

**AN ASSESSMENT OF WOMEN'S KNOWLEDGE, ATTITUDE AND HEALTH  
SEEKING BEHAVIOUR TOWARDS BREAST CANCER AND IT'S SCREENING IN  
KAKAMEGA COUNTY OF KENYA**

**BY**

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**DECLARATION**

This research is my original work and has not been presented for a degree in any university or any other award.

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## **DEDICATION**

I would like to dedicate this project to my mother and father especially for their endless support and their inspiration to pursue my studies.

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## **ABSTRACT**

### **Background**

Seventy to eighty percent of the cancer cases are diagnosed in late stages in Kenya. Breast cancer is among the most common cause of mortality in women and late diagnosis is the major ubiquitous concern. Existing literature has substantially focused on unraveling epidemiological and health system profile, but has largely neglected the assessment of factors shaping people's decisions on health care use. The study sought to evaluate the knowledge, attitude and health seeking behavior towards breast cancer and its screening in a quest to explain why women present for prognosis and treatment when symptomatic pointers are in advanced stages, impeding primary prevention strategies.

### **Methods**

Focus group discussions (FGDs) were conducted with women and key informant interviews (KII) in the rural and urban settings of Kakamega County in western Kenya.

### **Results**

Women perceived breast cancer as a deadly disease and conveyed fear of having early screening. Rural women preferred to seek self-prescribed medications and the use of traditional herbal remedies for long period before presenting for professional care on suspicion that the lump is cancerous. Long distance to health facilities, lack of information to establish effective follow-up treatment and low-income status were underscored as their major health seeking behavior barriers for rural women; whereas, urban women identified marital status as their main barrier. Key informant interviews revealed that health communication programs emphasized more on communicable diseases.

### **Conclusions**

Creating breast cancer awareness alongside clear guidelines on accessing screening and treatment infrastructure is critical. It was evident, a diagnosis of breast cancer/lump brings unexpected confrontation with mortality; the fear, pain, cultural barriers, emotional and financial distress are very real. Without clear referral channels to enable those with suspicious lumps or early stage disease get prompt diagnosis and treatment, then well-meaning awareness will not necessarily contribute to reducing morbidity and mortality.

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## DEFINITION OF TERMS

*Attitude*- A manner of thinking, feeling or behaving that reflects a state of mind or disposition

*Behavior*- Actions or reactions

*Breast Cancer*- Breast cancer is a malignant tumor that starts in the cells of the breast. A malignant tumor is a group of cancer cells that can grow into (invade) surrounding tissues or spread (metastasize) to distant areas of the body. The disease occurs almost entirely in women, but men can get it, too

*Breast cancer screening* – Breast cancer screening is the medical screening of asymptomatic, healthy women for breast cancer in an attempt to achieve an earlier diagnosis. The assumption is that early detection will improve outcomes.

*Breast Self-Examination (BSE)* - BSE is a screening method used in an attempt to detect early breast cancer. The method involves the woman herself looking at and feeling each breast for possible lumps, distortions or swelling.

*Clinical Breast Examination (CBE)* - Visual and manual examination of a woman's breast and under arm area by a medical professional

*Early Detection*- The key to finding breast cancer through screening tools: breast self-examination, clinical breast examination, and mammography

*Knowledge*- facts, information, and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject.

*Mammogram*- An x-ray examination of the breast

## **GLOSSARY**

*Baraza*- A Swahili word meaning a deliberation meeting held by a collective group of a people of wisdom

*Boma*- A Swahili word meaning a homestead

*Miyeka*- A luhya word meaning a traditional herb used to prevent breast cancer after breast feeding or used anytime that the breast develops wounds or pimples. It is also a generic word that means many diseases

## **LIST OF ABBREVIATIONS**

AIDS-	Acquired Immune Deficiency Syndrome
BCS-	Breast Cancer Screening
BSE-	Breast Self-Examination
CBE-	Clinical Breast Examination
CHS-	College of Health Science
CHW-	Community Health Worker
DPHN-	District Public Health Nurse
Dr. -	Doctor
FGDs-	Focus Group Discussions
HBM-	Health Belief Model
HIV-	Human Immune-deficiency Virus
HSB-	Health Seeking Behavior
IDIs-	In-Depth Interviews
IREC-	Institutional Research and Ethics Committee
KAP-	Knowledge Attitude and Practice
KIIs-	Key Informant Interviews
KBHP-	Kenya Breast Health Program
KNBS-	Kenya National Bureau of Statistics
KNCCS-	Kenya National Cancer Control Strategy

KM-	Kilometers
Ksh. -	Kenya Shillings
MCH-	Maternal and Child Health
Mr. -	Mister
MOPHS-	Ministry of Public Health and Sanitation
NGOs-	Non-Governmental Organizations
PGH-	Post Graduate Holder
QSR-	Qualitative data analysis software
SOM-	School of Medicine
SPH-	School of Public Health
UNICEF-	United Nation Children's Fund
WHO-	World Health Organization

## CHAPTER ONE

### 1.0 Background of the study

According to the American Cancer Association (2009), Cancer of the breast is regarded as the second type of cancer that is common for women and popular worldwide. Each year, 10% (more than 1.1 million women), of new cases of breast cancer are discovered every year (Maritza, 2009). Breast cancer incidence for women in the Sub-Saharan Africa is 15-53 for every 100,000 women, making it the second common type of cancer in women (Antoine, *et al.*, 2011).

In a research that was conducted between 2000 and 2006 by Nairobi Cancer Registry, 10,484 cases of cancer were reported for both male and female, and from this, 20.9% were the cases of women breast cancer (Nairobi Cancer Registry, 2006).

There has been wide implementation of screening methods that are protective, which has enabled the reduction of breast cancer death rates (Maritza, 2009). The main approach of controlling cancer that is popular in the world is clinical breast exam (CBE), mammograms, and self-examination procedures (Maritza, 2009). It is important to have early screening as it will lead to enhanced diagnosis, more effective cases of treatment, and better rates of survival (American Cancer Society, 2003; Andersson and Ryden, 2001). This is not case in the Sub-Saharan Africa; here, women do not seek early cancer treatment until there cancer is very advanced (Falkson, 2006). As a result, the region reports high mortality rates of breast cancer and faces many challenges to handle breast cancer (Anderson, *et al.*, 2006; Stewart and Kliehues, 2003; Williams, Olopade and Falkson, 2006).

Statistics show that six out of seven women in Kenya have not sought for breast cancer screening although there has been increased campaigns on awareness that have been carried out by the Kenyan government, hospitals, and Non-Governmental Organizations (NGOs) (Nairobi Cancer Registry, 2012). However, it is clear that there are some differences and disparities for access to screening services, making it hard for those with low income, lack of insurance, and lack of defined care to access screening. Muthoni and Miller (2010) indicate that only one hospital is used as a cancer treatment, and operational center, at Kenyatta National Hospital. It is unfortunate for the rural women who will have to travel to Nairobi, (the capital city of Kenya) at



their expenses to seek for cancer-related services (Muthoni and miller, 2010). It is even worse when there is no insurance cover that will take care of the costs and women have to pay for there own cancer related services (World Health Organization, 2008; Muthoni and Miller, 2010).

Finance is a barrier where rampant unemployment makes health care at least as inaccessible to residents of informal settlements as it is to their rural relatives (Muthoni and Miller, 2010). Only those few well-to-do patients who live in the largest urban centers have ready access to mammography and a range of treatment options, such as radiotherapy, chemotherapy, and surgery, at private hospitals (Muthoni and Miller, 2010).

Data on Kenya, suggest that most women are unaware of the signs, symptoms, and causes of the breast cancer (Nairobi Cancer Registry, 2006). None of the primarily urban women in a small baseline survey conducted by the Kenya Breast Health Program (KBHP) for instance, had knowledge of the correct risk factors for breast cancer (Muthoni and Miller, 2010). A study done by Muthoni and Miller, 2010 showed that the KBHP is the only local organization actively involved in promoting public awareness of breast cancer, and its activities are limited to a media blitz during breast cancer awareness month in October and mammogram screening in urban areas (Muthoni and Miller, 2010), none of which are suited to the needs of women outside of educated, urban circles.

To increase information on breast cancer among Kenyan women and to increase the uptake of early breast cancer screening among Kenyan women a study to assess the knowledge, attitudes and health seeking behavior regarding breast cancer and breast cancer screening among Kenyan women will be of great importance. This research aims to assess the knowledge, attitude and health seeking behavior regarding breast cancer and its screening among Kenyan women from Kakamega County.

## **1.1 Problem Statement**

Cancer is the third highest cause of morbidity in Kenya with (7% deaths per year) after infectious and cardiovascular diseases. Leading cancers are breast and cervical for women, prostate and esophageal for men (Antoine, *et al.*, 2011). Seventy to eighty percent of the cancer cases are diagnosed in late stages. Like many other Non-Communicable Diseases (NCDs) breast cancer is slow in progression, often degenerating to devastating disabilities and the management cost are hard to bear if not timely diagnosed and treated. There is better prognosis, chances of a more successful treatment and high survival rates when detected at early stages. Methods such as clinical breast exams (CBE), mammograms and breast self-examinations (BSE) have been utilized as main approaches (Maritza, 2009).

Even with government efforts in enhancing availability of early screening, diagnosis, and treatment of the leading cancers, uptake of these services has remained low and/or delayed over time. For instance, out of every seven women in Kenya, six have not been screened for breast cancer (Muthoni and Miller, 2010). The disease strikes 1 in 9 women and kills many due to late diagnosis (Kenya National Cancer Control Strategy, 2012). Most women hardly seek professional medical attention when they notice a lump in their breast when symptomatic pointers are advanced (El Saghir *et al.*, 2011). Socio-economic determinants of health have mainly been implicated in influencing individuals and communities' health services seeking behaviors (Akinyemiju, 2012). Much evidence pointing to lack of awareness, lack of funds, worry about examination discomfort, fear of finding cancer due to associated myths and stigma, and inability to establish effective follow-up treatment (Muthoni and Miller, 2010). All these, majorly informed by little to no basic knowledge of what cancer is. Limited data on breast cancer from Kenya shows that most women are not aware of signs and symptoms of breast cancer (Nairobi Cancer Registry, 2006). There are therefore high chances that women have misconceptions on breast cancer and its screening because they can not access health information (Muthoni and Miller, 2010). There are however differences among Kenyan women in early breast cancer screening uptake among the vulnerable, underserved populations and women with no or low income (Muthoni and Miller, 2010).

## **1.2 Justification**

As studies intensify with quantifying the risks and benefits of early breast cancer screening/diagnosis and primary prevention strategies uptake in relation to sensitization programmes, indepth understanding of women perceived risk and barriers of developing breast cancer and early presentation for screening/diagnosis have become integral(Maritz, 2009). The insights can help influence their choice of approaching screening options or risk-reduction strategies and effective follow-up treatment (Muthoni and Miller, 2010). It is therefore essential to understand how the scope of knowledge, attitude and health seeking behavior on breast cancer and its screening resonate with their gendered socio-cultural role; their perceived susceptibility, severity, benefits and perceived health needs. As a result, generate and enhance the pool of evidence that will inform the development of local cancer information, education and communications (IEC). Subsequently, provide the benefits of entrenching informed decision making among individuals, communities and stakeholders. This would as a result help address and reconcile the gaps on services uptake/utilization vis-à-vis general perception in order maximize on the existing and upcoming national health systems for cancer management and related policies.

