment and remission phases of breast cancer. According to Henderson et al. (2003) and Tomey and Alligood (2002), the model put the person as an adaptive system in constant interaction with the internal and external environment.

Roy Adaptation Model Framework

In Figure 1 shown above, the coping mechanisms model has the breast cancer experiences as the input that passed through coping processes, effectors, and output. The study was interested in using the coping mechanisms principle (control methods) as stated in the model (from the input to production).

In this study, the Roy Adaptation Model's three environmental stimuli were used to guide the study. The focus stimulus was the breast cancer, the contextual stimulus was the diagnosis, treatment, and remission; and residual were the unknown coping mechanisms of the participants. The study was concerned with the unknown coping mechanisms of the participants, as such; research questions were formulated to explore the coping mechanisms. The open-ended interview questions were from the four effectors of RAM – physiological, self-concept, role function and interdependence (Badr Naga & Al-Atiyyat, 2014) that told what coping resolved what experience and what phase.

The application of the model was used to determine the primary coping mechanisms applied in certain situations. After finding out about your diagnosis, did you remember thinking back about the signs or symptoms that you might have ignored or forgotten? The answer to this question reflected on the physiological function of individuals as stated in Roy's model.

Similarly, the interview issues such as, “If the support, why choose to go to that source for help?” The answer to this question measured the interdependency as shown in the role of social support in RAM. The response underlined the stress involved without that support. Lastly, the questions about family and community interactions reflect on both interdependence and self-concept group identity mode. Besides maintaining inter-communication with one another, it relieved participants from solitary life, and maintain the close relationship with the family (Radina, & Armer, 2001). The interview question’s answers reflected on research and were consistent with Badr Naga & Al-Atiyyat (2014) and Edwards (2010).

On the other hand, the cognator and regulator as mentioned in Figure 1 played a significant role in the coping process. Individual knowledge level of disease determined the application of the available resource to support their coping process. Also, from regulator perspective, the physical strength, as well as physical resources, appeared to affect the coping process, particularly, among the participants without funding.

Folkman, Lazarus, Gruen, and DeLongis (1986), showed the two primary coping methods predominantly used: Action-based coping (problem-focused) and emotion-based coping (emotion-focused). Where Action-based coping mechanisms were related to resolving the disease’s experiences (breast cancer) and solution, emotional-based coping mechanisms were related to planning, suppression of the activities, confrontation, self-control, or restraint (Drageser, Lindstrom, & Underlid, 2010; Folkman et al., 1986).

Folkman et al. (1986) documented that emotional-based coping mechanisms were applied to reduce the symptoms of the problem without addressing the source. The two models supported RAM’s view and added to RAM to provide the foundation used to explore coping mechanisms from the study group. Also, Coping mechanisms if naturally acquired or taught helped participants to adjust to the environmental conditions without altering the goals, or purpose, (Danhaur, Crawford, Farmer, & Avis, 2009; Monti, Kadden, Rohsenow, Cooney, & Abrams, 2002).

Roy Adaptation Model and Seminal Researchers

Singh-Carson, Wong, Martin, and Nguyen (2013) mentioned that survivors of ethnic minority groups differed from the understanding of breast cancer and coping mechanisms. Dobratz (2008) acknowledged that Roy's adaptation model was one of the frameworks from which researchers have used to explore information from breast cancer patients.

Roy's adaptation model has been used to examine the multiple adaptive modes of individuals at different environments (Shosha & Kalaldeh, 2012). Similarly, Baldacchino et al. (2013) used RAM to assess the spiritual coping mechanisms of patients with chronic heart diseases to determine prevention and control measures. Cunningham (2002) adopted Roy's model to study the coping mechanisms used in dealing with life changes associated with menopause to develop a protective measure for menopausal females. Raleigh, Robinson, Marold, and Jamison (2006) applied the model to explore the relationship of coping mechanisms between home caregivers and hospice caregivers for stress control measures. It was, therefore, appropriate to use RAM to explore the coping mechanisms of the study population.

Key Statement in Framework

The key statement mentioned by Roy was the physiological, self-concept; role function, individual identity, and interdependence modes affect coping process (Roy &Andrews, 1999). The methods enhanced coping processes that affected behavior. Per Roy (1976), individuals coped with self-concept, interdependence, and functional adaptive modes contribute to personal health, quality of life or dying with dignity.

The Roy Adaptation Model Application

Taleghani et al. (2006) used the environmental concept to study coping mechanisms and noted that understanding individuals' internal and external environments are of critical importance. For instance, a researcher could not examine the coping mechanisms of African American or Iranian females without considering the individuals' religion. Saati (2012) and De Bocanegra, Trinh-Shevrin, Herrera, and Gany (2009) noted that a limited knowledge and understanding of the environment could compromise female immigrants with a breast cancer coping mechanism. According to Saati (2012), such approaches may not promote healing process. Khalili et al. (2013) applied physical, psychosocial, and social well-being concepts to address breast cancer in a cross-sectional study, and recommended that those providing care for breast cancer patients should address physical, psychological, and social wellbeing. Khalili et al. equally acknowledged about an individual's coping mechanisms were relevant when evaluating the impact and treatment of breast cancer.

Naga and Al-Khasib (2014) conceptualized Roy's adaptation model and sociocultural aspects when assessing cancer patients with pain. Naga and Al-Khasib (2014) stated that physiological changes influenced the function of the individual patient and changed the interdependence mode. Naga and Al-Khasib indicated that coping mechanisms, and how they were applied, were necessary to reach adaptation.

Henderson et al. (2003) and Nerenz and Leventhal (1983) supported the model by showing evidence that individual demonstrated a capability to respond to both internal and external environments. The model contributed to the study and provided a more systematic guide, quality work, increased knowledge and organized data (Badr Naga & Al-Atiyyat, 2014).

Henderson et al. (2003) applied Roy’s adaptation model in a cross-sectional study of 86 African American females with breast cancer to determine their coping strategies (mechanisms). Henderson et al. (2003) viewed that individuals adaptive systems respond to their changing environment. Henderson et al. (2003) further found that positive appraisal and seeking social support were the most widely used among African American females with breast cancer.

According to Naga and Al-Khasib (2014), Roy’s adaptation model was used to examine a person’s thinking regarding adaptation. Roy (1976) defined adaptation as the process in which individuals used their consciousness to create integration between human perception and their environment (Shosha & Kalaldeh, 2012). Coping mechanisms if naturally acquired or learned, it helped participants to adjust to the environmental conditions without altering the goals, or purpose, (Danhaur, Crawford, Farmer, & Avis, 2009; Monti, Kaddden, Rohsenow, Cooney, & Abrams, 2002).

Literature Review Related to Construct

As reported by Olopade (2005), diagnosis of breast cancer was ten years earlier with Sub-Saharan females compared to advanced countries of the same age. The mortality rate was high among Sub-Saharan women with breast cancer, probably because of a lack of awareness/knowledge. A lack of access to treatment; cultural stigma; and a lack of training for physicians to make an appropriate diagnosis, treatment plan, and environmental exposure assessment (Olopade, 2005; Wiafe-Addai, 2014).

Despite the advances in education and the promotion of breast cancer awareness and care (Beyene, 1999), there was little improvement in the treatment of female immigrants with breast cancer from the Sub-Saharan African region.

Researcher Approach: Strengths and Weakness

Sub-Saharan African female immigrants' coping mechanisms were not known compared to those of other immigrant populations (McCoy, 2005). McCoy (2005) further stated that there was no consensus regarding comparative efficacy related to problem-focused and emotion-focused strategies, but the writer indicated that Western practices had been used to treat this population, and that has led the patients to distrust the doctor or treatment or had ended with poor prognosis.

The strength of this study was that individuals generated the information (primary data) through their experienced of the disease. Knowledge from the primary source helps to enhance the understanding of the problem, thereby providing an appropriate foundation for proper planning to support Sub-Saharan Africa female immigrants with breast cancer 's treatment or intervention.

The weakness, on the other hand, included the recruitment procedure and the size of the sample. The sample size was a small proportion of the Sub-Saharan African female population with breast cancer. As such, the outcome of the study results cannot apply to the entire Sub-Saharan Africa female population.

Constructs and Method of Study

While researchers have examined the coping mechanisms of women with breast cancer on other minority female populations, scholars have not studied the coping mechanisms of females from the Sub-Saharan African female immigrant with breast cancer (Ly et al., 2011). There were no data for diagnosed African female immigrants with breast cancer in the USA.

Probably as a result of anxiety and a lack of knowledge, women in the study population hid breast cancer till they were at advanced stage (Wiafe-Addai, 2009). During the hiding or exposed phases, methods for coping were unknown. Given this, the study explored the construct, coping mechanisms, which appeared to be unknown among Sub-Saharan African female immigrants. The interview's procedure was 1-to-1, per the recommended of IRB (11-18-15-0183692). All responses were digitally recorded and memos noted.

Concept and Rationale

Coping mechanisms have become essential in the healing and dying processes of breast cancer, particularly, for both the Caucasian and Black races (Buki et al., 2008). Females with breast cancer are compelled to verbalize inability to cope with the situation and asked for help related to the situational crisis. The rationale for the study was to be knowledgeable of the coping mechanisms, and know how they have used the unknown coping mechanisms to decrease the probability of experiencing high stress due to diagnosis, treatment, and remission (Iwasaki, 2003).

Breast cancer primarily affects females more than their male counterparts (DeSantis et al., 2013). Coping mechanisms differ between the men and women. Also coping vary by stage or phase of the disease (Holland & Gooen-Piels, 2000; Schleicher, 2007). The morbidity and mortality rate trend varied by ethnicity (CDC, 2016); however, scholars have shown that while morbidity was higher among European American females, mortality was higher among female's descendants of Africans (Gleason, Mdzinarishvili, & Sherman, 2012). Abdulraham and Rahaman

(2012), Ly et al. (2011), and Olopade (2005) noted that breast cancer affects Sub-Saharan African females early in their 30s compared to the late 60s for their Europeans and Americans counterparts.

These enumerated factors have generated ethnic concerns to consider the factors that have increased the risk of dying of the Sub-Saharan African female immigrants with breast cancer. Singh-Carlson, Wong, and Nguyen (2013) showed that emerging issues might differ from various ethnic minorities considering different cultural beliefs, religion, socio-economic status, politics or geographical region of origin.

Key Concept and What Remains …

Olopade (2005) noted that it was not clear how biology and the environment contributed to breast cancer. There was evidence that nature played a role in breast cancer incidence (Olopade, 2005). According to Olopade (2005), the data of breast cancer incidence in older European females did not apply to the types of breast cancer commonly found in African woman, because the risk level was different from European American, African American, and Africans. Given these, the coping mechanisms may be the same or different, or same, but the application may have a different meaning compared with these other ethnic groups. As a result of these, the study was formulated to uncover the coping gab.

Research Question(s) and Why

Lam and Fielding (2003) noted that the presence of breast cancer in African females called for the restructuring and redefining of a new assumption to restore the sense of purpose. There was the need to develop coping mechanisms and encourage Sub-Saharan African female immigrants with breast cancer to use (Elsheshtawy et al., 2014; Gonzaga, 2013; Mukwato et al., 2010).

Mukwato et al. (2010) recommended the development of coping mechanisms to assist the study group to cope with breast cancer crisis. Gonzaga (2013) supported the idea documented by Mukwato et al. (2013) on coping and adaptation strategies of Sub-Saharan African female immigrants with breast cancer. Kim, Han, Shaw, Mctvavish, and Gustafson (2010) mentioned that increased awareness about coping with breast cancer would promote adaptation. The multiple reasons regarding why the coping mechanisms were not known might arise from culture and beliefs. I encourage further study into cultural beliefs related to female breast cancer in Sub-Saharan Africa.

Summary and Conclusion

Chapter 2 was a review of the literature on breast cancer and Sub-Saharan African female immigrants, age, country of origin, culture, coping mechanisms, and Roy's adaptation model. Scholars have provided coping mechanism data on European Americans, African Americans, and other immigrants from Asia, Europe, and South America (Ben-Zur et al., 2001; Brady & Helgeson, 1999); but there is no database about Sub-Saharan female immigrants with breast cancer.

The gap in the literature on the coping mechanisms of Sub-Saharan female immigrants with breast cancer warranted investigation. The discovery of the coping mechanisms of Sub-Saharan female immigrants with breast cancer would add to the literature and enhance breast cancer interventions. Roy's Adaptation Model and phenomenological strategies were the methods to elicit information from the study participants.

Chapter 3 is an explanation of the methodology, research questions, and pilot study. The rest of Chapter 3 covered the method for sample recruitment, interview procedures, data collection, and analysis plan. Finally, Chapter 3 includes the issues of trustworthiness, ethical systems, and transition to Chapter 4.

Chapter 3: Research Method

Introduction

I explored the coping mechanisms of Sub-Saharan African female immigrants with breast cancer and to generate appropriate information to improve the care, diagnosis, and intervention of breast cancer. The study results added to the existing knowledge base in the field of public health and community medicine. Chapter 3 consists of the researcher's role, interview procedure and the rationale for the study. Chapter 3 covers the description of the method of recruitment of participants, research instruments, sampling system, sample saturation, and data collection. The rest of Chapter 3 are the interview process for the pilot and the main studies and data analysis process. Open-ended questions (Appendix A) were used to collect both demographic and research data. Participants' rights and ethical concerns, as well as the Chapter 3 transition, is in the last section. This section outlines the qualitative method used to explore the coping mechanisms of the study group.

Study Design and Rationale

Research Questions

RQ 1. What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer diagnosis?

RQ 2. What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer treatment?

RQ 3. What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer remission?

Defining Central Concept

The central concept of the study was the coping mechanisms of the study group that was unknown, and the need to know them for the purpose of improving the intervention, or management of psychosocial issues of the study group and quality of life. Roy’s adaptation model was selected as the framework of the study (Creswell, 2009; Doumit et al. 2010; Groenewald, 2004; Joulaee et al., 2012; Lie, 2013). A phenomenological approach was used for this study because Mannen (1990) and Giorgi (1997) showed that phenomenology deals with issues related to peoples’ life experiences of a phenomenon.

Roy’s adaptation model and phenomenological strategies in this context were congruent philosophies brought together to processes and explored the coping mechanisms (Groenewald, 2004; Joulaee et al., 2012; Roy & Andrews, 1999). Corbin and Strauss (2008) noted that research questions dictated the method for sampling and the research approach of the study.

