UNIVERSITY OF CAPE COAST

HEALTH SEEKING BEHAVIOUR AND PRESENTATION OF BREAST

CANCER AMONG WOMEN VISITING THE CAPE COAST TEACHING

HOSPITAL

ANASTHASIA ADOMAH OFORI

2015

UNIVERSITY OF CAPE COAST

HEALTH SEEKING BEHAVIOUR AND PRESENTATION OF BREAST

CANCER AMONG WOMEN VISITING THE CAPE COAST TEACHING

HOSPITAL

BY

ANASTHASIA ADOMAH OFORI

Thesis submitted to the School of Nursing and Midwifery, School of Health
and Allied Sciences, University of Cape Coast, in partial fulfilment of the
requirements for the awards of Master of Nursing Degree

DECEMBER 2015

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature………………………… Date……………………..

Name: Anasthasia Adomah Ofori

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature:……………... Date………....................

Name:...

Co-Supervisor's Signature………………… Date.................................

Name:...

ABSTRACT

Breast cancer has been identified as a leading malignancy and one of the most common causes of hospital admission among women. According to hospital records at the Cape Coast Teaching Hospital most women visiting the breast clinic delay their presentation of breast cancer symptoms. This study therefore examined the health seeking behaviour and late presentation among patients with breast cancer visiting the Cape Coast Teaching Hospital. A descriptive quantitative study was employed. Convenient sampling method was used with the inclusion criteria of women who had been diagnosed with self-detected cancer or cancer detected through mammogram or clinical breast examination with stage II to stage IV breast cancer. A questionnaire was used to assess the demographics characteristics, barriers to seeking early care for breast symptoms, factors influencing health seeking behaviour, and breast cancer related knowledge. Health records of respondents were also used to assess the date of presentation at the clinic, and the duration of symptoms. The questionnaire was found to have adequate reliability with a Cronbach alpha value of 0.0839. The study found that the respondents had poor health-seeking behaviour. Delayed presentation of breast cancer was found not to be associated with educational level, income, marital status nor religion. However it was associated (X^2=11.411: p=0.044) with older age. The study concluded that the willingness of women to screen for breast cancer influences time of presentation. The study therefore recommended that education is required for the relatively older women on breast cancer to avoid delayed presentation.

ACKNOWLEDGEMENTS

DEDICATION

To my husband and two lovely daughters, Lois and Laura.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

WHO   World Health Organization

ACS   American Cancer Society

IARC   International   Association Research on Cancer

CRI   Cancer Research Institute

NCCN   National Comprehensive Cancer Network

IBC   Inflammatory Breast Cancer

AJCC   American Joint Committee on Cancer

DCIS   Ductal Carcinoma In Situ

LCIS   Lobular Carcinoma In Situ

CBE   Clinical Breast Examination

BSE   Breast Self Examination

MRI   Magnetic Resonance Imaging

HSB   Health Seeking Behaviour

CHAPTER ONE

INTRODUCTION

Background to the Study

Breast cancer is a major public health problem in both high income and low income countries (Parkin, Bray, Ferlay & Pisani, 2005) and the most common cause of cancer deaths in women worldwide (Tsu, Jeronimo & Anderson, 2012). Breast cancer has approximately 500000 annual deaths (Unger-Saldaña, 2014), the highest incidence rates occurring in the most developed regions of the world, with 74.1 new cases per 100000 women in comparison to 31.3 new cases per 100,000 observed in less developed regions. However, the mortality rate is actually higher in developing countries (Unger-Saldana, & Infante-Castañeda, 2009). It is estimated that by 2030, the global burden is expected to grow to 21.4 million new cancer cases and 13.2 million cancer deaths (American Cancer Society, 2011).

Breast cancer is the second most frequent cancer in African and among sub-Saharan African women with an incidence of 15-53 per 100,000 women (Mbuka-Ongona, & Tumbo, 2013). Trend analysis of breast cancer indicates a rise by 50-100% in the prevalence in the last 20 years (Fregene & Newman, 2005; Easton, 2005). Breast cancer presents in a more aggressive form in African women than that of women from European origin (Fregene & Newman, 2005; Easton, 2005). Furthermore, the case-fatality rate tends to be higher, largely due to patients presenting with more advanced stages. About 90% of patients with breast cancer disease in Africa and sub-Saharan Africa present with stage III or IV disease, a median tumour size of 10 cm, and palpable nodal metastasis (Kanavos, 2006). Breast cancer is the leading

malignancy in Ghana. It accounts for 15.4% of all malignancies and appears to be on the increase (Clegg- lamptey & Hodasi, 2007). The pattern of the disease can be so advanced that even optimal western therapy may offer minimal survival benefit (Gilani, Khurram, Mazhar, Mir, Ali, Tariq, & Malik, 2010). This implies that majority of breast cancer deaths occur in developing countries and these cancers are detected at later stages where much cannot be done to address the problem.

Breast cancer can occur in men but it most commonly occurs in women (Okobia, Bunker, Okonofua, & Osime, 2006). Breast cancer presents most commonly as a painless breast lump and a smaller proportion with non-lump symptoms. For women to present early to hospital they need to be breast aware; they must be able to recognize symptoms of breast cancer (Okobia, et al., 2006). An estimated 20%–30% of women will wait at least 3 months from first detection before seeking help for breast cancer symptoms despite extensive measures to promote early detection of breast cancer. In breast cancer literature, delayed presentation is defined as a delay of more than 3 months from the self-detection of a new breast cancer symptom until presentation to a health care provider. Women with delayed presentation often have larger tumours and metastases (Heisey, Clemons, Granek, Fergus, Hum, Lord, McCready, & Fitzgerald, 2011). At this stage little or no benefit is derived from any form of therapy leading to poorer long-term survival (Sharma, Costas, Shulman, & Meara, 2012).

Breast cancer delay is not only associated with a reduced survival time; the longer the delay, the more likely for the patient to present with large tumours and regional lymph node involvement. Delayed presentation conveys

a greater risk of needing more aggressive treatments. Hence, the longer the delay, the more likely it is for a woman to require mastectomy instead of conservative surgery as well as more toxic or extended adjuvant treatment. Women diagnosed with advanced disease have also been shown to have psychological morbidity which strongly impacts their quality of life (Unger-Saldaña, 2014).

There is evidence-based research to show that one-third of all cancers are preventable and a further one-third, if diagnosed early, is potentially curable (Al-Naggar, Al-Naggar, Bobryshev, Chen & Assabri, 2011). Therefore early detection and treatment of cancers can drastically reduce mortality rates.

Statement of the Problem

In Ghana, breast cancer has been identified as a leading malignancy and one of the most common causes of hospital admission among women (Clegg- Lamptey & Hodasi, 2007). The age of developing breast cancer among Ghanaians is relatively younger compared to that of European countries. The average age is between 40-49 years compared to 60 years in the United States of America (USA) (Opoku, Benwell &, Yarney, 2012). Late presentations have been observed as the hallmark of breast cancer in Ghanaian women where over 60% of patients report with either stage III or IV of the disease (Opoku, et al., 2012). It has been reported that 57% of those who present with breast cancer have advanced cancers with average tumour size of about 6x7 cm (Clegg- Lamptey & Hodasi, 2007). On the average, women report at least eight months after first noticing a change in their breasts (Clegg-

Lamptey & Hodasi, 2007). This makes the 5-year survival rate of breast cancer in Ghana less than 25%, compared with 70% in Western Europe and North America. Studies have shown that one–third of breast cancers is curable when diagnosed early (Unger-Saldaña, 2014). However, most women in Ghana present late resulting in poorer long term survival (Clegg- Lamptey & Hodasi, 2007; Opoku, et al., 2012). Understanding the factors that influence patient delay in seeking help for breast changes is a prerequisite for development of strategies to prevent late reporting of breast cancer symptoms to the hospital (Okobia, et al, 2006).

A number of studies on delayed presentations has been done worldwide (Unger-Saldaña, 2014, Heisey, et al., 2011, Sharma, et al., 2012) and one study done in Ghana by Clegg Lamptey et al. (2007) at the Korle-Bu Teaching Hospital but from the literature search there appears to be no study from the Cape Coast Teaching Hospital. This makes it quite difficult to know the reason(s) why women with breast cancer delay presentation to the hospital as well as the health seeking behaviour of women with breast cancer visiting the hospital. Data from this study in addition to data from Clegg Lamptey's study will provide a better understanding of problems facing women with breast cancer in the country.

This study therefore, sought to find the health seeking behaviour and late presentation of breast cancer from the perspectives of women visiting the Breast Clinic at Cape Coast Teaching Hospital.

Purpose of the Study

The purpose of the study was to explore the health seeking behaviour and late presentation of women with breast cancer visiting the Cape Coast Teaching Hospital.

Objectives of the Study

The specific objectives of the study were:

1. To assess the health seeking behaviour of women visiting the Cape Coast Teaching Hospital.

2. To determine the factors that influence women to seek breast cancer support and treatment services.

3. To determine the association between health seeking behaviour and late presentation of breast cancer.

4. To determine the barriers in accessing breast cancer services.

5. To find the influence of demographic factors on late presentation of breast cancer.

Research Questions

The study sought to answer the following research questions:

1. What are the health seeking behaviours of women visiting the Cape Coast Teaching Hospital?

2. What factors influence women to seek breast cancer support and treatment services?

3. What is the relationship between health seeking behaviour and late presentation of breast cancer?

4. What are the barriers in seeking breast cancer services?

5. What demographic factors influence the late presentation of breast cancer?

Rationale for the Study

It is estimated that about 90% of breast cancer patients in sub-Saharan Africa including Ghana present with stage III or IV of breast cancer disease, with a median tumour size of 10 cm, and palpable nodal metastasis. The pattern of the disease can be so advanced that even optimal western therapy may offer minimal survival benefit. This study therefore sought to explore factors influencing delay in presentation of breast cancer symptoms from the perspective of women who delayed in seeking care for breast cancer symptoms visiting the CCTH in the Central Region of Ghana.

There have been studies in other parts of the world on factors influencing delayed presentation in women with breast cancer (Unger-Saldaña, 2014; Heisey, et al., 2011; Sharma, et al., 2012). A few studies have been done in Ghana on reasons why women delay in seeking help for breast cancer symptoms. An example of such study is Clegg- Lamptey and Hodasi, (2007) study in at the Korle-Bu Teaching Hospital. However, little is known about other parts of the country. In addition, most of the studies were qualitative in nature and therefore limited in generalizability. The Cape Coast Teaching Hospital (CCTH) was chosen as the study area because the breast clinic is also referral point for breast issues. The breast clinic in CCTH was started in 2012 and it has been observed that most women attending presented with stage II to stage IV of breast cancer. From the literature search, no study

has been done in the Cape Coast Teaching Hospital to find out why women attending the breast clinic were presenting with advanced stages of the disease despite the screening services available in the country.

Significance of the Study

The findings of the study will assist to provide insights to the need for early detection and presentation of breast cancer among women. Relevant information from this study would be shared with the hospital and participants to educate them on the importance of early presentation of breast symptoms and mechanisms to enhance early presentation. The information generated, will help in policy formulation by the Ministry of Health (MOH) to promote early breast health seeking behaviour among women (WHO, 2006) and facilitate the removal of barriers to accessing breast care among women. Finally, this study will contribute to knowledge with regard to factors that contribute to delayed presentation of breast symptoms and participation in clinical screening by women visiting the CCTH for which very little information is available. This may provide further information on the promotion of early cancer presentation in developing countries.

Delimitation of the Study

Data for the study was drawn from the Central Regional Hospital (CRH), which is a referral Hospital and is a fair representation of the women with breast cancer visiting the hospital.

Limitations of the Study

During the research the time frame was very limited to capture larger sample size. The study covered women with breast cancer visiting the CCTH in the Central Region of Ghana therefore results may not be generalised to the breast cancer population in the whole country. Also, survey method captured one time study data which may not represent phenomena over a long period of time. Additionally, women attending the breast clinic may give information they think researcher wants than real information.

Definitions of Terms

Breast cancer treatment: comprise of either surgery, or radiation therapy, or chemotherapy, or hormone therapy, or immune therapy or all of them.

Breast cancer: is a malignant tumor that starts in the cells of the breast and the ability of these tumor cells to spread throughout the body.

Delayed presentation: a prolonged interval between discovery of initial symptom to presentation to a health provider and in this study it was defined as greater than 12 weeks.

Health seeking behaviour: any action undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy/and the pattern of health care utilization among any population group.

Locally advanced breast cancer: cancers or tumors that are larger in size, have grown more deeply into nearby tissue, and have spread to lymph nodes, but not to other parts of the body and /or has spread to other organs or parts of the body.

Metastases: the process of tumour cells detaching from primary site and spreading to secondary sites within the human body.

Organisation of the Study

The study is divided into five chapters. Chapter one presents an introduction to the entire study. Chapter two presents review of related literature both theoretically and empirically. Chapter three presents the methodology of the study which include the research design, the population of the study, sample and sampling procedure, and instruments for data collection, data collection procedures and statistical tools that was used in processing the data collected. Chapter four presents the results arising from the data processing. Finally, chapter five presents the summary, conclusion and recommendation for the study

CHAPTER TWO

LITERATURE REVIEW

This literature review explored factors influencing women delay in seeking breast cancer services. The following databases were used for the review of literature: PubMed, Embase, Web of Science, CINAHL, J East, CAB, African Index Medicus, LiLACS, PubMed, Google scholar, SagePub, HINARI, Medline, PubMed, Asian Pacific Journal of Cancer Prevention. A systematic review was conducted querying these data bases using the Mesh headings "Patient with breast cancer symptoms and Health Care", "Delayed help seeking' and "Breast Neoplasms" with a text search of "delay" or "late" in titles and abstracts.

Areas reviewed were the current trends in breast cancer, theories and models related to delayed patient presentation of breast cancer symptoms, help seeking behaviours, socio – demographic characteristics associated with patient delayed presentation, psychological factors associated with patient delayed presentation, emotional factors associated with patient delayed presentation, social support network factors associated with patient delayed presentation, health service characteristics associated with patient delayed presentation of breast cancer. Articles published from the year 2003, peer reviewed and written in English, were used in this literature review. Literature on the Anderson Model of Total Patient Delay model, the conceptual framework underpinning the study was included.

Conceptual Framework

A framework is a tool used by researchers to guide their study; it is comprised of a set of constructs used to structure the research (Jeffels, 2013). This study was guided by the Model of Total Patient Delay proposed by Andersen, Cacioppo, and Roberts in 1995. This model is often used in breast cancer research to examine the factors that lead to patient delay in seeking help for breast cancer symptoms.

Patient delay is defined as the time elapsing between symptom self-discovery and first attempt to contact a medical provider. Patient pathways to presentation to health care professionals and initial management in primary care are key determinants of outcomes in cancer (Walter, Webster, Scott, & Emery, 2011). This pre-diagnostic period is comprised of several stages which may involve delay on the part of the individual. The Andersen, Cacioppo, and Roberts model (1995), is a general model for total patient delay from initial detection of the problem through treatment initiation. The Andersen's Model of Total Patient Delay presents a conceptual model for prolonged patient delay that builds on a model for stages of delay by Safer, Tharps, Jackson and Leventhal (1979). This model conceives of delay as composed of a series of stages, each governed by conceptually distinct set of decisional and appraisal processes. The decisional and appraisal process begins with the initial day that an individual detects an unexplained symptom to the day the individual appears before a physician. The Andersen Model of Total Patient Delay is comprised of four delay stages: appraisal delay, illness delay, behavioural delay, scheduling delay, and treatment delay (Andersen et al, 1995).

Appraisal delay (symptom appraisal) is the number of days elapsing from time an individual first noticed symptoms to the time the individual concludes he/she is ill. It is during this interval that the disease begins to manifest as noticeable bodily changes. The individual evaluates the significance of their signs and symptoms and they reach a conclusion they are ill. Appraisal delay is also a way of understanding helpseeking that does focus on the process leading to the decision to seek help. This perspective considers the ways through which people identify and evaluate symptoms. The way through which people make interpretations of the causes and implications of symptoms and how these inferences are used in the decision to seek help. The symptom appraisal stage maintains that following the detection of symptom, an individual will continue to appraise and decide whether a symptom means something is wrong. It is also the appraisal that drives the decision of whether professional care is necessary.

Deciding that the symptom is not serious, waiting to see if it will clear up on its own, or self-medicating, are all associated with longer appraisal delay (Ayers, Baum, McManus, Newman, Wallston, Weinman, & West, 2007). Knowledge about cancer symptoms has been shown to be associated with paying more attention to symptoms, and a shorter anticipated delay in help-seeking in the event of symptoms (Ayers, et al., 2007). The nature of the presenting symptoms, strong sensory signals such as bleeding or severe pain can lead to shorter appraisal. Andersen et al; (1995) proposed that the appraisal stage is the most important stage in seeking medical attention, constituting about 60% of the total delay. Patients who do not initially attribute their symptoms to cancer will wait for a longer period before seeking

help as compared to those who do attribute their symptoms to cancer (Ayers, et al., 2007).

Illness delay represents the number of days elapsing from time the individual concludes he/she is ill to the day which the individual decides to seek medical help (Andersen et al., 1995). During the illness delay the individual must decide for example whether to seek assistance from others e.g. others with similar condition, physician or to self-treat illness. Factors such as familiarity of the presumed disease, health information available to the individual are contributing factors to the delay at this stage of illness delay (Ayers, et al., 2007).

After the illness delay, the remaining delay time is spent making two remaining decisions. One is the delay between the decision to seek medical attention and the person acting on this decision to make medical appointment (behavioural delay). Response control factors such as affordability, normative factors such as family pressure, cognitive factors such as extent to which decision to seek medical attention is based on issues relevant- thinking are more likely to modulate the time between a decision and an action for the behaviour delay time (Andersen et al;1995). The other delay is the time that elapses between individual making an appointment and their first receiving medical attention (scheduling delay) (Andersen et al., 1995).

The first three stages of delay (appraisal delay, illness delay, and behavioural delay) are applicable to this study of patient delay. Subsequent stages of the Andersen et al. model (scheduling delay, and treatment delay) are not applicable to this study of patient delay. Measurable variables in the eclectic model are conceptualized in three broad groups: socio demographic

variables, variables pertaining to the interpretation of symptoms and variables pertaining to access and utilization of health care.

In this eclectic model, it is believed that socio-demographic variables affect delay primarily by influencing either symptom interpretation or access to care. Within the symptom interpretation box, it is conceptualized that misconceptions about the meaning of breast lumps would affect whether a woman feels the need to present medically, and that woman with a personal history of benign breast problems (i.e., who experienced a false alarm in the past) might be more likely to hold these misconceptions and therefore be less likely to present promptly the next time she finds a symptom. A family history of breast cancer might prompt a woman with a self-discovered symptom either to seek help sooner or delay seeking help to avoid a diagnosis of breast cancer. Within the health care access and utilization box, the absence of health insurance and fewer preventive care visits are conceptualized as some of the factors that may lead to delay in seeking medical attention. It is also assumed that how a woman interprets symptoms primarily influences appraisal delay, whereas health care access variables primarily influence illness delay.
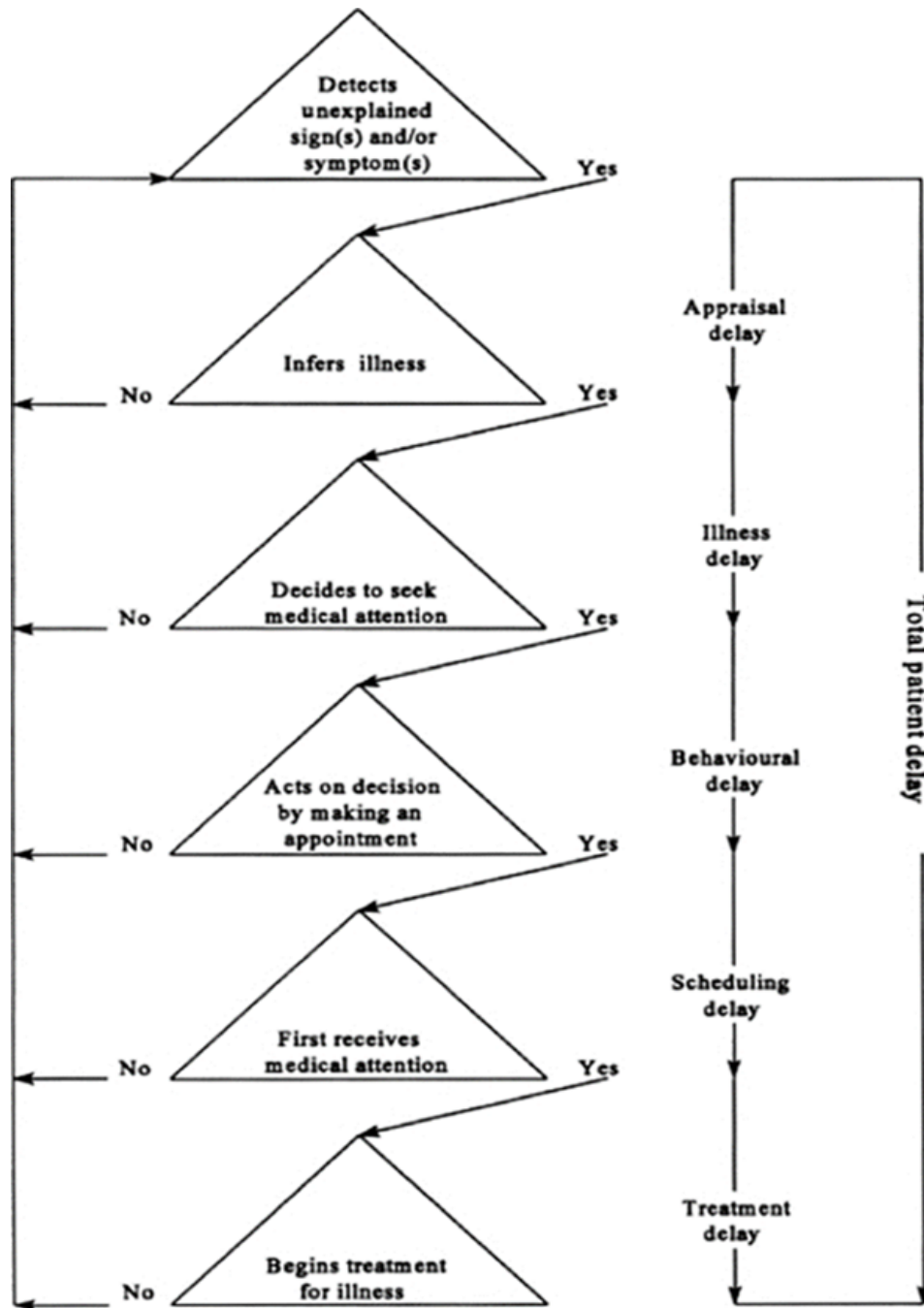
Figure 1: The general model of total patient delay as proposed by Andersen et al. (1995).