### **1.3 Objectives**

#### **General objective**

To describe the knowledge, attitude and practice on cancer among women and the same on cancer screening

#### **Specific Objectives**

1. To describe the knowledge on breast cancer and its screening among women in Kakamega County.
2. To describe the attitude towards breast cancer and its screening among women in Kakamega County
3. To describe the health seeking behavior concerning breast cancer and its screening among women in Kakamega County

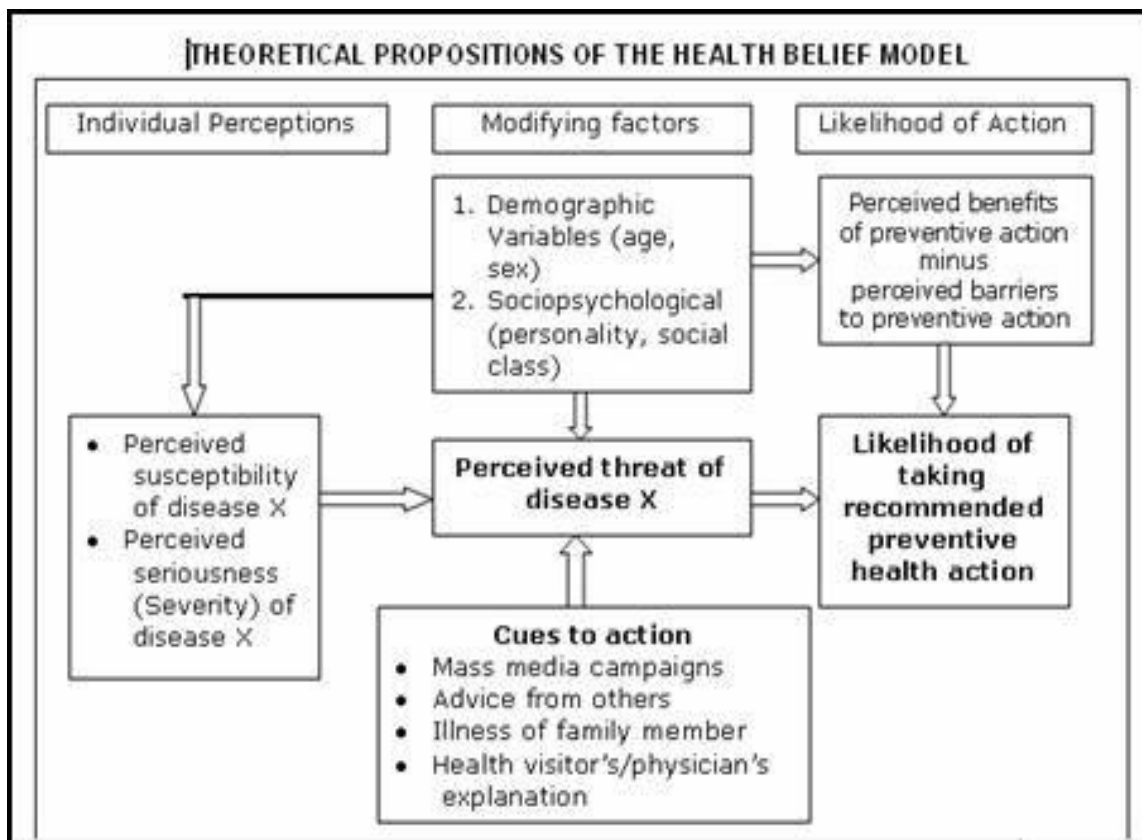
### **1.4 Research questions**

1. Why don't women in Kakamega County conduct regular early cancer screening or seek early cancer treatment?
2. What is the women's knowledge on breast cancer and its screening among women in Kakamega County?
3. What is the women's knowledge on breast cancer towards breast cancer and its screening among women in Kakamega County?

### **1.5 Conceptual framework**

The guiding conceptual frame work that will be used to conduct this study is the Health Belief Model (HBM). The HBM originally was formulated by Irwin Rosenstock in the year 1966 and the HBM model was used for studying and promoting the uptake of health services. (Muthoni and Miller, 2010). It has been widely used in investigations of breast cancer screening in recent years (Muthoni and Miller, 2010). The theory in its current state suggests six factors that influence adoption of health behaviors: (a) "perceived susceptibility," or perceived personal risk of contracting a health condition; (b) "perceived seriousness," or perceived personal harm of the condition in terms of physical, psychological, and social consequences; (c) "perceived benefits,"

or perceived positive attributes of a particular action in reducing the threat of disease or illness; (d) “perceived barriers,” or aspects related to an action that may be inconvenient, time consuming, expensive, complicated, unpleasant, painful, or upsetting; (e) “cues to action,” or events that stimulate an individual to perform preventive health activities; and (f) “self-efficacy,” or feelings of confidence in one’s ability to perform a behavior (Muthoni and Miller,2010). Rosenstock noted that knowledge should act as a modifying factor of early detection behavior (Muthoni and Miller, 2010). Figure 1.1 shows a diagrammatic representation of the health belief model.



**Figure 1.1: Conceptual Framework-Diagrammatic representation of the Health Belief Model (HBM)** ([http://currentnursing.com/nursing\\_theory/health\\_belief\\_model.html](http://currentnursing.com/nursing_theory/health_belief_model.html))

The Health belief model has the following limitations according to (Glanz and Viswanath, 2008): It does not take into account behavior that are performed for non-health related reasons such as social acceptability, behaviors that are habitual (e.g. smoking which may become relatively independent of conscious health related decision making process) or environmental factors

outside an individual's control. The researcher took into account the behavior performed for non-health related reasons, behaviors that are habitual, and environmental factors when designing the questionnaire.

The Health Belief Model was used in this study to formulate the questions in the interview guide and in the generation of themes during the data analysis.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

This chapter outlines information obtained from several reviewed literature based on the concepts of women knowledge, attitude and health seeking behavior towards breast cancer and breast cancer screening. The literature reviewed included: prevalence of breast cancer, breast cancer screening in Kenya, knowledge of breast cancer, attitude towards breast cancer screening and behavior towards breast cancer screening.

#### 2.1 Prevalence of Breast Cancer

New cases of breast cancer are diagnosed every year in more than 1.1 million women, which constitutes of 10% of all new cancer cases, and constitutes more than 1.6% of all deaths of women in the world (Maritza, 2009).

Of the breast cancer incidences reported in Africa, cases of breast cancer in East and middle Africa are known to have the lowest incidence rates (Leung *et al*, 2014). In the cases, the ratio of mortality to level of incidence is highest in East and Middle Africa (Caleb, 2006). There has been increase in the incidence rate in some parts of Africa, possibly because of an increase in cancer awareness in these regions (Caleb, 2006). Some of the common patterns of breast cancer in Africa include high rates of mortality, low incidence, reporting the cases at advanced stages, and poor access to health care (Macheneri, 2013). There are also social barriers that are known to exist that have been hindering the management of breast cancer which include stigma, and taboos (Muthoni and Miller, 2010).

In females in developed countries, breast cancer is the most common cancer with over 3 cases per every 500 persons (American Cancer Society, 2009). In Kenya, cancer is one of the leading causes of deaths, ranked at position three (Macheneri, 2013). The most common types of cancer in women include breast cancer and cervix cancer (Policy Brief on the Situational Analysis of Cancer in Kenya, 2011). Between 2000 and 2006, there was a total of 10,484 cases of cancer, in both men and women (Nairobi Cancer Registry (2010). It was found out that breast cancer

constituted 20.9% of cases related to women cancer in Kenya (Nairobi cancer registry, 2010). Breast cancer is commonly seen in young women of ages 50 and below at a rate of 33.5 per 100,000 population, according to the Nairobi Cancer Registry (2010).

Research and studies also shows that the people who are affected in Kenya are younger when compared to that in developed countries (Muthoni and Miller, 2010). Research from Nairobi Cancer Report show that breast cancer was the most prevalent cancer diagnosed in women in Kenya, and 51% of this were found in women that were less than 50 years of age (Nairobi Cancer Registry, 2010).

According to medical experts at the Nairobi Women's Hospital, too many of the cancer cases (70-80%) are not detected early due to poor awareness of breast cancer screening methods or lack of breast cancer screening which is what should be dealt with (Muthoni and miller, 2010).

There are predisposing factors that are associated with breast cancer. These factors include family background (if it is positive), stages of early menarche and late menopause, taking too long to have the first pregnancy, situations where there is existing ovarian, endometrial cancer, unilateral breast cancer (Calleb, 2006). The risk factors for breast cancer include female sex, age of the patient, background of the family in regard to breast cancer, exposure to oestrogen for prolonged periods, obesity, smoking and alcohol (National guidelines for cancer management, 2013). There are other predisposing factors that are likely to be an issue of concern. These factors include therapy of estrogen, drugs that are used for fighting hypertension, and diets, which are high in fat. Another factor is the fibrocystic diseases (Calleb, 2006).

Generally, there is insufficient information that show the situation of breast cancer in Africa. The treatment and assessment of breast cancer is faced with challenges such as inadequate resources that are used in this process (Calleb, 2006). It is a condition that is commonly seen in the whole of Sub-Saharan Africa (Calleb, 2006). It is for this reason that it is hard to make an evaluation of the incidence or the rate of prevalence without having in place efficient and reliable cancer death registries.



## 2.2 Breast Cancer Screening in Kenya

Women in Kenya do not seek for medical help and screening until the cancer they have is in advanced stage (Muthoni and Miller, 2010). This behavior has led to high fatality rates for cancer victims and heavy burden is left for the government and the entire nation (Muthoni and Miller, 2010). Women will seek for medical attention only if they start realizing that there is discharge from their breasts (Nairobi Cancer Registry, 2006). This is probably as a result of poor screening availability in most centers (Muthoni and Miller, 2010). There is a concern on the number of screening facilities and the accessibility of screening services by the women (Leung *et al*, 2014). The total number of facilities that offer mammography is inadequate and that there are minimal chances and situations where the number of victims that have been known to offer these services is inadequate in the entire process (Nairobi Cancer Registry, 2006).

Research shows that out of seven women, six have not been screened although there is some cancer screening awareness programs that have been put up by the government, NGOs, and private hospitals (Nairobi Cancer Registry, 2012).

Clinical breast examination (CBE) by trained health personnel and possibly breast self-examination (BSE), in which women examine their own breasts monthly for changes or abnormalities, can be useful for early detection of cancer if performed correctly and require no sophisticated equipment (American Cancer Society, 2003; Mitchell, Mathews, and Mayne, 2005). These behaviors become especially important in countries like Kenya where mammography screening is not a viable option for the majority of the population (Muthoni and Miller, 2010). Women who are knowledgeable about breast cancer and its risk factors have been found in other settings to be more likely to comply with such early detection behaviors than those who are not (Pearlman, *et al.*, 1999). The limited data on Kenya, however, suggest that most women are unaware of the signs, symptoms, and causes of the disease (Nairobi Cancer Registry, 2006).

In a study conducted in Nairobi, Embu, Nakuru, Nyeri, Kisumu, Mombasa, Kakamega, Kisii, Garissa, and Eldoret, a quarter of the women who were surveyed had not formal schooling. A further few had not undergone screening for breast cancer, even though there had been campaigns on the need to have breast cancer screening and the problems that can arise if there is no early detection of breast cancer. These women are in urban centers where information about

the need to get screening and the availability of health centers is not a problem (Nairobi Cancer Registry, 2012).

Some of the factors that have been known to affect the access to information for women that is preventing them from undertaking early detection include taboos and cultural beliefs which are known to be rampant in the population (Macheneri, 2013). Beliefs and taboos on cancer fatalities are the causal factors that have been associated with screening and general aspects of the population (Errico and Rowden, 2006).

### **2.3 Knowledge of breast cancer and its screening**

Breast cancer knowledge refers to a woman's knowledge of breast cancer risk, breast cancer screening and breast cancer treatment (American cancer society, 2009). Breast cancer is a predisposing variable that determines women's breast cancer screening compliance (Karma, 2001). According to the Ministry of Public Health and Sanitation (MOPHS), 2012, major risk factors to developing breast cancer include: female sex, age, family history of breast cancer and prolonged exposure to estrogens with related factors being hormone replacement therapy, ionizing radiation, high fat diet, lack of physical exercise, obesity, alcohol and family history of other cancers like ovarian cancer. Breast cancer knowledge is one factor influencing the likelihood of women practicing the following breast cancer screening techniques: breast self-examination, clinical breast exam, and screening mammography (Karma, 2001). Screening of breast cancer involves breast self-examination, clinical breast examination and breast imaging (mammography and/or ultra sound scanning) that aim at detecting lesions in their early stages (MOPHS, 2012).