Tradition and Rationale

A qualitative approach was used to explore coping mechanisms from Sub-Saharan African female immigrants with breast cancer. The qualitative method focused on the individual’s experience and described the situation (Miles & Huberman, 1994). A qualitative approach was an approach to explore the coping type, when was it used, and what was the outcome. The phenomenon, coping mechanisms, of the research group, has not been explored. As it is illustrated by Roy and Andrews (1999), the mechanisms that influence coping are internal and external forces. Strength and self-determination affect internal factors, whereas age, education, income, and sociocultural support, add to, or reduce a person’s coping capacity (Lie, 2013).

The study design was a phenomenological method. The method originated from psychology, and it seeks to understand the life experiences of an individual (Groenewald, 2004; Husserl, 1970). The phenomenological strategy works with a small number of the people to engage with direct observation and individual's expertise in the natural setting to find the pattern and the meaning (Creswell & Clark, 2004) of their experiences and coping. Folkman et al. (1986) and Hack and Degner (2003) stated that holistic appraisals might coalesce around the coping effort an individual makes.

As a consequence, people may share or hide their coping mechanisms depending on the environmental situation (Doumit et al., 2010). I was not concerned with describing the how (nature) and the why (the meaning to adapt) the coping mechanisms, instead, what coping mechanism(s) was used to neutralized the breast cancer experiences. The approach to meet the research question was by the use of qualitative and phenomenological strategies.

Role of the Researcher

My responsibilities as the researcher included all activities in the seven phases of research: designing, interviewing and data collection, transcribing, thematizing, analyzing, verifying, or giving the reporting of the study. To prevent biases in the data collection, analysis, and interpretation, no other researcher had access to the data or allowed to contribute to the understanding. I served as the interviewer, recorder, and a memo keeper. I contacted and prepared the interview sites before the interviews. The participants' response integrity maintained throughout the interview process (Fink, 2000).

Methodology

Participants and Recruitment Process

The research population was the Sub-Saharan African female immigrants with breast cancer. The criteria used to select the participants were the following: female immigrant, aged between 25 year and 65 years (Olopade, 2014), born in Sub-Saharan Africa and having been diagnosed with breast cancer within the last decade. I exempted female with breast cancer and pregnant or having other health conditions (comorbidity or co-occurring conditions) from the study. The reason being that these females comorbidity's coping mechanism would influence breast cancers'. I posted the criteria for the recruitment in the flyers and the posters posted at the treatment centers, indigenous breast cancer survivors' group centers, indigenous churches and shopping centers (Appendix C). Interested participants in the study signed up the sheets and emailed or text acceptance message as well as their contact information to me. Qualified participants were followed up via phone, e-mail or text messages. Because there was no previous comparable study with this population, I considered the variable, coping mechanisms.

There was no relationship (professional or nonprofessional) between the participants and the researcher. I told the members at the beginning of the study that they could quit at any time in the research process. I did the follow-up of the study after the completion of the complete research.

The sample size of the group interviewed was 12 (*n*=12) participants for the primary study (Creswell, 2009; Groenewald, 2004), and two (*n*=2) for the pilot. The strategy for data collection was the 1-to-1 interview. The interviewed method was a combination of a predetermined set of open-ended questions with the opportunity for the interviewer to further explore particular themes or responses. Although both the pilot and main study groups were independent of each other, they share similar characteristics. Each interview lasted between 45 minutes and 50 minutes.

The rationale for the pilot study was to examine the method for exploring the coping mechanisms at the individual level. The strategy to collect the data at the individual level, instead of the original plan of the focus group was per the recommendation of IRB (11-18-15-0183692). Participants (volunteers) received thank-you cards and information of the interview. A purposive sample was selected because the sample was a nonprobability (Welman & Kruger, 1999). Researcher based the selection of the participants the purpose of the research (Babbie, 1995; Greig & Taylor, 1999; Hycner, 1985), and have met the study criteria (Kruger, 1988).

Sample and Saturation

According to Mason (2010), qualitative research requires an analysis of small amounts of data rather than the large sample that was time-consuming and often impracticable. Per the author, qualitative samples must be large enough to ensure and uncover the relevant information. If the sample was too large, it may result in redundant or repetitious information. For this reason, the small sample size was 12 because the qualitative research was concerned with meaning and not making generalizations (Mason, 2010).

The volunteers were breast cancer patients. Similar with (Gonzaga (2013), the 12 female in the study was not predetermined, but by the principle of saturation. Data collection was terminated at the twelfth woman when there was no new emerging theme (Gonzaga 2013). The sample size in this context followed the concept of saturation.

Instrumentation

The extracted constructs used in the interview came from the semi-structured interview guides of Edwards, (2010), Hauken, Larsen, and Holsen (2013), and Henderson (2003). The semi structured interview guides were developed and used by Edwards (2010), Hauken et al. (2013), and Henderson et al. (2003). The three similar studies' guides were used to explore coping mechanisms on women with breast cancer. Edwards' work was on breast cancer in African-American women. Hauken et al. studied young women with breast cancer, and coping strategies among African American women with breast cancer by Henderson et al. The constructs were appropriate to this study population, in that both research concepts and study populations were similar to this research. The constructs were suitable for the collection of the study's data.

Pilot Study

A pilot study was conducted to pretest research materials to determine the appropriateness of the study procedure. The sample consisted of three Sub-Saharan female immigrants with breast cancer; however, two participants interviewed. The third dropped from the study. The open-ended and probing questions were the same for the pilot and main study. Note-taking and interviews digital recorded per the permission of the participants. The result of the analysis of the pilot study was used to update and appraise methodology of the original study. The questions are re-phrased in another ways to explore the coping mechanisms. In areas where the items were sensitive or too long, the questions were modified into short sentences without losing their meanings.

Interview Process

Participant sat on a 1-to-1 basis for each interview conducted. The selected language for the interview was English. Before the sitting, participants were informed on how to fill out the demographic questions. Participants were reminded that their responses and opinions are important and would be recorded. Participants were informed the rules for a hitch-free interview with each participant before the meeting. Open-ended questions with a probing strategy were used to collect the data (Brittin, 1999; Joulaee et al., 2012). Participants received easy-to-read and probing questions.

The content of the research questions was the instrument that helped to understand the coping mechanisms (Walden University, 2013). No one expressed emotional distress during the interview periods. However, there were mechanisms in place for participants who may have displayed emotional distress during the interview process to be referred to the local counselor, or given online phone numbers for online consultation, which was less expensive.

Semi structured in-depth interview questions were used to seek insight into each's experiences and coping mechanisms. Kvale and Brinkmann (2009) mentioned that semi structured interviews allowed for flexibility of open-ended questions and ensured the coverage of relevant topics. According to Husserl (1970) and Silverman (2010), experienced narration obtained descriptive information from the interviewees' accounted of reality. Lie (2013) acknowledged that the semi structured interview was organized with the main question first, followed by the probing questions. The IRB recommended the data collection method from focus group to 1-to-1 interview.

Data Collection Plan

The interview meeting places were upon the agreement of choice of the participants. Traditional and cultural sentiments related to gender differences, particularly, on this study, were addressed. Participants were reassured of confidentiality.

After the introduction, and before data collection, at each level, the participants were assured of an atmosphere of trust and openness. Participants were reminded at each interview sitting that she could refuse to answer any question, or could discontinue from the study at any time in the data collection process. The researcher informed participants that no name would appear in the research paper and reassured of the importance of anonymity.

For the purpose of privacy and confidentiality, each participant was ascribed a code number manually delivered or sent by text to them. The participants used these assigned code number throughout the study. Each member answered the same research questions, except the probing question that differed, depending on the direction of the responses to the interview questions. The interviewer noted nonverbal answers and detail information of the environment. The interviewer conducted the interview in a place that provided privacy or decrease distraction and maintained confidentiality. Participants were informed about the need for follow-up after the completion of the study. Half of the study group were followed up to see how they expressed their purported coping mechanisms. Two participants died from breast cancer complications after the initial interview and before the follow-up process.

The researcher transcribed the data, organized into files and place into ascribed color folders (Creswell, 1998). Data collected could only be accessed by the researcher. The data collection lasted approximately 60 days.

Data Analysis Plan

Excel software was used to compile the demographic and phenomenological data of the participants. The data were analyzed as the interview process continued (Merriam, 1995; Rossman & Rallis, 1998). Qualitative analysis entails transcription, coding, labeling, a grouping of similar codes, themes, cluster ideas and themes (Pope, Ziebland, & Mays, 2000).

The strategy was an appropriate method for the study because it focused on findings, the essence, and the meaning of experiences of the participants, and described the essential structure of a phenomenon in the analysis (Colaizzi, 1978). The phenomenological strategy was used to explore the participants' experiences, and RAM used to assemble the coping mechanisms whereas grounding approach used to analyzed the data.

The researcher thoroughly read through specific information to gain understanding and made general sense of the whole idea of each of the 12 participants' transcription. "Color coded systems were used to highlight specific theme or category to perform the preliminary analysis" (Maldonado, 2015, p. 4). The related information collated into transcripts, and meanings were formulated from the transcripts (Benisovich & King, 2003; Dickelmann, Allen, & Tanner, 1989; Gonzaley et al., 2016; Miles & Huberman, 1994).). The meanings formulated from the transcripts were organized into themes, theme clusters, and finally into issues categories (see Table 8) (Maldonado, 2015). A detailed and rich description of the lived experiences, perceptions, and coping mechanisms from the materials were written down. Triangulation from different data sources was used to build a coherent justification for the themes (Maldonado, 2015).

Issues of Trustworthiness

Morse, Barrett, Mayan, Olson, and Spier (2002) stated that verification was the process of checking, confirming, making sure, and being certain. According to Ice (2012) (as cited by Whittemore, Chase, & Mandle, 2001), there were debates concerning methodology rigor and terms of establishing validity criteria that protected investigators invoking concepts and theories that did not accurately represent the phenomenon of interest. The inclusion of, at least, four countries' females, and the distance between these participants increased the external validity of the current research (Nurmi, 2011).

Ice (2012) stated that validity and reliability assessment in quantitative research were not appropriate to qualitative research, given the interpretative research perspective, different terms have been proposed to assess qualitative researchers and to validate results. Lincoln and Guba (1985) mentioned truth values and credibility; Guba and Lincoln (1998) noted authenticity, and Emden and Sandelowski (1998) proposed goodness. According to Ice (as cited by Lincoln & Guba, 1985), the development of credibility criteria were used to assure trustworthiness in qualitative research inquiry. The current study used Lincoln and Guba's criteria: credibility, transferability, dependability, and confirmability to validate the study's results.

The reliability of the data was supported by prolonged engagement, persistent observation, triangulation and member checking to maintain credible finding and interpretation (Guba, 1981). The nature of the study may not allow the results to be generalized; rather the study provided an in-depth description of coping mechanisms of the population under study. The data were organized and presented to answer the research questions comprehensively, consistently and logically, to show or demonstrate the subjective view of the participants. The study results were transferable in that the study has a comprehensive description of Sub-Saharan African female immigrants with breast cancer coping mechanisms.

According to Shenton (2004), addressing the issue of reliability, the positivist advocated that if you repeat the same work in the same context, with the same method and the same participants, the results must appear to be the same. Dependability expressed consistency that established credibility through the construction of an audit trail (Krefting, 1991; Shenton, 2004). An audit trail incorporated to enhance the rigor of the study provided detailed data analysis and the decisions that led to study results.

An audit trail was used to address the problem of dependability. The incorporated audit trail in the methodology decision enhanced the chair and the research committee to scrutinize, and consistently reviewed the data during the analysis process.

Shenton (2004) stated that conformability was the quality of investigator's ability to compare concerns to objectivities. The findings were the real results of the experiences and the ideas of the informants. Increasing the level of triangulation and conformability reduced investigative bias. The research committee examined and reviewed the process of data collection, data analysis, findings, interpretations, and recommendations.

Ethical Procedures

When the study and the accompanying data collection materials were approved by IRB informed consent was prepared to explain the study and the role of the participants, and manually handed over or emailed to participants before the interview (Appendix C).

Participants were informed of the procedure, expectation, and the possible risk as stated in the university research guide (Walden University, 2013). The Researcher assured participants that the consent signed was only for the purpose of this study. Interviewer answered all questions from members before asked to sign the consent form. The interviewer informed members in writing all data collection methods. Participants signed the consent form before the interview. The researcher told members of the outcome of the study by mail after the study. To protect members' privacy, and for ethical purposes code numbers instead of names were used. For the purpose of confidentiality, individuals in the study were asked not to identify their personal information; instead, participants used the code numbers.

All the participants were volunteers. The researcher addressed members' ethical challenges, privacy, and confidentiality issues. After the IRB approval of the research materials, letters, and flyers (Appendices B & D) were sent out to the cancer treatment centers, indigenous African churches, and survivor group centers to recruit volunteers for the study.

Summary

A qualitative, phenomenological strategy, was the method chosen to explore the coping mechanisms of the participants in this study. The sample population included Sub-Saharan African female immigrants with breast cancer who lived in the United States. The researcher recruited 12 participants for the interviews. Researcher addressed members' security, ethical concerns, and confidentiality issues. Chapter 4 consisted of the discussion and the results, whereas Chapter 5 consisted of the interpretation, conclusion, implications, and recommendations.

Chapter 4: Results

Introduction

I recruited 12 participants for the qualitative study. The purpose for the study was to explore the coping mechanisms of the study group and used the outcome to improve the study population's breast cancer interventions. The Roy adaptation model and phenomenological approaches were the methods used to collect the data whereas grounding method was used for data analysis.

Excel software was used to compile the demographic and themes-descriptions-quotes data. The data that emerged from the study was thematically analyzed. Chapter 4 included the analysis and the presentations that were used to explore the themes of the coping mechanisms. The data analyzed showed a positive relationship with the research questions.

Q1. What are the coping mechanisms of sub-Saharan African female immigrants when dealing with breast cancer diagnosis.

Q2. What are the coping mechanisms of sub-Saharan African female immigrants when dealing with breast cancer treatment.

Q3. What are the coping mechanisms of sub-Saharan African female immigrants when dealing with breast cancer remission.

Chapter 4 comprised the findings of the pilot and main studies, the setting of the study, demography, data collection and organization, and individual disclosure summary. The rest were evidence of trustworthiness, results, and review. Chapter 4 includes the analysis of the study and addressed the research questions. included the results of each participant's thematic analysis in Chapter 4.

