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Knowledge, Attitudes, Beliefs, Behaviour and Breast Cancer Screening Practices in Ghana, West Africa

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Submitted in fulfilment of the requirements for the award of the Degree of Doctor of Philosophy in Radiography (Radiotherapy)

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Abstract

Breast cancer is both the most common cancer and the leading cause of cancer related-death among women around the world. The incidence of the disease is generally considered higher among women in the developed countries than the developing countries; however, the mortality rates for women in the developing countries meet or exceed those of the developed world, indicating poorer prognosis (Pannuti *et al.,* 2000; WHO, 2000; IARC, 2001; IARC, 2002; Anderson *et al.,* 2003; Tannerberger *et al.,* 2004).

Ghanaian women, like many other women from the developing countries, have a low participation rate in breast cancer screening services. As a result, the disease is commonly diagnosed at late stages leading to a poor outcome with high mortality rates. Efforts toward reducing the mortality from breast cancer should be focused on implementing cost-effective public health strategies to improve early detection and appropriate treatment (Pannuti *et al.,* 2000; WHO, 2000; IARC, 2001; IARC, 2002; Anderson *et al.,* 2003, Tannerberger *et al.,* 2004).

The main objective of the study was to assess breast cancer related knowledge, attitudes, beliefs, behaviour and screening practices among Ghanaian women in the study areas. Investigating an issue such as the knowledge, attitude, belief and breast cancer screening practices is of great importance, not only in identifying obstacles to participation in breast screening and treatment, but also to guide the development of future health promotion programmes to improve breast cancer care in Ghana.

The study was conducted in two phases, in Accra and Sunyani, both in Ghana. The first phase involved a total of 474 Ghanaian women aged between 40 and 70 years. Data collection was initially accomplished by using researcher-administered questionnaires, designed to obtain relevant socio-demographic characteristics, knowledge, attitudes, beliefs and practices towards breast cancer (Appendix iii page169). The questionnaire was pre-tested in a pilot study in Accra on 68 women before the major study. The second phase was accomplished by semi-structured interviews conducted on 10 breast cancer patients, 10 breast clinic attenders, 2 traditional healers and 3 Consultants, involved in breast cancer management in Ghana. Transcripts of the interviews appear in Appendices iv-vii page 178-231).

Characteristics of the subjects that participated in the study are covered in the first part of the findings. The majority of the women who participated in the first phase, (49.2%) were between the ages of 40 – 45 years (table 6:3:2a page54). With regards to the education of the respondents, it was observed that in sum 85.9% of the respondents (table 6:3:3 page57) had received some level of education. On employment, the vast majority of respondents (74.3%) were engaged in the informal sector, 14.2% in the formal sector and 11.5% unemployed.

The study showed a high level of knowledge deficit about the disease, which was evident from the poor appreciation of the risk factors and signs of the disease and high level of misconceptions and misinformation.

Attitudes towards the disease were those of fear, superstitions, fatalism and stigma, which impact negatively on the outcome of the disease in Ghana.

The women's self-reported participation in breast cancer screening was also found to be very low, it was, however, related to the respondents' level of education. In the quantitative data, 40.3% of the respondents reportedly practiced breast self-examination, which in many instances were irregular, and 8% had clinical breast examinations. For screening mammogram, the rate of participation was disappointingly low, at 4.3%. The screening practices among the women who participated in the interviews were equally poor.

A major observation from the literature review was the popularity of traditional medicine in Ghana (Twumasi, 1995; Gyapong *et al.,* 1996; Awusabo – Asare and Anarfi, 1997; Avotri and Walters, 2001). The study therefore looked at the activities of the traditional healers with emphasis on breast cancer care and more importantly their working relationship with the conventional medical practitioners. There were discrepancies between the respondents' perceptions of the roles of traditional medicine and their actual usage of that service. This trend could partly be due to "social desirability bias" and partly due to stigmatization which is often associated with traditional medicine (Aubert *et al.,* 1998). A disturbing observation was that a great deal of mistrust and unhealthy rivalry existed between the two medical systems and that the traditional healers were particularly immodest in their self-claimed capabilities.

To improve breast cancer care in Ghana, the study makes two broad recommendations to the Governmental agencies responsible for health, non-governmental organizations, communities and individuals.