Women's breast cancer knowledge is not enough to explain their breast cancer screening compliance. However, without breast cancer knowledge, women are unable to consciously comply with recommended breast cancer screening (Muthoni and Miller, 2010). A knowledgeable public carries out breast self-examination and talks to medical specialists about the appropriate high risk age for breast screening (Aydin, 2008). Women therefore choose to adapt to breast cancer screening if they receive reliable information from the hospitals that they trust and backed by vigorous holistic debates (Aydin, 2008). Currently, health promotional talks are given regularly through media outlets so as to make the public knowledgeable on different

health matters; sadly, every region in the country does not receive this information (Musimbi, 2008). (Muthoni and Miller, 2008) also showed that programs in Kenya that are aimed at promoting early breast cancer screening do it during specific months of the year and target women in urban settings like Nairobi, women in rural settings like Kakamega hardly get such messages and this would imply insufficient breast cancer screening knowledge and hence lack of breast cancer screening by the public in unreached areas on Kenya (Aydin, 2008).

A qualitative study on rural and urban Kenyan's, Kikuyu Kiambu District and the Kamba Machakos District, women, Muthoni and Miller (2010) showed that women regarded lifestyle and physical causes, curses, and genetics as the causes and risk factors for breast cancer. The study also showed that urban middle-income women seemed most knowledgeable about lifestyle issues, mentioning foods that contained preservatives, genetically modified foods, stress, and sedentary lifestyles as contributing to breast cancer (Muthoni and Miller, 2010). Rural women, in contrast, mentioned various physical causes of cancer such as milk retained in the breast (as when breast feeding was discontinued early or a baby died), keeping money or a mobile phone inside one's bra, and wearing undersized bras, all of which would make a woman more likely to get breast cancer (Muthoni and Miller, 2010). Certain plants also were described as causing breast cancer.

When it came to knowledge of early detection strategies, Muthoni and Miller (2010) reported that the participants in the urban middle-income study groups were able to describe the purpose of and the procedure for mammograms, though only a few had experienced them. They also described that the experience with clinical breast examination was more widespread among participants; the study also reported that older urban middle-income women and a few older Kikuyu women were able to give detailed explanations on how to perform a BSE and also were aware that hospitals held training sessions for women on the topic (Muthoni and Miller, 2010).

This research assessed the knowledge on breast cancer and its screening in the settings of Kakamega County. This study seeks to understand the knowledge, attitude, behavior, beliefs and cultural taboos that affect the women's access to breast cancer information and early breast cancer screening. This will provide invaluable insight to policy makers, program planners and other undertaking efforts to improve breast cancer screening uptake in the Kakamega.

## **2.4 Attitude towards breast cancer and its screening**

An attitude is an expression of favor or disfavor toward breast cancer screening. The attitude towards breast cancer screening is a positive or negative evaluation towards breast cancer and breast cancer screening.

Attitudes form a more complicated issue, and in fact, despite their explicit inclusion in the study type, they are scarcely accounted for in KAP surveys (Nyamongo *et al.*, 2003). Attitude has been defined as a learned predisposition to think, feel and act in a particular way towards a given object or class of objects (Nyamongo, *et al.*, 2003). As such, attitudes result from a complex interaction of beliefs, feelings, and values. They are important in designing health promotion campaigns which aim to change attitudes; attitudes may be inferred from a variety of statements and answers, but direct asking is usually problematic since people often respond in terms of what they think is the ‘correct’ answer (Nyamongo, *et al.*, 2003). In particular attitudes towards traditional medicine might be hidden. In a survey, attitudes are therefore not easy to obtain. However, attitudes are central to understand behavior, an element which is better acknowledged in cognitive models (Nyamongo, *et al.*, 2003).

A cross sectional study done by Huang, *et al.*, (2011) on knowledge, attitude and behavior on breast cancer screening from women of different socio economic backgrounds in China showed that of the 1,162 participants, 1,053 (90.6%) and 912 (78.5%) women were interested in learning more about breast cancer risk factors and prevention measures, respectively. Women stated that they had other misgivings about attending breast cancer screening. These participants cited “fear of detecting cancer, doctor may have insufficient expertise, bad attitude of doctor, no time, embarrassment during screening and no support from family as determinants of breast cancer screening” (Huang, *et al.*, 2011).

In Kenya, a study by Muthoni and Miller, 2010 showed that participants were skeptical that any type of treatment could save women from losing their breasts or from ultimate death. The study also pointed out that the participants believed that a diagnosis of breast cancer would jeopardize the family’s financial security and that a diagnosis of breast cancer could cripple one emotionally and lower one’s self-esteem.

This project will look at the differences in experiences and fears that influence the attitude towards breast cancer screening of the women that will participate in the study.

## **2.5 Health seeking behavior towards breast cancer and its screening**

Research that fall under health seeking behavior often use knowledge, attitude, and practice (Nyamongo, *et al.*, 2003). Health seeking behavior, a tool developed by WHO (1995) has been used to investigate how and the reason people would look for healthcare, treatment of a disease, or prevention (WHO, 1995). These behaviors will change according to the different demographic, cultural, or economic environments, and yet they are influenced by the same factors. Studies that have been conducted all over the world have shown that health seeking behaviors are determined by a person or the social factors that will include the perceptions, and the beliefs of a given individual, and also by the level of ease-of-access to healthcare and utilization (Grundy and Annear, 2010). It is important to undertake an assessment of health seeking behaviors in order to use it as a guide towards developing and designing effective intervention strategies and help to understand the obstacles in reduction of disease. It is also effective in designing campaigns that are used as tools for promoting advocacy and the associated changes that are needed in policies (WHO, 1995; Shaikh, Haran, *et al.*, 2008).

The behavior of someone towards breast cancer screening is the entire activity of an individual towards the process of breast cancer screening. There are six factors that have been stated to affect health behaviors. These factors include (a) perceived susceptibility, that is, perceived personal risk of getting a health condition, (b) perceived seriousness, or perceived individual harm that can be brought by the health condition, be it physical harm, social or psychological, (c) perceived benefits, or perceived positive attributes or a given step that has been taken in order to reduce the impact of the health condition, (d) perceived barriers, or aspects that are associated to an action that can be regarded to be inconvenient, painful, time-consuming, or sophisticated and which will affect the undertaking of that action (e) cues to action, or the events that will inspire an individual to take preventive measures towards a health condition (f) self-efficacy, that is, the feelings of confidence for an individual to undertake a given action towards something (Muthoni and Miller, 2010).

Early detection through screening form a very important step towards preventing breast cancer to develop further towards advanced stages. It is because lesions which are treated early are highly likely to cure than those that are treated later in the stage (MOPHS, 2012). In Kenya, the community place community leaders and health social workers as the effective lead agents that will help in driving the rate of acceptability of the cancer treatment options available (MOPHS, 2012). According to MOPHS (2012), one way to improve health seeking behavior for breast cancer and screening cancer health workers, and community leaders have a significant role to play. They have the role to provide information regarding cancer prevention services, and identifying eligible people who should be screened for cancer.

Most women have information about the fatality rates and yet they have no information about the rate at which this condition has been treated (Muthoni and Miller, 2010). It is the use of fear-instilling messages that will scare women away from undertaking early detection processes. Instead, these messages will intensify the fear and anxiety on the likely presence of breast cancer on the women (Muthoni and Miller, 2010).

This study therefore sought to assess; consolidate empirical information on HSB, among women from Kakamega County towards breast cancer and its screening that will be useful in the design of successful breast health awareness and early breast cancer screening detection programs.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

This chapter discusses the research methods that were used in the study. It describes the study design, area of study, target population, the methods of sampling the study population, the instruments that were employed in data collection and the procedures used in data management and analysis.

#### **3.1 Study design**

The researcher employed a descriptive cross sectional research design and used a qualitative approach which helped to assess the knowledge, attitude, perceptions and health seeking behavior of women in Kakamega County in order to inform health communication programs on the design of effective breast cancer screening interventions, help in understanding barriers related to breast cancer reduction and inform the design to successfully recruit women to breast health awareness and early detection programs. Focus group discussions (FGDs) and interviews of key informants (District Public Health Nurses) were conducted.

#### **3.2 Study site**

The study was done in Kakamega County. Kakamega is a County in Western Kenya lying about 30 KM north of the Equator. The county has a population of about 1.7 million (2009 census). With a population density of about 544 people per square kilometer, Kakamega is Kenya's second most populous county after Nairobi (KNBS, 2010). Kakamega has 12 constituencies and 60 wards. The County's 12 constituencies are: Butere, Mumias East, Mumias West, Matungu, Khwisero, Shinyalu, Lurambi, Ikolomani, Navakholo, Malava, Lugari and Likuyani. In the 12 constituencies, the study sites: Likuyani, Ikolomani, Lurambi and Mumias West constituencies were selected randomly. The 12 constituencies were grouped into rural and urban settings. Urban constituencies include: Mumias West, Lurambi, Shinyalu, Mumias East and Butere (Kakamega First County Integrated Development Plan, 2013). Rural constituencies include:

Matungu, Khwisero, Malava, Ikolomani, Navakholo, Lugari and Likuyani (Kakamega First County Integrated Development Plan, 2013).

Kakamega town is the capital of Kakamega County and its largest town is Mumias. According to the census that was carried out in 2009, 15.2% of the population lives in urban areas. This figure was projected to increase due to rural-urban migration in search of employment. Of the approximately 1.7 million people in Kakamega, 48% are male and 52% female. The population of Kakamega is relatively poor with poverty rate of 53 percent (KNBS, 2010).

The main health centers in Kakamega County are: Kakamega General Hospital, Kima Mission Hospital, Central Maternity and Nursing Home and Kimilili District Hospital.

### **3.3 Study population and sample**

The target population consisted of women aged between 18 and 60 years old from Kakamega County. FGDs were conducted in the following groups: young women of age group 18-35, older women of age group 36-60, urban women and rural women. Breast cancer mostly affects women of ages 18 to 60 years and the focus group discussions covered this age group.

Key informant interviews were conducted with 4 individuals who were the District Public Health Nurses (DPHN) that were from constituencies where the FGDs was done. The key informants were used to get more information on the women knowledge, attitude and health seeking behavior towards breast cancer and breast cancer screening from their respective communities. The DPHNs gave more information on breast cancer screening with regard to the whole County. They also shed more light on the knowledge attitude and behavior as per the community they represent.

#### **3.3.1. Sample size**

Data collection was done in rural setting until saturation point was reached and the same was done for urban setting. Eight focus groups constituted the sample size. The focus groups were held in four constituencies of Kakamega County: Kakamega Central-Lurambi, Kakamega East-Ikolomani, Mumias West and Likuyani. Each FGD had between 6-10 participants. Purposive sampling (using eligibility criteria for the research) and convenient sampling (distance to



location of FGD) for selection of the FGD members was done by the researcher with the help of local leaders. The researcher visited the study sites prior to the data collection and sought permission to conduct the study from the local authorities (chiefs'). The researcher discussed the aims of the study and the relevance of the various groups for the FGDs and the KIIs with the local authority to obtain their permission to conduct the study. The FGDs were conducted at the most accessible venues to participants (the Chief's offices and sub-chief's offices), facilitated by the researcher. Focus group discussions lasted approximately 1 hour 30 minutes while key informant interviews lasted approximately 1 hour. Before each FGD or interview, the researcher explained the research to all the participants (see informed consent form in Appendix III).