Pilot Study

I interviewed two participants for the pilot study. One of the three participants recruited for the pilot study interview dropped from the meeting because she was at the hospital with breast cancer complications. The meeting took place in the interviewee's home while the other took place in member’s church premises. The interviews lasted 45 minutes and 50 minutes respectively.

The pilot study revealed how participants answered the questions, the protocol to use one’s home for talking, and the best seating arrangement to facilitate the interview process (to record all the responses), as well as some cultural elements. It also provided practical insight into how to prepare the reading of the questions and how to wait for the participants to respond to the questions.

The pilot study revealed the reading speed at which participants could comprehend the issues. One of the findings was that if members were left to talk without guidance or redirection, they would spend all the time talking about one issue. The pilot study helped with the setup of the initial research interview, the arrangement of the questions, and a number of time participants might need to answer each of the questions for the primary study.

Setting

The research was a partial requirement of the doctoral course work. My mentors were Walden elected dissertation chairperson and committee members. The committee members did not play any role in the planning, execution of the plan, data collection and analysis or the interpretation of the data. The research student performed them all. None of the committee members have access to data collected, or influenced the interpretation of the data. No other institution was involved or influenced the dissertation process. The activities related to the research were all done by the student (researcher).

Data Collection

Demographics Tables

In the preliminary analysis, the researcher presented demographic data in tabular with use of Microsoft Excel.

Table 1
Age Distribution of 12 Female Immigrants with Breast Cancer Interviewed

Age group	Frequency	%
25-34	1	8.3
35-44	4	33.3
45-54	6	50
55-64	1	8.3
65+	0	0

Table 2
Years of Education Distribution by Participants

Years Edu.	Frequency	%
0-5	0	0
6-8	1	8.3
9-12	1	8.3
13-16	4	33.3
17-18	6	50
18+	0	0

Table 3
Participants by Marital status

Marital Status	Frequency	%
Married	6	50
Divorced	1	8.3
Single	4	33.3
Widow	1	8.3
Don't know	0	0

Table 4
Annual Income ($) by Participants

Income	Frequency	%
No Income	2	16.67
< 20000	0	0
20000-29999	5	41.67
30000-39999	1	8.33
40000-49999	1	8.33
> 50000	3	25

Table 5
Participants by Nationality of origin

Country	Frequency	%
Cameroon	1	8.33
Ghana	6	50
Nigeria	4	33.33
Sierra Leone	1	8.33

Table 6
Status of Breast Cancer by Participants during Interview

Status	Frequency	%
Survivors	5	41.67
Treatment	5	41.67
Remission	2	18.67

Among the 12 participants interviewed, five married, and a third reported of postgraduate education. The mean age of the studied participant was 50.75 years (Table 1). Seven (58.33%) participants said of going through a bilateral mastectomy or a single breast removal procedure, three (25%) lumpectomy, and one (8.33%) herbal treatment (Table 8). Participating countries in the study were Cameroon (8.33%), Ghana (50%), Nigeria (33.33%) and Sierra Leone (8.33%). There seemed to have multiple representations from Sub-Saharan countries, and I suggest further study in each country to determine other coping mechanisms. Table 7 showed the type of the treatment procedures as applied by the participants.

Data Collection

I interviewed 12 participants. Twelve different sites agreed upon by the participants for the interviews. The interview involved asking questions, probing question, listening, and recording the responses. The method enabled the participants to provide and share valuable information in the context of breast cancer coping mechanisms. Playback of the recorded data was presented to each interviewee to confirm the content of the responses and to add credibility to the data. Given the purpose of the study, the interview questions generated answers for the research questions. The study considered participants' the influence of their sociocultural and economic statuses into consideration during the interviews (Bruce, 1994). I transcribed nine digitally recorded data and three written scripts. The transcribed data were then organized and transferred into Microsoft Word. Each of the 12 transcribed was labeled and placed in a different colored folder. The transcriptions were printed to provide easy access to the identification of themes and accurate quotations related to each of the interview questions (Edwards, 2010). The concepts were organized into groups, examined, labeled, and compared to other literature findings to understand the content better and conceptualized the result into categories. The opened coding process reduced the data into a small set of themes as shown in Table 7 (Benisovich & King, 2003). The interviewer interviewed each participant one time.

The original data collection method was focus group interview. Considering the ethical issues involved, cultural and traditional characteristics of the study population, the IRB recommended 1-to-1 interviews. Therefore, 1-to-1 method was used for data collection.

None of the 12 participants withdrew from the main study. All 12 participants provided the information per the interviews conducted. The participants responded when follow up request was made. The recruitment of participants of the pilot study and interview process took 14 days. The recruitment, sampling, interview and transcription of the 12 participants took approximately 80 days.

The research plan followed the data collection course without any interruption. Schedule for interviews were consistent with the time table. Their participant interview was done mostly at their homes or churches that provided them with privacy and confidentiality. No unusual circumstances such as stress or any encounter happened in the data collection process to any participants. None of the participants dropped in the middle of data collection process that could result with variation.

Individual Interview's Summary

The focus of the study was to explore the coping mechanisms from Sub-Sahara African female immigrants with breast cancer. Additional data were collected to enhance the various methods for assessing these coping mechanisms. The focal areas were coping mechanisms, economy, education, support, belief, cultural and psychosocial, support groups, and perceived protective factors. Edward (2010) and Roy's adaptation model (1976) documented that verbatim experience provides detailed descriptions of the picture of the phenomenon and completeness that increases transferability. For confidentiality and trustworthiness, interviews took place in participants' homes, private offices and church premises. Below is the summary of data collected:

Participant 1. WUBCS02 was 43 years married woman with a 10 months old baby girl. I lived here but worked as a non-governmental agency in my home country. According to her she had no clue about her diagnosis till she came to deliver her baby girl.

> After my diagnosis, I was introduced to the African Women Cancer Awareness Association (AWCAA) supporting group. In her statement, she said, "If I knew that the lump in my breast was cancerous, I would have taken care of it first before reaching out to people to talk to them about their health issues". She paused and kept quiet for a while, and then tears started draining from her eyes flowing over her cheeks. She stayed quiet for about one minute and continued with her story. The most challenging thing was that when I was diagnosed I had no insurance coverage. I was depressed thinking that without insurance I was going to die. I wept when I went home, particularly when I saw my daughter lying on the bed. When I remember my diagnosis, I was scared; my body turns cold particularly, with the news about mastectomy. How would I feed my daughter, if all my breasts are gone? I asked myself. Sometimes I am stressed out with the breast cancer issue and how to get solution to it.
>
> I was diagnosed with Stage 3 breast cancer. Every little support was helpful. Nothing was counted least. Every bit of help was important. I was here alone, and lived by myself.

> When I considered the cost of care and knowing that I cannot work to earn money to pay the cost of breast cancer treatment, I was scared and stressed up because I knew I was going to die. I was fortunate to have insurance coverage through AWCAA. Acquisition of the insurance reduced my stress and helped me to cope with the disease.
>
> I was finding it difficult going for treatment with my child. This was another stressful situation. At one point when I was coming for chemotherapy treatment, I felt weak and exhausted. It was hard to descend down the stairs. I was lonely. Nobody was there to assist with me. I did not see anything again. Later, when I recovered I was told that I was rushed to the emergency room by an unknown benevolent. Breast cancer is a bad disease; it would make you poor; and potentially kill you. I am praying to God that He should heal me so that I could go to the rural communities and schools in my country to tell my story of the breast cancer. I have no idea of the disease, as such; I consented to the medical team to choose the treatment option appropriate for my diagnosis. I received support from AWCAA, but what boosted my coping skill was when my mother came to handle my baby for me. The other group of significant importance was my church and the prayer groups. I am strengthened by their prayers, calls, visitations and donations. My female community and my church have supported me up to today. In conclusion, I want to add to your work by advising the young females to respond to breast education, and act quickly to any suspicious lumps and pain in their breasts.

Participant 2. WUBCRS03 has been a breast cancer survivor for about three years. SO3 was 54 years old, married, and a female college graduate with three children. She declined to tell the interviewer her job in her home country. She migrated to USA a few years ago. S03 agreed to be interviewed because she wanted to share her experience with the world, particularly females from Sub-Sahara African countries. The participant started by saying she was diagnosed with breast cancer in her home country. She said she received treatment from different hospitals. The interview lasted 50 minutes. She began by saying,

> In my own case, it was ignorance, in the sense that, like a typical African woman, I have the tendency to live through pain. I had no knowledge of how breast cancer was like. I experienced the pain during the birth of my second child. When the pain reached its peak, my breast was swollen and the pain was similar to the one experienced when there is an inflammation of the skin. I went to the hospital and my diagnosis showed that I had breast cancer. When I asked about the stage of my breast cancer, I was told "RADICAL". I was terrified. I lost hope and began crying when I received the message. I thought I was going to die. My hope was on prayer.
>
> Before the surgeries, the medical team introduced me to AWCAA Cancer Supporting group. I was also introduced to group session programs where we were taught about how to cope with the stressful situations. My sisters supported me with whatever help I needed. My sisters added coping resources to deal with the disease and its symptoms to me.
>
> As a Christian, I maintained my faith and prayed to God to spare my life. I have the belief that God would heal me from this disease because my body was His temple and He will not let the devil dwell in His temple. The support I received from my family and African female community increased my strength and chances of survival.

> I believe that health insurance and individual choices will make the difference in surviving cancer. The kind of support I received from the community reduced my stress. The sociocultural support came from my family, my country's community women, and ACWAA. The social and cultural networks' support minimized my stresses and solitary life of the disease. One significant fact about African females is that we do not share with anyone details of any disease related to the sexual organ, not even closer relatives or physicians, unless the situation demands it. Though I delayed, eventually, I disclosed to my family and the doctor.
>
> Breast cancer has brought me closer to God. I have seen that breast cancer has subdued my arrogance and made me submissive and humble, because I was near death, my God brought me back to life.

Participant 3. WUBCRS04 was a 51-year old and breast cancer survivor. She was married with four children. She is a registered nurse by profession. The interview lasted about forty minutes. The interviewee preferred to be interviewed at her house. "At the time of my breast cancer diagnosis I was staying alone". S04 was able to narrate her experience to the interviewer as follows:

> I was diagnosed with positive breast cancer (early stage breast cancer) when I voluntarily reported for medical evaluation. The medical team worked with me and we agreed on first surgery of one of my breasts.
>
> I left the office and joined my car. I sat before the steering wheel and leaned my head on the steering wheel. I wept till a nurse from the unit came to see me. The nurse consoled me and encouraged me to stop crying and go home. I was not of myself when I

> was driving home, I asked God, a person like me with a positive mind, a child who respected my parents; I did what they told me to do, God, why this problem?
>
> My support only came from my faith and prayers in God. My supporting groups were my country community women and church members. Even then I did not disclose to anyone that I had cancer. I kept on researching and one morning in an early television show, I listened to a medical team discussing breast cancer treatment. The program appeared the next day. So, I spoke to myself that this might be an answer to my prayers so let me call this medical team. I called them and booked an appointment.
>
> I met with the team on the appointment day. After the medical and nursing diagnosis, all my laboratory analysis was done and I was told that my current diagnosis was Stage 2; however, they were not going to perform total mastectomy but lumpectomy. The appointment for the lumpectomy was then scheduled and the surgery was done as scheduled. After the surgery, a series of tests followed the lumpectomy till I was told that I am breast cancer free.

Participant 4. WUBCRS05 was a 52-year old African female breast cancer survivor. She was a single parent, social group organizer, and a nurse living in a single-family home. Her interview lasted 45 minutes. S05 agreed to be interviewed at her home. S05 began by saying,

> I noticed the lump three years before I was diagnosed. I was diagnosed as having Stage 3 breast cancer. The diagnosis was a death sentence to me. My fears rose to a climax and I thought that I was going to die. As a witness to several breast cancer deaths, I considered it critical to prepare before I die.

> I had no insurance to cover the treatment cost so I consulted with my county Health Department and joined also some prayer group to help me in prayers. The network of support came from my country's women community and the prayer groups. The medical team I chose supported me through education on medical and breast cancer care awareness. The medical team introduced me to the African Women Cancer Awareness Associations (AWCAA) where I received support as well.
>
> I said, "When an African female was sick, the entire female population in the community was sick." Consistent calls, visitation, cooking of the local foods, and, to the extent of paying bills and rents, as well as arrangements to carry me to and from the treatment centers, were all carried out by the females. I was relieved from certain stressful conditions from all these assistances. The help from my country's female community relieved me from the solitary life in which I found myself at the early stage of my diagnosis. Besides my belief in God, the African female community network was an essential tool that reduced my stress, and built my strength to fight the disease.
>
> During difficulty times, I was supported by my family, a prayer group, and the African female community. At one time in the disease process, I saw myself as an individual before God, and relied on my support group for other help I could not perform by myself.

Participant 5. WUBCRS06 was a 48-year old African female with breast cancer. She was an unmarried college graduate who was undergoing cancer treatment. S06's interview lasted 40 minutes. S06 agreed to be interviewed at a Public Park.

"I have not had my breasts examined before, so when I felt some pains in my breast I could not think of breast cancer. Like many African young females, I ignored the pain and went about my business. Sometimes, I took pain relief medication. I sought medical help when the pain intensified".

S06 was depressed and could hardly express her experience. She mentioned she was diagnosed with Stage 3 Cancer. "I was diagnosed with breast cancer when I went to the hospital for medication to alleviate my pain. When the physician informed me about the diagnosis at her office, I felt as if I have been issued a death sentence: I was buried." I asked myself, "What can I do to live with this deadly disease?"

I discovered that I cannot hide the disease so I shared the news with my home country female community. I have no insurance coverage. I was directed by one of the African females to contact AWCAA for help. I met with AWCAA, told them my story and they assisted me with a minimum treatment package. My country's female community gave me accommodation and supported me by providing my daily bread. My relatives and the country's female community assisted me to and from the treatment center. My gynecologist encouraged me to continue with the plan of treatment, but sometimes when I looked back, I get depressed.

I received support from my country's female community. They called and checked on me. Some paid me visits and talked to me while others cooked local food and brought it to me. At times, they carried me to movies. AWCAA's breast cancer survivor's sessions have built my confidence that I could survive the disease. I received support also from Cancer Care, Rockville.