Age	Misconceptions about breast lumps	Absence of health insurance	Use of health care services
Income	Family history of breast cancer	Fewer preventive care visits	
Education	Health information	Trust in regular provider	Late /early presentation
Culture	Signs and symptoms		Use of alternate health services
Marital status			

Appraisal delay   illness   illness delay   behavioural

Recognition   delay

Prolonged Patient Delay

Figure 2: An eclectic conceptual framework adapted from Andersen et al. (1995) model of total patient delay.

16

Breast Anatomy and Physiology

The breast or mammary glands are accessory glands of the female reproductive system. They exist also in the male but in only a rudimentary form. In the female the breast is immature until puberty. Thereafter they grow and mature under the influence of oestrogen and progesterone. The mammary gland consists of glandular tissues, fibrous tissue and fatty tissue. Each breast is made up of about 20 lobes of glandular tissue, each lobe being made up of a number of lobules that radiate around the nipple. The lobules consist of a cluster of alveoli that open into small ducts, and these unite to form large excretory ducts, called the lactiferous ducts. The nipple is a small conical eminence at the centre of the breast surrounded by a pigmented area, the areola. On the surface of the areola are numerous sebaceous glands (Montgomery's Tubercles), which lubricate the nipple during lactation. The mammary glands are only active during late pregnancy and after child birth when they produce milk (ACS, 2015).

The breasts are supplied with blood from the thoracic branches of the axillary arteries and from the internal mammary and intercostal arteries. Venous drainage is formed by anastomotic circle round the base of the nipple from which branches carry the venous blood to the circumference, and end in the axillary and mammary veins. Lymph drainage is into the superficial axillary lymph vessels and nodes and through the internal mammary nodes if the superficial route is obstructed.

Breast Cancer Statistics and Epidemiology

Breast cancer is the most common cancer in women both in the developed and less developed world. It is estimated that worldwide, over 508 000 women died in 2011 due to breast cancer (Global Health Estimates, WHO 2013). Although breast cancer is thought to be a disease of high income countries, almost 50% of breast cancer cases and 58% of deaths occur in low income countries (GLOBOCAN, 2008). Incidence rates vary greatly worldwide from 19.3 per 100,000 women in Eastern Africa to 89.7 per 100,000 women in Western Europe. In most of the developing regions the incidence rates are below 40 per 100,000 (GLOBOCAN, 2008). The lowest incidence rates are found in most African countries but here breast cancer incidence rates are also increasing. Breast cancer survival rates vary greatly worldwide, ranging from 80% or over in North America, Sweden and Japan to around 60% in middle-income countries and below 40% in low-income countries (Coleman, Quarresma, Berrino, Lutz, De Angelis, Capocaccia, Bali et al; 2008). The low survival rates in low income countries can be explained mainly by the lack of public awareness of the disease even among women, lack of early detection programmes, resulting in a high proportion of women presenting with late-stage disease, as well as by the lack of adequate diagnosis and treatment facilities that can optimally manage the condition (Wadler, Judge, Prout, Allen, & Geller, 2011).

Breast cancer is a disease in which malignant (cancer) cells form in the tissues of the breast and the renegade cells can invade surrounding tissues. Most breast cancers arise from either the epithelial lining of ducts and are called ductal carcinoma or the epithelium of the terminal ducts of the lobules

which are called lobular carcinoma (Cancer Research Institute (CRI), 2014). A carcinoma can be invasive or in situ. Invasive breast cancer is breast cancer that has spread from where it began in the breast ducts or lobules to surrounding normal tissue. On the other hand, non-invasive breast cancer is when the cancer is still inside its place of origin and has not broken out (American cancer Society, 2014; Purdy, 2008). In situ means in its original place. There are also other types of breast cancer known as Paget's disease of breast and inflammatory breast carcinoma (ACS, 2014).

It is estimated that one out of every eight women will develop breast cancer at some point during her life. WHO estimates that 508,000 women died in 2011 due to breast cancer (Global Health Estimates, WHO 2013). The exact aetiology of breast cancer is unknown but some studies have shown that the aetiopathogenesis of breast cancer involves multiple factors, some of which a woman may have absolutely no control over (Ahuja, & Chakrabarti, 2009). This makes it an even more traumatic disease for a woman and her family (Ahuja, & Chakrabarti, 2009).

Signs and Symptoms of Breast Cancer

According to the ACS, early symptoms of breast cancer include a lump in a breast, pain in the armpits or breast that does not seem to be related to the woman's menstrual period, and pitting or redness of the skin of the breast, like the skin of an orange (ACS, 2014). A rash around (or on) one of the nipples can also be a sign, swelling (lump) in one of the armpits, an area of thickened tissue in a breast and one of the nipples can have a discharge which sometimes may contain blood (ACS, 2014). The nipple changes in appearance; and may

become sunken or inverted, the size or the shape of the breast changes, and the nipple-skin or breast-skin may start to peel, scale or flake (ACS, 2014).

In most breast cancer cases, most patients present having felt a lump (20% as a painful lump) (ACS, 2014). About 10% of patients present with nipple change, 3% of patients present with nipple discharge, and 5% of patients present with skin contour changes. Breast pain/mastalgia alone is a very uncommon presentation (ACS, 2014). Advanced breast cancers are often accompanied by additional characteristics such as fixation of the mass to the chest wall or to overlying skin and surrounding tissue or even the entire breast, nipple retraction, pain, axillary mass and breast ulcerations (Yavas, Yavas, & Akyurek, 2013). There is also exaggeration of the usual skin markings resulting from skin edema caused by invasion of dermal lymphatic vessels (so-called peau d'orange). Matted or fixed axillary lymph nodes may suggest tumor spread, as does supraclavicular or infraclavicular lymphadenopathy. Metastases may cause pain in bones or even pathological fractures

Risk Factors

Given the high incidence of breast cancer, identifying individual risk factors may be beneficial for early detection and treatment. Several risk factors for breast cancer have been well documented. However, for the majority of women presenting with breast cancer it is not possible to identify specific risk factors (IARC, 2008; Lacey, Kreimer, Buys, Marcus, Chang, Leitzmann, Hoover et al., 2009).

Simply being a woman is the main risk factor for developing breast cancer. Although women have many more breast cells than men, the main

reason they develop more breast cancer is because their breast cells are constantly exposed to the growth-promoting effects of the female hormones estrogen and progesterone (ACS, 2011).

Estrogen exposure can lead to the development of breast cancer. Reproductive factors associated with prolonged exposure to endogenous estrogens, such as early menarche, late menopause or late age at first childbirth are among the most important risk factors for breast cancer (IARC, 2008, Schonfeld, Pfeiffer, Lacey, Berrington de González, Doody, Greenlee, Park, Schairer, Schatzkin, Sigurdson, Hartge, & Visvanathan, 2011).

Exogenous hormones also exert a higher risk for breast cancer as in cases of oral contraceptive and hormone replacement therapy users. HRT (hormone replacement therapy) – either combined or estrogen-only HRT may increase a woman's risk of developing breast cancer slightly (ACS, 2011).

The older a woman gets, the higher is her risk of developing breast cancer as age has also been implicated as a risk factor (ACS, 2011). About 1 out of 8 invasive breast cancers are found in women younger than 45, while about 2 of 3 invasive breast cancers are found in women age 55 or older. Over 80% of all female breast cancers occur among women aged 50 years or more. Genetics has also been found to be a risk factor in the development of breast cancer. Women who have a close relative who has/had breast or ovarian cancer are more likely to develop breast cancer (IARC, 2008). Some genetic mutations, particularly in BRCA1, BRCA2 and TP53 result in a high risk for breast cancer (IARC, 2008). A woman's chance of developing breast cancer increases if her mother, sister, and/or daughter (first-degree relative) have been

diagnosed with the disease, especially if they were diagnosed before age 50 (Cybulski, Wokołorczyk, & Jakubowska, et al., 2011).

Another risk factor is a history of breast cancer. Women who have had breast cancer, even non-invasive cancer, are more likely to develop the disease again, compared to women who have no history of the disease. Having had certain types of breast lumps, for example women who have had some types of benign breast lumps, are more likely to develop cancer later on in life (NCI, 2013).

Women with denser breast tissue have a greater chance of developing breast cancer (Schetter, 2014). Women with dense breasts on mammogram have a risk of breast cancer that is 1.2 to 2 times that of women with average breast density. Dense breast tissue can also make mammograms less accurate. High breast density decreases the conspicuity of breast lesions, and delay in the diagnosis of breast cancer (Schetter, 2014).

Post-menopausal obese and overweight women may also have a higher risk of developing breast cancer (IARC, 2008). Obesity has been associated with increased mortality from hormone dependant cancers such as breast cancer which is the most prevalent cancer in women. The link between obesity and breast cancer can be attributed to excess oestrogen produced through aromatization in adipose tissue (Esfahlan, Zarghami, Esfahlan, Mollazadeh, Nejati, & Nasiri, 2011).

Alcohol intake is associated with increased risk of breast cancer. The more alcohol a woman regularly drinks, the higher her risk of developing breast cancer (Kent, 2012). In the case of breast cancer, each 10-g-per-day

increase in alcohol intake results in a 7% to 10% increase in the risk of breast cancer (McDonald, Goyal, & Terry, 2013).

Smoking and second hand smoking has also been associated with breast cancer disease according to National Toxicology Program (United States Department of Healthand Human Services, 2010). The United States (U.S.) Environmental Protection Agency, U.S. National Toxicology Program, U.S. Surgeon General, and the International Agency for Research on Cancer have all classified smoking and second hand smoke as a known human carcinogen (U.S. Department of Health and Human Services, 2010).

Undergoing x-rays and computer topography (CT) scans may raise a woman's risk of developing breast cancer slightly. Scientists at the Memorial Sloan-Kettering Cancer Center found that women who had been treated with radiation to the chest for a childhood cancer had a higher risk of developing breast cancer (Croswell, Ransohoff, & Kramer, (2010).).

Researchers have found that certain jobs especially those that bring the human body into contact with possible carcinogens and endocrine disruptors are linked to a higher risk of developing breast cancer. (Brophy, Keith, Watterson, Park, Gilbertson, Maticka-Tyndale, Beck, Abu-Zahra, Schneider, Reinhartz, DeMatteo, & Luginaah, 2012). In 2007, the International Agency for Research on Cancer (IARC) classified shift work that involves circadian disruption' as probably carcinogenic to humans based on sufficient evidence from studies. Some researchers think the effect may be due to changes in levels of melatonin, a hormone whose production is affected by the body's exposure to light, but other hormones are also being studied

Nulliparity is a well-established risk factor for breast cancer, and the risk is most apparent when compared with the risk among parous women who gave birth at relatively young ages (Schonfeld et al, 2011). The long-term protection associated with one full-term pregnancy at a young age is hypothesized to reflect hormonally induced reduction in susceptibility of the breast epithelium to DNA damage.

Breastfeeding has a protective effect against breast cancer. Breastfeeding is protective against breast cancer in that it can delay the onset of the disease by 10 years – but only among women who do so for over six months and do not smoke, new research has found (Kim, Choi, Lee, Park, Ahn, Noh, Hong, Kang, and Yoo, 2007). This study therefore confirmed that lactation has an apparent dose-dependent protective effect against breast cancer.

Oestrogen and its Receptor Pathway

Estrogens regulate the growth, differentiation, and functioning of diverse target tissues, both within and outside of the reproductive system. Most of the actions of estrogens appear to be exerted via the estrogen receptor (ER) of target cells, an intracellular receptor that is a member of a large superfamily of proteins that function as ligand-activated transcription factors, regulating the synthesis of specific RNAs and proteins.

Estrogen mediates its effects by binding to its receptors, estrogen receptor (ER)-α and ER-β. Classically, ER-α is thought to function as a ligand-activated transcription factor. By interacting with estrogen-response elements contained in the promoter region of specific genes, modulation of

gene expression ultimately results in the biological effects of estrogen. Upon the binding of estrogen to ER-α, the ligand-activated ERα translocates to the nucleus, binds to the responsive element in the target gene promoter, and stimulates gene transcription (genomic/nuclear signalling). Emerging evidence suggests that ER signalling is complex, involving coregulatory proteins and also genomic actions and extranuclear actions (Carey, Perou, Livasy, Dressier, Cowan, Conway, et al. (2006).

In breast cancer, interruption of estrogen receptor ER-α function is an effective therapeutic strategy. Despite the clinical benefit of interruption of ER-α function, the precise biological action of ER-α in breast tumors is not completely understood. Results of a recent study show that ER-α promotes growth of breast cancer cells by targeting expression of signaling components of the insulin-like growth factor system. This study raises the possibility that unliganded ER-α itself may affect gene expression and breast cancer biology, and they suggest a potential mechanism for ER-α to stimulate proliferation in breast cancer (Carey, et al. (2006).

Staging

According to ACS (2011), the stage describes the size of the cancer and how far it has spread when it is diagnosed. It is based on whether the cancer is invasive or non-invasive, the size of the tumor, how many lymph nodes are involved, and if it has spread to other parts of the body. A staging system is a standardized way for the cancer care team to summarize information about how far a cancer has spread. The stage of a cancer is one of the most important factors in determining prognosis and treatment options

(ACS, 2011). The stage of a breast cancer can be based either on the results of physical exam, biopsy, and imaging tests (called the clinical stage), or on the results of these tests plus the results of surgery called the pathologic stage (ACS, 2011). Pathologic staging is likely to be more accurate than clinical staging, as it gives a first-hand impression of the extent of the cancer.

The American Joint Committee on Cancer (AJCC) Tumour, Lymph Node and Metastasis (TNM) staging system may also be used to describe breast cancer, as it can provide accurate information about the diagnosis. The letter T describes the size of the tumour, N describes whether cancer has spread to the lymph nodes, and M gives an indication of whether the cancer has spread to other parts of the body. The AJCC has designated staging by tumor, node, and metastasis (TNM) classification to define breast cancer.

DCIS = ductal carcinoma in situ; LCIS = lobular carcinoma in situ.

The T classification of the primary tumor is the same regardless of whether it is based on clinical or pathologic criteria, or both and the size should be measured to the nearest millimeter.

- The letter T followed by a number from 0 to 4 describes the tumor's size and spread to the skin or to the chest wall under the breast. Higher T numbers mean a larger tumor and/or wider spread to tissues near the breast.

- The letter N followed by a number from 0 to 3 indicates whether the cancer has spread to lymph nodes near the breast and, if so, how many lymph nodes are affected.

- The letter M followed by a 0 or 1 indicates whether the cancer has spread to distant organs -- for example, the lungs or bones (ACS, 2011).

Primary tumor (T) categories:

TX: Primary tumor cannot be assessed.

T0: No evidence of primary tumor.

Tis: Carcinoma in situ (DCIS, LCIS, or Paget disease of the nipple with no associated tumor mass)

T1: Tumor is 2 cm (3/4 of an inch) or less across.

T2: Tumor is more than 2 cm but not more than 5 cm (2 inches) across.

T3: Tumor is more than 5 cm across.

T4: Tumor of any size growing into the chest wall or skin.

Nearby lymph nodes (N)

NX: Nearby lymph nodes cannot be assessed

N0: Cancer has not spread to nearby lymph nodes.

N1: Cancer has spread to 1 to 3 axillary (underarm) lymph node(s), and/or tiny amounts of cancer are found in internal mammary lymph nodes

- N1a: Cancer has spread to 1 to 3 lymph nodes under the arm with at least one area of cancer spread greater than 2 mm across.

- N1b: Cancer has spread to internal mammary lymph nodes, but this spread could only be found on sentinel lymph node biopsy (it did not cause the lymph nodes to become enlarged).

- N1c: Both N1a and N1b apply. N2: Cancer has spread to 4 to 9 lymph nodes under the arm, or cancer has enlarged the internal mammary lymph nodes

- N2a: Cancer has spread to 4 to 9 lymph nodes under the arm, with at least one area of cancer spread larger than 2 mm.

- N2b: Cancer has spread to one or more internal mammary lymph nodes, causing them to become enlarged. N3: Any of the following:

- N3a: either • Cancer has spread to 10 or more axillary lymph nodes, with at least one area of cancer spread greater than 2mm

- N3b: Cancer is found in at least one axillary lymph node (with at least one area of cancer spread greater than 2 mm) and has enlarged the internal mammary lymph nodes

- N3c: Cancer has spread to the lymph nodes above the clavicle with at least one area of cancer spread greater than 2mm.

Metastasis (M):

MX: Presence of distant spread (metastasis) cannot be assessed.

M0: No distant spread is found on x-rays (or other imaging procedures) or by physical exam.

M1: Spread to distant organs is present. The most common sites are bone, lung, brain, and liver.

Once the T, N, and M categories have been determined, this information is combined in a process called stage grouping. Cancers with similar stages tend to have a similar outlook and thus are often treated in a similar way. Stage is expressed in Roman numerals from stage I (the least advanced stage) to stage IV (the most advanced stage). Non-invasive cancer is listed as stage 0.

Stage 0: Tis, N0, M0: This is ductal carcinoma in situ (DCIS), the earliest form of breast cancer.

Stage IA: T1, N0, M0: The tumor is 2 cm (about 3/4 of an inch) or less across (T1) and has not spread to lymph nodes (N0) or distant sites (M0).

Stage IB: T0 or T1, N1mi, M0: The tumor is 2 cm or less across (or is not found) (T0 or T1) with micrometastases in 1 to 3 axillary lymph nodes (the cancer in the lymph nodes is greater than 0.2mm across and/or more than 200 cells but is not larger than 2 mm) (N1mi). The cancer has not spread to distant sites (M0).

Stage IIA: T0 or T1, N1 (but not N1mi), M0: The tumor is 2 cm or less across

Stage IIB:T2, N1, M0: The tumor is larger than 2 cm and less than 5 cm across (T2). It has spread to 1 to 3 axillary lymph nodes

Stage IIIA: T4, N0 to N2, M0: The tumor has grown into the chest wall or skin (T4), it has spread to 1 to 3 axillary lymph nodes and/or tiny amounts of cancer are found in internal mammary lymph nodes on sentinel lymph node biopsy (N1).

Stage IIIC: any T, N3, M0: The tumor is any size (or can't be found), and cancer has spread to 10 or more axillary lymph nodes (N3).

Stage IV: any T, any N, M1: The cancer can be any size (any T) and may or may not have spread to nearby lymph nodes (any N). It has spread to distant organs or to lymph nodes far from the breast (M1). The most common sites of spread are the bone, liver, brain, or lung.

Tumour Grading

Tumour grading is based on how closely the biopsy sample resembles normal breast tissue. The grade helps predict a woman's prognosis. In general, a lower grade number indicates a slower-growing cancer that is less likely to spread, while a higher number indicates a faster-growing cancer that is more likely to spread. Histologic tumor grade (sometimes called the Bloom-

Richardson grade, Scarff-Bloom- Richardson grade, or Elston-Ellis grade) is based on the arrangement of the cells in relation to each other: whether they form tubules; how closely they resemble normal breast cells (nuclear grade); the nuclear features (pleomorphism) and how many of the cancer cells are in the process of dividing (mitotic count). Each of these features is scored from 1-3, and then each score is added to give a final total score ranging from 3-9. The final total score is used to determine the grade in the following way:

• Grade 1 (well differentiated) cancers have relatively normal-looking cells that do not appear to be growing rapidly and are arranged in small tubules.