### **3.3.2 Sampling procedures**

The researcher divided the 12 constituencies into two groups; urban and rural. Urban groups include: Mumias West, Lurambi, Shinyalu, Mumias East and Butere (Kakamega First County Development Plan, 2013). Rural groups include: Matungu, Khwisero, Malava, Ikolomani, Navakholo, Lugari and Likuyani (Kakamega First County Development Plan, 2013). Two FGDs were conducted in each constituency until saturation point was reached in the County. For urban constituencies, Mumias West and Lurambi constituencies constituted the sample size while for Rural constituencies Likuyani and Ikolomani constituencies constituted the sample size. The total numbers of participants interviewed from Mumias west were 10 for the younger FGD and 9 for the older FGD. The total numbers of participants interviewed from Lurambi were 9 for the younger FGD and 8 for the older FGD. The total numbers of participants interviewed from Ikolomani were 7 for the younger FGD and 7 for the older FGD. The total numbers of participants interviewed from Likuyani were 10 for the younger FGD and 8 for the older FGD. The total number of participants interviewed in the FGDs was 68. The FGDs were categorized into younger and older groups during the interviews to enable the participants to speak freely in groups and to enable the researcher to get opinions from the older and younger population on breast cancer. Constituencies were divided into urban and rural to get opinions from both groups on breast cancer and its screening. The DPHN's were selected as per the community (constituency) that the FGDs were done. In total, 4 DPHNs were interviewed.

### **3.4 Eligibility criteria**

#### **3.4.1 Inclusion Criteria**

All individuals who were eligible for the study meet the following inclusion criteria: Residents from the Kakamega County in the constituency of study and females aged between 18-60 years.

#### **3.4.2 Exclusion criteria**

Individuals who meet the following exclusion criteria were not enrolled: Non- residents of Kakamega County from the select constituency, females aged below 18 years and above 60 years and females who are very sick; that is those who are too weak to participate.

### **3.5 Data collection methods**

Focus group discussions and in-depth interviews of key informants in the community were used for data collection (by tape recording and note taking). The researcher moderated the discussions while the research assistants assisted the researcher by note taking. The items in the focus group discussion interviews and key informant interviews were developed based on the categories of HBM. The items include; attitude towards the severity of breast cancer, perception of susceptibility to breast cancer, perceived benefits of breast cancer early detection measures, perceived barriers to breast cancer early detection measures, self-efficacy and cues to action.

The language used in conducting the FGDs was selected according to the FGD respondents' suggestions. Rural focus groups were conducted in Swahili. Discussions with urban women took place in Swahili and English. The items in FGD interviews were initially formulated in English then translated into Swahili for the use in the different study locations. Data collected in Swahili versions were translated into English to ensure constituency with the data collected in English versions. A pilot study was done in Lugari constituency prior to the study in order to test the FGD interview guide.

### **3.6 Data Analysis**

Audio tapes for focus group discussions were transcribed in full, and those that were conducted in Swahili were translated into English. Yin (2011) five-phase cycle of compiling, disassembling, re-assembling (and arraying), interpreting and concluding were used to process

the data. Qualitative method of data analysis was employed because the researcher was interested in analyzing the information obtained in a step by step process and getting comprehensive information on the knowledge, perception and health seeking behavior of women in Kakamega County. The researcher read the transcription severally and wrote down ideas and main points that appeared and came out severally from the data (KIIs and FGDs) in excel worksheets.

Excel and QSR Nvivo 2 qualitative data analysis software were used for data management and processing. Computer Assisted Qualitative Data Analysis Software (CAQDAS) QSR Nvivo 2 for windows was used in the analysis of focus group discussions and key informant interview data. The CAQDAS software can be used to test ideas, explore patterns and show connections between themes in qualitative analysis. The demographic data of the FGD participants that was collected was entered and analyzed using Excel worksheets. The field data from the KIIs and FGD interviews were entered and analyzed using the QSR Nvivo2.

The researcher uploaded all the data from the KIIs and FGDs to QSR Nvivo2 software. The data was compiled and organized the data according to the 8 study sites, settings and age. Data was then coded the data and developed nodes as they emerged (level 1 coding). The nodes were then classified to the major themes that are provided by the HBM model (level 2 coding). These were further classified into broader categories that developed from the findings (level 3 coding).

A comparison of the difference in knowledge, attitude, and health seeking behavior, myths, beliefs and cultural taboos between the urban and rural study populations were made. A comparison between the ages group 18-35; classified as young and age group 36-60; classified as older was also done. The researcher then used tables to show connections between themes that emerged. The tables also showed the main dimensions that the researcher was interested in: age (younger and older women), settings (urban and rural), themes (from HBM)/categories that emerged (knowledge, attitude, HSB and breast health promotional strategies). The frequency tables showed the number of times that particular themes/categories were mentioned.

The researcher then interpreted and concluded his research findings. The researcher used Yin (2011) “description and explanation as type of interpretation” recommended modes of interpretation for qualitative research. Findings were therefore reported using the actual words of

the participants as well as their quotations in order to describe their attitude, knowledge and health seeking behavior of breast cancer and its screening. The tables that were developed during the reassembling phase in the analysis supported findings.

### **3.7 Measure of trustworthiness of data**

To guarantee trustworthiness of the data analysis, the researcher used the standards for evaluating research that take into account subjectivity, interpretation and context and uses qualitative concepts of justifiability of interpretations and transferability of theoretical constructs. To show justifiability of interpretation, transparency, communicability and coherence criterion were used in data analysis.

- Transparency; other researchers can know how the researcher arrived at the interpretations. The researcher has shown how the emerging themes; as provided by the HBM and HSB were developed from repeating ideas, were fitted into the categories provided by the research objectives.
- Communicability; The themes can be understood and make sense to other researchers. The researcher has explained the themes based on the participants own words.
- Coherence; The theoretical constructs should fit together, hence allow the researcher to tell a logical story that helps to organize the data; the researcher has presented the data in narrative form to realize coherence.

To show transferability of the data, the researcher has made sure that the theoretical constructs build from this study are transferable; patterns that are described in this study can be found in the different constituencies of Kakamega County.

### **3.8 Dissemination and utilization of results**

The findings of this study will be disseminated to the Kenya Ministry of Health and the relevant stakeholders to be used in improving breast cancer health seeking behavior. The results will be presented and disseminated to Moi University, School of Public Health for utilization in research on breast cancer and breast cancer screening. The results will also be disseminated to breast cancer prevention programs and health communication programs to provide more insight on

breast cancer and breast cancer screening practices in Kenya with specific reference to study sites.

### **3.9 Ethical consideration**

Informed consent was sought from the participants. Before the discussions, there was oral consenting process whereby respondents were reminded of the purpose of the research, assured of confidentiality, and permission obtained to audio record them. Permission to carry out the study was obtained from Institutional Research and Ethics Committee of Moi University, School of Public Health. All information was handled with confidentiality and only used for intended purpose which was to shed more light on the Kenyan's rural and urban women knowledge, attitude and health seeking behavior on breast cancer. There were no direct benefits from participating in this study. There were no risks associated to the sample population as only discussions were involved.

The findings will be used for academic and other related work such as breast health programs (Kenya Breast Health Association) to improve breast cancer screening uptake. The findings will also be sent for publications in peer-reviewed journals like the Research in Public Health journal.

## CHAPTER FOUR

### RESULTS

#### 4.0 Introduction

The data that was obtained is presented by the use of narratives and quotations, tables and figures as seemed suitable in this chapter. Findings from the focus group discussions and key informant interviews are presented below as per the set objectives and the main categories from level 3 coding that emerged; beginning with health seeking behavior, knowledge of breast cancer and its screening, attitude towards breast cancer and its screening (categories provided by HBM) and breast health promotional strategies. Each category is discussed with relevant quotations from participants. Comparisons between the groups (urban and rural, young and old) are highlighted when they occurred.

#### 4.1 Socio-demographic data of the participants

Individuals who participated in the focus group discussions were women aged 18-60 years. 4 individuals participated in the key informant interviews sessions. 68 participants were involved in the 8 focus group discussions made of 6-10 participants. The table 4.1.1 below shows the socio-demographic information of the older (36-60 years) FGD participants. The groups are listed consecutively in the order in which the FGD was conducted. It contains the number of participants in each group, the age range of participants in the group, the setting, and the religion of the FGD participants.

**Table 4.1.1: Focused Group Discussion for Older Participants**

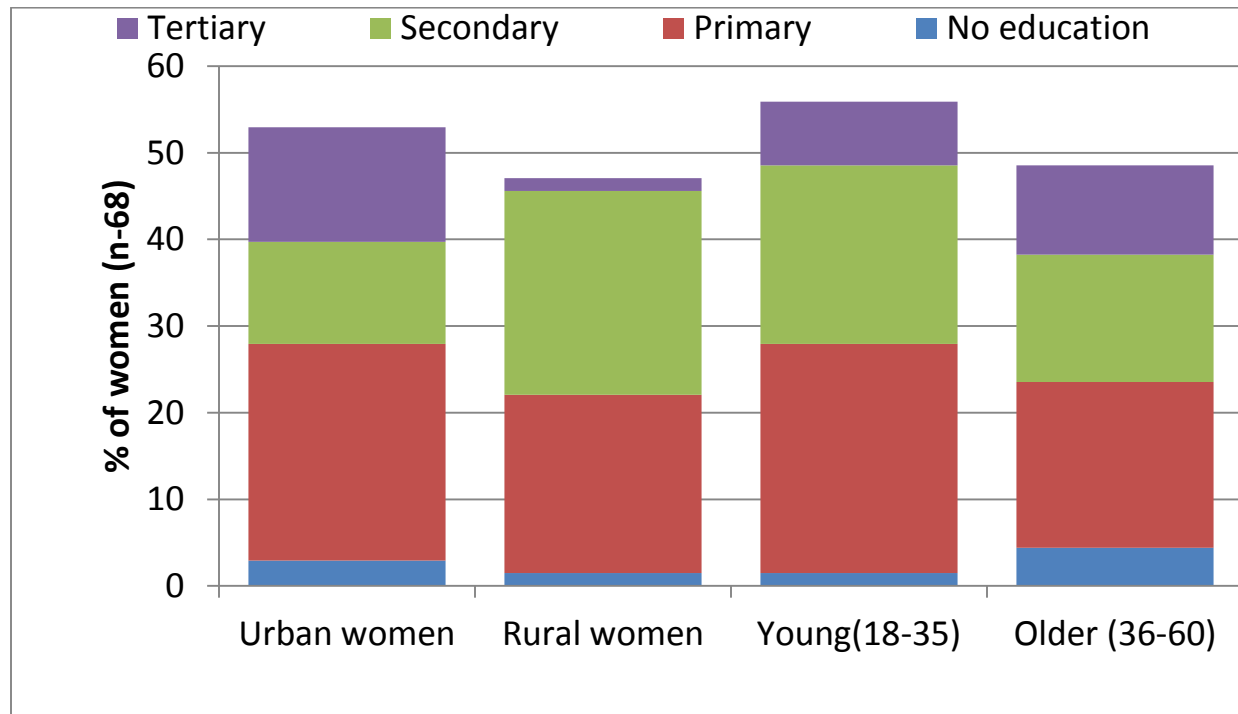
Group (FGD)	Number	Age range	Settings	Religion
1 (Likuyani)	8	36-60	Rural	Protestant and catholic
4 (Ikolomani)	7	36-60	Rural	Protestant and catholic
6 (Lurambi)	8	36-60	Urban	Protestant and catholic
8 (Mumias West)	9	36-60	Urban	Muslim, protestant and catholic

The table 4.1.2 below shows the socio-demographic information of the younger (18-35 years) FGD participants. The groups are listed consecutively in the order in which the FGD was conducted. It contains the number of participants in each group, the age range of participants in the group, the setting, and the religion of the FGD participants.