> I was concerned with my body image, but I did not let my people know that I had mastectomy. Bear in mind that mastectomy was a taboo to my people, so I did not inform people about mine, except my immediate family. Artificial breast was given to me to balance my other breast.
>
> In addition to my stressful situation, my movement from one family to another was another burden. It was stressful to me, but I had no option. I wished I had a single location for myself, but I could not afford it.
>
> I took pain medication when I felt pains in my breast. On several occasions I prayed alone. On every visit to my medical team, I shared the problems I encountered with them, church mates or people who visited with me and asked them to pray for me. The other advice from my medical team was that I should go to happy places such as the mall for sightseeing. I have done all these and I have found them to be helpful.

Participant 6. WUBCRS07 was a 47-year old African female breast cancer survivor. She was a nurse by profession, married with three children, living together with her family in a single-family home. S07 voluntarily accepted to be interviewed to contribute to the development of basic education of the Sub-Sahara African female communities on breast cancer. The interview lasted about 40 minutes, during which she said,

> I have a family breast cancer history so after I lost a family member from this disease; I considered undergoing the breast exams that I was taught in School. I chose to have the test performed monthly. I discovered my first breast lump in Ghana. I went for my lumpectomy, the first time.

My breast cancer stage was 0-1. I was scared to death while I was waiting for the result. I was praying with my husband and, sometimes prayed alone. My husband supported me during the entire process. I had insurance so I followed the same procedure suggested by the gynecologist for the second lumpectomy.

I was concerned with my body image, particularly, if I wanted to sustain my marriage. Nonetheless, I preferred to save my life than to keep my breast and die. My local church, as well as my close friends supported me in prayers and in many diverse ways. African's female community in my church supported me as well".

When asked what advice, she would give to the African female population, she said that prevention was better than cure, meaning breast cancer education and breast exams were the best methods to detect early development of breast cancer.

Participant 7. WUBCRS08 was a 63-year old Sub-Sahara African female breast cancer survivor. She was a widow with one child. She has been working in fast food companies since she migrated to the United States. S08 accepted to be interviewed in her house. The interview lasted 49 minutes.

"My breast was heavy, swollen and painful. What I did was that I warmed water and massaged my breast to relieve pain that was stressing me out. After the massage, I applied hot cream and went to work. The pain went down providing me less stressful environment to continue my work. Sometimes, the pain was so intense that I shared tears. It was not till I heard from my workmates about breast cancer that I acted to safe my life.

I went to my church to request for prayers. A church member (gynecologist) volunteered and requested for my consent to take my matter up. The gynecologist took me through all the laboratory, mammogram, breast biopsy, and x-rays examinations, then to the mastectomy. I was diagnosed with Stage 3 cancer, and pursued bilateral mastectomy.

I shed tears when I received the report of my diagnosis. “I was alone in this country and my only child was at home. Am I going to die and leave my child and my mother to suffer?” I said to myself. Tear and sorrow mingled and filled my eyes and heart.

I did not make any of the treatment decision, but I could see that the choices for my treatment were appropriate. I knew that I was going to die if I stayed in my home country with this diagnosis. I never knew that breast abscess could be breast cancer and could kill me. When I was told about my stage and condition, I cried. In fact, I did not understand what they meant by Stage 3.

I believe in God and I was optimistic that God would save me from the devil’s snare and I would be free from the breast cancer disease. I did not know anybody except the church and my work mates. I relied on Christian music, personal prayer and prayer groups, to comfort me. They impacted my surgery and the disease.

It was extremely difficult for an African female to discuss sexually related diseases with another person even with close relative. I could die if I continued to endure the pain without openly discussing it with my workmates. After the mastectomy, I was alone at home, not receiving any physical help from anywhere. My son’s phone calls enabled me to cope with the pain I was going through. My sociocultural challenge was how to cope with loss of my breasts.

> I received support from four main sources. The church supported me by providing me food and paid all my rent and bills. My workmates encouraged me to find cure for my breast cancer and supported me financially. The hospital medical team supported me with the appropriate education on the disease and some supplies. My church family and the gynecologist helped me overcome my stresses through teaching, counseling and prayers.
>
> You could survive breast cancer if you work to overcome it. Insurance was another key factor, because without insurance coverage you may not survive the disease. I have believed also that African females keep sexually related diseases to themselves. I think it is a wrong concept. Sharing your case with others has the potential to provide you with information or resources that could enhance coping mechanisms or treatment of the breast cancer.

Participant 8. WUBCRS09 was a 40-year old married female. She was a businesswoman in her home country. She does not know how to read or write, but can understand elementary English. She agreed to participate in the study and was interviewed in her church women's association meeting hall. She summarized her experience as follows:

> In my case, my lump was discovered earlier, but I wasn't sure of what it was. I thought it was an ordinary breast inflammation. Initially it was not painful, but the pain developed gradually. A few days later, the Church's women ministry organized a breast cancer education and awareness/screening session. They discovered the lump in my breast to be cancerous so I was scheduled for a biopsy appointment. My breast biopsy result was a positive indicator of breast cancer. The doctors disclosed this message and

presented the treatment plan to me. I went home to my chambers and knelt before my bed and cried hard to God to remove this deadly disease from me.

According to S09, after meeting with the doctors, appointments were scheduled for the first surgery. Three surgeries were performed. I limited the disclosure of my surgery to my close relatives because of the belief of the population and the stigma attached to females who have bilateral mastectomy.

Soon after my diagnosis, however, I started feeling some pressure on me. Most of the time, it rang in my ears that I was going to die. I informed my church prayer groups to pray for me. I developed a plan for fasting and praying. I continued with fasting and prayers, both day and night, for cure of the disease. I also continued taking the prescribed medication.

Will my husband continue to love me? That was the only worrying or stressful question, in addition to my breast cancer stresses. At certain times, I said to myself, if I refused to undergo this surgery and I die what next? What helped me to obtain responses to these questions were prayers and the practice of listening to sermons from the church and radios. My husband supported me in several ways, particularly, during the decision making process regarding treatment options. I counted on my family to be major coping tools, in that I tend to forget my pains when they engaged me in talking. I didn’t get much help from the hospitals I attended, because I did not get any education for some of the treatments before I went through them. Consequently, my anxiety was extremely high in the procedures. For instance, breast biopsy procedures took three hours at a time.

As explained above, I trusted the medical team, but trusted more in God. I believed that without God no procedure will be successful. My culture has two basic elements that should be noted. When a female was sick, all females in the community are sick. Each female contributed towards my welfare.

On the other hand, the community generally viewed a female with breast cancer or loss of breast as a witch, or a kind of punishment from the ancestor, as such they are stigmatized. This might be one of key reasons why females declined to tell people, particularly their spouses and family members or physicians, the true nature of their breast cancer".

She therefore, opted to undergo the mastectomy. She said, "After this surgery I may not be counted as a female but a man." She stated that her children and her husband encouraged her to undergo the surgery. My cultural network was protective, but the traditions isolate females with unfamiliar disease. As such, besides my immediate family decisions, I depended on prayers. My belief was that God would answer my prayers. I chose God as my problem-solver, in that, whatever issue I have submitted to Him in prayer, He has answered me.

My key supporting group was my church, prayers groups, my African female family and my immediate family. I talk to them, sing with them and pray with them. They help me to pray when I am in a difficult situation. Prayers from the church prayer groups have helped me in many ways to cope with my breast cancer treatment". When asked what, I could contribute to the study she said, "teach the females with breast cancer to explore all the options for its treatment before they make any treatment choice.

Participant 9. WUBCRS10 was a 51-year old single female breast cancer survivor. S10 was a Christian. She has a completed high school education and was self-employed. She volunteered as a candidate and agreed to be interviewed for the research. Her interview took place in a private office and lasted 60 minutes. S10 developed an interest in the research after she listened to a church program and about the research poster on breast cancer that was distributed in her church. She recounted:

> I found a lump in my breast, but was not experiencing any pain. I never thought it was a sign of breast cancer. I examined and felt this symptom any time I showered. I monitored the lump for size increase and followed up with my primary physician after receiving breast cancer education in my church.
>
> I was confused initially when I found the lump in my breast, because almost all the people I knew who had breast cancer talked about pain. However, after the breast biopsy analysis, I was told that it was stage 0-1 cancer, I grieved" I was near death", she said. I bent down my head and tears filled my eyes. I was consoled by the nurses. After about 10 minutes, I kept quiet, till two of the medical team members came and reassured me that at this stage, it was not as deadly as I may be thinking, so I should go home and return on the next appointment day.
>
> I was alone. My reliable family was the church, so I met with my churchwomen fellowship group and asked them to pray for me regarding my impending surgery. On the third day, I went to inform the team that I will be ready for the lumpectomy. Fears and anxiety filled my soul as I was preparing for the surgery. I prayed day and night alone,

and with the church. I sang Christian music to encourage me for the surgery. I went through a successful surgery.

The Church breast cancer presentations and female programs helped me to recognize the lump in my breast. I will advise females to listen to any program related to breast cancer.

My supporters were my medical team, the church's women fellowship group, and prayer groups. I believed my God healed me from the disease. So, from the time of diagnosis to the time of surgery, I was praying and fasting. God has healed me.

"The good thing about African females was that each female empathized with a fellow female with issues such as breast cancer", she said. So, losing breasts was a stressful issue among African communities.

During the process of my treatment when I faced any barrier or challenges, I went on my knees to pray. I dwell mostly on the spiritual healing than thinking about the cultural network though they were all helpful to me". She added that free educational programs on breast cancer should be offered to women both young and old among the Sub-Sahara African female community.

Participant 10. WUBCRS11 was a 40-year old single female diagnosed with stage 0-1breast cancer. She was self-employed and has 16 years of education. She volunteered to participate in this study. The interview took place at a private office at a church. It lasted 40 minutes. "My diagnosis took place in my home country," she said.

I did not know that I had a lump in my breast, till I bled from my nipple and went to see the physician. The physician told me that some of my breast veins have dilated that was why I bled. My mom told me to proceed vigorously with the treatment before it was too late. In another consultation with another physician, I found breast cancer posters on the wall describing breast cancer symptoms of which bleeding from the nipples was one of them. As soon as I saw that I was frozen. Tears started dropping from my eyes and extremely fearful about dying. The physician asked me several questions, which I heard but could not answer him. Suddenly, I sighed with relief and answered the physician's questions. A few days later, I found the lump had grown bigger than I had observed a few months earlier. The physician re-scheduled me for biopsy in two weeks. When I saw gynecologist, she told me that my biopsy was negative, but I was not told about the mammograms results. I was scared because I bled through my nipple and had a lump in my breast, but why was the result negative? I consulted with my step uncle and told him about the result and we prayed together and he advised me to take it cool, for God has answers to my prayers. I consulted with an old man closer to me at work and he introduced me to an herbal doctor. I consulted with the herbalist and he prescribed fruits and vegetables and stopped me from eating animal products. All along, I had not experienced any pain or bled anymore, but the lump is still in my breast. I am still struggling with treatment.

Over here your insurance matters most. If you have it you are likely to receive the appropriate care, otherwise you would not. I believe I may see supporting groups that may be helpful to me besides my church supporting and prayer group. My family, friends, work mates and, particularly my uncle, as well as my church, supported and helped me through prayers.

> I spent time praying with my prayer group for healing. I also spent time alone praying and fasting. I believe my God will resolve my breast cancer issues.
>
> Sub-Saharan African females are different, we love our husbands and we hate divorce, and so, we would not want to lose our breasts and lose our partners. As female immigrants, we contribute to the welfare of one another and in times of trouble, we share the problems among ourselves. The challenge over here was the availability of insurance. I cannot continue with my treatment if I do not have insurance.
>
> I believe my strong faith in God was keeping me healthy to this time. My counsel to the young females would be that they should take the issue of periodic breast examination serious so that they may detect or find early symptoms of breast cancer.

Participant 11. WUBCRS14 was a 45-year old female, married with three children. A lump in her breast was identified in a mass screening by a medical team in her church, but S14 chose to follow herbal treatment instead of western medicine. She has no formal education, but is a self-employed businesswoman. S14 showed interest in participating in the study. She was recruited and she agreed to be interviewed at her church women's ministries office. Her interview lasted 40 minutes. She recounted her experience as follows:

> Initially, I felt cold and pain in my breast, so I went to the pharmacy to buy some pain relief medication. I was relieved from the pain for a short period.
>
> The church medical team organized a health fair and I decided to attend. I went for breast cancer screening and I was told at the end of the program that there was a lump in my right breast. I was given a note to follow up at the hospital. I took the note but did not follow up. Afterwards, I became conscious of my breast as the pain started again and

the lump was increasing in size. A few days later, I was cold so I went for the pain medication again. This time, I informed my husband about the lump in my breast. My husband bought me some pain medication and consulted his mother about my condition. 'I had the same lump in my breast after the birth of my last born, but some herbs helped me', said his mother-in-law. My mother-in-law brought me the herbs and taught me how to prepare and apply it.

My husband assisted me in the management of the breast lump treatment. My church has also been supportive with continuous prayers and visitations in times of difficulty. I count on the herbs as helpful medicine, but the herbs are not available during the dry season. I am not familiar with any program or supporting groups here. As said earlier on, I have depended on the herbs for about 4 years; though the lump has not entirely disappeared it has reduced in size. My primary supports are my husband, the church and my mother. My husband was my prayer mate.

In difficult situations, I pray alone. I am a Christian believer. I believe in prayers and believe in Christ Jesus to have answers to all problems.

The sociocultural benefits were that when a female was sick with a deadly disease such as breast cancer, almost all females, particularly close relatives, in the communities are concerned. On the other hand, the culture has a negative view on breast cancer patients. Many people in the Sub-Sahara African Community think that breast cancer is a punishment, or some evil effect on the victims by unknown gods. This makes women with breast cancer isolate themselves or hide the disease from people.

> In times of trouble, I pray to God to deliver me from the situation. I chose to pray because I believe God alone was my Reliever". S14 stated that her primary support was her husband, the church, and her family. When asked about anything that was not asked that could be added to the coping mechanisms, she said, "Some herbs are more effective than western medicine, but breast examination must be done based on guidelines provided through western medicine.

Participant 12. WUBCRS15 was a 27-year old African female college graduate breast cancer survivor. S15 was a single unemployed female who listed her name among participants for the interview. Because of the cultural views on breast cancer, S15 was interviewed in the private office of her church pastor. Her interview lasted 42 minutes.

> She recounted her experience as follows: "I was fortunate to have discovered it during shower in its early stage".
>
> I went to the clinic to see my gynecologist, and was diagnosed as stage 0-1. I wept when I found out that I had cancer. Sometimes I hid in my room and sang Christian music. I asked my mother, (I am not married yet, I have no children) if the gynecologist decides to perform bilateral mastectomy, how would I breastfeed my children? And how will the society look at me? "God will provide", answered my mother. My mother supported me in the process of the diagnosis till the gynecologist finally decided that the procedure for the lump shall be lumpectomy. I did not know what lumpectomy was, so the gynecologist explained it to me. I was relieved because I was not going to lose my breast at this early age.