Firstly, to pursue vigorous breast awareness and educational programmes, to teach and encourage Ghanaian women to adopt breast self-examination practices and to encourage health professionals to use every opportunity to examine their female patients as part of the overall clinical assessments. A logical outcome of increased awareness and improved breast self-examination and clinical breast examinations will be an increase in women attending the hospitals with breast cancer and, hopefully, these will be at an earlier stage in the disease than is currently presented.

Unless there are adequate facilities in place to treat the increasing number of women presenting with cancer of the breast and the potential improved prognosis for these women, due their earlier presentation with the disease, the improved knowledge, attitude and behaviour will merely inform these women of a potentially fatal disease earlier than before. Therefore, the second recommendation of the study is that the Government of

Ghana should provide adequate facilities for diagnosis and treatment of breast cancer to patients at an affordable cost.

These two recommendations can be summed up as providing education, screening, diagnosis and treatment of breast cancer patients in an affordable way. Detailed recommendations are made in the study regarding the strategies for education, screening and treatment.

Key Words: developing countries, awareness, breast cancer, breast self-examination (BSE), clinical breast examination (CBE), mammogram, early detection, screening, diagnosis, education, risk factors, radiotherapy, chemotherapy, surgery.

List of Abbreviations

ACS	American Cancer Society
BCC	Breast Cancer Care
BSE	Breast Self-Examination
CBE	Clinical Breast Examination
CT	Computed Tomography
DoH	Department of Health
cGy	Centigray (Unit of measurement of absorbed radiation dose)
FM	Frequency Modulation
IARC	International Agency for Research on Cancer
KABBP	Knowledge, Attitude, Belief, Behaviour and Practice
MRI	Magnetic Resonance Image
NCRNM	National Center for Radiotherapy and Nuclear Medicine (Ghana)
NHS	National Health Service
TBA	Traditional Birth Attendant
UNDP	United Nations Development Programme
WHO	World Health Organization

Chapter 1 Background

1:1 Introduction

Cancer may not be considered as the biggest health problem in developing countries, and in the year 2000, cancer was not defined as one of the ten leading causes of death in the developing countries (WHO, 2000). Generally, cancer remains a low priority for 75% of the world population from the developing world that have to grapple with infectious diseases, the HIV/AIDS epidemic, poverty and malnutrition. However, according to the International Association of Research on Cancer (IARC, 2002) of the World Health Organization, the incidence of cancer is rising rapidly in the developing countries. This trend is partly as a result of demographic changes, where populations continue to expand and become more elderly, and partly due the adoption of reproductive habits such as delayed childbearing, fewer children and non-breast feeding. In addition, the adoption of "western" lifestyles and habits, particularly smoking, alcohol consumption and changes in diet, and the fact that breast cancer is detected late and frequently without the appropriate treatment, results in a higher mortality rate than expected, thus, making breast cancer a major public health problem in the developing world (Pannuti and Tannerberger, 2000; Tannerberger *et al.*, 2004).

It has been predicted by the International Association of Research on Cancer (IARC, 2002) that by the year 2020, there will be 15-20 million new cancer cases occurring annually in the world, of which some 70% will come from the developing countries. It is further observed that within 20 years, 75% of people dying from cancer will come from the developing countries, therefore cancer in the developing world is one of the greatest concerns for medicine and public health in this century (Pannuti and Tannerberger, 2000; Tannerberger *et al.*, 2004).

There are variations in breast cancer incidence and mortality rates in the different regions of the world, which are interesting for reasons that go beyond assessing the magnitude of the public health problem that the disease presents (Bradley *et al.*, 2002). For example,

the average age for diagnosis for White American and European women is about 60 years, for African-American women it is about 56 years. However, it has been established that Black African women are more likely to develop breast cancer at much earlier ages. In a study conducted in Nigeria, 39.8% of patients with infiltrating breast carcinoma were less than 40 years of age (Ikpat *et al.,* 2002). For post-menopausal women, the age for developing breast cancer in Black Africans is 53 years (Anderson *et al.,* 2003). These variations of breast cancer occurrence and trends have yielded important clues about the possible causes of breast cancer, potential preventive strategies and effectiveness of early detection, as well as the impact of changing patterns of management and care (Bradley *et al.,* 2002). For example, introducing mammographic screening interventions in populations where the disease tends to affect young women may not be the most appropriate method of detecting breast cancer. This is because mammography has been found to be less effective in the denser breast tissue of premenopausal women (Hendrick, 1993; Alexander *et al.,* 1999). It would seem therefore that different interactions are required if breast cancer is to be detected early in Black African women.