**Table 4.1.2: Focused Group Discussion for Younger Participants**

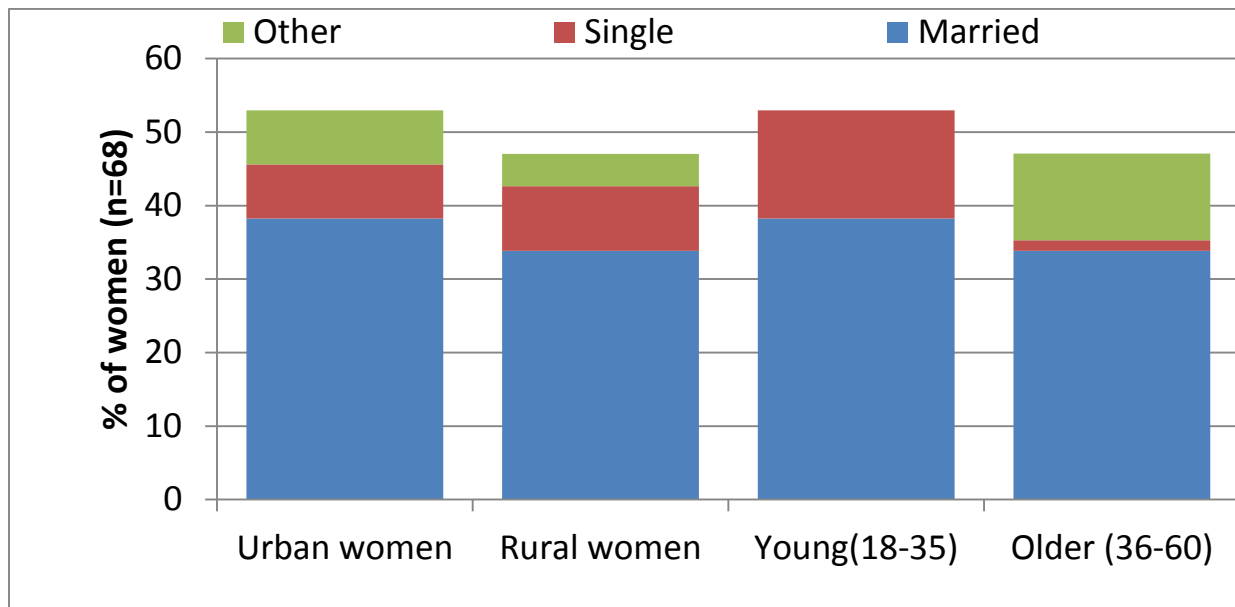
Group	Number	Age range	Settings	Religion
2 (Likuyani)	10	18-35	Rural	Protestant and catholic
3 (Ikolomani)	7	18-35	Rural	Protestant and catholic
5 (Lurambi)	9	18-35	Urban	Protestant and catholic
7 (Mumias West)	10	1-35	Urban	Muslim, catholic and protestant

The figure 4.1.1 below shows the education levels of the FGD participants



**Figure 4.1.1: Education level of the participants in the FGD**

The figure 4.1.2 shows the marital status of the participants from the FGD



**Figure 4.1.2: Marital status of the FGD participants**

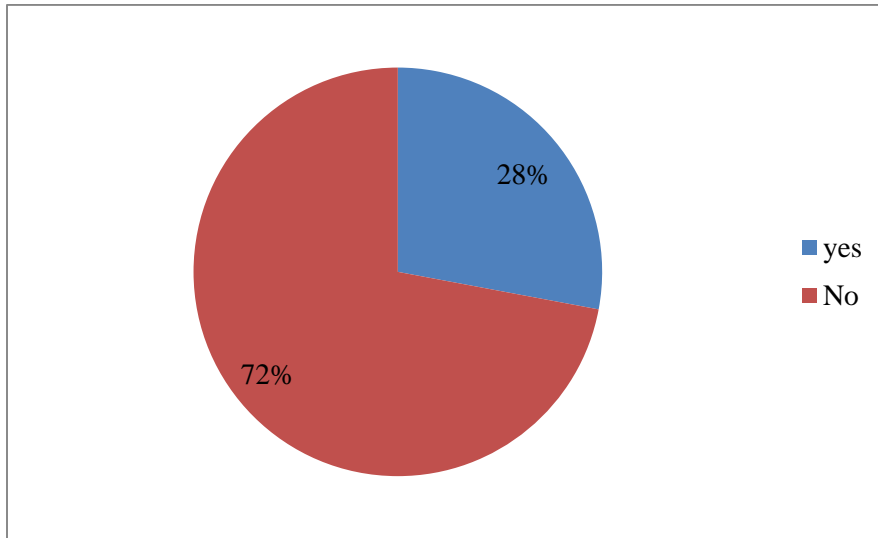
The table 4.1.3 below shows the socio-demographic information of the KII participants. It contains information on their age, gender, level of education, marital status, profession and constituency they represent.

**Table 4.1.3: Key Informant Interview Participants**

Serial number	Age	Gender	Level of Education	Marital status	Constituency	Profession
1	28	Male	Diploma	Single	Likuyani	Deputy DPHN
2	53	Female	Diploma	Married	Ikolomani	DPHN
3	44	Female	Diploma	Married	Lurambi	DPHN
4	34	Male	Diploma	Married	Mumias West	DPHN



The figure 4.1 below shows the number of FGD participants that had ever done BCS or not.



**Figure 4.1.3: Distribution of FGD participants who had taken up breast cancer screening (BSE, CBE and mammography)**

#### 4.2 Discussion of categories and themes derived from the data

The categories and themes are discussed with accompanying quotations from the data. The responses from focus group and key informant interviews were analyzed and generated themes that were classified into the categories shown in the table 4.2 below.

**Table 4.2: Summary of categories and themes generated.**

Categories	Themes
<b>Health seeking behavior of breast cancer and its screening</b>	Perceived barriers to breast cancer screening: -marital status -lack of transport money/long distance to health facility -lack of information/ knowledge -fear of associated stigma/fear of testing positive to breast cancer -Religion -Cultural beliefs -Insufficient health professionals Location of health seeking behavior of breast cancer and its screening: -hospital

	<ul style="list-style-type: none"> <li>-witch doctors</li> <li>-herbalists</li> <li>-self-medication</li> <li>-lack of action on situation</li> </ul>
<b>Knowledge of breast cancer and its screening</b>	<ul style="list-style-type: none"> <li>Knowledge of breast cancer</li> <li>Knowledge of breast cancer screening</li> </ul>
<b>Attitudes of women toward breast cancer and its screening</b>	<ul style="list-style-type: none"> <li>Perceived severity of breast cancer</li> <li>Perceived susceptibility to breast cancer</li> <li>Perceived benefits of early cancer screening</li> <li>Perceived disadvantages of early cancer screening</li> </ul>
<b>Breast health promotion strategies</b>	<ul style="list-style-type: none"> <li>Breast health education</li> <li>Avenues for communication of information</li> <li>Cues to action-health communication programs</li> </ul>

#### **4.2.1 CATEGORY ONE: Health seeking behavior of breast cancer and its screening in Kakamega County.**

There were huge disparities between the urban and rural when it came to health seeking behavior barriers. Most urban women (all the 4 urban FGDs) mentioned marital status (being married) as a barrier to breast cancer screening; this came out from all the 4 urban FGDs and was mentioned severally by urban women. For example, several young women from Mumias West of age group 18-35 noted being married as a barrier to early BCS. Married women had to get permission from their husbands to go out of the compound. An urban woman in group 7 narrated that:

*“Some men do not allow their women to go to the hospital.”*

Contrary, rural women (75% of rural participants) did not perceive marital status as a barrier. Most rural women mentioned long distance to health facility, few health professionals that offer breast cancer screening services, lack of information on breast cancer and its screening and low income status as major health seeking behavior barriers. An older woman from rural Kakamega in group 4 said; *“Ignorance and lack of information on the importance of cancer screening”* hinders women from the community from seeking early breast cancer screening. A younger woman from rural Kakamega in group 2, when asked what hindered women from seeking early cancer screening said: *“The long distance to the cancer facility would cost a lot of transport fare that I cannot afford and this makes it difficult for me.”* An interview with Key informant 2 revealed that the health centres and hospitals do not have enough nurses to perform regular breast cancer screening. She narrated:

*“The number of staff in the hospitals should be increased. Sometimes you will find there is only one nurse who has to do everything in a hospital. When a woman comes in for a BCS, the nurse is most likely to attend to the patients whose lives are at risk first. There should be devolution. The number of staff should be increased.”*

The study also established that some religions do not allow their church members to go to hospitals and women who went to such churches are not allowed to seek medical attention on breast cancer and its screening as stated by a rural participant in group 3 as follows *“Some women go to churches that believe in prayers for healing, the churches do not allow their followers to go to the hospital. Such women do not go for breast cancer screening.”* Some urban participants noted that some women with breast cancer just go for prayers and wait for the cancer to clear off.

The study found out that most women are skeptical of having early breast cancer screening. This is attributed to fear of a positive breast cancer diagnosis, stigmatization associated with breast cancer and breast cancer cultural beliefs. A young woman in group 5 when asked why the women in the community do not go for breast cancer screening narrated:

*“I saw an old woman oozing puss from the breast and smelling bad, she was isolated by the rest of the community and no one visited her and that’s why I fear going for breast cancer screening.”*

Other barriers to breast cancer screening noted include: unprofessional doctors, shame of having to remove one’s clothes, pain during screening and the long process of referral of cases.

The table 4.2.1 below describes various health seeking behavior barrier themes in relation to their popularity in each group.

Popularity is defined using a likert scale of 1-3, according to the number of individuals and number of times that a specific barrier came up and was mentioned by participants in the FGDs. Very popular means that the issue came up and was mentioned 4 or more times by 4 or more different participants. Popular means that the barrier came up and was mentioned 2 to 3 times by 2 or 3 different participants. Not popular means that the barrier was either not mentioned or was raised once in the FGD by a single participant.

**Table 4.2.1: Themes in breast cancer and its screening health seeking behavior barriers**

Respondents in FGDs	Perceived barriers to health seeking behavior					
	Marital status	Transport constraint	Lack of information/ knowledge on breast cancer	Fear	Religion	Cultural beliefs
Group 1 (older-rural women from Likuyani)	Not popular	Very popular	Very popular	popular	popular	Popular
Group 2 (young-rural participants from Likuyani)	Not popular	Very popular	Popular	popular	popular	Popular
Group 3 (young rural participants from Ikolomani)	Not popular	Very popular	Very popular	Popular	popular	Popular
Group 4 (older rural participants from Ikolomani)	Popular	Very popular	Very popular	Not popular	Very popular	Popular
Group 5 (young urban participants from Lurambi)	Very popular	Not popular	Popular	Very popular	popular	Popular
Group 6 (older urban participants from Lurambi)	Popular	Not popular	Popular	Very popular	Popular	Popular
Group 7 (young urban participants from Mumias West)	Very Popular	Not popular	Popular	Popular	Not popular	Not popular
Group 8 (older urban participants from Mumias West)	Not Popular	Not popular	Popular	Popular	Not Popular	Not popular

Details on the action taken after the discovery of a lump in the breast were wide-ranging. Most urban women described the community association of breast cancer or the presence of a lump in

the breast with promiscuity, infidelity and HIV. This prevented women from seeking early breast cancer screening in hospitals (CBE) because of the stigmatization associated with breast cancer. An older woman from the urban Kakamega County narrated:

*“If a woman is known to be sleeping around with many men, and she discovers that she has breast cancer, she will prefer not to go and seek treatment because she is afraid that she might go to the hospital, get tested for HIV and told that she has AIDS.”*

Women from Kakamega County noted that several women in the community on discovering that they have a lump in their breast or if they are diagnosed with breast cancer lost hope and did nothing to change their situation. This was mentioned severally by 29% of the participants. A woman from group 5 reported:

*“Women get afraid and so do not go to the hospital. One of my friends on discovering that she had breast cancer told me, I advised her to go to the hospital but she refused because she said that they are asking for a lot of money which she cannot afford. She has therefore decided to sit at home and await her death.”*

Visitation of traditional medicine men to get herbs and self-medication with pain killers and herbs was also mentioned severally by the participants as a health seeking behavior to breast cancer. A woman in group 3 from rural Kakamega said *“Women believe it is boils so they take traditional herbs called “miyeka.””* While another older woman from the same group said; *“because most women in this village believe that breast cancer is brought about when a child bulges during breast feeding; most women will go to the traditional medicine men.”*

Several older women mostly noted that women go to witch doctors and traditional medicine men to seek help with the belief that they had been bewitched and only the witch doctors and medicine men could get rid of a lump in the breast. One woman from group 6 said; *“Most women believe that it is witchcraft and so they prefer going to see a witch doctor.”* Older participants also noted that they did not know how and where screening was done and that only the educated did breast cancer screening. An older woman in group 8 when asked where breast cancer screening examination could be done said; *“We do not know. You should teach us on how one knows that they have breast cancer.”*

Some young participants noted that they did breast self-examination but mostly when they were pregnant. They did this because the nurses had instructed them to, but they did not know how to really check for the cancer lumps; they noted that they have been told severally by nurses to palpate and check for lumps in their breasts but they do not know what the nurses meant by palpation or how it was done. A woman from group 2 said; *“Most women do not even have an idea of how-breast self-examination should be done. They do not do screening.”* This is despite the fact that health centres in Kakamega County schedule a day in a month for breast health education. When the key informants were asked how much time they allocated for breast health education relative to other health issues in a month, key informant 1 said: *“Once a month.”* Some younger participants on the other hand mostly noted that the women in their community go to the hospitals on discovering that they have a lump in their breast.