• Grade 2 (moderately differentiated) cancers have features between grades 1 and 3.

• Grade 3 (poorly differentiated) cancers, the highest grade, lack normal features and tend to grow and spread more aggressively. This system of grading is used for invasive cancers but not for in situ cancers (ACS, 2015).

Primary prevention of breast cancer is still not available, except by extreme measures such as prophylactic mastectomy for women who are genetically at high risk, therefore efforts to promote early detection continue to be the major focus in fighting breast cancer (Caplan, 2014). International initiatives to reduce the burden of breast cancer, one of the WHO's (2010) initiatives, is the promotion of breast cancer control within the context of comprehensive national cancer control programs, the cornerstone of which is early detection. Raising general public awareness on the breast cancer problem and the mechanisms to control as well as advocating for appropriate policies and programmes are key strategies of population-based breast cancer control. Although some risk reduction might be achieved with prevention, these

strategies cannot eliminate the majority of breast cancers that develop in low- and middle-income countries. Therefore, early detection in order to improve breast cancer outcome and survival remains the cornerstone of breast cancer control (Anderson, et al., 2008).

There are two early detection methods; early diagnosis or awareness of early signs and symptoms in symptomatic populations in order to facilitate diagnosis and early treatment, and screening that is the systematic application of a screening test in a presumably asymptomatic population (Anderson et al; 2008). Screening aims to identify individuals with an abnormality suggestive of cancer. Early detection of breast cancer enhances treatment outcomes and survival. Morbidity and mortality have been shown to be effectively reduced by early detection of breast cancer through screening activities. Early detection of breast cancer through regular screening activities has been found to decrease mortality rates by 25-30% (Azaiza & Cohen, 2006). Also, breast cancer detected at an early stage has a high chance of responding successfully to treatment.

Screening includes mammography, clinical breast examination (CBE) by health care practitioners, MRI (for high-risk patients), and monthly breast self-examination (BSE). Although there is no evidence on the effect of screening through BSE (Macreedy, Littlewood, &Jenkinson, 2005), however, the practice of BSE has been seen to empower women, taking responsibility for their own health. BSE is therefore recommend for raising awareness among women at risk rather than as a screening method (Sankaranarayanan, Ramadas, Thara, Muwonge, Prabhakar, Augustine, Venugopal, Anju, & Mathew, 2011). Current guidelines from the American Cancer Society (2013),

state that women 20 years and older should practice monthly breast self-examination (BSE).Women 20–39 years old should have a clinical breast examination (CBE) every three years, while women 40 years and older should have a yearly CBE. Women 40–49 years old should also have a mammogram every 1–2 years, and women 50 years and older should have one yearly (Cuzick, Sestak, Bonani, Costantino, Cummings, DeCensi, Dowsett, et al., 2011).

Early diagnosis remains an important early detection strategy, particularly in low- and middle-income countries where the diseases is diagnosed in late stages and resources are very limited. There is some evidence that this strategy can produce down staging (increasing in proportion of breast cancers detected at an early stage) of the disease to stages that are more amenable to curative treatment (Yip, Smith, Anderson, Miller, Thomas, Ang, et al., 2008).

Management of Breast Cancer

Treatment of breast cancer is mostly patient-centred, taking into account patients' individual needs and preferences. Good communication is essential, supported by evidence-based information, to allow patients to reach informed decisions about their care. Discussion and involvement of patients' families with their consent is facilitated. Management of breast cancer involves multidisciplinary treatment planning involving at least a breast surgeon, radiologist, pathologist, and medical and radiation oncologists so as to integrate local and systemic therapies and their sequence (ACS, 2011). The treatment modalities available include surgery, chemotherapy, hormonal

therapy and radiotherapy. Optimal management of a patient with breast cancer includes establishing a pathologic diagnosis prior to any definitive operative intervention. Testing is required to differentiate benign lesions from cancer and this differentiation must be conclusive before evaluation is terminated. If advanced cancer is suspected based on physical examination, biopsy is done first. Any skin taken with the biopsy specimen would be examined since it may show cancer cells in dermal lymphatic vessels.

The diagnosis of breast cancer is confirmed by histological evaluation, and the tumor is assessed for grade as well as human epidermal growth factor receptor 2 (HER2), estrogen, and progesterone receptor status (Carlson, Allred, Anderson, Burstein, Carter, Edge, Erban, et al., 2011). This information is critical for optimal decision making regarding treatment options, most importantly allowing for coordination of care for those patients that will benefit from neoadjuvant chemotherapy prior to operative intervention (Carlson, et al., 2011). After the diagnosis of breast cancer is established, patients are evaluated to determine the extent of the disease. Laboratory values that will assist in treatment recommendations like complete blood count, liver function tests, and alkaline phosphatase are conducted. Sometimes, additional imaging studies to evaluate for metastatic disease are obtained depending on signs and symptoms of the patient, as well as the clinical stage at presentation (Carlson, et al., 2011).

A bone scan is indicated if the patient has localized bony pain or elevated alkaline phosphatase. Chest imaging is indicated for pulmonary symptoms, and abdominal imaging by computerized tomography is indicated for abnormal liver functional tests or abdominal symptoms (Baildam, 2010). A

review of the acquired data, including pathology, laboratory assessment, and imaging, allows the multidisciplinary team to make recommendations for definitive management of the patient with breast cancer. Patients with evidence of advanced disease are typically managed medically with preoperative chemotherapy, prior to any definitive surgical management (Rostas & Dyess, 2011).

Radiation Therapy

Radiation therapy is the use of high-energy x-rays or other particles to kill cancer cells. A radiation therapy regimen usually consists of a specific number of treatments given over a set period of time (NCI, 2010/ Cancer.Net, 2015). Most commonly, radiation therapy is given after a lumpectomy, and following adjuvant chemotherapy if recommended. (Cancer.Net, 2015).

Adjuvant radiation therapy is also recommended for some women after a mastectomy, depending on the age of the patient, the size of their tumor, the number of lymph nodes under the arm that contain cancer, the width of normal tissue around the tumor removed by the surgeon, the ER, PR, and HER2 status, and other (NCI, 2015/ Cancer.Net 2015).

Neoadjuvant radiation therapy is radiation therapy given before surgery to shrink a large tumor, which makes it easier to remove. This approach is not common and is only used when a tumor cannot be removed by surgery (Cancer.Net, 2015).

Chemotherapy

Chemotherapy is the use of drugs to destroy cancer cells, which work by stopping the cancer cells' ability to grow and divide. Systemic chemotherapy is delivered through the bloodstream to reach cancer cells throughout the body (NCI, 2014/ ACS, 2011). Common ways to give chemotherapy include intravenous (IV) or oral routes. Chemotherapy may be given before surgery to shrink a large tumor and reduce the risk of recurrence and is called neoadjuvant chemotherapy. It may also be given after surgery to reduce the risk of recurrence, called adjuvant chemotherapy. Chemotherapy may be given on many different schedules depending on what worked best in clinical trials for that specific type of regimen (Cancer.Net, 2015; Fabian, 2007).

Hormonal Therapy

Hormonal therapy, also called endocrine therapy, is an effective treatment for most tumors that test positive for either estrogen or progesterone receptors (ER-positive or PR-positive), in both early-stage and metastatic cancer (ACS, 2011). This type of tumor uses hormones to fuel its growth. Blocking the hormones can help prevent a cancer recurrence and death from breast cancer when used for early-stage disease either by itself or after adjuvant or neoadjuvant chemotherapy.

Immunotherapy

Although breast cancer has histologically been considered immunologically silent, several preclinical and clinical studies suggest that

immunotherapy has the potential to improve clinical outcomes for patients with breast cancer (Cancer.Net, 2015).

Health Seeking Behaviour

Symptom Detection

In a meta-ethnography review of studies by Khakbazan, Taghipour, Roudsari, and Mohammadi (2014) women detected different symptoms including lumps which were the most frequently detected symptom, pain, inverted nipple, axillary mass, arm pain and weakness and dizzy. The patient's delay from the detection of symptoms to seeking help varied from a few days to several months although the symptoms were discovered by active detection through a breast self-examination (Unger-Saldana, Infante-Castaneda, 2011; Lam, Tsuchiya, Chan, Chan, Or, et al. (2009) ; Lu, Lin, Lee, 2010; Taib, Yip, Low (2011), O'Mahony, Hegarty, McCarthy (2011).

Initial Symptom Interpretation

According to Unger-Saldana, Infante-Castaneda (2011); Lam, et al., (2009); and Lu, Lin, and Lee (2010) symptom interpretation was identified as the first, and the most important step of the help seeking process after symptom. At this stage, women assessed and attributed their symptoms to a cause and labelled it as a normal, ambiguous, or serious condition. Women initially tended to interpret the breast symptom as a normal or non-life-threatening condition such as hormonal changes, trauma or breastfeeding. Interpreting the symptoms as normal changes, less serious or ambiguous

conditions contributed to patient delay (Unger-Saldana, Infante-Castaneda (2011); Lam, et al. (2009) Lu, Lin, & Lee, 2010).

Initially symptom interpretation was mainly influenced by interacting of issues such as nature of the symptoms, women's knowledge and women's perception regarding being at risk of breast cancer (Rastad, Khanjani, & Khandani, 2012). Symptoms that were compatible with the women's knowledge and expectation of breast cancer symptoms usually resulted in action. In contrast, symptoms that were perceived as a common ailment or were not compatible with the women's expectation of breast cancer symptoms were interpreted as less serious or ambiguous changes (Lam, et al.; 2009).

Previous experience of benign breast disease, history of cancer in the family, and knowing people who suffered from cancer in relatives or friends influenced knowledge and interpretation of symptoms. These factors also affected the women's decision making process (Unger-Saldana & Infante-Castaneda, 2011; Lam, et al.; 2009).

A meta-ethnography review of studies by Khakbazan, Taghipour, Roudsari, and Mohammadi (2014) showed that the women's perception of being at risk of breast cancer had a great impact on symptom interpretations. Often women who considered themselves at low risk for breast cancer attributed their symptoms to less serious causes and vice versa. A family history of cancer had different and conflicting effects on the perceived risk of breast cancer and shaped positive/negative beliefs and experiences about the curability of the disease. Generally, women with a family history of breast cancer had a greater awareness of breast cancer, considered themselves at higher risk and experienced greater fear in dealing with symptoms (Rastad,

Khanjani, & Khandani, 2012). Women who did not have a family history of breast cancer, perceived themselves at low risk and delayed seeking help (Lam, et al., 2009).

Symptom Monitoring

The initial interpretation of symptoms changed across the help seeking process through monitoring of symptom progression and information seeking via social interactions. Symptom disclosure and receiving social signals were often used by patients to evaluate, confirm or develop their own interpretations (Lam, et al., 2009; Khakbazan, Taghipour, Roudsari, & Mohammadi, 2014). Women, who initially dismissed the breast symptom, often monitored their symptoms for change and kept them under monitoring (Khakbazan, Taghipour, Roudsari, & Mohammadi, 2014). In most cases, persistent symptoms and symptom development, such as enlarged size of the breast and visible symptoms like skin changes and breast discharge triggered women to reappraise their initial interpretation and motivated them to seek help (Khakbazan, Taghipour, Roudsari & Mohammadi, 2014; Unger-Saldana, & Infante-Castaneda, 2011; Lam et al.; 2009). The appearance of pain and physical discomfort, especially if they interfered with women's daily activities, were the most common triggers to action in several studies with different cultural contexts (Lu, Lin, & Lee, 2010; Rastad, Khanjani, Khandani, 2012; Lam et al, 2009; Khakbazan, Taghipour, Roudsari, and Mohammadi, 2014).

Social Interactions

According to Khakbazan, Taghipour, Roudsari, and Mohammadi (2014) social interaction was an influencing factor on the help seeking process. Disclosing the discovered symptoms was a repeated concept in most reviewed articles, and had more positive than negative effects on help seeking behaviours. Although some women did not disclose their symptoms to anyone else, due to concerns such as bothering others, most of the women talked about their symptoms with a lay person and received various kinds of social support. Symptom disclosure to others had supportive role to interpret symptom (Lam, et al.; 2009).

Some women, who had initially ignored the breast symptom, reinterpreted the symptom differently following getting new information. For example, an alert message implied required attention and provoked help seeking while receiving misinformation and reassurance messages that implied a "wait-and-see approach". These factors could act as barriers to seeking help (Unger-Saldana, & Infante-Castaneda, 2011; Lam, et al., 2009; Dye, et al., 2012; Rastad, Khanjani, & Khandani, 2012).

Undeniably, women received other kinds of social support. For example family and other relatives attempted to provide women with their emotional support, and financial support, as well as to reassure, encourage, and advise women to seek treatment. In some cases, the pressure bought to bear from others (spouse, relatives and colleagues) resulted in medical seeking (Unger-Saldana, & Infante-Castaneda, 2011; Lam, et al., 2009; Dye, et al., 2012; Rastad, Khanjani, & Khandani, 2012). According to Khakbazan, Taghipour, Roudsari, and Mohammadi (2014) the need for being sanctioned

sick or ill was an important trigger to label the symptoms as serious. Therefore, when significant other individuals had no information about signs of cancer, the symptoms were left unattended (Lam, et al., 2009).

Receiving messages via social media could also influence women's interpretation of their symptoms and also their decision making process of helpseeking. Multimedia resources were an important source of information for women who presented with delayed breast cancer (Lam, et al.; 2009; Dye, et al.; 2012)

Emotional Reactions to Symptoms

Emotional reactions after discovering symptoms were emphasized in all of the reviewed studies (Khakbazan, Taghipour, Roudsari, & Mohammadi, 2014). While women who did not perceive the seriousness of the symptom, might dismiss their symptoms without any emotional reaction, nearly all of the women who recognized the seriousness of the symptoms experienced different types of emotional feelings, such as; anxiety, uncertainty, depression, hopelessness, and various forms of fear(Khakbazan, Taghipour, Roudsari, & Mohammadi, 2014). These psychological responses often caused conflicting outcomes in the help seeking process (Unger-Saldana, & Infante-Castaneda, 2011).

According to Unger-Saldana, and Infante-Castaneda (2011), fear seemed to provoke one of two opposite actions in the women that experienced it: delayed seeking of medical attention to avoid confirmation of a cancer diagnosis, or acceleration of medical help-seeking to receive treatment as early as possible. Emotional reactions and the way women respond to them (prompt

or delayed help seeking), appear to be related to the nature of the symptoms, the women's prior experience of cancer in relatives , and their perceived risk of cancer (Unger-Saldana, & Infante-Castaneda, 2011) .

Priority to Medical Help

According to, Lam, et al. (2009); Unger-Saldana, and Infante-Castaneda (2011); and Rastad, Khanjani, and Khandani (2012), women who understood the seriousness of their condition, tried to seek medical care to confirm the diagnosis. Some women that attributed their symptoms to less serious causes or those who were frightened of medical confirmation, initially sought alternative therapy as a simple way to deal with the symptoms before medical help seeking. Some of the women, due to uncertainty about the ability of conventional medicine to combat the fatal outcomes of cancer, chose alternative medicine. Some women applied alternative therapies as an adjunctive treatment for decreasing the adverse effects of conventional treatment (Unger-Saldana, & Infante-Castaneda, 2011).

Some women, despite their understanding of the potential seriousness of their symptom, had delayed symptom presentation because of occupational or family commitments. Competing priorities were significant barriers for help seeking in these women which led to giving higher priority to others rather than their own health needs. Whereas, in African American women, caring behaviours towards family and others did not play a negative role (Dye, et al., 2012; Lam, et al., 2009).

Appraisal of Health Services

Finally, women made a decision about the source of care and appraised the feasibility of using health services in an implicit manner. Financial constraints, lack of insurance services, difficulty accessing health care services for a number of reasons such as distance and lack of knowledge of breast clinic locations were identified as factors that impeded timely medical help (Khakbazan, Taghipour, Roudsari, & Mohammadi, 2014). In addition, medical error and the assurances which some women received from their physician involved patient delay in seeking medical help (Dye et al; 2012; Rastad, Khanjani, & Khandani, 2012). Unpleasant previous experiences related to health service providers and women's trust in the knowledge and skills of the physicians, were identified as factors affecting women's help seeking behaviour. The shame and embarrassment of breast examination as a private organ were also reported in some studies (Khakbazan, Taghipour, Roudsari, & Mohammadi, 2014).

Delayed Presentation

Delay in breast cancer is defined as patient delay and system delay. Patient delay is the interval between first detection of symptom and first medical consultation and system delay the interval between first presentation to a medical professional and initial treatment. Prolonged delays usually defined as intervals greater than 12 weeks (Committee on Cancer Control in Low and Middle Income Countries Board on Global Health, 2007). The first study on cancer delay where these two types of delay are described was done by Pack and Gallo in 1938. They defined undue patient delay as three months

or more elapsed time between discovery of symptoms and a visit to a physician. This first definition has been surprisingly preserved for 70 years in most studies of patient delay, even though the time threshold was established arbitrarily (Unger-Saldaña & Infante-Castañeda, 2009).

Provider delay refers to a prolonged period of time between the initial medical consultation and the beginning of definitive treatment. It is also known as system or doctor delay. Pack and Gallo (1938), defined one month as adequate time for the physician to take appropriate action. This too was arbitrarily established. Although other researchers have used it, variability of the period of time used to define provider delay has been greater than that of patient delay. Provider delay has been further divided by some authors into diagnosis delay, time between the first clinical consultation and cancer diagnosis, and treatment delay, time between diagnosis and beginning of treatment (Barber, Jack & Dixon, 2004).

Age and Delayed Presentation

Studies have shown that women who delay their presentation with breast cancer for three months or longer are more likely to be diagnosed with later stage disease and have poorer survival (Mitchell, Macdonald, Campbell, Weller, & Macleod, 2008; Macdonald, Macleod, Campbell, Weller, & Mitchell, 2006). A study by Burgess et al (2006), found that older women, who are at greater risk of developing breast cancer, are also more likely to delay their presentation. In another study by Innos, Padrick, Valvere, Eelma, Kunter, Lehtsaar, and Tekkel, (2013) to identify women at risk for delayed presentation of breast cancer in Estonia using women with primary breast

cancer diagnosed from 2008 to 2010. The study used structured personal interviews carried out by trained nurses in a hospital setting. Multivariate analysis of their results using only patients with self-discovered symptoms indicated that the risk of prolonged delay was significantly associated with age 65 years and over.

Another study by Harirchi, Ghaemmaghami, Karbakhsh, Moghimi, and Mazaherie (2005), to find the extent and determinants of patient delay in women with advanced breast cancer in Iran using a one year cross-sectional study found that delay was associated with older age. There was also strong evidence of an association between older age and patient delay for breast cancer in a study to understand the diagnostic process, and to ascertain the risk factors for increased time to presentation of breast cancer symptoms by Macleod et al; (2009).

Bish, Ramirez, Burgess, and Hunter, (2005), in their study to improve our understanding of why women delay their presentation with breast cancer conducted a review of the evidence for the adverse effect of delayed presentation on survival and the risk factors for delay. Bish and colleagues realised older age was a risk factor for delayed presentation of breast cancer symptoms and therefore placing the empirical risk factors for delayed presentation in a theoretically derived model should be done to enable the development of an effective intervention to reduce delay and thereby save lives. Using elements of self-regulation theory, the theory of planned behaviour (TPB) and implementation intentions, a theoretical model was proposed by Bish et al; (2005) to explain delayed help-seeking. A study by Piñeros, Sánchez, Cendales, Perry, & Ocampo, (2009) to examine the extent

44

and determinants of patient delay in Bogota, Colombia, using a census approach identified 1,106 women with breast cancer. Patient delay was established in 20.3% of the population. One of the main factors was older age.

Brzozowska, Duma, Mazurkiewicz, Brzozowski, and Mazurkiewicz, (2014) in a study with the aim to evaluate time between the first symptoms of breast cancer and treatment commencement, as well as to analyze reasons for the delay in Poland, conducted research on 260 breast cancer patients treated at the Oncology Center in Lublin between 2008 and 2011. They found that among factors which significantly influenced the length of patient delay included age more than 65 years (Brzozowska et al., 2014).

Educational Level and Delayed Presentation

Macleod et al (2009) found across cancer sites that there was strong evidence of an association between lower education level and delay for breast and colorectal cancers. Montazeri, Ebrahimi, Mahrdad, Ansari, and Sadjadian, (2003) in a cross sectional study conducted in Tehran, Iran to examine the extent of patient delay and associated factors in the presentation of breast cancer among a group of newly diagnosed breast cancer patients using a population of 190 breast cancer patients found that there was a risk for longer delay in less educated patients. Sharma, Costas, Shulman, and Mahammadi, (2012), in a systematic review of barriers to breast cancer care in developing countries resulting in delayed patient presentation identified 763 unique abstracts. Of those, 122 were extracted for full review and 13 included in final analysis. Results showed there was a strong evidence that lower education level contributed to patient delay.