In Ghana, it is very difficult to determine the actual incidence of breast cancer due to the absence of Cancer Registries. However, available statistics from the International Agency for Research on Cancer (IARC, 2004) puts the 2003 estimates at 24.82 per 100,000 with 1,623 recorded cases in Ghana. Statistics from the National Center for Radiotherapy and Nuclear Medicine, Korle Bu Teaching Hospital Accra, Ghana, reported that out of a total number of 719 patients seen and treated at the Center in the year 2003, 166, representing 23.1%, were breast cancer patients (NCRNM, 2003). These figures may be underestimated due to the fact that only a small percentage of cancer patients actually report to the centre for treatment. Nonetheless, between 70-80% of the patients seen and treated at this centre presented at stages III and IV of the disease, resulting in poor outcomes (NCRNM , 2003).

Although Ghana has few facilities and personnel to deal with breast cancer care, people also lack awareness of the problem, have inadequate information, and harbour negative attitudes and fear which, coupled with poverty, contributes to the late presentation of the

disease with poor outcomes (Anim, 1993; Ghartey, 2001; NCRNM , 2003; Mayo *et al.*, 2003). For women to present early to hospital they need to be "breast aware"; that is, they must be able to recognize symptoms of breast cancer through the routine practice of practicable screening and take the appropriate measures for early detection, diagnosis and treatment (Anderson *et al.,* 2003). Therefore to increase awareness, change negative attitudes and fears among Ghanaian women and reduce the barriers which impede efforts to improve breast cancer care in Ghana, calls for an in-depth analysis of all the factors contributing to the current breast cancer situation. These factors were the focus of the present study.

In Ghana's health system, there exist traditional healers and herbalists who claim to treat all kinds of conditions including breast cancer (Twumasi, 1995; Awusabo – Asare and Anarfi, 1997; Mona, 1997). In fact some medical authorities in Ghana (Appendix vii page 231) tend to partly blame these healers for the delayed diagnosis and treatment of the disease due to their keeping the patients for long periods. It is important therefore that efforts aimed at improving breast cancer in Ghana should also be targeted at these healers by investigating, coordinating and controlling their activities.

1:2 Outline of Chapters

This thesis is structured in 10 chapters with 7 appendices. Chapter 1 provides an overview and background information regarding breast cancer, a statement of the problem as well as the aims, objectives and hypothesis of the study. Chapter 2 deals with the anatomy of the female breast, pathophysiology and management of breast cancer, incidence of breast cancer with special emphasis on breast cancer situations in the United Kingdom and Ghana as well as the proposed breast cancer care model for Ghana. Chapter 3 describes the health systems in Ghana in general and facilities and services available for breast health and cancer care in particular. The Ghanaian culture as it relates to health and the health seeking behaviour of Ghanaians is also covered. Chapter 4 describes the theoretical basis of the study. Under chapter 5, the research design is discussed which includes sampling strategies and the sample population as well as the research sites. Also included in this chapter are the data collection methods, types of data, analytical methods

and procedures. Presentation of the results as obtained from the quantitative data is provided in chapter 6, while chapter 7 deals with the findings from the qualitative data obtained from the interviews. Discussions of the results are covered in chapter 8 while chapter 9 is the concluding part which includes the recommendations of study. Personal reflection of the study is presented in chapter 10.

1:3 Statement of the Problem

Recent global cancer statistics indicate a rising global incidence of breast cancer and the increase is occurring at a faster rate in populations of the developing countries that previously enjoyed a low incidence of the disease (Pannuti and Tannerberg, 2000; Parkin *et al.*, 1994; Parkin *et al.*, 2004; IARC, 2002; IARC, 2004). In addition to the fact that the incidence of the disease appears to be on the increase, late presentation with poor outcomes of treatment is the hallmark of breast cancer in Ghanaian women, as portrayed by figures 8:11 a & b (page126). The 5-year survival of breast cancer in Ghana is less than 25%, compared with over 70% in Western Europe and North America (Anim, 1993; Ghartey, 2001; NRCNM, 2003). It also disturbing that the average age at diagnosis for breast cancer in Ghana is 46.29 years with a range of 26 to 80 years as compared to an average age of over 65 years in Europe and America.

Very little information is available on Ghanaian women's knowledge, perception, attitude and behaviour about breast cancer, including its screening and treatment. Answers to the following questions were therefore sought in order to gain better understanding of the current breast cancer situation in Ghana.