Some participants noted having had a breast examination in the hospital when they were pregnant.

#### **4.2.1 CATEGORY TWO: Knowledge of breast cancer and its screening.**

Women from Kakamega County identified breast cancer as one of the diseases that affect the breast among other diseases, as explained by a young participant: “I have heard of breast cancer; that it affects the breast”. Younger participants had a better comprehension of breast cancer, its early manifestations, early breast cancer screening and predispositions’ to the disease compared to older participants. When asked what breast cancer meant, some of the young participants were able to clearly define breast cancer. A young participant from group 2 defined breast cancer as: *“I know they are cells that multiply in the breast leading to death.”* Most of the young participants were able to clearly define the early presentations of breast cancer while mentioning terms like lumps and describing breast self-examination in their explanations of early breast cancer symptoms. A participant in group 7 described how to notice the early presentation as;

*“If you press the breast and you feel lumps in your breast or sometimes if you lift your hands and your breasts do not lift up simultaneously then you know that you have breast cancer.”*

Several young-urban participants seemed more knowledgeable about lifestyle issues that predispose individuals to breast cancer. Young women mentioned smoking, too much sugar and

salt in food, use of bleaching pills and self-medicated pills. For example, a woman in group 7 said: *“I know that it is brought about by smoking and using a lot of fat in your food.”*

On the contrary, older participants’ did not have enough knowledge on breast cancer. Most participants stated that they did not know breast cancer, its causes and they did not understand what screening was. A participant from group 1 said: *“we do not know what it is and we are glad you came to let us know about breast cancer.”* Their descriptions of breast cancer, its early presentation and its screening were not as clear as the young participants’ descriptions. Older women breast cancer definition was based on the late manifestation and the severity of the disease; they included: words like a disease that kills, makes a hole in your breast, a disease that results to cutting off of the breast and a painful disease in their description of breast cancer. One woman from group 4 described breast cancer as: *“chopping off of the breast which leads to death is breast cancer.”* Older women mostly mentioned physical causes of cancer as the likely causes of breast cancer. These included: not breast feeding/retention of breast milk, not having children, a child bulging on the breast while breast feeding and dirty food. A woman from group 6 explained: *“lack of breast feeding will also cause breast cancer. The milk that remains in your breast coagulates and causes breast cancer.”* Another older woman from group 4 explained that family planning methods could cause breast cancer. She said: *“Family planning methods, especially the 3 months injection.”*

Bareness, breast feeding and not breastfeeding were stated severally by participants as a cause of breast cancer. A participant from group 7 described breast cancer as a disease that *“...comes from the lack of breast feeding.”* Another woman in group 8 said: *“not having children like the nuns triggers breast cancer, I have heard rumors that many of them; the nuns, have breast cancer.”* Several participants associated breast cancer with breast feeding. They seemed to have the impression that breast cancer is likely to develop during breast feeding. A woman in group 8 narrated:

*“When a baby is breast feeding and she/he bulges on your breast while suckling, you can get breast cancer. You should therefore rush to a traditional medicine man and get some herbs that you can use to rub on your breast before you develop breast cancer.”*

Participants also described various myths as causes of breast cancer. For example, a woman in group 6 said: *“An insect that you are born with inside your breast can also cause breast cancer.”*

Most participants described clinical breast examination. A woman in group 8, on being asked where breast cancer screening can be done narrated:

*“Maybe you can go to the hospital. When I was applying for a job, one of the requirements for one of the jobs was that I had to get tested for every disease and that included breast cancer.”*

There was also a mention of screening by mammography. A woman in group 2 said: *“Breast cancer screening means using machines in the hospital to test if there are lumps in your breast.”*

#### **4.2.3 CATEGORY THREE: Attitudes of women toward breast cancer and its screening**

Women in Kakamega County were terrified of breast cancer and were overwhelmingly convinced that breast cancer was a serious disease. Most participants (from 5 of the 8 FGDs) noted that breast cancer was a terminal disease with no cure (see table 4.5). Terms such as ‘deadly and death sentence’ were commonly used by the participants in the description of breast cancer. A participant in group 1 said: *“Breast cancer is a death sentence.”* Another participant in group 2 said: *“I understand that it has no cure. It is an incurable disease.”* Several participants also described the perceived seriousness of the disease as extremely dangerous and incurable. A young woman in group 3 stated; *“the women in the community believe that breast cancer is a disease that does not have a cure and so will not bother to go to the hospital.”* Participants were also afraid of CBE. A participant in group 8 narrated:

*“I do not think going for breast cancer screening is a necessity. One woman that I know went for breast cancer screening and was told that she had it and that her breast had to be removed... When her breast was cut, the cancer spread throughout her body and following that I and many of my friends who knew her would not even consider going to the hospital.”*

Young urban women were convinced that they were not as susceptible to cancer. They noted that nuns and the rich were more susceptible to breast cancer. A young woman in group 7 narrated:



*“I do not know of any breast cancer screening exercise. Breast cancer is a disease of the rich because it is only them that can develop such things because of the kind of food they take. They will then afford to go to the hospital and get checked regularly if they have breast cancer.”*

Urban women further noted that the rich had enough money to go to the hospital more often for regular check-up and it was easy for breast cancer to be detected in them.

Most participants seemed well aware of the benefits of early breast cancer screening. Several participants noted that knowing their breast cancer status early would result to the early treatment of breast cancer hence being cured and could help make better plans for their future. They also noted that early breast cancer screening helps to reduce the cost of treatment of breast cancer if found early hence, reduce the financial burden on their families. A woman in group 6 said: *“If I am found with cancer at an early stage, it means that i will not spend much on the treatment of the disease. It will be cheaper for me.”* Despite this knowledge, most rural participants said they were sceptical of going for early breast cancer screening. Participants were afraid that early screening comes with its disadvantages of being diagnosed with breast cancer. A woman in group 1 said *“The disadvantage that I know is that I would get scared and get stressed up if I am diagnosed with breast cancer”*.

#### **4.2.4: CATEGORY FOUR: Breast health promotion strategies**

Women in Kakamega County could not mention any organization or program that was aimed at breast health awareness creation. The participants could only mention programs aimed at awareness creation of communicable diseases like malaria and HIV. Participants from group 1 said: *“there is no much pressure on breast cancer awareness campaigns.”* Most of the participants noted that the reason why they do not have much information on breast cancer was because breast cancer was not given as much importance as other diseases like malaria. An interview with key informant 4 revealed that if participants were given information on breast cancer and its screening; then there would be rapid uptake of breast cancer screening. She said:

*“In this community, if a woman does not know the importance of BCS, they will not go for screening. But after they have been taught on the importance, many of them flock to the screening rooms and get the screening. An example is cervical cancer. Most women have had a*

*pap smear done on them because there have been consistent seminars and campaigns on the importance of doing a pap.”*

An urban participant when asked what measures can be put in to motivate women to go for early screening said: *“If they gave us information on breast cancer, it would motivate me to go for screening.”* Urban participants also asked for free and regular breast cancer screening services to be made available not only in MCH clinics but also in hospitals.

When the participants were asked on the best channel of communication of information on breast cancer and its screening, urban participants suggested the use of media, films in villages and clinics (MCH). Most young participants suggested use of community health workers, social media and text messages as the best avenues for the communication of information. Most rural participants suggested the use of community health workers. A rural participant said: *“Through seminars- they should take CHW’s on seminars, and when they come they should educate the community through door to door.”* Older women suggested use of door to door campaigns, churches, barazas and village chief’s as the best channel for communication of information on breast cancer and its screening. A woman in group 7 said; *“...The village elders can be given the information which they will relay to us...”* Key informant 2 suggested: *“Verbal health education- use of wall charts, the mass media, chief barazas and use community leaders (church leaders and chiefs to talk to them).”*

## CHAPTER FIVE

### DISCUSSION OF THE RESEARCH FINDINGS

#### 5.0 Introduction

This chapter discusses the research findings. The findings of the research according to the objectives beginning with health seeking behavior and its screening, knowledge and attitude of breast cancer and its screening are discussed below.

#### 5.1 Health seeking behavior towards breast cancer and its screening in the study area.

There were huge disparities between urban and rural women when it came to health seeking behavior barriers. Whereas urban women identified issues such as having to get permission from their husbands, rural women mostly identified the lack of information, long distance to health facilities, long waiting lines in hospitals, high treatment and screening costs, lack of health professionals to perform breast cancer screening and lack of transport fares as barriers to breast cancer screening. A study done by Leung, *et al.*, (2014) revealed that across 41 studies that were reviewed, rural women were likely to report difficulties in breast cancer health service access such as great distance to breast cancer specialists and treatment. The barriers reported by the findings of this study from the rural participants could be attributed to the fact that most rural areas are usually characterized by low population density and residents have poor access to health care than in urban areas (Leung, *et al.*, 2014). According to WHO (2007) study on the social determinants of health, lack of knowledge and awareness to health is a great barrier in seeking health among women.

Other barriers to breast cancer health seeking behavior included: unprofessional doctors, few health workers, stigmatization associated with breast cancer, fear of living with breast cancer and rejection by husbands as a result of being diagnosed with cancer as barriers to getting breast cancer screening

Urban women first point of action on discovering that they had a lump in their breast was to seek treatment in the health facilities. Rural women on the other hand and some urban women identified seeking care from traditional medicine men, pastors and preachers, the use of

traditional herbs/painkillers or ignoring the lump until it cleared off. Studies indicate that it is common for women to be aware of “painless breast lump” symptom for many months or even years and not present until complications such as pain, ulcer, foul-smelling purulent discharge or symptoms of metastatic disease occur. (El Saghir, *et al.*, 2011). A study done by (El Saghir, *et al.*, 2011) showed that a woman may suspect that the change is due to cancer but avoid seeking a diagnosis out of fear of cancer; a significant proportion of women seeks guidance primarily from alternative health care providers for long periods and decide to see a medical professional only when the cancer has advanced. The actions taken on the discovery that one had a lump in the breast by the two groups (urban and rural) were therefore influenced by different factors. Among the urban women, the action to visit a health facility on the discovery they had breast cancer was influenced by their knowledge and information of breast cancer. Women who are knowledgeable about breast cancer and its risk factors have been found in other settings to be more likely to comply with such early detection behaviors than those who are not (Pearlman, *et al.*, 1999). Rural women point of action was determined by lack of information on breast cancer. One of the contributing factors to late presentation is lack of awareness about early detection of breast cancer (MOPHS, 2012). Distance to health facility, the cost involved and cultural beliefs associated with breast cancer also determine late presentation to health facilities. For example, for a rural woman who believed that their child was the cause of the cancer when he bulged on her breast either sought for help from a traditional medicine man or used herbs, and women who believed that seeking treatment from the hospital/having a mastectomy would result to the cancer jumping to the other breast would not seek care in a health facility. Religion plays an important role as a barrier to breast cancer and its screening health seeking behavior among the women in Kakamega. Studies done in Kenya show that religious beliefs play a larger role, not only in the prohibition of herbal medicine, but some denominations also prevent treatment seeking at health facilities (UNICEF, 2012 and USAID, 2009)

## **5.2 Knowledge and attitude towards breast cancer and its screening in the study area.**

The findings from the assessment suggest that women in Kakamega County generally have poor knowledge on breast cancer and breast cancer screening.