Talpur, Surahio, Ansari, and Ghumro, (2011), in their study to assess factors responsible for late presentation of breast cancer in Nawabshah conducted a descriptive study at a private and public sector hospital of Nawabshah, Pakistan, from January 2004 to December 2008. Sixty (60) females were admitted and selected as study subjects during the study period with mean age of 43.5±10.38 years and range 28-80 years. Patients with poor economic status were 49(81.6%) and remaining 11 (18.3%) were from middle class which led to the conclusion that most cases of breast cancer presented in advanced stage probably due to poor socioeconomic status. Ali, Mathew, and Rajan, (2008), analyzed the distribution of socio-economic and demographic (SEDs) factors among breast cancer patients and assessed their impact on the stage at diagnosis of the disease and symptom duration. Data for the year 2006 were collected from the Hospital Based Cancer Registry, Regional Cancer Centre (RCC), Trivandrum, Kerala, India. Patients (n=522) were included if they were from native Kerala state or adjoining Tamil Nadu. SEDS factors included age, residing district, religion, marital status, income, education and occupation. Other study variables were menopausal status, parity, listed symptoms with duration and stage at diagnosis. Elevated risks for late stage reporting among breast cancer patients were observed for women who were unmarried, widowed/divorced with lower education (Ali, Mathew, & Rajan, 2008).

Marital Status and Delayed Presentation

Harirchi et al (2005), aimed at finding the extent and determinants of patient delay in women with advanced breast cancer using a one-year cross-

sectional study. Analysis of the results found that the median patient delay was 12 weeks. Delay was associated with being married. Ali, Mathew, and Rajan, (2008), also found that risks for late stage reporting among breast cancer patients were observed for women who were unmarried or widowed/divorced.

Socio-economic status and Delayed Presentation

Stubbings, Robb, Waller, Ramirez, Austoker, Macleod, Hiom, and Wardle (2009), with the aim of developing a measurement tool to assess public awareness of cancer in 585 eligible participants, noticed the first sign or symptom of cancer was a self-detected breast abnormality for 80% of the study population. Among women with self-detected cancers, 17% reported self delay, and 12% reported a care delay. Self delays were associated with poorer financial status. Women with fewer financial resources are more likely to delay seeking medical attention for a self-detected breast abnormality

Talpur et al (2011), to assess factors responsible for late presentation of breast cancer conducted a descriptive study at a private and a public sector hospital in Nawabshah, Pakistan, from Jan 2004 to Dec 2008. Results showed 60 females were admitted and selected as study subjects during the study period with mean age of 43.5±10.38 years and range (28-80 years). Patients with poor economic status were 49(81.6%) and remaining 11 (18.3%) were from middle class. Sixteen (26.6%) patients were literate, with 3 of them being educated to secondary level. The study found 58 (96.6%) patients with breast carcinoma noted lumps in respective breasts as incidental findings in breast self-examination. Only in 2 (3.3%) patients did family physicians note a lump and refer them to a proper health care facility. Fifty-eight (96.6%) patients

belonged to rural areas and in 95% of the patients, first visit regarding the breast symptoms was made after 6 months of initiation of symptoms. Three (5%) patients in this study presented in stage I, 15(25%) in stage II, 23 (38.3%) in stage III and 19 (31.6%) in stage IV. The researchers therefore concluded that, most cases of breast cancer presented in advanced stage probably due to poor economic status.

No data was available from low income countries correlating socio-economic status (SES) with survival in female breast cancer patients according to Aziz, Sana, Akram, and Saeed (2004). Aziz et al therefore decided to test the hypotheses whether socio-economic status (SES) was an independent determinant for disease stage, access to minimal expected treatment (MET) and survival. Two hundred and eighty six (286) patients diagnosed with breast cancer were recruited from April 1996 to May 1998. Patients were divided into three groups according to their SES. Prognostic factors analyzed were age; tumor size; nodal status; stage at presentation; estrogen receptor status; time elapsed before diagnosis; and access to MET. Disease free survival (DFS) and overall survival (OS) were determined according to the SES of the patients. Patients were categorized into three socioeconomic groups, and it was found that (21%) fell into high socio-economic group, middle (44%) and low (35%). Mean age of all patients was 46 years. Patients from lower SES, the mean age was 43 years compared to 50 years in high SES. Early breast cancer was more common in affluent strata; 70% versus 41% in the lower strata. Literacy rate of patients from high SES was 73.7% compared to 15% in the low SES. There was strong association between low SES and advanced disease, delay in diagnosis, limited access to MET and inferior DFS and OS.

Mohaghegh, Yavari, Akbari, Abadi, and Ahmadi (2014), with the aim of investigating the relationship between family levels of socio-economic status and stage at diagnosis of breast cancer conducted a cross-sectional, descriptive study on 526 patients who were suffering from breast cancer and registered in Cancer Research Center of Shahid Beheshti University of Medical Sciences from March 2008 to December 2013. The results indicated a significant relationship between stage at diagnosis of breast cancer and family levels of socio-economic status at the time of diagnosis. Also, the relationship between stage at diagnosis and place of living (living in Tehran or not) was significant. Owing to the results of the studies above, paying attention to the family socio-economic status as an important variable in stage at diagnosis of breast cancer among women is important and presenting preventing plans related to this topic seems necessary.

Khan, Hanif, Iqbal, Shahzad, Shafique, and Khan (2015), to determine the frequency of breast cancer patients with delayed presentation, the reasons of delay and its association with different socio-demographic variables in North Pakistan interviewed 315 histologically confirmed breast cancer patients. Questions were asked from each patient which could reflect their understanding about the disease and which could be the likely reasons for their delayed presentation. The results of the study indicated that education and socio-economic status were two independent variables related to the delayed presentation and also due to their misconceptions about the disease. There was also evidence that groups from lower socio-economic status (SES) and ethnic minority background had lower awareness (Waller et al, 2009; Forbes et al, 2011) and therefore delayed presentation of breast cancer symptoms.

Forbes, Atkins, Thurham, Layburn, Haste and Ramirez (2014), aimed to identify risk factors for delay in presentation across several cancers. They found out that delay was associated with greater socioeconomic deprivation.

Racial Differences in Breast Cancer Presentation and Age at Diagnosis

Breast cancer is a heterogeneous disease composed of a growing number of recognized biological subtypes. The prognostic and etiologic importance of this diversity is complicated by many factors, including the observation that differences in clinical outcomes often correlate with race (Carey, Perou, Livasy, Cowan, Conway, Karaca, Geradts et al; 2006). This disparity is particularly pronounced among women younger than 50 years as the age specific breast cancer incidence rate for African and African-American women under age 35 is more than twice the rate for white women of similar age, and the mortality rate is more than three times higher (Abdulrahman, & Rhaman, 2012).

Breast cancer in African and African American women has been characterized by higher grade, later stage at diagnosis, and worse survival even after controlling for stage at diagnosis (Lantz, Mujahid, Schwartz, Janz, Fagerlin, Salem, Liu, et al; 2006). A study by Daly and Olopade, (2015) confirms that women of African ancestry are more likely to be diagnosed with breast cancer 10 to 15 years earlier (women in their late 40s) whereas in the United States, breast cancer typically occurs after menopause and usually affects women in their late 50s or early 60s. The causes of this observed survival difference are likely multifactorial and include socioeconomic factors, differences in access to screening and treatment, religiosity, spirituality, and

fatalistic beliefs about breast cancer, as well as potential biological differences among the cancers themselves (Olopade, 2015; Gullatte, Brawley, Kinney, Powe, & Mooney, 2009).

Breast Cancer Knowledge and Delayed Presentation

Low breast cancer awareness is a risk factor for delayed presentation in breast cancer. Systematic reviews have concluded that failure to recognise early warning signs is a key contributor to delayed presentation in clinical populations (Macdonald et al., 2006; Mitchell et al., 2008). The results of some clinical studies have highlighted the need for research into awareness of early warning signs of cancer in the general population (Quaife, Forbes, Ramirez, Brain, Donnelly, Simon, & Wardle, 2014; Grimmett, Macherianakis, Rendell, George, Kaplan, Kilgour, & Power, 2014). Several surveys have identified low symptom awareness in general population samples (Lockwood-Rayermann et al., 2009; Robb et al., 2009).

Many early cancer symptoms such as change in the appearance of a mole or post-menopausal bleeding do not cause pain or interfere with functioning; consequently they may not trigger help-seeking unless they are recognised as warning signs of cancer. Not recognising a symptom as suspicious is one of the most common reasons given by cancer patients for delayed help-seeking. There is evidence of the longer delay with ambiguous symptoms rather than classic symptoms (Macleod et al; 2009). In a systematic review of barriers to early presentation and diagnosis of breast cancer among black women. Jones, Maben, Jack, Davies, Forbes, Lucas, and Ream, (2014), searched multiple bibliographic databases from 1991 – 2013 investigating

barriers to early presentation and diagnosis with symptomatic breast cancer among black women (≥18 years).

Findings were integrated through thematic synthesis but designs of quantitative studies made meta-analysis impossible. At the end of their review, they identified 18 studies (6183 participants). Delay was noted to be multifactorial, individual and complex. Factors contributing to delay included: poor symptom and risk factor knowledge; fear of detecting breast abnormality; fear of cancer treatments; fear of partner abandonment; embarrassment in disclosing symptoms to healthcare professionals; taboo; and stigmatism. Presentation appeared quicker following disclosure. The reviewers compared older studies (≥10 years) with newer ones (<10 years) to determine changes over time. In older studies, delaying factors included: inaccessibility of healthcare services; competing priorities; and concerns about partner abandonment. Partner abandonment was studied in older studies but not in newer ones.

In another study by Quaife et al (2013), to investigate associations between recognition of warning signs for breast, colorectal, and lung cancer and anticipated time to help-seeking in a population sample of adults in the UK. The researchers realised that for each symptom, the odds of waiting for more than 2 weeks were significantly increased in those who did not recognise the related warning sign: breast changes, rectal bleeding, or persistent cough, independent of demographics and health-care access.

Forbes et al (2014), examined ethnic differences in breast cancer awareness and barriers to symptomatic presentation in East London. They carried out a population-based survey of 1515 women aged 30 and older using

the Cancer Research UK Breast Cancer Awareness Measure (CAM). Results indicated that South Asian and black women had lower breast cancer awareness than white women. Interventions to promote early presentation of breast cancer for South Asian and black women should promote knowledge of symptoms and skills to detect changes to promote early symptomatic presentation for breast cancer.

Norsa'adah, Rahmah, Rampal, and Knight, (2012), in a qualitative study to explore reasons for delay in seeking help among patients with breast cancer from the East Coast of peninsular Malaysia using a face- to-face in-depth interview involving 12 breast cancer patients who had been histopathologically confirmed and were symptomatic on presentation. Respondents were selected purposely based on their history of delayed consultation, diagnosis or treatment. All were of Malay ethnicity and the age range was 26-67 years. Three were in stage ll, seven in stage lll and two in stage lV. At the time of interview, all except one respondent had accepted treatment. The themes derived from the study were poor knowledge or awareness of breast cancer, fear of cancer consequences, beliefs in complementary alternative medicine, sanction by others, other priorities, denial of disease, attitude of wait and see and health care system weakness. Help-seeking behaviour was influenced by a complex interaction of cognitive, environmental, beliefs, culture and psycho-social factors. Breast cancer awareness and psychological counselling are recommended for all patients with breast symptoms to prevent delay in seeking care for breast cancer symptoms.

Within the developing world, many personal, socio-cultural, and economic factors cause delayed patient presentation, or a prolonged interval from initial symptom discovery to provider presentation. Understanding these barriers to care is crucial to optimizing interventions that pre-empt patient delay. Sharma et al (2012), conducted a systematic review of barriers to breast cancer care in developing countries resulting in delayed patient presentation found a strong evidence that lower education level and lesser income status contributed to patient delay. There was weak and, sometimes, contradictory evidence that other factors may have also contributed. Poverty emerged as the underlying common denominator preventing earlier presentation in these settings. The evidence for socio-cultural variables was less strong, but may have reflected current paucity of high-quality research. Conflicting results may have been due to heterogeneity of the developing world itself.

Khakbazan et al (2014), in a meta-ethnographic synthesis of patient delay, synthesized existing qualitative evidence in order to gain a new understanding of help seeking behaviour in women with self-discovered breast cancer symptoms and to determine the factors that influenced patient delay. A quality appraisal of the articles was carried out using the Critical Appraisal Skills Programme qualitative research checklist (Khakbazan et al, 2014). The synthesis was conducted according to Noblit and Hare's meta-ethnographic approach (1988), through reciprocal translational analysis and lines-of-argument. The synthesis led to identification of eight repeated key concepts including: symptom detection, initial symptom interpretation, symptom monitoring, social interaction, emotional reaction, priority of medical help, appraisal of health services, and personal-environmental factors.

Symptom interpretation was identified as the important step of the help seeking process and which changed across the process through active monitoring of symptoms, social interactions, and emotional reactions. The perceived seriousness of the situation, priority to receive medical attention, perceived inaccessibility and unacceptability of the health care system influenced women's decision-making about utilizing health services. Rauscher, Ferrans, Kaiser, Campbell, Calhoun, and Warnecke (2010), in a population-based study of breast cancer, examined factors potentially associated with patient delay in seeking health care for a breast symptom. The participants were 436 symptomatic urban breast cancer patients (146 white, 197 black, and 95 Hispanic). Race/ethnicity, socioeconomic status, health care access and utilization, and misconceptions about the meaning of breast lumps were the key independent variables. Misconceptions about breast lumps and lacking a regular provider, health insurance, and recent preventive care were all associated with prolonged patient delay. Misconceptions were much more common among ethnic minorities and women of lower socioeconomic status (Rauscher et al; 2010).

Taib, Yip, and Low (2011) explored the experience of Malaysian women presenting with advanced breast cancer with regards to their interpretation of breast symptoms. Purposive sampling of 19 breast cancer patients presenting with delayed treatment and/ or advanced cancer diagnosed within two years at the University Malaya Medical Centre, Kuala Lumpur was carried out. In-depth interviews were conducted using a self-devised interview guide. At the end of the analysis themes that emerged with regards to triggering help seeking behaviour were: a) poor symptom knowledge and

55

recognition; b) importance of knowledge of the disease and its' outcomes; c) role of coping mechanisms and affect; and lastly d) role of significant others in appraising breast symptoms (Taib, Yip, & Low, 2011). Symptom recognition remained an important public health issue in early presentation of breast cancer symptoms. Educating women, their significant others, and primary health and primary care providers in detecting early staged breast cancer are needed and supporting women with breast symptoms is important (Taib, Yip, & Low, 2011).

Health System Delays

Programmes on breast cancer prevention in resource poor countries often emphasize cost effective interventions to increase the uptake of screening, breast awareness, and the use of breast self-examination (Wadler, Judge, Prout, Allen, & Geller, 2011; Ezeome, 2009). The success of such programs depends on the response of women and health professionals to the presence of symptoms of breast cancer. Understanding the factors at play in these responses is a prerequisite for strategies to shorten delays and improve stage at diagnosis.

Ezeome, (2009), in a study designed to assess the delays and define the causes of delays in getting medical treatment by patients with breast cancer at University of Nigeria Teaching Hospital Enugu, (UNTH-E), Nigeria using a cross-sectional survey of consecutively presenting patients with breast cancer at the Surgical Oncology unit of the UNTH-E, Nigeria. Results showed most of them were married (71.2%), literate (84.7%), low (58.8%) or middle socioeconomic class (40%), and had access to hospitals within their area of

residence. Most (81.6%) reported first for treatment at a modern health facility while 17.5% used alternative practitioners first. Institutional or physician - related delays were present in 44.5% of the cases while patient-related delays were present in 76.7% of cases. Only use of alternative practitioners as the first treatment point was (p = 0.029) significantly related to delays of more than 3 months before presentation.

Otieno (2010), to determine the extent and nature of delayed presentation of patients treated for breast cancer at Kenyatta National Hospital (KNH) in Kenya used a prospective cross sectional study. A total of 166 patients were recruited into the study with the mean age of 47 years (range 17 and 88 years). Only 11 (6.62%) patients presented within 30 days of discovering their breast symptom; 34 (20.4%) presented between 30 and 90 days; and the remaining 115 (73.1%) presented three months after noticing symptoms. Three reasons accounted for 67.5% of the delay. Thirty three (19.9%) kept away fearing that they would be told they had cancer while 39 (23.5%) presented late because their breast symptom was painless. Another 40 (24.1%) said they had earlier visited medical personnel who had reassured them that their symptoms were benign. Majority of patients treated for advanced breast disease presented to the healthcare providers more than three months after noticing their breast symptom and a sizeable number of patients were being reassured falsely that they have benign disease without the benefit of biopsy. Not recognising a symptom as suspicious is one of the commonest reasons given by cancer patients for delayed help-seeking (Chapple et al., 2004; Smith et al., 2005). There is evidence of longer delay with ambiguous rather than classic (e.g. lump) symptoms (Macleod et al., 2009). Systematic

reviews have concluded that failure to recognise early warning signs is a key contributor to delayed presentation in clinical populations (Macdonald et al., 2006; Mitchell et al., 2008). The results of these clinical studies have highlighted the need for research into awareness of early warning signs of cancer in the general population. Several surveys have identified low symptom awareness in general population samples (Lockwood-Rayermann et al, 2009; Robb et al, 2009; Quaife et al., 2013; Whitaker, Macleod, Winstanley, Scott, & Wardle, 2015).

Psychological Factors and Delayed Presentation

Harirchi et al. (2005) studied the extent and determinants of patient delay in women with advanced breast cancer found that lack of knowledge regarding the necessity of such a visit, fear, negligence, lack of access to physicians, and poverty (Harirchi et al; 2005). It is argued that an intention to seek evaluation of breast symptoms is not merely a matter of education and economics but it is dependent on a complex picture of personal and social factors on the perceived amount of negative consequences of delaying diagnosis and on previous habit of health care utilization (The Australian Institute of Health and Welfare (AIHW), 2012).

CHAPTER THREE

METHODOLOGY

This chapter deals with the methodology adopted for the study. The methods section describes the rationale for the application of specific procedures or techniques used to identify, select, and analyze information applied to understanding the research problem, thereby, allowing the reader to critically evaluate a study's overall validity and reliability (Kallet, 2004). The major components of this methodology were the research design, setting of study population, sample and sampling technique, data collection, sources of data, data collection instrument, validity of instruments, and procedure for data collection. The methods and statistical tools used for analyzing the data are also included.

Research Design

According to Trochim (2006), a research design provides the glue that holds the research together. He explained that the design is used to structure the research, thereby showing how all the major parts of the research work together to address the central research question.

The research design for this study was a quantitative descriptive study. Quantitative was chosen because the researcher wanted to look for a relationship between demographic characteristics and delayed stage of presenting with breast cancer. This study was also quantitative in nature because the researcher wanted to measure outcomes and measure the numbers involved in a category of interest. Most studies done on delayed presentation of breast cancer identified in Ghana, were qualitative in nature; therefore, this

59

quantitative study hoped to bring a new dimension and identify factors of interest. Quantitative studies do not depend heavily on the individual skills of the researcher and thus results are not influenced by the researcher's personal biases and idiosyncrasies (Anderson, 2010). Rigor is easy to maintain, assess, and demonstrate in quantitative studies. The volume of data from quantitative studies makes analysis and interpretation less time consuming. However findings can be more difficult and time consuming to characterize in a visual way (Anderson, 2010).

Descriptive surveys gather data at a particular point in time when there is an intention of describing the nature of existing conditions or identifying standards against which existing condition can be compared. It also attempts to describe and explore a phenomenon in a real life situation and also generates new knowledge about a topic. Descriptive surveys have the advantage of cost-effectiveness and also promote faster and easier way to collect data (Polit, & Beck, 2008). A descriptive survey involves collecting data in order to answer research questions concerning the subject of study. In a descriptive survey, the collection of information typically involves one or more of the following data gathering techniques: structured or semi structured interview, self-completion or postal questionnaire and attitude scales (Polit, & Beck, 2008). Statistics can be used to generalise findings.

Study Setting

The study setting was Cape Coast Teaching Hospital (CCTH) in the Central Region of Ghana. The Cape Coast Teaching Hospital is a referral hospital for the Central Region of Ghana. The CCTH has a Breast Clinic

which is a referral point for breast cases. The Teaching hospital has a breast clinic and the manpower to attend to women with breast problems and those presenting with advanced stages of breast cancer from other parts of the country. It would be imperative to use the teaching hospital where most breast cases are referred. The Central Regional Hospital has staff strength of 25 medical officers, 122 nurses, 130 paramedics and 61 causal workers

Population

Population is the total number of members targeted by the research as defined by the aims and objectives of the study (Postlethwaite, 2005). The target population for this study were women diagnosed (either self-diagnosed or hospital diagnosed) with breast cancer seeking care at the CCTH. The information received indicates that, the number of clients attending Breast Clinic was 350 from 2012 to2014 (Central Regional Hospital Records, 2015).

Inclusion Criteria

Participants included women meeting the following eligibility criteria: women who had been diagnosed with self-detected breast cancer and/ or cancer detected through mammography or clinical breast exam; and women with stage II, III, or IV breast cancer; who were undergoing or had completed adjuvant breast cancer treatment, except for ongoing endocrine treatment, if applicable.