- Do the women's knowledge and their behaviour, attitudes and beliefs contribute to the poor outcome of the disease?
- Are the women aware of the facilities and services available (if any) in the communities for breast cancer care and are the services accessible and affordable to the majority of Ghanaian women?
- Do the social and cultural factors contribute to poor outcome of the disease in Ghana?
- What is the effect of the independent variables (age, educational background, marital status, occupation, religious beliefs, etc) on the women's knowledge,

attitudes, beliefs and health seeking behaviour in general and breast cancer screening and treatment in particular?

- What other barriers impede effective breast cancer care in Ghana?
- What are the limitations of Ghana's health system in providing efficient breast cancer care

In an effort to provide answers to these questions, it was considered necessary to undertake a cross-sectional study with the broad purpose to design interventions and strategies to improve breast cancer in Ghana. The study involved a total of 494 women randomly selected from two locations in Ghana (Accra and Sunyani - figure 3:1 page 32), two (2) traditional healers and three (3) Consultants employed at the Korle Bu Teaching Hospital, Accra who are involved in breast cancer in Ghana.

1:4 Objectives of the Study

The overall aim of the study was to explore various factors to gain the insights needed to develop socio-economic and cultural specific models to improve breast cancer care in Ghana.

To facilitate this, the objectives of this study were to:

- identify the main sources of information about breast cancer used by the women
- determine how women in Ghana perceive and behave with respect to breast cancer.
- assess the awareness level of the women about breast cancer screening and early detection practices.
- determine the quantity and quality of screening and treatment facilities and services available in the study area and the cost of such services.
- determine the proportion of the women who use these services and facilities.
- assess the roles of traditional healers in breast cancer care in Ghana and the effect of such activities.
- determine the factors that hinder the optimal utilization of the services and facilities and to recommend measures to improve breast cancer in Ghana based on appropriate conceptual and operational models.

1:5 Hypotheses of the Study

Given the objectives of the study, the following constitute the hypotheses of the study.

1. Awareness level among the women on breast cancer is low.
2. Misinformation and misconceptions about the disease is common in Ghana, leading to negative attitudes towards the disease.
3. Cancer fatalism is a prominent phenomenon in Ghana.
4. Facilities and services for breast care in Ghana are inadequate and unaffordable especially in the rural areas of Ghana.
5. There will be a positive correlation between educational level of the women and their knowledge of breast cancer.
6. Breast cancer screening (breast self-examination, clinical breast examination and mammogram) rates among Ghanaian women are low.
7. Women in big cities for example, Accra, the National Capital, have better knowledge, behaviour and practices with respect to early detection and treatment than their counterparts in the semi-rural and rural areas.

1:6 Significance of the Study

- The findings and recommendations of the study will help policy makers in Ghana formulating policies and implement strategies to improve breast cancer care.
- As almost all the literature on the topic was found to be from the developed countries, it was the expectation that a study from a developing country, such as Ghana, with different socio-economic and cultural factors would also contribute to the existing knowledge on the topic.
- The present study will serve as reference material for further research in the related areas.