I never underrated any support, in that; breast cancer was a deadly disease, and every help was counted useful. It was through health fairs and screening programs that my breast cancer was confirmed. The other side of the issue was that checking with my breast cancer clinic monthly helped me to determine my health status. As stated above, my church prayer group and my mother supported me during the surgery and post-surgery periods. I did not believe that there was any difference between any ethnic group and Africans in terms of the nature of the disease and its treatment; however, our coping processes appear to be different. For instance, when I went through my surgery, my church members, friends and most of the females in the community visited with me. Others contributed to the cost of my treatment who and some cooked local dishes for me. The rest of the people came to either converse with me or helped clean my home. There were people around me all the time that provided the much needed support during the treatment.

Christianity has influenced my life more than my home country's culture. It is beneficial to have Christian faith and culture, because you may have a spiritual growth and psychosocial support. The way God helped me to achieve victory over breast cancer, I could not understand. I had no concern about my body image, in that my surgery did not interfere with my body image.

In most of my difficult times, my church members or my mother were there to support me. They encouraged and supported me when I was in distress, particularly, during the post-surgical period. We prayed together for help from God. At other times, we sing hymns together. Sometimes we go into lengthy conversations. All these turned my mind

> from the pain and reduced the continuous per mouth or intramuscular pain medication. My church and my mother were among the instruments of my coping process. They lovingly supported me, particularly when I was preparing for the surgery. I was scared to death, but prayers and encouragement from the nursing staff drove my fears and anxiety away. Though I was not in the advance stage with my breast cancer, I employ you (researcher) to include breast cancer awareness in your post dissertation program, particularly, for Sub-Saharan African females at home.

Data Variation

There was no variation in data collection. The reason was that the same questions and the same person performed the interview. There were age and country of origin variation yet they did not affect the data collection.

The data collection went on smoothly with no unusual encounter. Participant provided their answers freely, and independently. None of the participants had any attribute that could influence the data collection and analysis.

Data Analysis

Categories/Themes

Similar to Bradley, Curry, and Devers (2007) repeating the coding and rereading processes continued throughout the analysis. The themes emerged were categorized, and the investigation progressed. Findings were compared with other studies, discussed and resolved differences of interpretations (Gonzalez et al., 2016; Miles & Huberman, 1994). The clusters themes grouped into topics and sub themes. The appraised data collection reduced research bias, the transcriptions and coding with an accuracy of 80%, or more reliability between the systems and the recommended criteria for safety and ensuring consistency in the coding process.

Describing Data Coding

I read through each person's transcription first time to make sense of the transcribed information. Inductive reasoning was the process to determine the coping mechanisms. Notes were written at the margins to gain the first impression of the data. The selection criteria for coding were materials reported by the participants in the interviews and or by the 12 participants that were relevant to subject matter; or the research questions, or when they have repeated the information several times. The second reading of each of the transcript was done with the additional note at margins. I carefully performed line-by-line reading and underlined the codes. Different specific color pencil was used to underline or to describe different coding of each of the 12 transcribed data.

The codes (the phrases or words or paragraphs) were determined from the first thorough to the third readings of each of the 12 individual participants transcripts (Edwards, 2010). The transcribes were reviewed at least six times and on several occasions. In most of the cases, new codes were added, some overlapped and others were dropped. The codes with similar meaning were grouped together (cluster themes) and labeled as shown in Table 7. The specific groups were categorized into copings and at what phase the coping was used as an intervention (Table 9).

Criteria for clustering themes could have created discrepancies, but the grounding approach analysis steps were consistently followed as such no discrepancy was identified in the coding process. Secondly, interviewees confirmed the transcribed data before the analysis.

Finally, non-verbal data analyzed were the physical observations made by the researcher during the data collection process.

Table 7

Final Themes, Descriptions, and Codes

THEMES		DESCRIPTION		Codes
Crying		sharing tears after hearing bad news; support I need		What is this world to
		May die and leave my children behind		open crying; tears wa filled with sorrow
Family Support		family and siblings help; Help from country's females		could help me showe
				sing cultural and loca
				children; always visit
				children called me fr
Religion		Support received from religious and prayer groups		It so good to receive
				I got check from my
				My church prayer gr
				When I was alone I s
				Christian gospel. Pas
				I read my bible or pr
Social Support		Receiving physical support from others other than		Community of wome
		family;		Called me daily to se
				survivors' invite me t
Social Network		Links to get resources to support treatment		Internet search; Calli
				for treatment schedu
				for health education
				survivors support gr
Problem focused		Managing to reduce or control stressing conditions.		Quiet to do other thi
Coping				I prefer knowing all
				tell them my needs;

Emotional-focused		Receiving a diagnosis of terminal disease; changing		Do not know what pe
Coping		emotional reaction to stressful situation		Too much calls when
				after chemotherapy;
				Hearing of death of b
				Scared to death abou
				Second mastectomy
				frustrated about mys
				and fears about my li
				Insurance
Expression of emotions		verbal or non-verbal expression of stress		Change of facial cont
				I cannot bear the tre
				Why did you need ins
Positive appraisal		Decision to avoid negative responses		God can heal me; goo
				Good news were rece
				professionals; ignore Watch
				good movies;
Prevention		Practicing preventive measures		annual mammograph
				Report of early symp food
Relaxation		Thinking nothing about breast cancer		watching movies; goi
				recreational ground;
Health insurance		Patient security		Good insurance earn
				Insurance; no insura

I explored the coping mechanisms based on (a) economic and education, and support (family, network, and supporting groups), and religion**.**

Evidence of Trustworthiness

Participants were engaged in data collection by answering the same questions. At the end of each interview session, the recorded information was played back for omissions and commissions, and for confirmation of the right data provided. The data collected provided the in-depth description of coping mechanisms of the persons studied. Data have been organized and presented to answer the research questions comprehensively, consistently, and logically to demonstrate the subjective view of the participants.

The interviewees lived far and near, but none of the participants knew one another, but the participants' provided similar or same answers to related questions. Guidelines for data collection were consistent throughout the interview. The reviewed notes and the recorded information were examined continuously during the data collection and the analysis process. The faculty research committee questioned the accuracy of the data and the data analysis. The interviewer collected all data from the interviewees. Each participant listened to the playback of the recorded information after the interview. The transcription, the transcribed information was sent to participants for data accuracy and confirmation.

Concerning Transferability, Merriam (1998) stated that "external validity is concerned with the extent to which the findings of one study can be applied to other situation." Bassey (1981) proposed that if researcher believed that their status to be similar to the one described they might relate the finding to their position. By the nature of the sample size, it is impossible to apply the results to other population. However, there existed the provision of the background data, to establish the context of the study and detailed description of coping mechanisms research that would allow comparisons to be made (Guba, 1985).

Addressing dependability in the study, a thick description of the plan of study allowed readers to understand individuals coping responses (Borgman, 1986). And how they affected the participants' experiences, were provided in the study to enable readers to compare instances described within those that have emerged in the situation (Lincoln & Guba, 1985). The researcher provided background data to establish the existence of the phenomenon of study, participants of the study, data collection method, number and length of data collection session and the period for the data collection. This information highlights the readers' boundaries of the study.

The researcher explained in details the research design, methods of data collections, data analysis and addressed the requirement of data collection. The researcher also discussed the reflective appraisal of the data per every situation of the research undertaken.

The concept of confirmability has been the qualitative investigator's comparable concerns to objectivity. The researcher reported the data and the analysis from the participants. And to reduce the researcher's biases, the role of triangulation was used to promote confirmation. Additionally, a detailed methodological description was made to enable the readers to determine how the data and constructs emerged may be accepted. The audit-trail process, such as data-oriented process leading to the reformation of data due to the recommendation of my research committee was gathered and prepared during the study.

Results

According to Moskowitz, Hult, Bussolari, and Acree (2009), there were a countless number of ways of coping, from making a plan of action or fantasizing about an ideal outcome, to reminding oneself of the good that would come out of the situation, or pretending that the stressful event did not happen. Table 7 showed the summary of all the types of the treatment procedures. The study showed various kinds of treatment procedures that precipitated some experiences that demanded coping mechanisms. It was reported by the participants that receiving chemotherapy treatment was very stressful among all the treatments procedures, and required different kinds of coping mechanisms to control the stress.

Table 8

Percentage Procedure by the 12 Participants

Procedure	Frequency	Percentage
Chemotherapy	1	8.33
Lumpectomy & medication	4	50
Mastectomy	6	33.33
Herbal	1	8.33

The major coping themes that emerged from the cluster topic analysis were crying, religion (faith and prayers), family (nuclear and extended) and relaxation. The rest were expressing motions, seeking support, the social network supporting systems, prevention, problem-focused coping versus emotional-focused coping (depression & venting), positive reappraisal and infusing ordinary events with positive meaning. The others were insurance, and health-system cares (medical and treatment teams). Religious coping mechanisms appeared at least at two phases of the three-dimensional areas, the researcher noted, compared to problem and emotions foci that occurred in all the three phases of the breast cancer continuum. Similarly, social support network ran through the three stages of the disease, because, the participant used countless coping. Moskowitz, Hult, Bussolari, and Acree (2009), there were the countless number of ways of dealing, from making a plan of action or fantasizing about an ideal outcome, to reminding oneself of the good that would come out of the situation, or pretending that the stressful event did not happen.

The major coping themes that emerged from the cluster topic analysis were crying, religion (faith and prayers), family (nuclear and extended) and relaxation. The rest expressed motions, seeking support, the social network, and supporting systems. The remaining were prevention, problem-focused versus emotional-focused coping (depression & venting) and positive reappraisal. Finally, participants received medical and social support from other sources for the period of treatment. And the family was ascribed by the members as their primary support throughout the breast cancer journey.

The female immigrants sensed death. Therefore, they sought for help. At the diagnosis phase, the findings of the research of coping mechanisms employed were crying, family support, seeking support, social network support, emotion/problem-focused coping expression of emotions (depression & venting), healthcare/insurance and primary prevention (see Table 9 below). The rest of the coping mechanisms applied as the research found out was prevention. Table 9 is the summary of the explored coping mechanisms at the three phases of breast cancer study

Table 9

Breast Cancer Diagnosis, Treatment, Remission Coping Mechanisms

Diagnosis	**Treatment**	**Reemission**
Crying	Religion (faith & prayers)	Religion (faith & prayer)
Family support	Family support	Family support
Seeking support	Seeking support	Relaxation
Social network support	Social network support	Social network support
Emotional/problem focused	Problem-focused/emotional-focused (depressing & venting)	Problem-focused /emotional-focused
Expression of emotions	Positive reappraisal/infusing with positive meaning	Positive reappraisal /infusing with positive meaning
Health Care/Insurance	Health Care/Insurance	Health Care/Insurance

RQ 1: What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer diagnosis?

The coping mechanisms, mostly used during diagnosis were as shown in Table above. All 12 members of the study reported crying when they received the diagnostic or laboratory and X-ray or other medical reports.

“When I received the message I went to my car, the diagnostic message was still ringing in my ears so could not move my car, I rested my head on my steering wheel and wept, till a nurse came to my aid.”

According to the eight, they were emotional mixed with a bad feeling which they could not bear. The Interpersonal and intrapersonal supports were what they needed at that time when they received the diagnostic report.

RQ 2: What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer treatment?

The study group explored all sources or resources of help at the treatment phase of the disease continuum. Table 8 described the types of coping mechanisms mostly applied during the treatment period of the disease. The 12 participants unanimously agreed on seeking health insurance, health institutions, and support from medical teams as well as factors that could give them assurance of treatment and reduce their stresses. The participants used problem-focused coping at this stage than emotionally focused coping because they had a treatment plan they were following.

The seven members at one point mentioned that they wanted to hear positive reappraisal or something positive. Prayers and family support were the primary factors that enhanced their ability to cope when participants returned from chemotherapy or other treatments. “All the time in my cancer treatment, I could not touch my child of 10 months when I come home after treatment”, said S03.

“When my mother came to support me, the stress involving my child and my treatment reduced, I was not thinking about who cared for my daughter when I went for medical or treatment appointments.”

RQ 3: What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer remission?

At the time of the interview, two participants have had remission experiences. Because they have had previous experience of breast cancer, they expressed fears and anxiety when they received the diagnostic report. One of them verbalized on receiving the report, “again, the tear began dropping from her checks.” According to the two, they intensified their prayers, knowing that the God, who took care of them during the previous experience, would do likewise with the second episode. The rest of the mechanisms that enhanced they're coping were religious, family support, social support, as well as positive appraisal/infusing with positive meaning continued through remission stage of breast cancer (Table 8).

There was no discrepancies or conflict of data that existed in the analysis. Each participant presented and answered the original and the probing question as was asked.

Summary

Chapter 4 consisted of the field implementation of the methodology in Chapter 3. Two participants interviewed for the pilot study, and 12 members surveyed in the original study. The outcome of the pilot study analysis was used to appraise the first study methodology. Data was either digitally recorded or written verbatim. Researcher transcribed the data, performed coding, grouped into themes, and established the cluster of ideas and labeled the ideas. The results of the analyzed ideas were used to address the following research questions

RQ questions 1: What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer diagnosis?

The results showed a variety of coping mechanisms used by the participants at various stages of the breast cancer diagnosis phase as shown in Table 8 above. All 12 members of the study received the diagnosis with a tear. According to the 12 participants, they were emotional and could not bear with the report. Interpersonal and intrapersonal supports were what they needed at during diagnosis.

RQ 2: What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer treatment?

All coping mechanisms as used in the treatment phase of the disease continuum. Table 8 described the types of coping mechanisms mostly applied during the treatment period of the disease. The 12 participants unanimously agreed on seeking health insurance, health institutions, and support from medical teams as well as factors that could give them assurance and reduce their stresses. The participants used problem-focused coping at this stage than emotionally focused coping when resolving issues turn to be difficult. All those involved at one point mentioned that they wanted to hear positive reappraisal or something positive.

RQ 3: What are the coping mechanisms of Sub-Saharan African female immigrants when dealing with breast cancer remission?