Other researchers have found out that there exists a gap with respect to knowledge of breast cancer screening between rural and urban women. According to African Population and Health Research, 2002, there exists a huge disparity on health issues between all other women and urban women. This study supports these findings; however, the urban-rural gap in knowledge of breast cancer is influenced by age of the women. Young urban women were able to describe breast cancer, early breast cancer symptoms and causes of breast cancer. Young women from urban settings defined breast cancer as the multiplication of cells in the breast, were able to describe early breast cancer symptoms like the presence of lumps in the breast and identified lifestyle issues like smoking, drinking, and presence of high cholesterol among others as causes of breast cancer. Older rural women could not define breast cancer and some had never heard of it. Low functional health literacy is a particular issue among the elderly, even among those who are more affluent and educated than the national norm (Kanj and Mitic, 2009). Older urban women and young rural women however, identified physical factors like lack of breast feeding, retention of breast milk, keeping money in the bra and excessive use of medication as causes of breast cancer. The majority of the participants except the young urban women did not have basic information on breast cancer. The limited data on Kenya, suggest that most women are unaware of the signs, symptoms, and causes of the disease (Nairobi Cancer Registry, 2006).

The low level of knowledge among the rural population found in this study is similar to findings of other similar studies done in developing countries and in Kenya. A similar study on women's attitude and knowledge on breast cancer done by Muthoni and Miller in 2010 in the Kikuyu-Kiambu District and in the Kamba-Machakos District showed that there exists a wide gap of knowledge of breast cancer between the rural and urban population in Kenya.

Women in this study saw breast cancer as a very deadly disease that was only curable by getting a mastectomy. Participants could not identify early treatment options like radiation and chemotherapy; they identified death and the loss of one's breast as the only option that one could have on diagnosis of breast cancer. This study revealed that most participants on being diagnosed with breast cancer would lose hope and would not seek treatment. They were so

fearful of breast cancer that most of them opt not to seek early breast cancer screening as a prevention measure. Treatment of breast cancer especially among the rural women was associated with the further spread of the cancer, death, and loss of the position in the society as a woman. Incidence of breast cancer have been observed to be low among rural women; however, death rates are higher among those diagnosed with breast cancer (Leung, *et al.*, 2014). The high death rate among rural women diagnosed with breast cancer could be attributed to the rural women fear and perception of the disease (it would lead to the further spread, death, and loss of their position in the society as women). This study result on perceived severity was similar to a study done in Kenya (Muthoni and Miller, 2010; Mucheneri, 2013) on the perceived severity of breast cancer that showed that women saw themselves as very vulnerable to breast cancer and preferred not doing breast cancer screening.

Knowledge of breast cancer and its screening by the community members would encourage early breast cancer screening by the community. Despite the fact that non communicable diseases such as cardiovascular diseases, cancers, diabetes and chronic respiratory diseases are on the increase, the health systems in the country have traditionally concentrated on the prevention and control of communicable diseases; most participants had mostly heard of malaria, respiratory diseases and HIV/AIDS from the health campaigns and health promotion programs.

## **CHAPTER SIX**

### **CONCLUSION AND RECOMMENDATIONS**

#### **6.1 Conclusion**

Creating breast cancer awareness alongside clear guidelines on accessing screening and treatment infrastructure is critical when setting up breast cancer screening uptake programs. It was evident, a diagnosis of breast cancer/lump brings unexpected confrontation with mortality; the fear, pain, cultural barriers, emotional and financial distress are very real. Without clear referral channels to enable those with suspicious lumps or early stage disease get prompt diagnosis and treatment, then well-meaning awareness will not necessarily contribute to reducing morbidity and mortality.

#### **6.2 Recommendations**

##### **6.2.1 Health seeking behavior of breast cancer and its screening**

Programs should prioritize communication of information to instill hope, self efficacy and eradicate myths and beliefs on breast cancer.

##### **6.2.2 Knowledge of breast cancer and its screening**

There is a need to give more public emphasis on non-communicable diseases like breast cancer in Kenya. Precedence should be given to rural women who do not have enough information on breast cancer and its screening.

##### **6.2.3 Attitude towards breast cancer and its screening**

In order for information on breast cancer to reach rural settings; women groups, and local chiefs should be used to pass this information. Films and door-to-door campaigns should be used as a communication avenue for urban women while churches and barazars should be used when targeting older women in Kakamega County.

## **6.3 Recommendations for further research**

### **6.3.1 Health seeking behavior of breast cancer and its screening**

Studies that assess use of herbalists, witchdoctors and traditional medicine men in rural communities as health seeking behavior avenues for breast cancer and its screening should be done to shed more light on health seeking behavior of breast cancer and its screening.

Other studies that look at the impact of different barriers to breast cancer screening in different communities should also be done.

### **6.3.2 Knowledge of breast cancer and its screening**

Studies that assess the impact of different communication avenues (the media, Facebook, barazas, MCH clinics) on breast cancer screening and its control in Kenya should be done. These studies will give information on the best avenues for communication of information on breast cancer and its screening in Kenya and hence improve breast health promotion in Kenya.

### **6.3.3 Attitude of breast cancer and its screening**

Similar studies on the attitude of breast cancer should be carried out in other parts of Kenya in order to understand women's attitude towards breast cancer and its screening.



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## APPENDICES

### APPENDIX 1: INTERVIEW GUIDE: FOCUS GROUP DISCUSSIONS

N/B. Record all the conversations verbatim to ensure that there is little or no loss of originality in the data collected.

#### *Introductions*

Good morning/afternoon. My name is ....., a student from Moi University and currently conducting a study on breast cancer and breast cancer screening. What are your names?

Please allow me to kindly ask you a few questions about breast cancer and breast cancer screening to make this study successful. This discussion will take approximately 1-1.5 hours. This discussion is completely voluntary. You can skip any uncomfortable questions and you can end your participation in the discussion at any time. The information you provide will be kept strictly anonymous and confidential; and will be used to make recommendations to the government in order to improve breast cancer screening uptake among Kenyan women.

#### **Understanding of Breast Cancer and Breast Cancer Screening**

1. Discuss women's perceptions of breast cancer and breast cancer screening (encourage women to discuss the issues by asking the following questions).

#### **Knowledge**

i. Which County/Constituency/Ward is this?

ii. Are there any diseases that affect the breast?

Probe: If yes, what are they?

iii. What does breast cancer mean to you?

iv. How can breast cancer be noticed?

v. What factors may trigger breast cancer?

vi. Can breast cancer be cured /prevented?

Probe: How do you prevent it /what are the treatment options available? /Where can they receive care?

vii. What does breast cancer screening mean to you?

Probe: Where can you perform a breast cancer screening exercise?

Probe: How is breast cancer screening done?

viii. What are the breast cancer screening exercises that you know of?

ix. What are benefits of breast cancer screening?

Probe: what are the benefits to you as an individual/ what are the benefits to your family? What are the benefits to the society?

x. What are disadvantages of breast cancer screening?

Probe: What are the disadvantages to you as an Individual/to your family/to the society?

### **Attitude and Health seeking behavior**

xi. What do women in this community do on discovering that they have breast cancer?

xii. Do women regularly undertake breast self-examination within the division as required? Give reasons for this response

xiii. Do the women who have suspicious lumps in their breasts go for clinical examination in MCH clinics always? Give reasons for this response?

xiv. How does attitude about breast cancer (such as its cause and urgency) affect breast cancer treatment?

xv. How does attitude about breast cancer screening (such as its necessity) affect breast cancer screening uptake?

xvi. Do you know of any cultural or religious practices that affect the uptake of breast cancer screening in this community?

xvii. Do the following factors influence breast cancer screening uptake among women in this community

- level of education (yes/no), explain
- marital status (yes/no), explain
- distance to screening facilities, explain
- income status, explain and
- The cost of screening, explain.

xviii. How does fear, pain and embarrassment of women influence breast screening uptake?

xix. How does the knowledge about breast cancer and breast screening influence the uptake of screening by the women? Explain.

xx. What hinders you/women in this community from going for breast cancer screening?

xxi. For women like yourself, how often do you go for breast cancer screening?

xxii. How is a woman with breast cancer treated/viewed in your community

xxiii. For women like you what would makes/motivates you to do breast cancer screening

Probe: Breast self-examination? / Clinical breast examination? /Mammogram

xxiv. For women like yourself what makes it difficult for you to do breast cancer screening

Probe: Breast self-examination? / Clinical breast examination? /Mammogram

- xxv. In your view, what are some suggestions that would make it easier for you to do regular breast self-examination/clinical breast examination/Mammogram?
- xxvi. What encourages or will encourage women in this community to go for breast cancer screening?
- xxvii. If you could request for some kind of services for breast cancer, what would you want?

**Sources of Information**

Discuss sources of information related to breast cancer and breast cancer screening by asking:

- i. Do you have any information related to breast cancer and breast cancer screening?
- ii. How did you access this information on breast cancer and breast cancer screening?
- iii. What are barriers to breast cancer and breast cancer screening information?
- iv. In your view, what would be the best channel of communication of information of breast cancer and breast cancer screening?
- v. Do you know of any cancer organization aimed to increase information and raise awareness for breast cancer that exists in Kenya/this community?

Probe: What are some of the breast cancer program that you know of?

**Thank you for your time and assistance.**



## **APPENDIX II: INTERVIEW GUIDE: IN-DEPTH INTERVIEWS (KEY INFORMANTS)**

N/B. Record all the conversations verbatim to ensure that there is little or no loss of originality in the data collected.

### ***Introductions***

Good morning/afternoon. My name is ....., a student from Moi University and currently conducting a study on breast cancer and breast cancer screening.

Please allow me to kindly ask you a few questions to make this study successful. The information you provide will be kept strictly anonymous and confidential; and will be used to make recommendations to the government in order to improve breast cancer screening uptake among Kenyan women.

### ***Background Information***

Name of Respondent.....Age.....Constituency .....

Marital status ..... Profession ..... Education level .....

Understanding of Breast Cancer and Breast Cancer Screening

### **Knowledge**

- i. Which County/Constituency/Ward is this?
- ii. Does the Kakamega level 5 health facility have an operational breast clinic within it? If so, state the facilities and services offered. ( if No skip to number vi)
- iii. Is there an operational breast health protocol used by nurses/doctors in the health facility? Explain.
- iv. How many women were referred from MCH clinic to the breast clinic within the last two months?
- v. Does the health facility have a working mammogram /breast scan facility within it?
- vi. What specific aspects of breast cancer and screening if any are covered at the MCH clinic?
- vii. About how much time is allocated for breast health education relative to other health issues in a month within the MCH clinic? Give a reason(s) for your response.
- viii. Does the health facility have follow up visitation cards for women on BSE and clinical examination? Explain
- ix. What does breast cancer mean to you?
- x. What does breast cancer screening mean to you?
- xi. What does breast cancer mean to the people in this community?
- xii. What does breast cancer screening mean to the people of this community?
- xiii. According to the women of this community, what factors may trigger breast cancer?
- xiv. According to the women in this community, how can breast cancer be treated?