Chapter 2 Breast Cancer

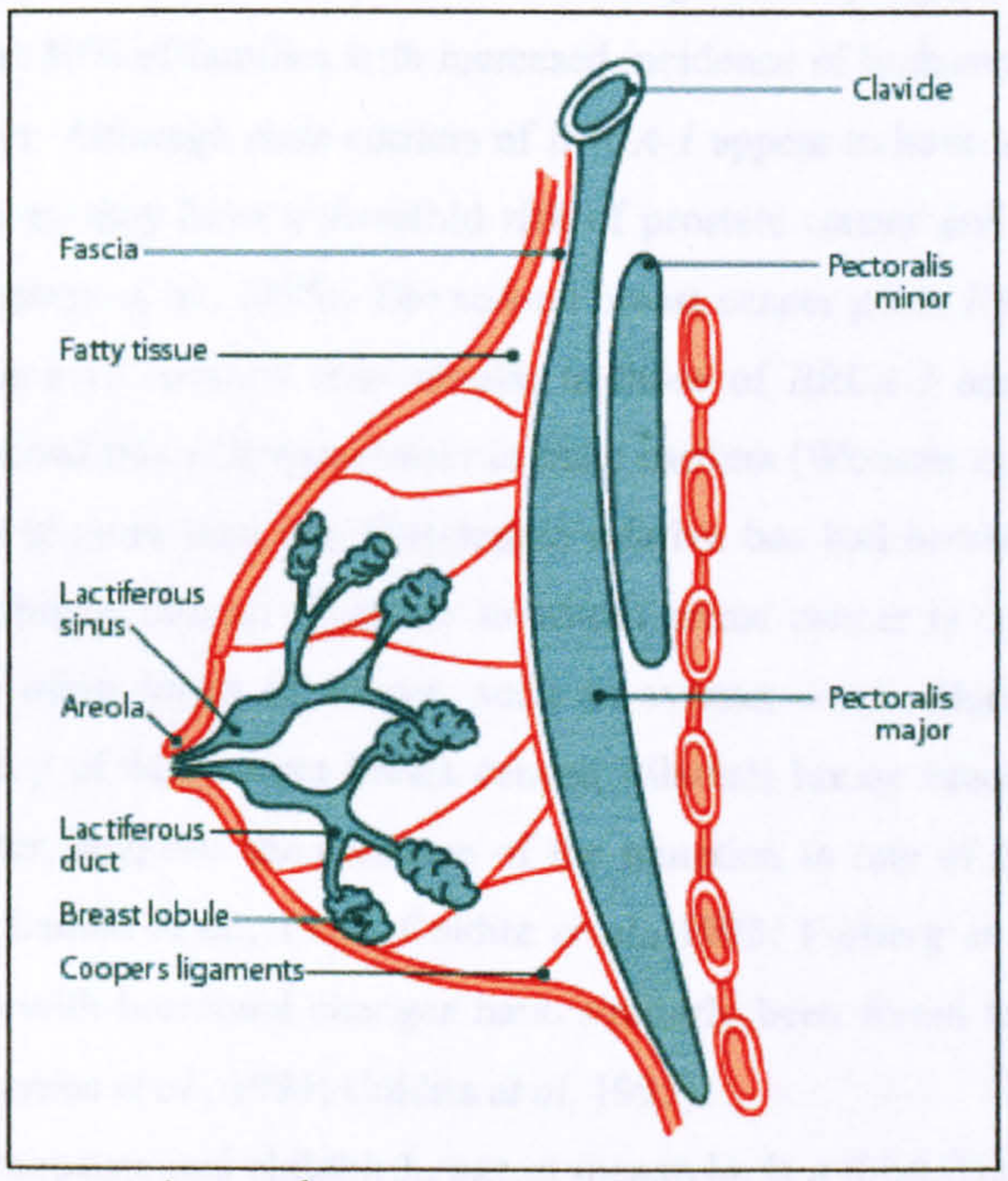
2:1 Female Breast

The breast is a mound of glandular, fatty and fibrous tissue located over the pectoralis muscles of the chest wall and attached to the muscles by fibrous strands called the Cooper's ligaments. Other tissues develop into muscle cells, which will form the nipple and the areola and the sensory nerves that give feeling to the breast. These nerves extend upwards from the muscle layer through the breast and are highly sensitive, especially the regions of the nipple and the areola, which accounts for the sexual responsiveness of some women's breast. The mature female breast is composed of essentially four structures, namely, the lobules (glands), milk ducts, fat and connective tissue. There is a preponderance of glandular tissue in the upper outer portion of the breast (Vander *et al.*, 1990).

The consistency of breast lobes varies from woman to woman and may even vary in an individual from one side to other. The discrepancies in the textures allow the lobes to be outlined by carefully palpating the breast. Normal anatomy on a mammogram will image differently, depending on a woman's weight, age, the presence of surgical scar and superficial or sub-muscular implants as well as the amount of fatty tissue in the breast. The breasts of younger women are primarily composed of glandular tissue with only a small percentage being fat. In older women, the breasts become softer and lose their support therefore physical examinations and mammograms are easier to interpret and may be more accurate at this period (Vander *et al.*, 1990).

The breast is responsive to a complex interplay of hormones that cause the breast tissue to develop, enlarge and produce milk. Whereas the female hormones influence all components of the breast, the glandular tissue is the most sensitive. Immediately after menstruation, the hormone levels are at their lowest and the breast becomes softer and less tender. This is the recommended time to perform breast self-examination, clinical breast examination and to have a mammogram (Thibodeau and Patton, 2003).