The women were recruited from Breast Cancer Clinic at the Cape Coast Teaching Hospital. Women within the age range of 20 to 70 years were recruited. Women with metastatic disease were included.

Exclusion Criteria

Women with stage I breast cancer were excluded.

Sample and Sampling Procedure

To draw inferences from the sample about the population, attention was paid to the selection of the sample that reflected the population of the study. Due to the nature of the population, a non-probability sampling procedure was used. Convenient sampling method was used for women with stage II to stage IV breast cancer symptoms. In using convenience sampling, respondents visiting the breast clinic were contacted to enrol in the study until the required sample size was obtained

The sample size was determined by the formula for determining sample size Glenn (1992).

$$no = \frac{N}{1 + N(e)^2}$$

where

no – sample size

N –total population

e – desired margin of error

1 – is constant value.

Therefore

The population of women with breast cancer at the Cape Coast Teaching Hospital is 350 (Cape Coast teaching Hospital Records Unit, 2015).

The sample size will therefore be determined as

$$\frac{350}{1 + 350\,(0.05)^2}$$

$$= 155$$

The sample size was 155.

Research Instrument

The main data collection tool was a questionnaire (Appendix A). Existing documentation in the health record of women with stages II to IV breast cancer symptoms were also used. Some of the items in the questionnaire were developed by the researcher under the guidance of supervisors, while others were adopted from research work in related areas. Those that were adopted from related research works were modified to suit the context of this study.

Health records were checked for stage of the disease, date and time of presentation, duration of symptoms and size of tumour at presentation. Data collection was done with the help of two research assistants who were trained for this purpose. Research assistants were two junior colleagues from the School of Nursing and Midwifery. Two hour training sessions were organized for the research assistants. The training included how to maintain confidentiality, taking informed consent from participants, observing office protocol, personal introduction, and purpose of the study. The questionnaires were distributed to respondents who could read and understand the questions. For those who could not read and understand, questionnaires were administered to them in the form of face-to-face interview. The questionnaire was in the following sections;

Part 1   Includes items related to socio – demographic variables of respondent

Part 2   Health history of participants

Part 3   Barriers to seeking care early for breast cancer symptoms

Part 4   Factors influencing health seeking behaviour

Part 5   Cancer related knowledge

Pre-testing

The questionnaires were pre-tested before collecting the main data for the study. This was done to authenticate the research instruments. According to Baddie (2001) pre-test are small tests of single elements of the research instrument, which are predominantly used to check eventual mechanical problems of this instrument. Creswell (2008) pointed out that when one modifies an instrument or combines instruments in a study, the original validity and reliability may be distorted and it becomes important to re-establish validity and reliability.

Pre-testing of Instruments

Pretesting of the questionnaire was done at the Stovich's Breast Care Centre in Cape Coast. The prepared items were tested on 10 women. This enabled the researcher to clarify all ambiguous questions, identified possible challenges likely to be encountered in the actual exercise and how to address them.

The pre-test also provided data for the researcher to determine the reliability of the instrument. After pre-testing, the questionnaire was analysed to report the reliability coefficient (Cronbach alpha coefficient reliability). The

Cronbach alpha measures the internal consistency and according to Nunnally (1970), a Cronbach alpha value of 0.7 and above is considered reliable. The Cronbach alpha reliability coefficients obtained for the women's instrument was 0.839. Therefore it was determined that the questionnaire had adequate reliability.

Ethical Consideration

Ethical considerations refer to procedures that are followed to protect the rights of the institution and the respondents and to ensure scientific integrity (Polit & Beck, 2008). Ethics approval for the present study was obtained from the University of Cape Coast Institutional Review Board and the Cape Coast Teaching Hospital. An introductory and a permission letter was sought from the School of Nursing and Midwifery to the Ministry of Health and the Directorate of the Cape Coast Teaching Hospital. The researcher then introduced herself and her qualifications to participants. If a sponsor or sponsoring agency was involved, participants were given this information.

The purpose or objectives of the study were clearly presented. All aspects of the study were fully explained. These included telling potential participants where and when the study would take place, stressing on the participants' time involvement and all activities participants would perform. Participants were told of any possible discomfort, either physical or psychological that might occur as a result of participation. Any invasion of privacy was also discussed. Potential benefits were described. Consent was sought from participants by participants signing of a consent form.

Anonymity and confidentiality was assured. Due to ethical considerations, names of respondents were not sought nor recorded. Participants were made aware they could withdraw from the study any time they wished to do without any penalty. Participants were given the opportunity to ask any question they had about the study. The researcher informed participants that she would be available by phone or mail if questions arose at a later time. Means of obtaining study results were provided.

Data Collection

Data collection was conducted twice a week on Wednesdays and Fridays. The questionnaires were distributed to respondents who could read and understand the questions. For those who could not fill the questionnaires on their own because they could not read and understand questionnaires were administered to them in the form of face-to-face interview.

Fieldwork

The researcher and the two research assistants carried out the data collection in the Cape Coast Teaching Hospital. The exercise took a period of 6 months. There were some constraints that the researcher faced in the course of the data collection. Some of the respondents could not follow their stated duration for completing the questionnaires whilst others were most often not available at the time that the research team went round to receive the questionnaires. There was also no way to tell how truthful a respondent is being and how much thought a respondent has put in. The respondent may be forgetful or not thinking within the full context of the situation. People may

read differently into each question and therefore reply based on their own interpretation of the question - i.e. what is 'good' to someone may be 'poor' to someone else, therefore there is a level of subjectivity that is not acknowledged.

Data Analysis

The data collected through the administered questionnaires and participants' files were entered into an excel worksheet, cleaned and thereafter transferred and analysed using the Statistical Package for Service Solution (SPSS) version 22. Responses were coded into numerical data for further analysis using the software. Descriptive statistics (frequency, percentages) were used to describe the data. Factor analysis was used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables. Chi - square (s) test were used to determine the associations and differences between the variables at significance level set at 0.05. A descriptive analysis was done and the information obtained summarized in tables and frequency charts.

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter presents the results of the analysis of the data collected from the respondents in the study. The study sought to examine the health seeking behaviour and late presentation of breast cancer among women visiting the Cape Coast Teaching Hospital. It specifically sought to answer the following research questions:

1. What are the health-seeking behaviour of women visiting the Cape Coast Teaching Hospital?

2. What factors influence women to seek breast cancer support and treatment services?

3. What is the relationship between health-seeking behaviour and late presentation of breast cancer?

4. What are the barriers in seeking breast cancer services?

5. What demographic factors influence the late presentation of breast cancer cases to the breast clinic?

The study samples included 148 out of a targeted 155 women who received medical care from Breast Cancer Clinic at the Cape Coast Teaching Hospital. Also, they were within the age range of 20 to 70 years. The study recorded a 95.5% response rate in that 148 of the 155 patients who had met the inclusion criteria completed and returned their copies of the questionnaires. The researcher employed both descriptive and inferential statistical tools in analysing the data and the results are presented below.

<center>**Results**</center>

<center>**Demographic Characteristics of Respondents**</center>

Data on the characteristics of the respondents were collected to help have an understanding of the background dynamics of the respondents in the study. The characteristics examined included age, ethnicity, religious affiliation, marital status, level of education, employment type and monthly income. Table 1 presents a summary of results on these variables on the following page.

The results from Table 1 indicate that a large majority of the respondents (67.6%) were aged at least 42 years, while 42 (29.7%) were within the age range of 30-41 years. It was also seen that 4 (2.7%) of them were as young as 24-29 years. The modal age group for the respondents was 42-47 years, which is usually during their menopausal stages. In terms of their ethnic backgrounds, more than half of them (54.7%) were Akans. The Ewes and Ga Adangbes also made up a substantial proportion of the participants (32.4%). As much as 76.4% of the respondents were of the Christians, while the remaining 35 (23.6%) were Muslims.

The results of Table 1, showed that majority of the respondents (60.1%) were married. The widowed and separates constituted 11.5% and 10.1%, respectively of the women. There were also divorcees, unmarried and cohabitants in the sample.

<center>69</center>

Table 1

Demographic Characteristics of Respondents

Variables	Frequency	Percentage
Age (in years)		
24 – 29	4	2.7
30 – 35	27	18.2
36 – 41	17	11.5
42 – 47	35	23.6
48 – 53	32	21.6
54 and above	33	22.4
Ethnicity		
Akan	81	54.7
Ewe	23	15.5
Ga Adangbe	25	16.9
Mole-Dagbani	10	6.8
Guan	2	1.4
Others	7	4.7
Religious affiliation		
Christianity	113	76.4
Islam	35	23.6
Marital Status		
Married	89	60.1
Divorced	10	6.8
Single	13	8.8
Widowed	17	11.5
Separated	15	10.1
Cohabiting	4	2.7
Educational Level		
No formal education	43	29.1
Basic/ primary	54	36.5
Secondary	13	8.8
Vocational	3	2.0
Tertiary	35	23.6
Employment type		
Government employee	30	20.3
Non-government employee	2	1.4
Self-employed	88	59.5
Student	3	2.0
Unemployed	21	14.1
Others	4	2.7
Income per Month (GH¢)		
Less than GH¢ 200	67	45.2
GH¢ 201-500	34	23.0
GH¢ 501-800	24	16.2
GH¢ 801-1100	12	8.1
GH¢ 1101-1400	9	6.1
GH¢1401 and above	2	1.4
Total	148	100.0

With regard to their academic profile, although a large majority of them were educated, almost one-third them (29.1%) were not. Among the educated, the results showed that they had obtained varied levels of education with 36.5% having basic/ primary education. About 29% of them had had tertiary education. Other respondents had secondary and vocational education. Over half, 88 (59.5%) of the respondents were self-employed, while another 30 (20.3%) were government employees. It can also be seen that 21 (14.1%) of them were unemployed, while there were also students. The results showed that a substantial proportion of the respondents (45.2%) were earning less than GH¢200 in a month. Seven-eight representing 39.2% earned between GH¢201 to GH¢800. However, only 23 (15.6%) were earning above GH¢800 per month.

Figure 3 shows the distribution of respondents by subscription to the National Health Insurance Scheme (NHIS). The purpose of this data was to have a fair view of the financial limitation that might be facing the respondents.
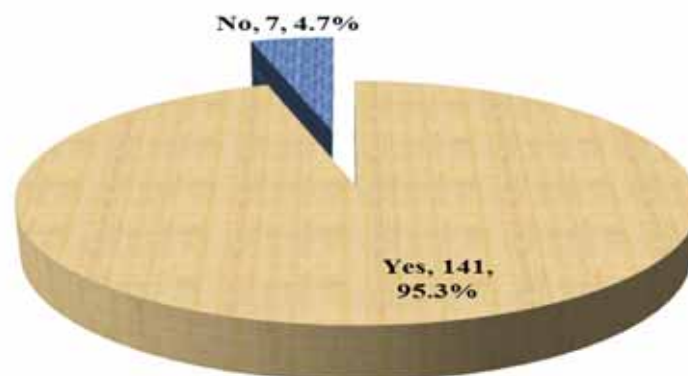
Figure 3: Distribution of Respondents by Subscription to the National Health Insurance Scheme (NHIS).

The results in Figure 3 revealed that majority of the respondents (95.3%) were subscribers to the national health insurance scheme (NHIS). This means that they had access some medical treatments for free. The NHIS has identified the treatment of certain basic health conditions to be borne by the scheme. Table 2 indicates the areas from which the respondents were refereed in order to seek treatment at the Cape Coast Teaching Hospital, Cape Coast.

Table 2

Areas from which Respondents were Referred

Source	Frequency	Percent
Within Cape Coast Metropolis	69	46.7
Outside Cape Coast Metropolis	79	53.3
Total	148	100.0

The results showed that more than half of the respondents (53.3%) were referred to the hospital from outside Cape Coast Metropolis. It mean that the remaining 69 (46.7%) were initially accessing treatment from within the metropolis before being referred to the teaching hospital for treatment.

Research Question 1: What is the health-seeking behaviour of women visiting the Cape Coast Teaching Hospital?

This research question sought to assess the health-seeking behaviour of the respondents. This was to identify whether or not they acted speedily when their realised abnormal changes in their breasts. The study asked the age at which respondents had the screening for breast cancer. Table 3 presents the summary of their responses.

Table 3

Respondents Specific Age of Screening for Breast Cancer

Age (in years)	Frequency	Percent
Less than 30	11	7.4
30 – 39	16	10.8
40 – 49	13	8.8
50 or more	5	3.4
Never screened	103	69.6
Total	148	100.0

Majority of the respondents (69.6%) had never screened for breast cancer before. Among the 45 respondents who had obtained screening for breast cancer, 16 (10.8%) were aged 30-39 years. Also, 13 (8.8%) were 40-49 years before obtaining their first breast cancer screening. It can also be seen that 11 (7.4%) of them were less than 30 years before going for the breast cancer screening. On the means by which the respondents identified breast cancer, they gave varied responses as contained in Table 4.

Table 4

Respondents' Means of Identifying Cancer

Means	Frequency	Percent
Self-identification	113	76.3
Clinical breast/ routine medical examination	9	6.1
Mammogram	26	17.6
Total	148	100.0

A large majority of the respondents identified the symptoms of breast cancers in their breast. Thus, as much as 113 (76.3%) self-identified their condition. However, 26 (17.6%) said their condition was found as a results of the use of mammogram. Meanwhile, 9 (6.1%) said that through clinical breast or routine medical examinations, they were diagnosed of breast cancer. The researcher asked other questions in order identify the symptoms or changes that they noticed in their breasts before the diagnosis. Table 5 presents the results.

Table 5

First Changes Noticed in the Breast by Respondents

First symptoms	Frequency	Percent
Lump in the breast	80	54.0
Lump in the armpit	37	24.8
Breast pain not related to menses	13	8.6
Rash around/ on the nipple	5	3.4
Pitting of the skin/ orange skin	3	1.7
Did not see any change	2	1.2
Others	9	6.3
Total	148	100.0

According to Table 6, more than half of the respondents said they first noticed lumps in the breast, while 37 (24.8%) noticed lumps in the armpit. Similarly, another change experienced was unusual pains in the breasts which were not as a result of their menstrual periods. Five of them also reported of having rashes around and on their nipples. Equally, 3 (1.7%) revealed that they realised the pitting of their skins. However, only 2 (1.2%) stated that they

had not seen any changes prior to the diagnosis. The respondents were asked about their thoughts on the possible causes of such initial symptoms as shown in Table 6.

Table 6

Respondents' Initial Thoughts about First Changes Noticed in the Breast

Initial thoughts	Frequency	Percent
I was initially worried but got over it	56	37.9
It was nothing serious to be worried about	35	23.7
I didn't think I was at risk	20	13.2
It did not match my idea of cancer	18	12.3
It was the result of normal hormonal changes	14	9.6
It resulted from a spell cast on me by my enemies	0	0.0
It was a curse from the gods	0	0.0
Others	5	3.2
Total	148	100.0

The results of Table 6 showed that a good proportion of the respondents (37.9%) said they were initially worried, but got over it later. Meanwhile, 35 (23.7%) of them reported that they did not see anything serious about such symptoms so they were initially not worried about them. Also, 20 (13.2%) of them revealed that they did not think that they were at risk of breast cancer in view of the symptoms. Meanwhile, 18 (12.3%) of the respondents said they never averted their minds to breast cancer from the beginning.

Fourteen of them said that their condition was as the result of normal hormonal changes. Interestingly, however, none of them attributed their predicaments to a spell cast on them by enemies as well as a curse from gods. The results in Table 7 contained the places that the respondents visited first before the breast clinic. It included herbal clinic, hospital/clinic, pharmacy shop and prayer camp.

Table 7

First Place Visited by Respondents after Noticing a Change in their Breasts

Place	Frequency	Percent
Herbal clinic	80	54.1
Hospital/clinic	46	31.0
Pharmacy shop	17	11.5
Prayer camp	2	1.4
Others	3	2.0
Total	148	100.0

The herbal clinics were the first treatment centres for majority (54.1%) of the respondents. Another common place of visit was the hospitals/clinics. Similarly, 17 (11.5%) of the respondents were found to have visited the community pharmacy shops before going to the breast clinic. Only 2 of the respondents said they first went to the prayer camps. On what they presented to the Breast Clinic for treatment, they gave different responses. This means that they presented varied conditions for treatment. Table 8 presents the details of the results.

Table 8

Initial Manifestations Presented by Respondents at Breast Centre

Manifestations	Frequency (N=148)	*Percent (%)
Breast pain	124	83.8
Breast enlargement	70	47.3
Breast ulcer	62	41.9
Breast itching	30	20.3
Swelling from armpit to arm	30	20.3
Arm pain	17	11.5
Others	5	3.4

Multiple responses permitted

The results showed that substantial proportion of them (83.8% out of the 148) presented with breast pain for treatment at the clinic. This means that the main reason why these respondents came to the clinic was the issues of breast pains. Meanwhile, 70 making 47.3% of the 148 said they went to the clinic because of an enlargement in the breast, while 62 (41.9%) out of 148 were at the clinic for the treatment of breast ulcer. In addition, a good number of them also presented with issues of breast itching and swelling from armpit to the arm. Seventeen representing 11.5% also reported of arm pains. Table 9 presents the most worrisome symptoms they experienced.

Table 9

Most Worrisome Symptoms indicated by Respondents

Symptoms	Frequency	Percent
Breast pain	67	45.6
Breast sore	34	22.8
Breast enlargement	19	12.6
Breast itching	12	8.1
Arm pain	12	8.1
Others	4	2.8
Total	148	100.0

The results from Table 9 showed that as many as 67 (45.6%) of the respondents felt pains in the breast as their most worrying symptom. Also, 34 (22.8%) identified breast sores as their main concerns about breast cancer symptom. As to whether or not enlargement in the breast was a worrisome condition to them, 19 (12.6%) responded in the affirmative. This means that they were worried about the abnormal increase in their breasts at a point in time.

Another worrying phenomenon experienced by the respondents was itching of the breast. Twelve representing 8.1% of the respondents reported of experiencing itching of the breast. Meanwhile, 12 (8.1%) also reported that the arm pains they experienced was worrying. Figure 4 shows the classification of respondents according to the time of presenting the case at the health facility. Thus less than twelve weeks represented early presentation and more than twelve weeks represented delayed presentation.
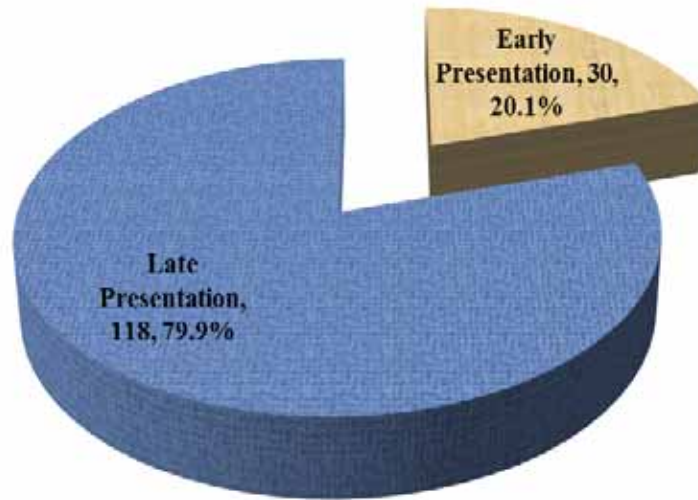
Figure 4: Distribution of Late/ Early presentation of breast cancer cases at the Cape Coast Teaching Hospital.

As shown above, majority of the respondents (80%) presented their conditions at the hospital after 12 weeks of noticing changes in their breasts. Only very few (20.3%) sought medical treatment within a reasonable time period after noticing changes in their breasts.

Research Question 2: What factors influence women to seek breast cancer support and treatment services?

The study assessed the factors that influenced the respondents' decision to seek treatment for their conditions. These factors included the identification of who the respondent first told of changes in the breast. It also touched on the financial assistance needed by the respondents to access health care. Table 10 presents the details of what first persons noticed changes in the breasts of the respondents.

Table 10

Persons First Informed about Changes in the Breast by Respondents

Response	Frequency	Percent
Husband	71	48.0
Siblings	23	15.5
Mother	19	12.8
Friend	15	10.2
Church member	11	7.4
Others	9	6.1
Total	148	100.0

Table 10 shows a large number of the respondents said they informed their husbands of the change in their breasts. Also, 23 (15.5%) of them indicated that they first informed their siblings about their conditions, while 19 (12.8%) said their mothers. Out of the 148 respondents, 15 (10.2%) revealed that their friends were the first they informed about the strange changes in their breasts. Church members and other persons were also informed of the changes in their breasts. The study further asked the respondents to identify the persons who recommended seeing a doctor for diagnosis and treatments. Table 11 presents their responses.