The research findings showed that religious belief, family support, social support, as well as positive appraisal and infusing with positive meaning continued through remission stage of breast cancer (Table 8). Problem-focused coping and health care/insurances were the primary two coping tools mentioned in the reduction phase of the study. The two were six (50%)

survivors resorted to relaxation techniques by attending breast cancer meetings and sharing their breast cancer experiences, whereas the other six (50%) were working only for survival, stressing that they only wished that they never went through the breast cancer experience the second time.

Chapter 5 consisted of the description of the findings, the limitations, and recommendations of the study. In Chapter 5, the researcher presented the social implications and the proposal of the research. Finally, the key point or essence of this study was spelled out again in conclusion.

Chapter 5: Interpretations, Conclusions, Implication, and Recommendations

Introduction

The study's findings are in Chapter 5, including the results and provide the interpretation of the findings, a summary of the key findings, limitations of the study, recommendations for future research, implications (positive social change), and conclusion. I explored the coping mechanisms of Sub-Saharan African female immigrants with breast cancer that were not known or published in academic journals. Coping mechanisms and early detection of breast cancer lumps were of public health significance because of their preventive measures. The study was a follow-up of other studies of breast cancer, particularly among African-Americans and other ethnic groups in the United States (Edwards, 2010; MCcoy, 2005). Culver et al. (2002) showed that there are differences in coping mechanisms by age, culture, ethnicity, gender, person, and geographical locations.

In 2014, Cancer Surveillance and Health Services reported on breast cancer distribution by the major and minor ethnic groups, Sub-Saharan African female immigrant breast cancer population was excluded or buried in African American data in the United States breast cancer database. Where the study demographic information was not available, Sub-Saharan African Female immigrants with breast cancer coping mechanisms could not be available.

The data analysis of the District of Columbia Surveillance report mentioned all the major and minor ethnicities, except Sub-Saharan or African immigrants (Gray, Garcia, & Kharfen, 2015). Beyene (1999) reiterated that African immigrants differ in many ways and their cultural understanding of the health care system. Given these facts, Sub-Saharan African females with breast cancer data have been excluded or buried in other data; it was, therefore, relevant to study or research to explore the coping mechanisms of the study group during diagnosis, treatment, and remission.

The summary of the significant coping themes explored from the cluster issues was: crying, family support, emotion-focused, expression of emotions (venting or depressions), health care and insurances, positive appraisal/infusing with definite meanings, prevention, and problem-focused copings. The rest were relaxation techniques, religion (Christian music, faith, individual prayer, and prayer groups), seeking support, and social supporting network systems.

Interpretation of the Findings

Bodour (2011) defined coping as the skills or strategies used to reduce stress as in his study. Females from Sub-Saharan countries describe health and domestic needs second to the family (Smith, Pope, & Botha, 2005). For this reason, they present apparently with little symptoms and accessed emergency rather than assuming care from their primary physician as reported in this study (Burgess, Hunter, & Ramirez, 2001). Whereas other females may be influenced by the relatives or friends to seek help, others take the responsibilities and ask for help themselves.

Besides advice, Sub-Saharan women ask for help from the perspective of expressing longing and wanted people (such as spouse or relatives) to be around her at all times when threatened by terminal illness. Where there was no such help coming, the initial observation was sharing of tears or crying (Rottenberg, Wilhelm, Gross, & Gotlib. (2003).

The seven (58.33%) of 12 participants upon the reception of the medical and laboratory report wept. Crying or sharing tears was the first response of good news or bad news (Vingerhoets & Bylsma, 2007). Crying or sharing tears as results of bad or good news was an expression of being overwhelmed with the content of the story, and thereby calling for help. Ryde and Hjelm (2016) supported crying as result of severe feeling as such offering assistance cannot be overemphasized.

> “The most challenging thing was that I had no insurance coverage when diagnosed with breast cancer. I was depressed thinking that without insurance I was going to die. I wept when I went home, particularly, when I saw my daughter lying in bed” (Interviewee S02). I left the office and joined my car. I sat behind the steering wheel and leaned my head on the steering wheel. I wept till a nurse from the unit came to me” (Interviewee S04).

When bad news happens, it leads to crying, understanding, and resolution of the issue (Vingerhoets et al., 2001). The ideas support RAM cognator subsystem that defenses are used to seek relief from anxiety or motions (Roy, 2009). Crying was a significant cultural factor to be observed as an issue when attending to the study population. Providers or caretakers must cry a signal of a problem that required attention or interventions.

Unresolved issues increased emotional focused coping and relaxation benefits when problems were resolved (Stanton et al., 2000). As foreigners, these female matters were different. They did not know the national health system and were incapable of manipulating the computers to look for what they need. In all the treatment period participants were dependent, stressful and emotionally unstable. According to Interviewee S08,

> “I could die if I continue to endure the pain without openly discussing it with my workmates.” “I saw my baby lying in bed crying, but I could not get her because of my chemotherapy treatment,” verbalized Interviewee S02.

According to RAM when personal needs and issues remained unresolved, effort to cope decreases (Roy, 2009). Another factor for vital importance was that years of education played a significant role in coping strategies. The study supported Khalili et al. (2013) about years of schooling on the application of emotional-and problem-focused coping strategies.

Similarly, religion, particularly prayer group, was used as coping strategy. Gonzalez et al. (2016) showed that religion was a common strategy for coping. As mentioned in RAM, persons have a mutual relationship with the world and God (Roy, 2009); the participants considered to bargain for healing from God because they believed God created them and that he has the power to heal them. I identified religion or prayer as the coping mechanism with God.

> “I believed in God, and I was optimistic that God would save me from the devil’s snare and I would be free from breast cancer, said interviewee S07. I thought I was going to die. My hope was on prayer” (Interviewee S03).

It appeared that family support was used by the study group throughout the diagnosis to remission phases. According to the interviewees, their families were the immediate source of contacts. The parents or spouses played a significant role in decision making as regards types of treatment. In the interview process, Interviewee S06 said,

> “I received support from my relatives and my church family. “The coming of my mother minimized my psychological distress, anxiety, social isolation, depression and fatigue” (Interviewee S02).

Roy (2009) related social relationship concept as factors that may influence coping mechanisms. The participants believed that their families have more responsibility to them more than any other group of persons. Interviewees agreed that the parents and siblings gave them physical and psychosocial more than any supporting group. Reasons might be that parents and siblings have strong family bond.

Social support and social support network were found to have been used widely in the study second to religion (Ginter & Braun, 2014). In Roy's prepositions, she mentioned that the role to promote adaptation in health situations or illness was by enhancing interactions between human systems and the environment (Roy & Andrews, 1999). Interviewee S03 stated,

> "the medical team introduced me to AWCAA which assisted me with the methods of handling my BC treatment". According to Interviewee S04, "I kept on researching in the social media and one morning in an early TV show, I listened to a medical team discussing breast cancer treatment procedures….The program gave me an opportunity of another treatment choice".

Females who have gone through the breast cancer treatment processes told the truth about the disease. Also, members used support network resources to know what the disease was like, and what role they could play to hasten the healing process.

The positive appraisal was conversations participants wanted to hear. Because of anxiety and fear related to breast cancer, participants declined to talk or hear about the disease.

> "I felt comforted when breast cancer survivors stood before me with encouraging and perseverance words," said S02. The participants' said, "soft languages received from survivors strengthened us".

Participants believed that when healing started, they need to grow with positive mindedness, to develop and to enhance the meaning of life like others (Andrews & Roy, 1991). In Drageset, Lindstrom, Giske, and Underlid (2011) supported words of appraisal such as, "It is good to lean on a shoulder without having to ask for it. I used to be strong and comfort to others," said S04.

> "My support only came from my faith and prayers in God. Even then, I did not disclose to anyone that I had BC" (Interviewee S04). "My church and my mother were the instruments of my coping process. They lovingly supported me, encouraged me with positive words, particularly when I was preparing for my surgery" (Interviewee S14).

Health insurance and medical care were the security of breast cancer patients. Death or surviving the disease depended on health insurance and healthcare. According to RAM (Andrews & Roy, 1991) all conditions, circumstances, and influences surrounding the earth resource which insurance and medical resources were not exceptional impacted on the coping of the study participants. No health insurance posed a threat to the member. Approach to seeking for health resource was another hindrance to the participants, in that they did not understand the complex health care system and also how to navigate the computers. According to Interviewee S08,

> "insurance was another key factor, because without insurance coverage l may not have survived the disease". In the next note, Interviewee S13 stated, "the challenge over here was the availability of insurance. I cannot continue with my treatment if I do not have insurance".

The cheapest cost of breast cancer treatment was the prevention of its occurrence. Participants who went through primary prevention program have less or no coping to worry.

According to Roy (2009), health is a state and process of being and becoming integrated and whole, that reflects person and environmental mutuality. According to interviewee S15,

> "… but I was fortunate to have discovered it during the shower in its early stage. After I lost a family member of this disease I considered doing breast exam that I was taught in school", said interviewee S07.

The 12 participants interviewed shared their experiences on coping mechanism during the diagnosis, treatment, and remission. Roy's adaptation model and phenomenological strategies were used to explore the lived internal and external experiences of the participants (Naga & Al Khasib, 2014), while grounding analysis approach used to analyzed the transcribed data. Han et al. (2008) noted that coping was a way to reduce stress triggers and the increased quality of life. According to Han et al. (2008), females have a variety of coping mechanisms to reduce tensions with breast cancer. The findings of the current study have underlined primary coping mechanisms from a thematic analysis that might be beneficial to the study population. The results will be used to answer the research questions.

Analyzing of Findings

The overall findings suggested that the participants focused their attention on seeking for help, healthcare/insurance, and resources to resolve the triggers related to the breast cancer diagnosis, treatment, and remission. The 12 (100%) participants applied crying, family support, social support network, as well as emotional/problem focused coping methods during the diagnosed. Seeking for resources to adjust and survive the disease, participants incorporated faith and prayer into the healing process (Fatone et al., 2007; Gonzalez et al., 2016; Simon et al., 2007).

In the interviews, all 12 participants mentioned more than five times that faith, prayers, and trust in God, played essential or crucial role in the breast cancer healing-coping-process. The member reliance on God was in line with one of the assumptions of RAM's that human in our creative ability of awareness, enlightenment, and faith to adapt to stressful situations. A similar study showed that beliefs were held by Mexican American women with breast cancer (Gonzalez et al., 2016), in their coping process.

Lopez-Class et al. (2011) reported in a study that Latina immigrants relied on spirituality, prayer, and relationship with God to cope with breast cancer experiences. Gonzalez et al. (2016) findings supported this research view on the use of faith and prayers as essential coping tools. The results suggested that faith and prayer played the central role in the coping process of the disease. Participants of this study mentioned that God had kept them alive through their entire crisis. The findings support Gonzalez et al.'s study on Korean, Chinese, and Mexican Americans females with breast cancer application of prayers and faith in God as part of the coping mechanisms.

The "family" has been mentioned in various kinds of literature as the core support of breast cancer patients of African-American origin (Henderson, 2003; Mukwato et al., 2010). However, the specificity of the family functions was not known. The family support, as mentioned in this context, appears to have expressed a different aid to the participants.

According to Mukwato et al. (2010), when an African female is sick, the entire family is sick, and they equally need physical and psychological treatment. The idea support RAM's views on systemic relationships include acceptance, protection and foster interdependence.

Mukwato et al. and Erickson and Lauri (2000) shared similar view with this study's findings that family support requires sharing information, educating and providing emotional support.

Tension, stress or anxiety could be relieved by relaxation techniques (Burish, Sydner & Jenkins, 1991; Gudenkauf et al., 2015; Kaspereen, 2012). Relaxation was reported by three interviewees as their coping instrument after they went through the medication treatment (Burish et al., 1991). Relaxation, as one of the findings of the current study, aligned with stress during chemotherapy as reported by Burish et al. and Gudenkauf et al. (2015).

Participants in the present study used concerts, movies, games, and other shows to relieve themselves from the stress of chemotherapy. Some of the participants also reported joining a gymnastic club or going through some gymnastic exercises or activities to alleviate some of their stresses. The majority of the candidates believed that going through any of these extracurricular activities released some of their stresses. A relaxation technique as used by the participants in the current study was consistent with other research findings (Burish et al., 1991).

The results such as social support interventions enhance the effectiveness of coping with breast cancer as found by Ginter and Braun (2014), Kim et al. (2010), and Thoits (1995). The study finding was consistent with Antoni et al. (2006) on seeking psychosocial adaptation to breast cancer distress. To optimize the quality of life for breast cancer patients, Carver (2005) supported the outcome of the research finding that social support by the spouse or a family member yields more positive results in a spouse's coping mechanisms.

Social support and network systems were mentioned as major factors that enhanced coping mechanisms applications of Sub-Saharan African females with breast cancer (Kim et al., 2010). A similar report from White and Boehmer (2012) supported the study's finding on social support from the fellow peer female groups, particularly, those from the patient's home countries of origin.

The study showed that the participants used both problem-focused and emotional focused coping at the onset of the diagnosis. Folkman and Lazarus (1985) expressed a similar finding in a study of 1,300 stressful episodes. The outcome of the research supported Mukwato et al., (2010), on how African females used both problem-focused and emotional-focused coping mechanisms to manage breast cancer stresses.

The study findings supported Lazarus and Folkman (1984) on emotion-focused coping mechanisms when patients cannot change the situation. The study results supported Mukwato et al., (2010) and Stanton et al., (2000), on participants' resolution to use coping strategies such as wishful thinking, minimization, expression of emotions, and avoidance of people where members could not decide by themselves.

Eleven of the 12 members used optimistic coping. All the participants from the four Sub-Saharan African countries with different marital and educational backgrounds had a positive outlook and disposition towards their lives and were confident of overcoming or believed they would overcome the disease. The study findings supported Gonzalez et al. (2016) viewed coping mechanisms among Chinese-American, Korean-American, and Mexican-American. The results were consistent with the "meta-analysis with implications for coping with serious illness" on positive reappraisal on coping mechanisms (Moskowitz et al., 2009).

In spite of participants' culture assimilation or moved into a new culture, the immigrants had a different mental view on the health system. They believed in all the information they received from the medical and treatment teams. The outcome of the study supported Khosla (2006) views on optimistic participants turned all interpretations into positive events.

Access to health insurance was security for individuals during sickness or episode. The study results supported of McDavid, Tucker, Slogget, and Coleman (2003) on the influence of health insurance on health care and treatment. None possession of health insurance was the number one stressor 11of the 12 participants mentioned in the interview. Health insurance was stressed as the gateway into health institutions as well as receiving medical and nursing care. Participants indicated that the acquisition of health insurance was a significant step in the healthcare treatment process. It was also the primary level to get access to medical and nursing teams for treatment, the participants observed.