Probe: How/what are the treatment options available

- xv. According to the women of this community, what are benefits of breast cancer screening?
- xvi. According to the women of this community, what are disadvantages of breast cancer screening?

**Attitude and health seeking behavior**

- xvii. Have you ever gone for a breast cancer screening exercise?
- xviii. Where do women in this community go to on discovering that they have breast cancer?
- xxviii. How does attitude about breast cancer (such as its cause and urgency) and breast cancer screening (such as its necessity) affect breast cancer screening uptake?
- xxix. Do you know of any cultural or religious practices that affect the uptake of breast cancer screening in this community?
- xxx. Do the following factors influence breast cancer screening uptake among women in this community
  - level of education (yes/no), explain
  - marital status (yes/no), explain
  - distance to screening facilities, explain
  - income status, explain and
  - The cost of screening, explain.
- xxxi. How does fear, pain and embarrassment of women influence breast screening uptake?
- xxxii. Does the knowledge about breast cancer and breast screening influence the uptake of screening by the women? Explain.
- xix. In your view, what are some suggestions that would make it easier and encourage women in this community to do regular breast self-examination/clinical breast examination/Mammogram?
- xx. What hinders the women in this community from going for clinical breast cancer screening?

**Sources of Information**

- xxi. Have you ever accessed information on breast cancer and breast cancer screening? If yes, how? Where?
- xxii. Do women in this community have access to information on breast cancer and breast cancer screening? If yes, how? Where?
- xxiii. Does the health facility have breast health brochures, magazines, books and videos/CDs on breast cancer and screening in the breast clinic/MCH clinic for distribution to the women? Explain
- xxiv. What are barriers to breast cancer and breast cancer screening information?
- xxv. In your view, what would be the best channel of communication of information of cancer and breast cancer for women in this community?

xxvi. What are some of the cancer programs aimed at increasing awareness on breast cancer that women of this community know of?

xxvii. In your view, what are some suggestions that would make it easier for women of reproductive age in this community to undertake breast examination?

**Thank you for your time and assistance.**

**APPENDIX III: CONSENT FORM**

**An evaluation of women knowledge, attitude and behavior towards breast cancer and breast cancer screening in select rural and urban communities of Kenya**

**The investigator Kisiangani Nasimiyu Joyce has explained to me the purpose of the study and that it's meant to benefit women towards the attitude and behaviors towards breast cancer and breast cancer screening. I am voluntarily consenting to participate in this study by answering questions as directed by the focus group discussion. I do not expect any monetary benefits from the investigator. However, the investigator will be using the information she collects to make recommendations to the government officials, school of public health and programs responsible for breast cancer and breast cancer screening in order to strengthen the programs. My responses will be confidential and will not be revealed to any other third party. My identity will not be used at any point during data collection and presentation of this work.**

**I .....on my own freewill accept to participate in the above study.**

**Signature.....Date.....**

## APPENDIX IV: DEMOGRAPHIC INFORMATION-FGDs

Instructions: Kindly fill the following form before we begin the Focus Group Discussion. Tick appropriately.

Confidentiality: The responses you provide will be strictly confidential. No reference will be made to any individual(s) or organization in the report of the study.

1) What is your age?

18-25

26-35

36-45

46-60

2) What is your present marital status?

Single

Separated

Married

Divorced

Widowed

3) How many children do you have? \_\_\_\_\_

4) What is your religious affiliation?

Catholic

Protestant (For example, Presbyterian, Baptist, Methodist)

Muslim

Non-Affiliated

Other: \_\_\_\_\_

(Please specify)

5) What is the highest level of education that you have?

None

Primary School

Secondary School

College/Technical School

University Degree

Other: \_\_\_\_\_

(Please specify)

6) How long have you been a resident in this community?

< 1 year

1-2 years

3-4 years

4-5 years

> 5 years

7) What is your primary source of income?

Agriculture

Clerical

Skilled manual labor

Unskilled manual labor

Business

Teacher

Other

8) Have you ever had breast cancer screening?

Yes

No

**APPENDIX V: WORK PLAN**

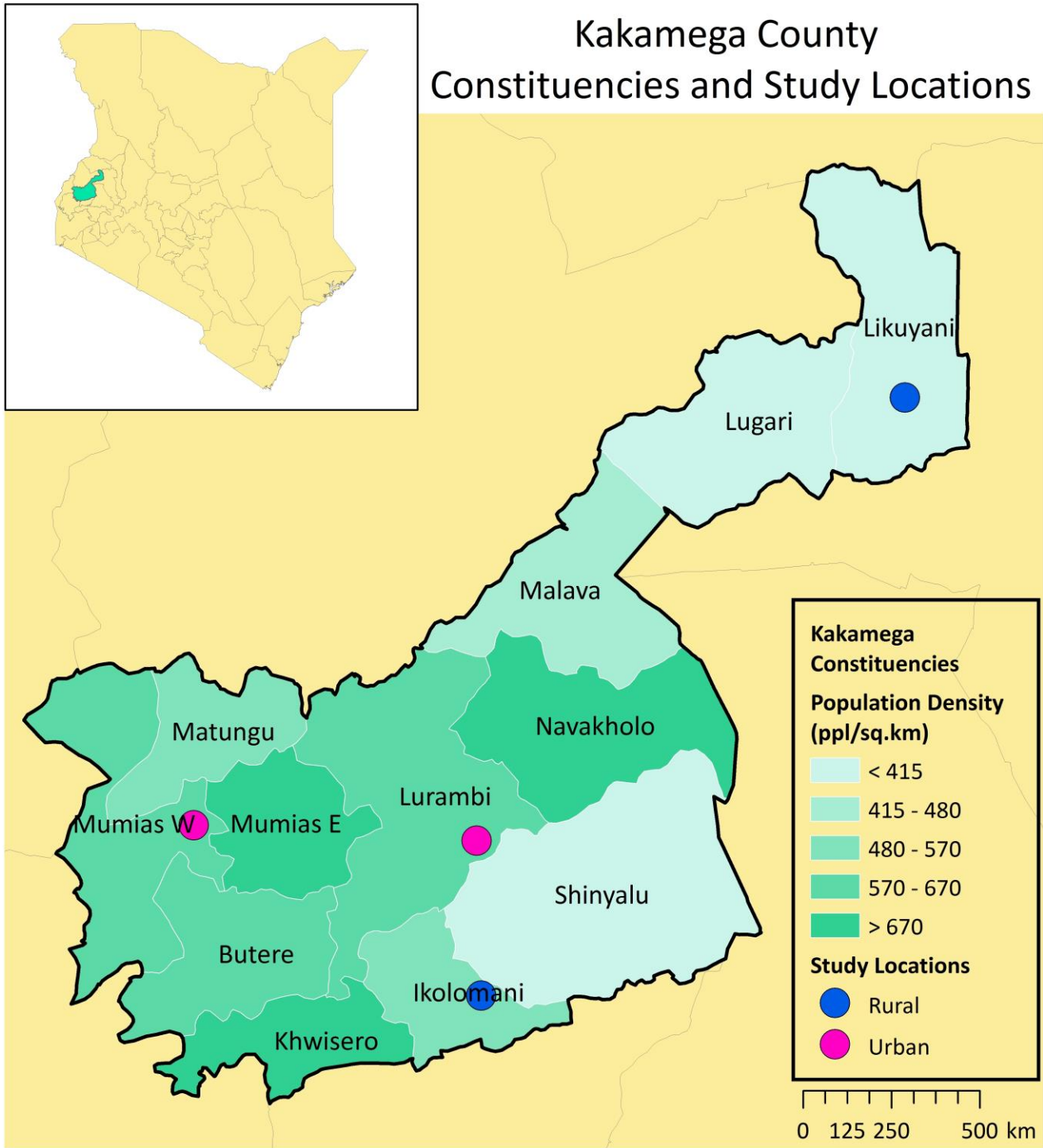
<b>Number</b>	<b>Activity</b>	<b>From</b>	<b>To</b>
<b>1</b>	Proposal development and writing	<b>Feb. 2012</b>	<b>May 2013</b>
<b>2</b>	Proposal to IREC for approval	<b>May 2013</b>	<b>September 2013</b>
<b>3</b>	Data collection	<b>November 2013</b>	<b>December 2013</b>
<b>4</b>	Data analysis/ Thesis report writing	<b>January 2014</b>	<b>May 2014</b>
<b>5</b>	Submission/Intent to defend thesis	<b>June 2014</b>	<b>December 2014</b>
<b>6</b>	Theses defense	<b>December 2014</b>	<b>As scheduled by SPH</b>
<b>7</b>	Graduation	<b>As scheduled by SPH</b>	<b>As scheduled by SPH</b>

**APPENDIX VI: BUDGET**

<b>ITEM</b>	<b>VOLUME</b>	<b>COST</b>	<b>TOTAL (KSH)</b>
1. Proposal printing	36	@Ksh 5	180
2. Pens	3	@ Ksh 15 each	45
3. Photocopying	144	@Ksh 4	576
4. Audio tapes	8	@ Ksh 100 each	800
5. Recorder	2	@ Ksh 3,000	6,000
6. Travel and accommodation		Ksh 5,000	5,000
7. Thesis printing	60	Ksh 5	300
8. Thesis photocopying	6 copies	Ksh 240 each	1440
9. Data collection assistants	4	@ Ksh 1,000 per day for 4 days	16,000
10. Statistician	1	Ksh14, 000	3000
11. Paper	1 Rim	Ksh 500	500
12. Tea and snacks for FGDs	8- FGDs	@ Ksh1000	8000
13. Miscellaneous		Ksh 3000	3000
<b>TOTAL</b>		<b>Ksh55,841</b>	







**APPENDIX VII: STUDY AREA MAP OF KAKAMEGA COUNTY**



Source: Kenya National Bureau of Statistics- County Fact Sheets- 2010

## APPENDIX VIII: IREC LETTER OF AUTHORIZATION

	<b>INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE (IREC)</b>		
MOI TEACHING AND REFERRAL HOSPITAL P.O. BOX 3 ELDORET Tel: 3347102/3		MOI UNIVERSITY SCHOOL OF MEDICINE P.O. BOX 4606 ELDORET	
Reference: IREC/2013/38 <b>Approval Number: 0001058</b>		12 <sup>th</sup> September, 2013	
 Kisiangani Nasimiyu Joyce, Moi University, School of Public Health, P.O. Box 4606-30100, <b>ELDORET-KENYA.</b>			
Dear Ms. Kisiangani,			
<b>RE: FORMAL APPROVAL</b>			
			
The Institutional Research and Ethics Committee have reviewed your research proposal titled:-			
<b><i>"An Assessment of Women's Knowledge, Attitude and Behaviour towards Breast Cancer and Breast Cancer Screening in Select Rural and Urban Communities of Kenya".</i></b>			
Your proposal has been granted a Formal Approval Number: <b>FAN: IREC 1058</b> on 12 <sup>th</sup> September, 2013. You are therefore permitted to begin your investigations.			
Note that this approval is for 1 year; it will thus expire on 11 <sup>th</sup> September, 2014. If it is necessary to continue with this research beyond the expiry date, a request for continuation should be made in writing to IREC Secretariat two months prior to the expiry date.			
You are required to submit progress report(s) regularly as dictated by your proposal. Furthermore, you must notify the Committee of any proposal change (s) or amendment (s), serious or unexpected outcomes related to the conduct of the study, or study termination for any reason. The Committee expects to receive a final report at the end of the study.			
Sincerely,			
			
<b>PROF. E. WERE</b> <b>CHAIRMAN</b> <b>INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE</b>			
cc	Director - MTRH Principal - CHS	Dean - SOM Dean - SPH	Dean - SON Dean - SOD