Table 11

Persons who Recommended Respondents to see a Doctor

Response	Frequency	Percent
Husband	68	45.9
Siblings	25	16.9
Mother	16	10.8
Friend	15	10.2
Church member	12	8.1
Others	12	8.1
Total	148	100.0

It can be seen from Table 11 that 65 (45.9%) of the respondents said their husbands mostly recommended that they go to see the doctors when they noticed a change in their breasts. Similarly, 25 (16.9%) of them said their siblings were the ones who asked them to go to the hospital. The third most influential persons who recommended that the respondents went to the hospital were mothers. Friends and church members were also mentioned by the respondents to be among those who advised them to seek medical treatment from the hospital. Figure 5 presents the views of the respondents as to whether finance was their problems to early treatment.
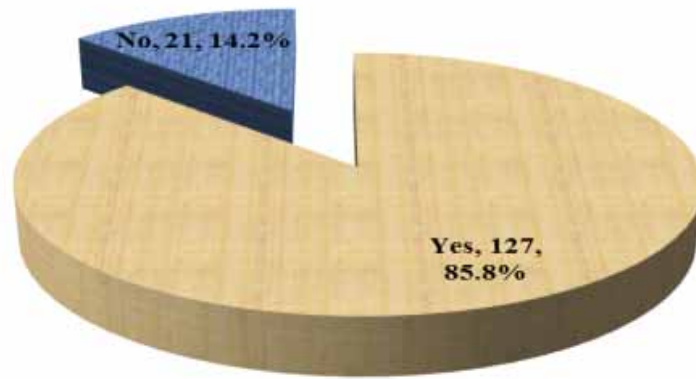
Figure 5: The views of Respondents' as to whether finance was their problem to early treatment.

The results in Figure 5 showed that as many as 127 (85.8%) of the respondents said they were expecting financial assistance to seek treatment. Thus, only very few of them (21) were financially independent that they did not expect any financial assistance to access health care. Table 12 presents the responses of the respondents as to persons who supported them financially.

Table 12

Persons Providing Financial Supports to Respondents

Persons	Frequency	Percent
Husband	75	59.0
Siblings	21	14.2
Mother	18	12.2
Friend	8	5.4
Church member	5	3.4
Total	127	100.0

As shown in Table 13, the majority of the respondents (59.0%) identified their husbands to be persons financing their medical treatment. Also, 21 (14.2%) said their siblings were helping them financially to seek treatment for the breast cancer. Eighteen representing 12.2% and friends (5.4%) were said to be helping the respondents to pay for the cost of treatment. In terms of emotional support, Table 13 presents their responses.

Table 13

Persons Providing Emotional Supports to Respondents

Response	Frequency	Percent
Husband	69	46.6
Siblings	24	16.2
Mother	24	16.2
Friend	23	15.5
Church member	6	4.1
Others	2	1.4
Total	148	100.0

Husbands came top as the ones providing the respondents with emotional support. Almost half (46.6%) of the respondents identified husbands as the key persons that provided emotional support. Siblings, mothers and friends were also mentioned. From the data gathered, it can be concluded that the factors that influenced health seeking behaviour of the respondents were family relations, financial supports and emotional support. It was found that husbands were very important in helping their wives to seek health care. Respondents were asked for reasons why they sought medical care, Table 14 contains the summary of their responses.

Table 14

Respondents Reasons for Seeking Medical Care at the Breast Clinic

	Frequency	*Percent
Reasons	(N=148)	(%)
Worsening of symptoms	127	85.8
Signs and symptoms have persisted	60	40.5
Alternate medicine not improving condition	58	39.2
Now I have money to seek care	19	12.8
Being worried by my family to seek care	3	2.0
Others	2	1.4

Multiple responses permitted

Out of the 148 respondents, 127 (85.8%) said they went to the Breast Clinic because of the symptoms they were experiencing were getting worse. Another group of respondents (60 representing 40.5%) also said the persistence of the signs and symptoms, cause them to visit the clinic for treatment. It was also found that some of the respondents resorted to the use of alternate medicines to treat their conditions, but their conditions were not improving. As shown in Table 8, as many as 58 (39.2%) of the 148 respondents reported this situation.

However, 19 (12.8%) of them said they are now reporting at the hospital because they now had money to pay for their treatments. Also, a few of the respondents said they were worried by family members to seek care.

With as much as almost 70% of the respondents never had breast cancer until it was detected later showed that they respondents generally had poor health seeking behaviour. Again, out of the 45 respondents who accessed

breast screening exercise, only 11 (23.5%) had it when they were less than 30 years. It was also seen that the main reasons for seeking treatment was because the breast symptoms were getting out of hands and becoming worrying rather than seeking early treatment. Generally, there was a late presentation of breast cancer cases among the respondents as much as 79.9% were found to have reported late to the hospital.

Research Question 3: What is the relationship between health-seeking behaviour and late presentation of breast cancer?

The aim of this research question was to assess the relationship between the respondents' health-seeking behaviour and the presentation of their condition at a health facility. Therefore, the time of presentation of breast cancer at the hospital was cross-tabulated with the health seeking behaviour and the Chi-square and p values were computed. Tables 15 present the results. As noted already, the study used a .05 as the level of significance for drawing conclusions.

Table 15

Influence of Variables determining Health Seeking Behaviour on Late Presentation of Breast Cancer Cases

Variables (Screening)	Late Presentation of Breast Cancer Cases		Total (N=148)
	Delayed (n=118)	Not delayed (n=30)	
Last Time of Screening for Breast Cancer	χ^2=7.966 df=4 p=.093		
Within last year	18	2	20
1-2 years ago	9	0	9
3-4 years ago	5	0	5
5 or more years	10	1	11
Never	76	27	103
Screening for breast cancer	χ^2=6.373 df=1 p=.012		
Yes	34	2	36
No	84	28	112
Screening age for breast cancer	χ^2=1.698 df=4 p=.791		
Less than 30	8	2	11
30-39	10	4	16
40-49	10	2	13
50 or more	4	0	5
Never	81	22	103
Total	118	30	148

Table 15: Continued
Influence of Variables determining Health Seeking Behaviour on Late Presentation of Breast Cancer Cases

Variables (Others)	Late Presentation of Breast Cancer Cases		Total (N=148)
	Delayed (n=118)	Not delayed (n=30)	
Persons First Informed of Changes in the Breast	χ^2=9.466 df=5 p=.092		
Husband	57	14	71
Siblings	18	5	23
Mother	13	6	19
Friend	15	0	15
Church member	10	1	11
Others	5	4	9
Persons who Recommended the Seeing of Doctor	χ^2=7.536 df=5 p=.184		
Husband	54	14	68
Siblings	20	5	25
Mother	12	4	16
Friend	15	0	15
Church member	10	2	12
Others	7	5	12
Need for financial assistance by respondents	χ^2=6.222 df=5 p=.013		
Yes	97	30	127
No	21	0	21
Persons Providing Financial Supports to Respondents	χ^2=5.888 df=5 p=.317		
Husband	56	12	68
Siblings	14	7	21
Mother	14	4	18
Friend	8	0	8
Church member	3	2	5
Others	23	5	28
Persons Providing Emotional Supports to Respondents	χ^2=9.262 df=5 p=.099		
Husband	60	9	69
Siblings	16	8	24
Mother	19	5	24
Friend	19	4	23
Church member	3	3	6
Others	1	1	2
First Place Visited	χ^2=6.340 df=4 p=.175		
Herbal clinic	67	13	80
Hospital/clinic	34	12	46
Pharmacy shop	14	3	17
Prayer camp	2	0	2
Others	1	2	3
Total	118	30	148

The results indicated that among those who screened for breast cancer with the last year, only 2 of them presented early to the breast clinic, while the remaining majority (18) delayed. None of those who screened about 1-2 or 3-4 years presented their conditions at the hospital early. Furthermore, the Chi-square test showed that the *p-value* was greater than 0.05, indicating that there was no significant relationship between late presentation and last time of screening for breast cancer. However, among the 112 respondents who had some point in time screened for breast cancer, only 2 of them presented the cases early at the hospital, while the greater number of them (34) delayed. The p-value from the Chi-square test revealed that there was a significant association between late presentation and having breast cancer screening *(p = .012).*

The *p-value* of 0.791 indicates that age at which respondents screened for breast cancer was statistically independent of the time of presenting the case at the hospital. Table 15 results showed that out of the 71 respondents who informed their husbands first of their conditions, 57 of them delayed, while the remaining 14 did not delay. Among the 15 respondents who informed their friends first, all of them were late in reporting at the hospital. Also, 11 respondents informed their church members first and only 1 was not late in presenting at the hospital. The Chi-square test showed that there was no significant association between the late presentation of breast cancer and the persons who were informed first (*p = .092*).

Also, the results revealed that out the 68 respondents who were advised by their husbands to seek medical treatment, 54 of them were late to present their cases at the hospital, while 14 of them were on time. Among 25

respondents who were advised by their siblings to seek treatment, only 5 had not delayed. Similarly, all those advised by their friends to seek doctor's advice were late in presenting their cases. The test produced a *p-value* of 0.184, indicating that there was no statistically significant association between time of presenting breast cancer cases and the one who recommended the seeking of medical treatment.

In addition, the results revealed that among the 127 respondents who needed financial assistance for treatment, 97 of them delayed in presenting the case at the clinic, while 30 had not delayed. On the other hand, none of those who said they needed no financial assistance was on time to see the doctor. The Chi-square test produced a *p-value* of .013, which is less than .05. This means that there was a significant association between time of presenting the breast cancer cases at the hospital and the financial capacity of the respondents.

The analysis indicated that only 12 out of the 68 respondents who had financial assistance from their husbands were not late in reporting their condition at the hospital. All 8 persons who had assistance from their friends were late in presenting their cases. Similarly, 14 out of 18 respondents whose mothers assisted them financially delayed. The p-value from the Chi-square test showed that there was no significant relationship between time of presentation of breast cancer cases and the persons who financially assisted the respondents to seek health care at the breast clinic since *p>0.05*.

Out of the 69 respondents who received emotional supports from their husbands, only 9 did not delay in presenting their condition at the hospital. Also, only 8 out of 24 respondents supported emotionally by their siblings

were found to have delayed in reporting at the hospital. Out of the 25 respondents who received emotional support from their mothers, only 5 did not delay in going for medical treatment. The trends remained similar among other emotional support providers. The *p-value* of 0.099, which is greater than 0.05 is an indication of no significant relationship between the variables.

Therefore, it can be concluded that the only health seeking behaviour that influenced the time of presenting breast cancer cases at the hospital was the financial ability of the respondents. This means that the easier it was for a respondent to bear the cost treatment, the earlier the presentation of the case at the hospital and vice versa.

The herbal clinics were the first treatment centres for majority of the respondents. This is because 54.1% of the respondents reported of visiting the herbal clinic first before coming to the breast clinic. Another common place of visit was the hospitals/clinics. Similarly, 17 (11.5%) of the respondents were found to have visited the pharmacy shops before going to the breast clinic. Only 2 of the respondents said they first went to the prayer camps. Furthermore, the Chi-square test results showed that there was no significant association between late presentation of cases and the first place the patient visits after noticing the change in breast.

Research Question 4: What are the barriers in seeking breast cancer services?

The researcher sought to identify the barriers preventing women from seeking treatments for breast cancer cases. These included the reasons for late

presentation of cases, request for tests by doctors, and reasons for delayed diagnosis.

Table 16

Respondents Reasons for Presenting Late at the Cape Coast Teaching Hospital

	Frequency	*Percent
Reasons	(N=148)	(%)
I thought symptom would resolve	94	63.5
I was afraid of the diagnosis I would get	77	52.0
I lack financial resources	35	23.6
I had a previous negative health care experience	10	6.8
I was embarrassed about someone seeing my breast	1	0.7
I could not miss work	1	0.7
Others	7	4.7

***Multiple responses permitted**

The results in Table 16 showed that the main reasons for the delayed presentation were respondents thought the symptoms would resolve (63.5%) and they feared the diagnosis (52%). Almost one-quarter (23.6%) lacked financial resources to present early. Ten (6.8%) out of the 148 respondents delayed before going to the hospital because of the fact that they had had a previous negative health care experience. This means that they were afraid of not having the best of care at the hospital. Only few (0.7) respondents attributed their delay to the embarrassment of exposing their breasts to someone and the tendency of absenting themselves from work. The study also examined the types of diagnostic tests they were requested to undergo before

doctor's advice. Figure 7 presents the results after the doctors requested for mammogram from the respondents.
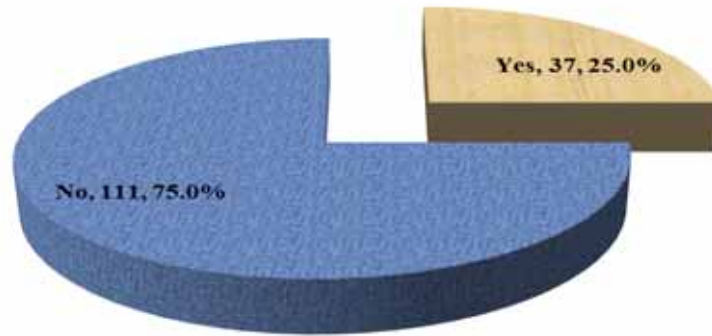
Figure 6: Request for mammogram by first doctor.

Among the respondents a large majority of them (75.0%) were not requested by doctors to undergo mammogram diagnosis. Figure *6* presents the responses of the respondents on whether the doctors requested them to do breast ultrasound.
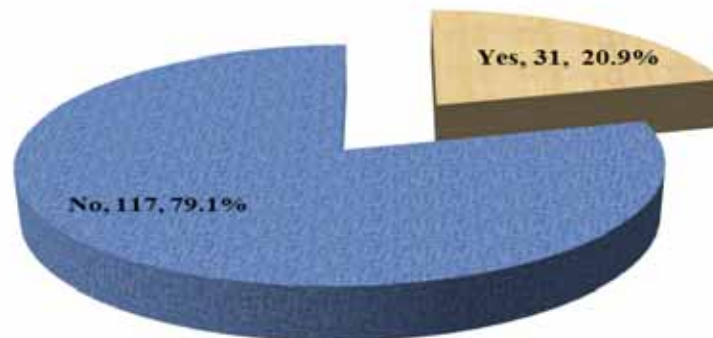
Figure 7: Request for breast ultrasound by first doctor.

The analysis showed only 31 (20.9%) of the respondents were requested by their doctors to undergo a breast ultrasound diagnosis.

The study further sought the views of the respondents on the possible causes of delay in diagnosis. Table 17 presents the findings.

Table 17

Factors Causing Delay in Diagnosis on First Visit from Respondents' Perspective

Reasons	Frequency	Percent
Don't know	86	58.1
Doctor felt nothing was wrong	35	23.6
Inadequate equipment to do needed test	26	17.6
Excess pressure on diagnostic equipment	4	2.7
Others	3	2.0
Total	148	100.0

The data gathered indicated that more than half (58.1%) of the 148 respondents did not know what accounted for the delay in diagnosis. Meanwhile, 35 representing 23.6 attributed the delay to the fact their doctors felt there was nothing wrong with them. A few of them also said the delay was as a result of the excess pressure on diagnostic equipment leading to prolong waiting time to get tests done.

Table 18

Last Time of Screening for Breast Cancer by Respondents

Response	Frequency	Percent
Within last year	20	13.5
1-2 years ago	9	6.1
3-4 years ago	5	3.4
5 or more years	11	7.4
Never	103	69.6
Total	148	100.0

It can be seen that 69.6% of the respondents never had breast screening, while 20 (13.5%) of them had screening within the last one year.

Nine representing 6.1% and 5 (3.4%) had breast screening for 1-2 and 3-4, respectively. Also, 11 (7.4%) had screened for breast cancer for at least 5 years ago. This means that only 45 (30.4%) of the respondents had had breast cancer screening.

The study also sought to find the knowledge of respondents on breast cancer and signs and symptoms.
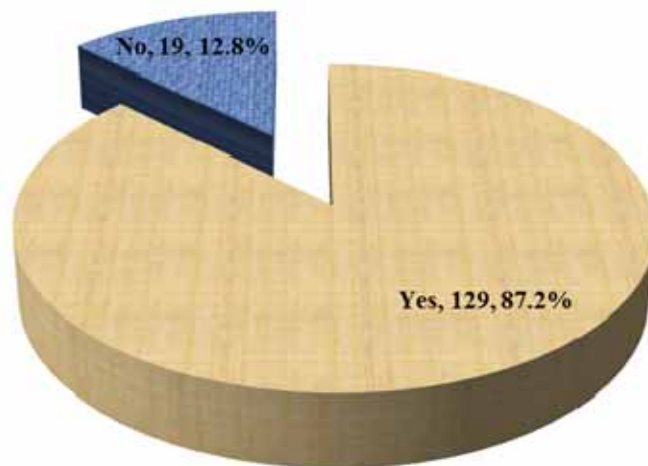
Figure 8: Respondents awareness of breast cancer.

Table 19

Knowledge of Signs and Symptoms of Breast Cancer by respondents

Signs	Frequency (N=148)	*Percent (%)
Lump in the breast	83	56.1
Change in size or shape of breast	24	16.2
Swelling/ darkening of the breast	9	6.1
Dimpling of the skin	3	2.0
Itchy/sore rash on nipple	3	2.0
Swelling in the armpit	3	2.0
Redness of the on the breast	2	1.4
Others	14	9.5

Multiple choice responses

According to Table 19, majority of the respondents (56.1%) knew only lumps in the breast as a symptom of breast cancer. Similarly, 24 (16.2%) indicated that they only knew changes in the size or shape of breast, while 9 (6.1%) reported of swelling/ darkening of the breast as the only possible sign and symptom of breast cancer. A few of them also indicated dimpling of the skin, itchy/sore rash on nipple, and swelling in the armpit as a possible sign and symptom of breast cancer. From the above one could infer that respondents had heard about and were aware of breast cancer. The level of awareness was more than average (56.1%) since this percentage knew lump in the breast as a sign of breast cancer while other respondents knew other symptoms of breast cancer. There were some level of awareness among respondents since they had some knowledge which enabled them to respond to the question.

Research Question 5: What demographic factors influence the late presentation of breast cancer cases to the breast clinic?

The study examined the influence of demographic factors on the late presentation of breast cancer cases at the breast clinic. As shown in figure *6*, majority of the respondents (118 representing 79.7%) delayed the presentation of their cases at the hospital, while the remaining 30 (20.3%) reported early. The Chi-square test was performed to determine if any relationships existed. The results are summarised in Table 20 on the next page.

Table 20

Socio-Demographic Characteristics of Respondents and its influence on Presentation of Breast Cancer Cases at the Breast Clinic

Variables	Late Presentation of Cases		Total
	Delayed (n=118)	**Not delayed (n=30)**	**Total**
Age (in years)	χ^2=11.411 df=5 p=.044		
24 – 29	3	1	4
30 – 35	16	11	27
36 – 41	12	5	17
42 – 47	31	4	35
48 – 53	27	5	32
54 and above	29	4	33
Ethnicity	χ^2=9.605 df=5 p=.087		
Akan	68	13	81
Ewe	18	5	23
Ga Adangbe	18	7	25
Mole-Dagbani	5	5	10
Guan	2	0	2
Others	7	0	7
Religious affiliation	χ^2=3.532 df=1 p=.060		
Christianity	94	19	113
Islam	24	11	35
Marital Status	χ^2=8.345 df=5 p=.138		
Married	76	13	89
Divorced	6	4	10
Single	8	5	13
Widowed	13	4	17
Separated	11	4	15
Cohabiting	4	0	4
Educational Level	χ^2=8.954 df=4 p=.062		
No formal education	32	11	43
Basic/ primary	42	12	54
Secondary	13	0	13
Vocational	1	2	3
Tertiary	30	5	35
Employment type	χ^2=2.267 df=5 p=.811		
Government employee	25	5	30
Non-government employee	1	1	2
Self-employed	69	19	88
Student	3	0	3
Unemployed	17	4	21
Others	3	1	4
Income per Month (GH¢)	χ^2=4.918 df=5 p=.426		
Less than GH¢ 200	49	18	67
GH¢ 201-500	30	4	34
GH¢ 501-800	21	3	24
GH¢ 801-1100	9	3	12
GH¢ 1101-1400	7	2	9
GH¢1401 and above	2	0	2
Subscription to NHIS	χ^2=4.918 df=5 p=.426		
Yes	113	28	141
No	5	2	7
Total	118	30	148

According to the table, the results indicated that out of the 4 respondents aged 24-29 years, only one did report early enough at the hospital for treatment. However, among those aged 30-35 years, as much as 11 of the respondents presented their cases early. Twenty-seven out of the 32 respondents aged 48-53 years delayed in presenting their cases. Among those aged at least 54 years, 29 of them delayed, while only 4 of them reported early. The Chi-square test showed a p-value of 0.044, which is less than 0.05. This is an indication of a significant relationship between time of presentation and age of respondents.

The analysis revealed that out of the 81 Akans, only 13 presented the cases at the hospital early. Among the Ewes, five respondents presented their cases early, while the remaining 18 delayed. Meanwhile, none of the Guans and the other tribes delayed. The test results showed no significant associations between late presentation and ethnicity.

In addition, it appears that majority of the respondents of both Christianity and Islam delayed their presentation. Therefore, the p-value of 0.060 showed a statistically insignificant relationship between late presentation and religion of the respondents.