The primary, secondary, and tertiary prevention also relay with this current study. Human activities and individual behaviors strongly influence epidemiological patterns (Nelson & Williams, 2007) of breast cancer among the Sub-Saharan African female immigrant population. The present study demonstrated that participants performed less or no coping mechanisms because of the practice of the primary prevention (monthly breast examinations) methods. When participants were able to detect the lump earlier, in secondary prevention (Remington, Brownson, & Wegner, 2010); they were able to prevent the tertiary stage of breast cancer, and subsequently reduced stressful situations or death.

However, participants who ignored monthly breast examinations used multiple coping mechanisms. The participants used various coping mechanisms through secondary prevention (diagnosis) to tertiary prevention (lumpectomy, mastectomy or chemotherapy) levels of the disease continuum. Additionally, individual behaviors or behavior pattern observed in the interviews were significant factors that influenced the participants' choices in determining (Nelson & Williams, 2007) coping mechanisms.

Limitation of the Study

Among the limitations of the study was the small size of sampling group and were Christians. Another limitation was that the study was limited to a specific tiny fraction of a large female population. The study population was confined to a specified geographical region; therefore the result cannot be generalized to the entire African females or women community. Similar to Edward (2010), another limitation was the exclusion of participants' under 25 years of age. The population under 25 years has left a gap that warrants further study. Reliance on participants' interviews on coping mechanisms may compromise the validity of the findings, in that the interviewees' responses may have related to other diseases other than breast cancer. The subjectivity of the phenomenological research method was another limitation.

The researcher, being an African male and also an interviewer may have influenced the participants in the sharing of various experiences that may not be related to breast cancer, also mentioned as a limitation in Edwards (2010). Personal matters shared by opposite sex, particularly in African culture, might impact the data collection. I desired that the findings of this study may inspire further research on the subject outside the United States of America.

Recommendation

Most of the participants acknowledged the absence of coping mechanisms, yet they were using coping mechanisms. The exploration of coping mechanisms may be beneficial and understanding as regarding how to apply the mechanisms, specifically to the study population, to prevent stressors related to breast cancer.

The finding showed that seven or 58.33% of participants did not know the initial signs to identify or detect early signs breast cancer. The current study holds the view that many Sub-Saharan African females immigrants lack the knowledge of the difference between breast cancer and breast abscesses. In any of these cases, certain number of coping were demonstrated to cope with the stresses or the situation that were not known to the individuals with the episode. An epidemiological study is recommended to use this study's result as a stepping stone to further perform a quantitative research to quantify the problem, and also seek from the study population understanding of the difference between breast abscesses and breast cancer. The public health agencies and health educators are encouraged to educate, and support the females to identify early signs of breast cancer in the communities.

The study result may be disseminated by publication, presentation and conferences' presentations. To the larger Sub-Saharan African female immigrants population the dissemination of the results may be by discussions and seminars with the indigenous churches and women groups; and also to the general Sub-Saharan immigrant population through the indigenous radio show program on the Friday's talk on life issues, on concerns of African immigrants.

Implications

Participants who have received greater supports have showed lowered degree of depression and other negative mood caused by physical illness (Brown, Wallston, & Nicassio, 1989). Ginter and Braun (2014) documented that breast cancer patients require social support to cope with the fears and frustration associated with diagnosis and treatment. The current findings support Kim et al. (2010) on the use of family support, and Ginter and Braun that prayers buffer stresses related to breast cancer diagnosis and treatment.

The findings have contributed to the knowledge and understanding of Sub-Saharan African female immigrants with breast cancer coping, during diagnosis, treatment, and remission. The identified coping were crying, religion (Christian music, faith, and prayer groups), family, relaxation, seeking support, and the social network system, problem-focused and emotion-focused coping. The rest were positive reappraisal/ infusing positive meanings, healthcare system/insurance, and the prevention, are indicative of achieving a quality of life benefits. I desired to help educate care providers to use these coping mechanisms to promote quality of life or provide quality interventions for Sub-Saharan African female immigrants with breast cancer.

Positive Social Change

The findings have provided available coping mechanism resources for the Sub-Saharan African female community with breast cancer. The sub-Saharan African female immigrants with breast cancer could quickly find resources to use throughout their breast cancer care continuum. Similarly, providers and program planners for sub-Saharan African female immigrant with breast cancer must have a source of data to derive information to plan program for the study population. The acceptance and application of the coping results may increase their social adjustments and bring social change that may improve their quality of life.

Positive self-soothing thoughts and seeking social support were critical coping buffers that bring positive social change because they provided the individuals with sympathy, understanding, moral support, and more vital information, or resources. Another factor that created positive social change was the individuals’ religion. There was evidence of comfort through the participants’ faith, particularly with the prayer groups. The prayer groups provided support that changed the negative meaningless life of breast cancer participants to a definitive meaningful and hopeful life.

Participants were made aware by their prayer groups that they were not solving their breast cancer problems alone, but provided them with hope and spiritual strength and support that the prayer team and God is on their side. The prayer groups were looked at as important as family members. One critically important point to be noted among Sub-Saharan African female immigrants with breast cancer was that participants’ family are primarily and extremely important to them. As such, caregivers should at no circumstances denied families members to attend or visit with relatives with breast cancer. The reason being that participants have believed they belong to the family members.

The findings is the primary coping mechanisms database for sub-Saharan African female immigrant with breast cancer. The results could be used to develop a framework approach to reducing breast cancer challenges, morbidity and mortality among the Sub-Saharan African female immigrant population. For instance, according to Stanton et al. (2000) terminally illness candidates used emotional coping combined with powerful expression and processing emotions as psychological adjustment benefits. Supporting the findings of Stanton et al., Folkman and Moskowitz (2004) mentioned that the application of the emotional coping and active expressions decreases depression, hostility and increase life satisfaction. In fact, S03 mentioned in her response that “expressing emotions towards her siblings increased her inner satisfaction”.

The interviewees indicated that a single breast cancer female affects the entire African female community, particularly, the immediate family members. Given this, the current findings would alleviate the stresses when Sub-Saharan African female immigrants appropriately apply the coping mechanisms. The findings may add to coping resources of healthcare providers dealing with Sub-Saharan African female immigrants with breast cancer. The results will add to the resources of the literature, psycho-educational programs, medical and nursing cares, as well as provision of breast cancer support networks.

The study result could be used to control breast cancer stress, to develop a breast cancer educational program, and to prevent and control breast cancer morbidity and mortality among the Sub-Saharan African female population.

Implications for Social Change: Public Health, Epidemiological Approach, and Intervention

The collection of the coping mechanisms' data from the participants is an initial public health assessment of the study population. However, a quantitative methodology that abstracts data from participants of the community would provide an objective view of the community problem. Quantitative study may be used to quantify the problem in the study population. The outcome of the quantitative research may be used to formulate appropriate health policy, monitoring and auditing guidelines to deal with breast cancer issue in the study population. The program outcome would change the study community and thus bring social change in the study population.

African countries have the lowest incidence, but they have a high proportion of women presenting with late-stage disease (Mohamed et al., 2005). From an epidemiological point of view, there exist some identifiable risk factors with this study population that might have caused the high risk. In addition to the risk factors (Hauk, 2012; Tirona, Sehgal, & Ballester, 2010), there is a modifiable risk factor such as, “ health-seeking behavior and attitude towards health checks” of Sub-Saharan African females immigrants, also identified in this study. Seven or 58.33% participant did feel the symptoms of the disease but did nothing about it. Breaking this behavior or modifying it will directly affect early detection or minimize the incidence of the late stage of the disease, and reduce the application of multi-copying mechanisms, which could promote positive social change.

Coping mechanisms act to prevent, change, alter or annihilate the anticipating adverse effect to adapt to reduce the discomforts and distresses induced by the disease (Vaida et al., 2015). According to Vaida et al., the ability to adjust (coping) is an essential route to control stress. Furthermore, Vaida et al. noted that coping stands for any mechanisms of prevention and adjustment to stress for any reason between the body and its environment. This study viewed coping mechanisms as instruments to prevent or reduce stresses that have already induced. Indeed, the coping mechanisms have brought a wide range of preventive tools to promote positive adjustment that will bring social change with the study population.

According to American College of Obstetrics and Gynecologists update of breast cancer screening (Hauk, 2012) early detection of breast cancer could reduce breast cancer and minimize complex coping mechanisms, and promote social change. The guidelines show that early breast cancer could be trapped or detected by clinical breast examination done once in every three years for ages between 20 years and 39 years, and annually for ages 40 years and above. Additionally, breast self-examination is recommended for at high-risk persons and optional for 20 years and over, but recommended mammography every two to five years for women aged 40 years and older. Furthermore, female aged 50 years and above, with a family history of breast cancer have a biennial mammography. Given this, the implementation of a planned educational and screening program in the Sub-Saharan African female population, with monitoring and auditing in place, will decrease the incidence or minimize coping mechanisms. The study also showed that early detection of breast cancer lump or tumor reduced the use of coping mechanisms. At least four or 33.33 % participants detected cancer early; as such, they used less coping compared with seven or 58.33% participants that went through metastasized breast cancer.

Furthermore, the primary prevention is the identification of breast cancer gene in the DNA by genetic testing. However, the option of managing such cancer risk in individual who have been known with harmful BRCA1 and BRCA2 is by screening, prophylactic surgery, and chemoprevention (National Cancer Institute, 2017).

Perry et al. (2008) concluded that population assessment provides information for initiating step by step epidemiologic study of the health problems in the community. Sustainable health policy, monitoring, and auditing of the breast cancer screening program for the sub-Saharan African female immigrants' community may enhance early detecting of breast cancer. The study confirmed that early detection of breast cancer prevents multiple coping application. Early detection of breast cancer cells cannot prevent breast cancer complication alone but may lessen the use of coping mechanisms (Perry et al., 2008), and save medical expenditure.

Given this, public health agencies at the county levels may develop health policy to promote scientific knowledge such as mammogram screening programs to help healthy breast for the study population. The program may detect early breast cancer lumps and prevent breast cancer complications or application of multiple coping mechanisms or death. Additionally, the program may increase the longevity of life of women, as well as decrease the morbidity and mortality rates of the disease.

Giving education to the susceptible population on mammogram screening has been reported to be the cornerstone of breast cancer prevention (Aschengrau & Seage III, 2008). Early detection of breast cancer was by systematic mammogram screening, or monthly breast exam. These two methods could find breast cancer lump early for treatment and less tolerable coping (Perry et al., 2008). Early treatment of breast cancer may reduce clinical symptoms and coping mechanisms. The feature of breast cancer control is characterized by the function of public health assessments, policy administration, and assurance of the continuity of the program (Novick et al., 2008).

To control the incidence of breast cancer and minimize or control application of multiple coping mechanisms, population-based breast cancer screening programs should be planned by the public health agencies at the county levels. Prioritization of quality assurance such as training staff and audit, with a specialist in breast cancer units, to manage breast cancer in the sub-Saharan African female community.

Conclusion

The current data was the explored information from the Sub-Saharan African female immigrants about the breast cancer coping mechanisms. Most of the themes were consistent with the previous studies showing how Sub-Saharan female Africans coped with breast cancer at diagnosis, treatment and remission. The coping mechanisms included crying, family support, religion, social support, social network, problem focused, emotion focused; coping, positive reappraisal, prevention, relaxation and health care/insurance. The coping mechanisms have provided the bases to motivate academicians to continue the study into Sub-Saharan African female immigrants with breast cancer.

Despite the limitations, the current study provided increased in-depth understanding of the Sub-Saharan African female immigrant population with breast cancer. The coping mechanisms explored from the data analysis have become the primary documentation of the study population. A continuous, monitoring and auditing breast cancer screening program may reduce complicated breast cancer disease, lower the rates of morbidity and mortality, and lessen coping mechanisms. The participants applied coping mechanisms at different stages of breast cancer.

With the understanding of the sensitivity of women experiences and coping challenges, providers, and caregivers must offer coping mechanisms using cultural competency to provide support to the women with breast cancer. The study support Cherewick et al. (2015) that coping strategies are related to risk and protective factors at individual, family and community level and real attachment relationship with family or church provide stability, structure, and opportunity of emotion expression. Breast cancer patients live with a host of stresses; therefore they can cope effectively with these coping mechanisms.

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Appendix A: Interview Guide

(Adapted from UK breast cancer survivor.org)

STUDY ID NUMBER ___/___/___/___/__/

MODIFIED Edwards (2010), Hauken et al., (2013) and Henderson et al. (2003) OPEN ENDED PROBING QUESTIONS FOR SUB-SAHARAN AFRICAN FEMALE IMMIGRANT COPING MECHANISMS.

Introduction: I am thanking your time to meet and speak with me. Your response to the interview questions/discussion will help me to better understand some ways of how you coped with your breast cancer experience. Your answer is valuable and important to me and this study.

Per your permission I would audiotape this interview/discussion to make sure that I get everything that you are sharing. The recorded information will help me to retrieve the answers you may give which I may not write. Also, if you feel uncomfortable answering any question, that is okay, you do not have to. Do you have additional questions that are relevant or may add to the research you may ask during the interview or after interview?
Let's begin with some background information and remember that your name will not be used anywhere in the report.

Open-ended and/with Probe Questions

As you are aware, this study is conducted to gain a better understanding of the lived experiences of Sub-Saharan African female immigrants with breast cancer coping mechanisms.

A. Coping1

After finding out about your diagnosis, at any point did you remember thinking back about the signs or symptoms that you may have ignored during diagnosis, treatment or remission?
Please, can you please tell me about you experience, being Sub-Saharan woman immigrant diagnosed with breast cancer?
Please, tell me what stage you were diagnosed? And what has ASSISTED YOU MOST in managing your breast cancer? How did you cope with breast cancer?
Please, tell me what has ASSISTED YOU LEAST in managing breast cancer?
Please, what made you choose the treatment you are on and how did the treatment help you to manage with the situation?

B. Economic Question

Please, what programs are available to individuals like you who may need assistance that you know?

C. Educational Question

Please, can you tell me how your educational background helps you during the diagnosis, treatment or remission? What were your steps to continue with the breast cancer treatment? How did you make your treatment options?

D. Support

How do you support yourself?
If you went for support, why did you choose to go to that source for support?
When were you supported and what kind? How did the support help your situation?
If with your family, are they here or elsewhere?
How is your family coping with your diagnosis?