With regard to the marital status of the respondents, only 13 out of the 89 married persons presented their cases early. Also, among the divorcees, 6 out of the 10 delayed in presenting their cases. Meanwhile, none of those cohabiting presented their cases early at the hospital. The Chi-square test produced a p-value of 0.138 showing that there was no significant relationship between marital status and late presentation of breast cancer cases at 0.05.

In assessing the association between late presentation and educational level, none of the 13 secondary school levers presented their cases at the hospital early. Also, only 5 of the 35 respondents with tertiary education qualification had presented their cases early at the hospital. However, 2 out of the 3 respondents with vocational education qualification did present their conditions at the hospital enough for treatment. The p-value of .062 was greater than .05, therefore it can be concluded that there was no significant association between late presentation and educational level. Similarly, the Chi-square test results revealed that there was no statistically significant relationships between late presentation of breast cancer cases and employment type, monthly income and subscription to NHIS of the respondents, since their respective p-values were greater than 0.05.

Discussion

This study examined the health seeking behaviour and late presentation of breast cancer among women visiting the Cape Coast Teaching Hospital. The study involved 148 respondents who aged within the age range of 20 to 70 years and also received medical treatment at the facility.

Health-seeking behaviours of women visiting the Cape Coast Teaching Hospital

With regard to the health-seeking behaviour of the respondents the study found that the patronage of screening for breast cancer was low among the respondents. However, a majority of them (76.3%) personally identified the changes in their breast despite their low knowledge on breast self-examination procedures/ breast cancer signs and symptoms. The study

revealed that the main symptom found by the respondents were lumps in the breast (54.0%). The finding of this study is consistent with that of Khakbazan et al. (2014) who found that women detected different symptoms including lumps, which were the most frequently detected symptom, pain, inverted nipple, axillary mass, arm pain and weakness and dizziness.

The respondents had varied initial thoughts of the symptoms that they detected. It was obvious that they could not properly interpret breast cancer signs and symptoms to acknowledge the seriousness of their symptoms. Clearly, they initially regarded these symptoms as temporary and therefore were not worried about them. This supports the findings of earlier researchers like Unger-Saldana, Infante-Castaneda (2011) and Lam et al. (2009). They revealed that women initially tended to interpret the breast symptom as a normal or non-life-threatening condition such as hormonal changes, trauma or breastfeeding. According to them, symptom interpretation was identified as the first, and the most important step of the help seeking process after symptom detection.

Of the 45 respondents who accessed breast screening exercise, only 11 (23.5%) were screened when they were less than 30 years. It was also seen that the main reasons for seeking treatment was because the breast symptoms were getting out of hands and becoming worrying rather than seeking early treatment. As was found by Unger-Saldana and Infante-Castaneda (2011), Lam et al., (2009). They found that worsening of signs and symptoms influenced women to seek help. In addition, as much as 79.9% presented their cases late at the hospital. The health-seeking behaviour of the respondents could be described as generally poor as about 70% of them had never had

breast cancer screening until its detection. Again, the patronage of herbal clinic (54.1%) and pharmacy shops (11.5%) by respondents largely resulted in the delay presentation of cases at the hospital this could be due to respondents' uncertainty about the ability of conventional medicines to combat the fatal outcomes of cancer as was found by Unger- Saldana & Infante- Castaneda (2011).

Factors influencing women to seek breast cancer support and treatment services

This study found that husbands played the most important roles in encouraging patients to seek medical treatments, and also providing financial and emotional supports upon discussion the conditions with them. This therefore requires that these categories of people are also well equipped with the necessary information on the risk factors, symptoms, effects and treatment options. Similar to these findings, Talpur et al. (2011) in their study to assess factors responsible for late presentation of breast cancer in Nawabshah mentioned negligence by patients or their family members and general practitioners as being responsibly for delayed presentation of breast cancer cases. Family members and other relatives in this study mostly provided breast cancer patients with emotional and financial supports as well as advised them to seek treatment.

Relationship between health-seeking behaviour and late presentation of breast cancer

Screening periodically for breast cancer was a health-seeking behaviour of respondents, which was significantly associated with the time of presentation of breast cancer at the hospital/clinic. Respondents who took

initiative to screen periodically presented early at the hospital with their signs and symptoms. This finding agrees with that of Lockwood-Rayermann et al. (2009) and Robb et al. (2009). They agree that factor which significantly influenced the length of patient delay was the lack of prior cancer screening. The result from this study was that the financial ability of respondents was also associated with delayed presentation of breast cancer cases at the hospital. Khakbazan et al. (2014) also mentioned that financial constraints were identified as factors that impeded timely medical help. To corroborate the findings of this study, Talpur et al. (2011) said that patients with poor economic status were 49(81.6%) and remaining 11 (18.3%) presented their cases in advanced stage probably due to poor socio economic status, illiteracy and negligence by patients or their family members and general practitioners.

According to Opoku et al. (2012), late presentations have been observed as the hallmark of breast cancer in Ghanaian women where over 60% of patients report with either stage III or IV of the disease. This makes the 5-year survival rate of breast cancer in Ghana less than 25% compared with 70% in Western Europe and North America. Studies have shown that one–third of breast cancers is curable when diagnosed early (Unger-Saldaña, 2014). However, most women in Ghana present late resulting in poorer long term survival (Clegg-Lamptey & Hodasi, 2007; Opoku, et al., 2012). In addition, Mohaghegh et al. (2014) also found a significant relationship between stage at diagnosis of breast cancer and family levels of socioeconomic status at the time of diagnosis.

Barriers in seeking breast cancer services

Lack of proper knowledge on the symptoms of the breast cancer although there was an average level of awareness among respondents was identified by this study to be a barrier to early presentation of breast cancer symptoms. Knowledge of breast cancer signs and symptoms have been identified by several studies as the barrier to obtaining medical help (Jones et al., 2014; Taib et al., 2011). According to Jones et al. (2014), the causes of delay presentation were multifactorial, individual and complex.

The myth that symptoms identified would resolve/disappear with time was found to be main barrier to seeking breast cancer treatment early in this study. Also, the fear of obtaining disappointing results after diagnostic test. These support the findings of Khakbazan et al. (2014) that denial of having breast cancer and fear of confronting a cancer diagnosis, fear of cancer as an incurable disease, and fear of the consequences of treatment caused delayed help seeking and therefore become barriers to accessing health services. They also identified the fear of loss of femininity after diagnosis of breast cancer as another barrier.

Demographic factors influencing the late presentation of breast cancer cases

Older age was found as the only demographic factor that was significantly associated with delayed presentation of breast cancer cases at the hospital. This could be due to older women attributing breast cancer symptoms to normal ageing process as confirmed by Forbes et al. (2011). This confirms the findings of other researchers. Innos et al. (2013) revealed that the risk of prolonged delay was significantly associated with age (65 years and over).

Similarly, Harirchi et al. (2005) reported that delay presentation was significantly associated with older age. Bish and colleagues realised older age was a risk factor for delayed presentation of breast cancer symptoms and therefore placing the empirical risk factors for delayed presentation in a theoretically derived model should be done to enable the development of an effective intervention to reduce delay and thereby save lives.

The study disagreed with Montazeri et al. (2003) when they found that there was a risk for longer delay in less educated patients and marital status (Ali et al., 2008). This study did not find marital status, educational level, ethnicity, religious affiliation, income and other demographic variable significantly associated with delay presentation of breast cancer cases.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of the study and the most important findings highlighted from the data analysis. It also includes the conclusions drawn based on the findings as well as recommendations offered to draw attention to the health seeking behaviour and late presentation of breast cancer among women visiting the Cape Coast Teaching Hospital.

Summary

This study examined the health seeking behaviour and late presentation of breast cancer among women visiting the Cape Coast Teaching Hospital. It also sought to determine the influence of demographic factors on the late presentation of breast cancer cases as well as the barriers to seeking early health care for breast cancer.

The study employed a descriptive quantitative design where a questionnaire was administered to the selected samples. Ethical clearance was obtained from the University of Cape Coast Institutional Review Board. The study used convenient sampling method and recorded a 95% response rate. The study involved 148 respondents who were aged between 20 to 70 years and also received medical care from Breast Cancer Clinic at the Cape Coast Teaching Hospital.

In analysing the data, the SPSS version 21.0 was used and both descriptive and inferential statistical tools were employed. Specifically, frequencies, percentages, graphs, and the Chi-square test were used. All variables were tested at a 0.05 significance level. The profile of the

respondents showed that only 4 (2.7%) were aged below 30 years. the remaining majority of the respondents were at least 30 years. The respondents were mainly from outside of the Cape Coast Metropolis who referred to the Cape Coast Teaching Hospital for treatment.

The Akans constituted more than half of the respondents. Also, the respondents were dominated by Christians. There were also a majority of the respondents who were married. Also, a substantial proportion of the respondents were not educated, a large majority were educated at different levels.

Again, 88 (59.5%) of the respondents were self-employed, while the others were in other employment types expect 21 (14.1%) of them who were unemployed. The results showed that a substantial proportion of respondents (45.2%) earned less than GH¢200 for a month. As much as 95.3% of the respondents were subscribers of the National Health Insurance Scheme.

Key Findings

The following were the major findings that emerged from the study:

1. The health-seeking behaviour of the respondents could be described as generally poor as about 70% of them had never had breast cancer screening, although there was an average level of awareness among respondents, until its detection, only 23.5% had been screened when they were less than 30 years.

2. The main reasons for seeking treatment was because the breast symptoms were getting out of hands and becoming worrying rather than

seeking early treatment. In addition, as much as 79.9% presented their cases late at the hospital.

3. The factors that influenced health seeking behaviour of the respondents were family relations, financial supports and emotional support. It was found that husbands were very instrumental and supportive in helping their wives to seek health care.

4. Screening for breast cancer and financial ability to pay for treatment were the only health seeking behaviour of respondents, which significantly associated with the time of presentation of breast cancer at the hospital/clinic since their respective p-values were less than 0.05. Again, the patronage of herbal clinic (54.1%) and pharmacy shops (11.5%) by respondents largely resulted in the delay presentation of cases at the hospital.

5. The myth that symptoms identified would resolve/disappear with time was found to be the main barrier to seeking breast cancer treatment earlier. Also, the fear of getting obtaining disappointing results after diagnostic test.

6. The only demographic factor that significantly influenced late presentation of breast cancer cases at the hospital was age of the respondents (p<.05).

Conclusions

The poor nature of health seeking behaviour among breast cancer patients is detrimental to effective and cost effective treatment of their

conditions. The development of breast cancer usually begins with some notable signs and symptoms, which detected on time could help treatment.

As established by the findings, the willingness of a woman to screen for breast cancer influences the time of presenting the case at the hospital. Hence, an early detection could lead to early presentation and vice versa. A delayed presentation is fatal to the condition of patients. With younger patients responding to early presentation of cases, attentions and education are required for the relatively older women in order to avoid pre-mature deaths among breast cancer patients in the country.

Recommendations

The following recommendations were made for practice, policy and further research:

Practice

1. Health authorities should engage in rigorous education and sensitisation of women about the signs and symptoms of breast cancer in and outside the metropolis. This will empower them to act correctly upon seeing any signs and symptoms of breast cancer and the treatment options available.

2. Females must be taught breast self-examination (BSE) procedures and be encouraged to practice this regularly for prevention or early detection of breast cancer.

3. Females(>40 years), should screen for breast cancer with mammogram every 1-2years so that such condition could be determined early enough for effective treatment.

4. In efforts to instil positive health seeking behaviour among the women, husbands, siblings, mothers and friends should not be left out. They are important persons who encourage them to seek treatment and also offer financial and emotional supports to patients.

5. The financial abilities of the respondents should be considered when encouraging early presentation of breast cancer cases at the hospital.

6. After the detection of signs and symptoms of breast cancer, patients should be offered pre-treatment counselling and education that early treatment is needed and important for their own health rather than to believe that those symptoms will vanish with time.

7. Herbalists and pharmacy shop owners should be educated on signs and symptoms of breast cancer so that they refer such persons to the hospital rather than keeping them for treatment.

8. In strategies to encourage early presentation of cases, age should be considered because the younger ones (those aged 35 years and below) are likely to present their cases early compared to the older ones.

Policy

1. The Ministry of Health, Ghana Health Service and other relevant stakeholders in the fight against breast cancer should come up with an elaborate public health education plan for all categories of females in the country. There should continuous advertisements in both electronic and print media and internets.

2. The National Health Insurance Authority should consider bearing the cost of treatment for breast cancer. This will encourage early

presentation of cases as patients usually seek financial assistance for treatment.

3. The Ministry of Health and Ghana Health Service should bar and prosecute any persons and or entities that cause delay presentation of breast cancer. These include herbalists, pharmacy shop owners/attendants, and pastors/prayer camps among others.

Suggestions for Future Research

1. The scope of this study could be expanded to include more breast cancer patients in the country for more generalised conclusions about their heath seeking behaviour.

2. The knowledge level of breast cancer patients should be examined in order to devise more effective education and sensitisation strategies.

3. A study on the knowledge, procedures and practices of breast self-examination among young women can be undertaken.

4. The cost of breast cancer treatment can also be explored.

5. The incidence and prevalence rates of death among breast cancer patients can be studied.

REFERENCES

Abdulrahman, G. O., & Rahman, G. A. (2012). Epidemiology of breast cancer in Europe and Africa. *Journal of Cancer Epidemiology, 5,* 10-11

Ahuja, S., & Chakrabarti, N. (2009). To determine the level of knowledge regarding breast cancer and to increase awareness about breast cancer screening practices among a group of women in a tertiary care hospital In Mumbai, India. *The Internet Journal of Public Health*, *1*(1), 175-179.

Ali, R., Mathew A., & Rajan, B. (2008). Effects of socio-economic and demographic factors in delayed reporting and late-stage among patients with breast cancer in a major cancer hospital in South India. *Journal of Cancer Prevention, 9*, 703-707.

Al-Naggar, R. A., Al-Naggar, D. H., Bobryshev, Y. V., Chen, R., & Assabri, A. (2011). Practice and barriers toward breast self-examination among young Malaysian women. *Asian Pacific Journal of Cancer Prevention, 12*(5), 1173-1178.

American Cancer Society. (2011). *Cancer facts & figures*. Atlanta: American Cancer Society.

Andersen, B. L., Cacioppo J. T., & Roberts, D., C., (1995). Delay in seeking a cancer diagnosis: Delay stages and psychophysiological comparison processes. *British Journal of Social Psychology, 34*, 33-52.

Anderson B. O., Yip, C. H., Smith, R. A., Shyyan, R., Senor, S. F., & Eniv, A. (2008). Guideline implementation for breast healthcare in low income and middle-income countries. *Cancer, 113*, 2221-2243.

Anderson, C. (2010). Presenting and evaluating qualitative research. *American Journal of Pharmaceutical Education, 74*(8), 141-148.

Ayers, S., Baum, A., McManus, C., Newman, S., Wallston, K., Weinman, J., & West, R. (2007). *Cambridge handbook of psychology, health and medicine* (2nd ed.). Cambridge: University Press.

Azaiza, F., & Cohen, M. (2006). Health beliefs and rates of breast cancer screening among Arab women. *Journal of Womens Health, 15*(5), 520-530.

Aziz, Z., Sana, S., Akram, M., & Saeed, A. (2004). Socio-economic status and breast cancer survival in Pakistani women. *Journal of Pakistani Medical Association, 54*(9), 448-53.

Baildam, A. D. (2008). Oncoplastic surgery for breast cancer. *British Journal of Surgery*, *95*(1), 4–5.

Barber, M. D., Jack, W., & Dixon, J. M. (2004). Diagnostic delay in breast cancer. *British Journal of Surgery, 91*(1), 49-53.

Bish, A., Ramirez, A., Burgess, C., & Hunter, M. (2005). Understanding why women delay in seeking help for breast cancer symptoms. *Journal of Psychosom Research, 58*, 321–326.

Brophy, J. T., Keith, M. M., Watterson, A., Park, R., Gilbertson, M., Maticka-Tyndale, E., & Beck, M. (2012). Breast cancer risk in relation to occupations with exposure to carcinogens and endocrine disruptors: A Canadian case–control study. *Environmental Health*, *11*(87), 11-87

Brzozowska, A., Duma, D., Mazurkiewicz, T., Brzozowski, W., & Mazurkiewicz, M. (2014). Reasons for delay in treatment of breast cancer detected due to breast self-examination in women from the Lubelskie region. *Ginekol Pol., 85*(1), 14-17.

Cancer Research Institute (2014). *Cancer research.* Retrieved on May 11, 2014) from www.cancerresearchuk.org/cancerinfo/cancerstats

Caplan, L. (2014). Delay in breast cancer: Implications for stage at diagnosis and survival. *Frontiers in Public Health, 2,* 87-91

Carey, L. A, Perou, C. M., Livasy, C. A., Dressier, L. G, Cowan, D., Conway K. (2006). Race, breast cancer subtypes, and survival in the Carolina breast cancer study. *JAMA, 295,* 2492–2502.

Carlson, R. W., Allred, D. C., Anderson, B. O., Burstein, H. J., Carter, W. B., Edge, S. B., Erban, J. K. (2011). Invasive breast cancer: Clinical practice guidelines in oncology. *Journal of the National Comprehensive Cancer Network, 9*(2), 136–222.

Clegg-Lamptey, J. N. A., & Hodasi, W. M. (2007). A study of breast cancer in Korle-Bu Teaching Hospital: Assessing the impact of health education. *Ghana Medical Journal, 41*(2), 25-31.

Coleman, M. P., Quaresma, M., Berrino, F., Lutz, J. M., De Angelis, R., Capocaccia, R., Baili, P., Rachet, B. & CONCORD Working Group (2008). Cancer survival in five continents: A worldwide population-based study (CONCORD). *Lancet Oncology, 9,* 730–756.

Committee on Cancer Control in Low and Middle Income Countries Board on
Global Health. (2007). *The cancer burden in low and middle income
countries and how it is measured*. Washington, D.C.: The National
Academies Press.

Croswell, J. M., Ransohoff, D. F., & Kramer, B. S. (2010). Principles of
cancer screening: Lessons from history and study design issues.
Seminars in Oncology, 37(3), 202–215.

Cuzick, J., Sestak, I., Bonanni, B., Costantino, J. P., Cummings, S., DeCensi,
A., Dowsett, M., Forbes, J. F., Ford, L., LaCroix, A. Z., Mershon, J.,
Mitlak, B. H., Powles, T., Veronesi, U., Vogel, V., & Wickerham, L.,
(2011). Preventive therapy for breast cancer: a consensus statement.
Lancet Oncology, 12(5), 496-503.

Cybulski, C., Wokołorczyk, D., & Jakubowska, A. (2011). Risk of breast
cancer in women with a CHEK2 mutation with and without a family
history of breast cancer. *Journal of Clinical Oncology, 29*(28), 3747-
3752.

Daly, B., & Olopade, O. I. (2015). Race, ethnicity, and the diagnosis of breast
cancer. *JAMA*, *313*(2)*,* 141–142.

Dye, T., D., Bogale, S., Hobden, C., Tilahun, Y., Deressa, T., & Reeler, A.,
(2012). Experience of initial symptoms of breast cancer and triggers
for action in Ethiopia. *International Journal of Breast Cancer*, 547-
552.

Easton, D. F. (2005). *Screening with magnetic resonance imaging and mammography of a UK population at high familial risk of breast cancer: A prospective multicentre cohort study (MARIBS)*. London: Sage

Esfahlan, R. J., Zarghami, N., Esfahlan, A. J., Mollazadeh, M., Nejati, K., & Nasiri, M. (2011). The possible impact of obesity on androgen, Progesterone and Estrogen receptors (ERα and ERβ) gene expression in breast cancer patients. *Basic and Clinical Research, 5*, 227–237.

Fabian, C. J. (2007). The what, why and how of aromatase inhibitors: Hormonal agents for treatment and prevention of breast cancer. *International Journal of Clinical Practice, 61*(12), 2051–2063.

Ferlay, J., Shin, H. R., Bray, F., Forman, D., Mathers, C., & Parkin, D. M., (2010). Estimates of worldwide burden of cancer in 2008: GLOBOCAN 2008. *International Journal of Cancer*, *16*, 254-261.

Forbes, L. J. L., Atkins, L., Thurnham, A., Layburn, J., Haste, F., & Ramirez, A. J. (2011). Breast cancer awareness and barriers to symptomatic presentation among women from different ethnic groups in East London. *British Journal of Cancer, 105*(10), 1474–1479.

Fregene, A., & Newman, L. A. (2005). Breast cancer in Sub-Saharan Africa: How does it relate to breast cancer in African-American women? *JAMA, 103*(8), 1540-50.

Gilani, S. I., Khurram, M., Mazhar, T., Mir, S. T., Ali, S., Tariq, S., & Malik, A. Z. (2010). Knowledge, attitude and practice of a Pakistani female cohort towards breast cancer. *The Journal of the Pakistan Medical Association, 60*(3), 205-210.