E. Belief, Cultural and psychosocial Questions:

Please, how did your faith help you to cope with this diagnosis?
Would you say that being Sub-Saharan African female immigrant makes any difference? If so how?
Can you tell me how you are coping with the altered body image?
Please, tell me about your indigenous sociocultural factors that are ***beneficial/not beneficial*** to your situation
Probe:
Language, cultural network, traditional values, etc.
Challenge and perceived benefits questions:
Please tell in one of your difficult times, what helped you to overcome the difficulty?
How did you work out with that situation to overcome it?
Why did you choose to handle the situation the route you chose?

F. Supporting Groups

Have you explored ***Supporting groups***; cultural network, spiritual growth, etc.
Probe:
If you have, what group, how have they improved your experiences?
Does female African immigrant make a difference with breast cancer experience? If so/not, how?

G. Perceived protection factors:

Explore for language skills, acculturation, family expectations, and notion over body/self-image, Religion, specific traditions or values, etc.

H. Conclusion:

Please, you can add anything that you know that has not been mention here that will be helpful or will be relevant to the study and may enhance coping situations.
Thank you for being here and participating in this research.

IRB approval # 11-18-15-0183692

Appendix B Letter to Participant

Name of Participant Date:
Address
Dear (Name)

My name is Ernest O. Agyeman and I am a doctoral candidate at Walden University. I am conducting dissertation research on coping mechanisms of Sub-Saharan African female immigrants living in the United States. There are number of studies detailing with female breast cancer coping mechanisms of other ethnic groups. What is not known, however, are the coping mechanisms of Sub-Saharan African Female immigrants with breast cancer in the United States? This research will provide insight into what these females experience and what coping mechanisms they use.

I realize that your time is important to you and I appreciate your consideration to participate in this study. In order to fully understand your experience, we need to meet on one occasion for approximately one hour. Meeting can be held at agreed location of our choice and will not require you to do anything you don't feel comfortable doing. The meeting is designed to simply get to know you and learn about your experience of being cancer patient, what are your coping processes. All information gathered during our meetings will be kept strictly confidential.

Please contact me at your earliest convenience to schedule a date and time that we can meet. My telephone number is (443)319-3920. You can also email me at name@walden.edu. I look forward to hearing from you.

Ernest O. Agyeman (Doctoral Candidate, Walden University)

Ernest O. Agyeman

Walden University

School of Health Sciences

Minneapolis, MN 55401

____

____

Dear _________________:

Thank you for participating in the breast cancer research of Walden University on _________________. Your participation on the topic was very well received by our research team. The information to the research and the additional reference material you provided were both fascinating and timely. Our only regret is that we didn’t have enough time to discuss this topic with you, however, please take this ten-dollar gift card token and this thank you letter for our appreciation.

I hope that you enjoyed meeting with me (the student of Walden University) and that you will consider returning in the future to continue the interview/discussion.

Thank you again for taking your time to speak with our student.

Sincerely,

Ernest O. Agyeman

(PhD Candidate)

Appendix C: Consent Form

Coping mechanisms Sub-Saharan African female immigrants with breast cancer
Walden University

You are invited to participate in a research study, coping mechanisms Sub-Saharan African female immigrants with breast cancer. You were selected as a possible participant because of your knowledge and/or experience related to the topic. Please read this form and ask any questions you may have before acting on the information on this invitation the study.

This study in being conducted by
Ernest O. Agyeman, Doctoral Candidate at Walden University.

Background Information:

The purpose of this study is to know and understand the Coping mechanisms Sub-Saharan African female immigrants with breast.

Procedures:

If you agree to be in this study, you will be asked to participate in face to face (1-to-1 interview) interview in a location agreed, and for approximately one hour in length each time.

Voluntary Nature of the Study:

Your participation in this study is strictly voluntary. Your decision whether or not to participate will not affect your current or future relations with Walden University, your employer, or your breast cancer treatment. If you initially decide to participate, you are still free to withdraw at any time later without affecting those relationships.

Risks and Benefits of Being in the Study:

There are no known risks associated with participating in this study. The potential benefit of participating in this study may come in the form of providing more inclusive support services.

In the event you experience stress or anxiety during your participation in the study you may be given the local counselor phone or on-line resource for contact. You may refuse to answer any questions you consider invasive or stressful.

Compensation:

There is no form of compensation for participation.

Confidentiality:

The records of this study will be kept private. In any report of this study that might be published, the researcher will not include any information that will make it possible to identify a participant. Research records will be kept in a locked file; only the researcher will have access to the records. Interviews will be audio recorded for purposes of providing accurate description of your experience. Audiotapes will be destroyed at the completion of the study, which will be within one year.

Contacts and Questions:

The researcher conducting this study is Ernest O. Agyeman. The researcher's advisor is Dr. Raymond Panas. You may ask questions at this time. If you have questions later, you may contact the researcher at 410-772-5446/ ernest.agyeman@waldenu.edu. If you desire a private conversation, you will be afforded that opportunity. If you desire the opportunity to speak to a Walden University representative regarding your rights as a participant, Dr. XXX XXXX can be reached at 612-312-1210 or irb@waldenu.edu. Walden University's approval number for this study is IRB APPROVAL NUMBER 11-18-15-0183692 and it expires on November 16, 2016.

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

Consent:
If you would like to participate in this study and you have sufficient information to make this decision, please indicate your consent by signing below.

Printed Name of Participant Date

____ ------------------------------
Signature Date
____ --------------------------------
Signature of Investigator Date

Appendix D: Join the Breast Cancer Research and Save Generations

Are you a sub-Sahara African Woman?

immigrant diagnosed with breast cancer?

If 'yes,' then this research is for you.

Join 1-to-1 interview /discussion.

Participation is primarily VOLUNTARY.

There is NO INVASIVE procedure involved.

Your answers are valuable to this study aimed at Africans and Breast Cancer patients. Interested as a volunteer? Please, answer the questions below:

Contact Phone Number 410-772-5446 **Email**:krobeagyeman2013@hotmail.com

Thank You

Detach

Code WUBC-RS……

Interested Volunteer PLEASE check or circle where applicable (Y= yes, N= no) and mail to Breast Cancer Research, 6029 Turnabout Lane, Columbia, 20144 with paid envelope provided.

Are you ….?

Sub-Saharan female immigrant Y N Greater than 25 years and less than 65 years Y N
Diagnosed with breast cancer Y N In treatment Phase Y N
Survivor Y N Not Pregnant Y N
No co-existing disease Y N You qualify for this study (Please check, √) ___
Please you're Name: Phone/Email/Text 443-319-3920

Email Address: krobeagyeman2013@hotmail.com Contact Number (410) 772-5446

Appendix E: Permissions Requested

On Wed, May 27, 2015 at 9:43 AM, Ernest Agyeman <krobeagyeman2013@hotmail.com> wrote:

Hi Professor XXX,

ROY' S ADAPTATION MODEL

I am writing to request permission to use one of your theory models as described above for my dissertation.

I am a PhD candidate in Walden University, working on coping mechanisms of sub-Saharan female immigrants. I chose this particular model from your models because it fits well in the development of my constructs for data collection, as well as for the development of my argument. I will be very grateful if you will grant me the permission to use this model.

Thank you and hope to hear from you.

Sincerely yours,

Ernest O. Agyeman (PhD candidates, Walden University)

Sent from my iPad

Hi Professor XXX,

I am so happy when I read your response. I want to thank you for your work, and I promise I will continue from there to help those who need help. Once again thank you,

Ernest O.

Ernest Agyeman

From:(krobeagyeman2013@hotmail.com)

Sent: Wed 5/27/15 11:08 AM
To: xxxxx.xxxbc.edu

Hi Professor XXX,

I am so happy when I read your response. I want to thank you for your work, and I promise I will continue from there to help those who need help.

Once again thank you,
Ernest O. Agyeman
Sent from my iPad
On May 27, 2015, at 10:47 AM, "XXX XXXXX XXX" <xxxxxx.xxxx@bc.edu> wrote:

Dear Ernest,
Thank you for your email. Please find attached a letter of permission for your dissertation. I wish you the best of luck with your studies and ongoing contributions to nursing.

Peace,
XXXX, PhD, RN, FAAN
Professor & Nurse Theorist
Connell School of Nursing Boston College
140 Commonwealth Ave.
Chestnut Hill, MA 02467
617-552-8811
<Agyeman, Earnest Permission 5-27-15.pdf>
Actions
XXXX XXXXX (xxxxxx xxxx@bc.edu)
Edit contact
5/27/15
Documents

Boston College
William F. Connell School of Nursing

May 27, 2015

To: Ernest O. Agyeman (PhD candidates, Walden University)

From: XXX XXXXX, PhD, RN, FAAN

Re: Letter of Permission

To whom it may concern,

This letter provides Ernest O. Agyeman permission to use the Roy Adaptation Model, figures and text for all dissertation and follow-up work on “the coping mechanisms of sub-Saharan female immigrants.” This permission extends to all educational, practice and research endeavors. It omits any permission for proprietary purposes.

I wish you well in your continuing contributions to nursing.

Sincerely,

Callista Roy

XXXX XXX, PhD, RN, FAAN
Professor and Nurse Theorist

CUSHING HALL, 140 COMMONWEALTH AVENUE, CHESTNUT HILL, MASSACHUSETTS 02467-381 TEL: 617-552-4250 FAX: 617-552-0745 WEB: www.bc.edu/nursing

To:
Outlook.com Active View
1 attachment (182.4 KB) Agyeman, Ernest Permission 5-27-15.pdf

Hi Professor XXXXX

Center for Crisis Psychology

I am writing to request permission to use your construct as described above for my dissertation. I am a PhD candidate in Walden University, working on coping mechanisms of sub-Saharan female immigrants. I chose this particular construct from your because your study is similar to mine. Your work was on coping mechanisms of the young women with breast cancer, and I am looking for similar coping mechanisms of the Sub-Saharan African females with breast cancer, therefore your constructs could be used to collect my data. I will be very grateful if you will grant me the permission to use your constructs.

Thank you and hope to hear from you.

Sincerely yours,

Ernest O. Agyeman (PhD candidates, Walden University)

Re: Lie's Open-ended Question Guide

Ernest Agyeman
7/15/15
To: XXX XXXXX

From: **Ernest Agyeman** (krobeagyeman2013@hotmail.com)
Sent: Wed 7/15/15 7:43 PM
To: XXXXXX XXXX (may@krisepsyk.no)

Sent from my iPad

\> On Oct 28, 2014, at 9:19 AM, "Ernest Agyeman" <krobeagyeman2013@hotmail.com> wrote:
\>
\> Professor XXXXX,
\> Thank you for accepting my request, and your article sent to me. I may get in touch with you as I move forward with my dissertation process; or for counseling if need be.
\> Thank you,
\> Ernest Agyeman (PhD Candidate, Walden University)
\>
\> Sent from my iPad

\>
\>> On Oct 28, 2014, at 4:08 AM, "XXX XXXX XX" <xxx@krisepsyk.no> wrote:
\>>
\>> To Ernest Agyeman
\>>
\>> Thank you for your mail and request. To clarify: Lie did not collect any data, but got permission to use the transcribed interviews i conducted with YACS in the work of my thesis. The detailed interview guide was developed and conducted in Norwegian, so this will be of no use for you. However, you will the content of the interview guide translated to English in my first Paper "Meeting Reality" in Table 3 - see attached field.
\>>
\>> I hope this will be of help for you, and I wish you the best luck in your important work.
\>>
\>> Yours sincerely
\>>
\>> XXXXXX XX XXX
\>> Researcher
\>> Center for Crisis Psychology
\>> Fortunen 7,
\>> 5013 Bergen, Norway
\>> Mail: xxx xxxx
\>> Phone: (xx) xxx.xxxx.xxxx
\>> xxxx.xxxxx.xx>> <Vedlegg 1.pdf>
\>> <may.vcf>

XXXXX X XXXX (xxx.xxxx.xxxxxx.xxx)

RESEARCH CONTRUCTS

I am writing to request your permission to use your construct as described above for my dissertation.

I am a PhD candidate in Walden University, working on coping mechanisms of sub-Saharan female immigrants. I chose this particular construct from your because your study is similar to mine. Your work was on coping mechanisms of the young women with breast cancer, and I am looking for similar coping mechanisms of the Sub-Saharan African females with breast cancer, therefore your constructs could be used to collect my data. I will be very grateful if you will grant me the permission to use your constructs.

Thank you and hope to hear from you.

Sincerely yours,
Ernest O. Agyeman (PhD candidates, Walden University)

XXXX X XXXX (xxxxxxx@waldenu.edu)
Add to contacts
5/07/15
To: Ernest Agyeman

Thank you, yes, you have permission. Much success!
XXXX XXXXX, PhD, FNP-BC, CNE, FAANP
Coordinator FNP Specialty College of Health Sciences School of Nursing Walden
University 100 Washington Av

XXXXXXX XXXX (xxxxxx@waldenu.edu) You moved this message to its
From: current
Location.
Sent: Thu 5/07/15 6:48 AM
To: Ernest Agyeman (krobeagyeman2013@hotmail.com)

Thank you, yes, you have permission.
Much success!
xxxxx xxxx, PhD, FNP-BC, CNE, FAANP
Coordinator FNP Specialty
College of Health Sciences School of Nursing Walden University
100 Washington Avenue South, Suite 900
Minneapolis, MN 55401
1-800-925-3368 ext. 2001011939 (voicemail)
xxxx xxxxx@waldenu.edu

Request of Permission

Request of Permission

Actions
Ernest Agyeman
5/27/15

Data source: XXXXX, XXX. (2010). *Breast cancer in African-American women: Qualitative study* [Doctoral dissertation]. Available from ProQuest. (UMI 3397085)

Dear XX XXXXX

RESEARCH CONTRUCTS

I am writing to request your permission to use your construct as described above for my dissertation.

I am a PhD candidate in Walden University, working on coping mechanisms of sub-Saharan female immigrants. I chose this particular construct from your because your study is similar to mine. Your work was on coping mechanisms of the African American women with breast cancer, and my work on coping mechanisms of the Sub-Saharan African females with breast cancer appear similar, therefore your constructs could be used to collect my data. I will be very

grateful if you will grant me the permission to use your constructs.
Thank you and hope to hear from you.
Sincerely yours,
Ernest O. Agyeman (PhD candidates, Walden University)

Effort to reach Dr. XXXXX through his/her former school and other faculties I searched failed. However, I credit him on the resource I used for my work.