Global Health Estimates, WHO (2013). *Global health estimates*. Retrieved from http://www.who.int/healthinfo/global_ burden_disease/en/

Grimmett, C., Macherianakis, A., Rendell, H., George, H., Kaplan, G., Kilgour, G., & Power, E. (2014). Talking about cancer with confidence: evaluation of cancer awareness training for community-based health workers*. Perspectives in Public Health*, *134*(5), *268–275*.

Gullatte, M. M., Brawley, O., Kinney, A., Powe, B., Mooney, K. (2009). Religiosity, spirituality, and cancer fatalism beliefs on delay in breast cancer diagnosis in African American women. *Journal of Religion and Health, 37*, 232-238

Harirchi, I., Ghaemmaghami, F., Karbakhsh, M., Moghimi, R., & Mazaherie, H. (2005). Patient delay in women presenting with advanced breast cancer: an Iranian study. *Public Health, 119*, 885–891.

Heisey, R., Clemons, M., Granek, L., Fergus, K., Hum, S., Lord, B., McCready, D. R., & Fitzgerald, B. (2011). Health care strategies to promote earlier presentation of symptomatic breast cancer: Perspectives of women and family physicians. *Current Oncology, 18*(5), 227-37.

International Association for Research on Cancer, [IARC] (2008). *Handbook of cancer* (7th ed.). Lyon: Lyon Press.

Innos, K., Padrik, P., Valvere, V., Eelma, E., Kütner, R., Jaak Lehtsaar, J., & Tekkel, M., (2013). Identifying women at risk for delayed presentation of breast cancer: A cross-sectional study in Estonia. *BMC Public Health, 13*, 947-953.

Jeffels, S. (2004). *What is the meaning of conceptual framework in research.* Retrieved from: http://www.ehow.com/about_6664512_meaning-conceptual-framework research_.html#ixzz1JCpO2GEG

Jones, C. E. L., Maben, J., Jack, R. H., Davies, E. A., Forbes, L. J. L., Lucas, G., & Ream, E. (2014). A systematic review of barriers to early presentation and diagnosis with breast cancer among black women. *British Medical Journal, 4*, 4076-4082

Kallet, R., H. (2004). How to write the methods section of a research paper. *Respiratory Care, 49*, 1229-1232.

Kanavos, P. (2006). The rising burden of cancer in the developing world. *Annals of Oncology, 17*(8), 15–23.

Kent, A. (2012). Alcohol and breast cancer. *Rev Obstetrics Gynaecology, 5*(1), 57-62.

Khakbazan, Z., Taghipour, A., Latifnejad Roudsari, R., & Mohammadi, E., (2014). Help seeking behavior of women with self-discovered breast cancer symptoms: A meta-ethnographic synthesis of patient delay. *PLoS ONE, 9*(12), 110-116.

Khan, M. A., Hanif, S., Iqbal, S., Shahzad, M. F., Shafique, S., & Khan, M. T. (2015). Presentation delay in breast cancer patients and its association with socio-demographic factors in North Pakistan. *Chinese Journal of Cancer Research, 27*(3), 288–293.

Kim, Y., Choi, J. Y., Lee, K. M., Park, S. K., Ahn, S. H., Noh, D. Y., Hong, Y. C., Kang, D., & Yoo, K. Y. (2007). Dose-dependent protective effect of breast-feeding against breast cancer among ever-lactated women in Korea. *European Journal of Cancer Prevention, 16*(2), 124-

129.

Lacey J. V., Kreimer, A. R., Buys, S. S., Marcus, P. M., Chang, S. C., Leitzmann, M. F., Hoover, R. N., Prorok, P. C. (2009). Breast cancer epidemiology according to recognized breast cancer risk factors in the Prostate, Lung, Colorectal and Ovarian (PLCO) cancer screening trial cohort. *BioMed Central Cancer, 9*, 84-94.

Lantz, P. M., Mujahid, M., Schwartz, K., Janz, N. K., Fagerlin, A., Salem, B., Katz, S. J. (2006). The influence of race, ethnicity, and individual socioeconomic factors on breast cancer stage at diagnosis. *American Journal of Public Health, 96*(12), 2173–2178.

Lam, W. W., Tsuchiya, M., Chan, M., Chan, S. W., & Or, A. (2009). Help-seeking patterns in Chinese women with symptoms of breast disease: a qualitative study. *Journal of Public Health, 31*, 59–68.

Lu, M., H., Lin, H., R., & Lee, M. D. (2010). The experiences among older Taiwanese women facing a new diagnosis of breast Cancer. *Cancer Nursing, 33*, 398–405.

MacDonald, S., Macleod, U., Campbell, N. C., Weller, D., & Mitchell, E., (2006). Systematic review of factors influencing patient and practitioner delay in diagnosis of upper gastrointestinal cancer. *British Journal of Cancer*, *94*, 1272–1280.

Mbuka-Ongona, D., & Tumbo, J. M. (2013). Knowledge about breast cancer and reasons for late presentation by cancer patients seen at Princess Marina Hospital, Gaborone, Botswana. *African Journal Primary Health Care Fam Med.*, *5*(1), 465-467.

McCready, T., Littlewood, D., & Jenkinson, J., (2005). Breast self-

examination and breast awareness: A literature review. *Journal of Clinical Nursing, 14*(5), 570-578.

McDonald, J. A., Goyal, A., & Terry, M. B. (2013). Alcohol intake and breast cancer risk: Weighing the overall evidence. *Current Breast Cancer Reports, 5*(3), 113-124.

Mitchell, E., Macdonald, S., Campbell, N. C., Weller, D., & Macleod, U. (2008). Influences on pre-hospital delay in the diagnosis of colorectal cancer: a systematic review. *British Journal of Cancer, 98*, 60–70.

Mohaghegh, P., Yavari, P., Akbari, M. E., Abadi, A., & Ahmadi, F. (2014). The correlation between the family levels of socioeconomic status and stage at diagnosis of breast cancer. *Iranian Journal of Cancer Prevention, 7*(4), 232–238.

Montazeri, A., Ebrahimi, M., Mehrdad, N., Ansari, M., & Sajadian, A. (2003). Delayed presentation in breast cancer: A study in Iranian women. *BMC Women's Health, 3*(4), 157-165.

Norsa'adah, B., Rahmah, M., A., Rampal, K., G., Knight, A. (2012). Understanding barriers to Malaysian women with breast cancer seeking help. *Asian Pacific Journal of Cancer Prevention*, *13*(8), 3723-3730.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Okobia, M. N., Bunker, C. H., Okonofua, F. E., & Osime, U. (2006). Knowledge, attitude and practice of Nigerian women towards breast cancer: A cross-sectional study. *World Journal of Surgical, 43,* 365-371.

O'Mahony, M., & Hegarty, J. (2009). Help seeking for cancer symptoms: A review of the literature. *Oncology Nursing Forum, 36*, 178–184.

Opoku, S., Benwell, M., & Yarney, J. (2012). Knowledge, attitudes, beliefs, behaviour, screening in Ghana, West AfricaPan. *Public Health Nursing, 18,* 357-363.

Otieno, E. S., Micheni, J. N., Kimende, S. K., & Muta, I. K. K. (2010). Delayed presentation of breast cancer patients. *East African Medical Journal, 87*(4), 147-150

Parkin, D. M., Bray, F., Ferlay, J., & Pisani, P. (2005). Global cancer statistics, 2002. *Cancer Journal of Clinicians*, *55*, 74-108.

Piñeros, M., Sánchez, R., Cendales, R., Perry, F., & Ocampo, R. (2009). Patient delay among Colombian women with breast cancer. *Salud Publica de Mexico*, *51*(5), 372–380.

Polit, D. F., & Beck, C. T. (2008). *Nursing research: Principles and methods* (8th ed.). Philadelphia: Lippincott.

Postlethwaite, T. N. (2005). *Quantitative research methods in educational planning*. Hamburg: University Press.

Purdy, E. (2008). *National breast cancer coalition.* Thousand Oaks: Sage Publications, Inc.

Rastad, H., Khanjani, N., & Khandani, B. K. (2012). Causes of delay in seeking treatment in patients with breast cancer in Iran: A qualitative content analysis study. *Asian Pacific Journal of Cancer Prevention, 13*, 4511-5.

Rauscher, G. H., Ferrans, C. E., Kaiser, K., Campbell, R., Calhoun, E., & Warnecke, R. B. (2010). Misconceptions about breast lumps and

delayed medical presentation in urban breast cancer patients. *American Society of Preventive Oncology, 19*(3), 640–647.

Rostas, J. W., & Dyess, D. L. (2011). Current operative management of breast cancer: An age of smaller resections and bigger cures. *International Journal of Breast Cancer, 7*, 417-422.

Safer, M. A., Tharps, Q. J., Jackson, T. C., & Leventhal, H. (1979). Determinants of three stages of delay in seeking care at a medical clinic. *Medical Care, 17*, 11–29.

Sankaranarayanan, R., Ramadas, K., Thara, S., Muwonge, R., Prabhakar, J., Augustine, P., Venugopal, M., Anju, G., & Mathew, B. S. (2011). Clinical breast examination: Preliminary results from a cluster randomized controlled trial in India. *Journal of National Cancer Institute, 103*(19), 1476-1480.

Schetter, S. E. (2014). Breast density as an independent risk factor for cancer. *Journal of American College of Radiologists, 3*(1), 143-152.

Schonfeld, S. J., Pfeiffer, R. M., Lacey, J. V., Berrington de González, A., Doody, M. M., Greenlee, R. T., Park, Y., Schairer, C., Schatzkin, A., Sigurdson, A. J., Hartge, P., & Visvanathan, K. (2011). Hormone-related risk factors and postmenopausal breast cancer among nulliparous versus parous women: An aggregated study. *American Journal of Epidemiology, 173*(5), 509–517.

Sharma, K., Costas, A., Shulman, L. N., & Meara. J., G., (2012). A systematic review of barriers to breast cancer care in developing countries resulting in delayed patient presentation. *Journal of Oncology*, *78*, 112-119.

Stubbings, S., Robb, K., Waller, J., Ramirez, A., Austoker. J., Macleod, U., Hiom, S., Wardle, J., (2009). Development of a measurement tool to assess public awareness of cancer. *British Journal of Cancer, 101*(2), 13–17.

Taib, N. A., Yip, C. H., & Low, W. Y. (2011). Recognising symptoms of breast cancer as a reason for delayed presentation in Asian women--the psycho-socio-cultural model for breast symptom appraisal: Opportunities for intervention. *Asian Pacific Journal of Cancer Prevention*, *12*(6), 1601-1618

Talpur, A. A., Surahio, A. R., Ansari, A., & Ghumro A. A. (2011). Late presentation of breast cancer: A Dilemma. *Journal of the Pakistan Medical Association*, *61*(7), 662-666.

Trochim, W. M. K. (2006). *Research methods knowledge base*. Retrieved on December 6, 2014, from www.socialresearchmethods.net/kb/design. php.

Tsu, D. V., Jeronimo, J., & Anderson, B. O. (2012). Why the time is right to tackle breast and cervical cancer in low-resource settings. *Bulletin of the World Health Organization, 91,* 683-690

U.S. Department of Health and Human Services Healthy People (2010). *With understanding and improving health and objectives for improving health*. Washington, D.C.: U.S. Department of Health and Human Services

Unger-Saldana, K., & Infante-Castañeda, C. (2009). Delay of medical care for symptomatic breast cancer: A literature review. *World Journal of Clinical Oncology, 5*(3), 475- 487.

Unger-Saldana, K. (2014). Challenges to early diagnosis and treatment of breast cancer in developing countries. *World Journal of Clinical Oncology, 5*(3), 465- 447.

Wadler, B. M., Judge, C. M., Prout, M., Allen, J. D., & Geller, A. C. (2011). Improving breast cancer control via the use of community health workers in South Africa: A critical review. *Journal of Oncology*, *56*, 150-159.

Walter, F., Webster, A., Scott, S., & Emery, J. (2012). The Andersen model of total patient delay: A systematic review of its application in cancer diagnosis. *Journal of Health Services Research & Policy, 17*(2), 110–118.

Yavas, G., Yavas, C., Akyurek, S. (2013). Postmastectomy radiation therapy in locally advanced breast cancer. *Experimental Oncology, 35*, 258–266.

Yip, C. H., Smith, R. A., Anderson, B. A., Miller, A. B., Thomas, D. B., & Ang, E. S. (2008). Guideline implementation for breast healthcare in low- and middle income countries. *Cancer, 113*, 2244-2256

APPENDIX A

QUESTIONNAIRE

UNIVERSITY OF CAPE COAST

COLLEGE OF HEALTH AND ALLIED SCIENCES

SCHOOL OF NURSING AND MIDWIFERY

This study is to elicit the views of participants on reasons why some women delay in seeking care for breast cancer symptoms. I request you to give your response by placing a tick mark (√) in the box provided and then write any comment when appropriate. No answer is wrong. Your response would be held in confidence and would be used only for the purpose of this study.

PART 1 Demographic Characteristics

1. Age

a) 18 -23years   [   ]   d) 36- 41 years   [   ]

b) 24 -29 year   [   ]   e) 42- 47years   [   ]
 c) 30- 35 years   [   ]   f) 48- 53 years   [   ]
                                                                      g) 54 years and above

2. Ethnicity

  a) Akan   [   ]   d) Mole – Dagbani [   ]
   b) Ewe   [   ]   e) Guan   [   ]
   c) Ga Adangbe   [   ] Other specify…………

3. Religious affiliation

     a) Christian   [   ]   c) Traditional   [   ]
b) Islam   [   ]   Other specify………………

4. Marital status
     a) Married   [   ]   d) Widowed   [   ]
      b) Divorced   [   ]   e) Separated   [   ]
       c) Single   [   ]   f) Cohabiting   [   ]

5. Employment status
      a) Government employee [ ]   d) Student   [ ]
      b) Non- government employee   [ ] e) Unemployed   [ ]
      c) Self-employed   [ ]   Other specify ……………

6. Educational level
      a) No formal education   [ ]   d) Tertiary   [ ]
      b) Basic / primary   [ ]   e) Vocational   [ ]
      c) Secondary   [ ] Other specify ……………

7. Income per month?

      a) Less than GH¢ 200   [ ] d) GH ¢ 801 -1100   [ ]
      b) GH¢ 201 -500   [ ] e) GH ¢ 1101 – 1400 [ ]
      c) GH¢ 501- 800   [ ] f) GH¢ 1401 and above

8. City/ town of residence? Please specify…………………………………..

9. Health insurance registration?   a) Yes [ ]   b) No   [ ]

   If no, state reason..

10. Source of referral? Specify…………………………………

PART 2 Health History

11. When was the last time you were screened for any problem with your breast?
a) Within last year   [ ]   d) 5 or more years   [ ]
      b) 1-2 years ago   [ ]   e) Never   [ ]
      c) 3-4 years ago   [ ]

12. Have you ever been screened with mammography or clinical breast examination?
      a) Yes [ ]   b) No [ ]
  If yes, specify age…………………………. years

I3. Have you ever been taught Breast Self-Examination (BSE)?
      a) Yes [ ]   b) No   [ ]
If yes, please specify the last time you performed…………………………

14. How did you get to know you have a problem with your breast?
      a) Self-identification   [ ]   c) Mammogram   [ ]
      b) Clinical breast/ routine medical examination   [ ]

      d) Other   [ ]

15. What was the <u>first</u> change you noticed in your breast?
      a) Lump in the breast   [ ]
      b) Breast pain not related to menses   [ ]
      c) Pitting of the skin/orange skin   [ ]
      d) Rash around/ on the nipple   [ ]
      e) Lump in the armpit   [ ]
      f) Did not see any change   [ ]

Other please
specify…………………………………………………………

16. What was your initial thought about this symptom? Please tick all (√) that
    apply
 a) It was nothing serious to be worried about   [   ]
        b) I was initially worried but got over it   [   ]
        c) It did not match my idea of cancer   [   ]
        d) It resulted from a spell cast on me by my enemies [   ]
        e) It was a curse from the gods   [   ]
        f) It was the result of normal hormonal changes   [   ]
        g) I didn't think I was at risk   [   ]
        Other specify……………………………………………………

17. Which of the following manifestations did you present at the Breast
Centre? Tick all that apply
        a) Swelling from armpit to arm   [   ] d) Breast itching [   ]
        b) Breast ulcer   [   ]   e) Arm pain   [   ]
        c) Breast pain   [   ]   f) Breast enlargement   [   ]

18. Which of the symptoms was most worrisome to you? Tick all that apply
        a) Breast sore   [   ]   d) Arm pain   [   ]
        b) Breast pain   [   ]   e) Breast enlargement [   ]
        c) Breast itching [   ]   Other specify…………….

19. Which of the following reason (s) is/ are making you to seek care now?
Tick all that apply
        a) Signs and symptoms have persisted   [   ]
        b) Worsening of symptoms   [   ]
        c) Being pressured by my family to seek car   [   ]
        d) Now I have money to seek care   [   ]
        e) Alternate medicine not improving condition   [   ]
        Other specify……………………………………………

PART 3 Barriers to seeking care early for breast symptoms

20. Why did you not come to the hospital before now? Tick all that apply
        a) I thought symptom would resolve.   [   ]
        b) I was afraid of the diagnosis I would get.   [   ]
        c) I lacked of financial resources.   [   ]
        d) I was embarrassed about someone seeing my breast. [   ]
        e) I could not miss work.   [   ]
        f) I had to take care of younger/ older relatives.   [   ]
        g) I had a previous negative health care experience. [   ]
        Other specify………………………………………..

21. What was the first place you visited when you noticed a change in your
breast?

a) Prayer camp   [ ]   d) Pharmacy shop   [ ]
b) Herbalist clinic   [ ]   e) hospital/ clinic   [ ]
c) Chiropractic centre   [ ]   other specify………………

22. Was a mammogram requested by the first doctor?
a) Yes   [ ]   b) No   [ ]

23. Was a breast ultrasound requested by first doctor?
a) Yes   [ ]   b) No   [ ]

24. Which of the following reasons may have caused delay in making a diagnosis at your first hospital? Tick all that apply
a) Doctor was young and inexperienced   [ ]
b) Inadequate equipment to do needed test   [ ]
c) Doctor felt nothing was wrong   [ ]
d) Don't know   [ ]
Other specify………………………………………

PART 4 Factors Influencing Health Seeking behaviour

25. Who was the first person you told when you noticed a change in your breast?
a) Mother   [ ]   d) Church members   [ ]
b) Siblings   [ ]   e) Friend   [ ]
c) Husband   [ ]   Other Specify…………………..

26. Who encouraged you to see a doctor?
a) Mother   [ ] d) Church members   [ ]
b) Siblings   [ ] e) Friends   [ ]
c) Husband   [ ]   Other Specify……………..

27. Before coming to the Breast Clinic, did you need financial assistance in order to seek care?
Yes [ ]   No   [ ]
28. Who supports you financially now that you have been seen at the Breast Clinic?
a) Mother   [ ]   d) Church members   [ ]
b) Siblings   [ ]   e) Friends   [ ]
c) Husband   [ ]   Other specify…………………
29. Who has given you the most emotional support since this breast problem started?
a) Mother   [ ]   d) Church members   [ ]
b) Siblings   [ ]   Other Specify………………
c) Husband   [ ]

PART 5 Cancer Related Knowledge

30. Have you heard of breast cancer?

a) Yes   [ ]   b) No   [ ]

31. What was your source of information?
     a) Radio   [   ]   e) family   [   ]
     b) Hospital / clinic   [   ]   f) friends   [   ]
     c) I read from a book [   ]   Other specify…………
     d) Television   [   ]
32. Do you know any person with cancer?
     a) Yes   [   ]   b) No   [   ]
33. Does anyone in your family have breast cancer?
a) Yes   [   ]   b) No   [   ]
     If yes, specify…………………………….

34. Have you heard of mammogram?
     a) Yes   [   ]   b) No   [   ]
35. What is the suggested age for first screening with mammogram?
a) 25 – 29 years   [   ]   d) 40 – 44years   [   ]
     b) 30- 34years   [   ]   e) 45 years and above   [   ]
     c) 35 -39 years   [   ]   f) No idea   [   ]

36. Which of the following is/ are a sign (s) of breast cancer? Tick all that apply
a) Lump in the breast   [   ]
     b) Swelling / darkening of the breast   [   ]
     c) Change in size or shape of breast   [   ]
     d) Dimpling of the skin   [   ]
     e) Itchy / sore rash on nipple   [   ]
     f) Redness of the on the breast   [   ]
     g) Swelling in the armpit   [   ]
Other specify…………………………………………….………..

37. Which of the following is a risk factor for breast cancer? Tick all that

apply.

     a) Being a female   [   ]
     b) Older age   [   ]
     c) Family history of breast cancer   [   ]
     d) Dense breast tissue   [   ]
     e) Oral contraceptives   [   ]
     f) Obesity   [   ]
     g) Alcohol intake   [   ]
     h) Smoking   [   ]
     Other specify………………………………………………………

Information from participant's folder

Date of presentation to breast clinic……………………..

Date of noticing change in breast………………………….

Duration of symptoms before presentation at breast clinic……………