Figure 2:2.1 Anatomical Structure of the Female Breast



(www.breastcancersource.com)

2:2 Pathophysiology of Breast Cancer

2:2:1 Risk Factors and Causes of Breast Cancer

The exact cause of the disease is still unknown, but what is known is that certain risk factors are linked to the disease, for example, increasing age, which is considered the single biggest factor in breast cancer incidence and mortality (Murphy *et al.*, 1995; Berry *et al,.* 1997; Feuer and Wun, 1999; ACS, 1999). Another important risk factor is genetic, found to be responsible for about 10% of all breast cancer patients and 25% of cases diagnosed before the age of 30 years (Murphy *et al.*, 1995; Berry *et al,.* 1997). Two breast cancer susceptibility genes have been discovered and characterized, *BRCA-1* and *BRCA-2.* Certain changes, known as mutations, in either of these genes will increase a woman's risk of breast cancer and may also increase the risk of other types of cancer including ovarian. Another important gene that may confer an increased risk of breast cancer is the p53 gene (Murphy *et al.,* 1995; Swensen *et al.,* 1994). Mutation of the

BRCA-1 gene may be present in 45% of families with a significantly high incidence of breast cancer and at least 80% of families with increased incidence of both early-onset of breast and ovarian cancer. Although male carriers of *BRCA-1* appear to have a negligible risk (1%) of breast cancer, they have a threefold risk of prostate cancer and a fourfold risk for colon cancer (Easton *et al.*, 1995). The second breast cancer gene, *BRCA-2*, that is located on chromosome 13, confers risks similar to those of *BRCA-1* and it is also associated with an increased risk of breast cancer in male carriers (Wooster *et al.*, 1994). The risk is even higher if more than one first-degree relative has had breast cancer or when it was a bilateral breast cancer. Families in whom breast cancer is common are more likely to develop other forms of cancer, such as ovarian cancer (Easton *et al.*, 1995). A personal history of early-onset breast cancer, bilateral breast cancer, or both breast and ovarian cancer, suggests the presence of the mutation in one of these genes (Swensen *et al.,* 1994; Lambe *et al.*, 1994; Colditz *et al.*, 1995; Furberg *et al.*, 1999). Other events associated with hormonal changes have similarly been found to influence the breast cancer risk (Lambe *et al.*, 1994; Colditz *et al*, 1995).

In addition to age at menopause and childbirth, age at menarche is a third factor that has been linked to breast cancer risk. Women, who experience menarche before the age 11 years, have about 20% greater chance of developing breast cancer than women who experienced menarche after 14 years (Ursin *et al.* 1998).

Because breast tissue exposure to estrogen increases cancer risk, there has been much interest in evaluating the risk of oral contraceptives and hormonal therapy after menopause. Some studies have shown that oral contraceptive use is associated with an increase in a young woman's risk of breast cancer, although other studies suggest that the risk may be limited to recent use (Ursin *et al.,* 1998; Marchbank *et al.,* 2002; Elder *et al.*, 2003). The risk associated with oral contraceptives use was strongest for women who had used oral contraceptives within 5 years of breast cancer diagnosis (Collaborative Group on Hormonal Factors in Breast Cancer, 1996). Currently, there are serious efforts to control the population growth of many developing countries through family planning campaigns for economic reasons. However, these good intentions may have the potential to increase the individual risks for breast cancer (Thomas, 1991; Hollander, 2002).

In addition to the better characterized hormonal and genetic factors that increase the risk of developing breast cancer, there are several environmental and lifestyle risk factors. Obesity has been shown to increase breast cancer risk in women after menopause (Huang *et al.*, 1997; Cleary and Maihle, 1997; Tretli *et al.*, 2001; Petrelli *et al.*, 2002; Cui *et al.*, 2002). Endogenous estrogen levels in postmenopausal women, which are 50 to 100% higher among heavy women than leaner women, are produced primarily in the adipose tissue (Prentice *et al.*, 1990; Fisher *et al.*, 1994; Murphy *et al.*, 1995; Powles *et al.*, 1996; Huang *et al.*, 1997; Bergman *et al.*, 2000; Verkasalo *et al.*, 2001; ACS, 2004). Obese women with breast cancer have been found to have decreased survival rates and increased recurrence (Petrelli *et al.*, 2002). It might also be because detection of the breast tumor is more difficult in obese than in lean women (Petrelli *et al.*, 2002; Huang *et al.*, 1997; Moorman *et al.*, 2001).

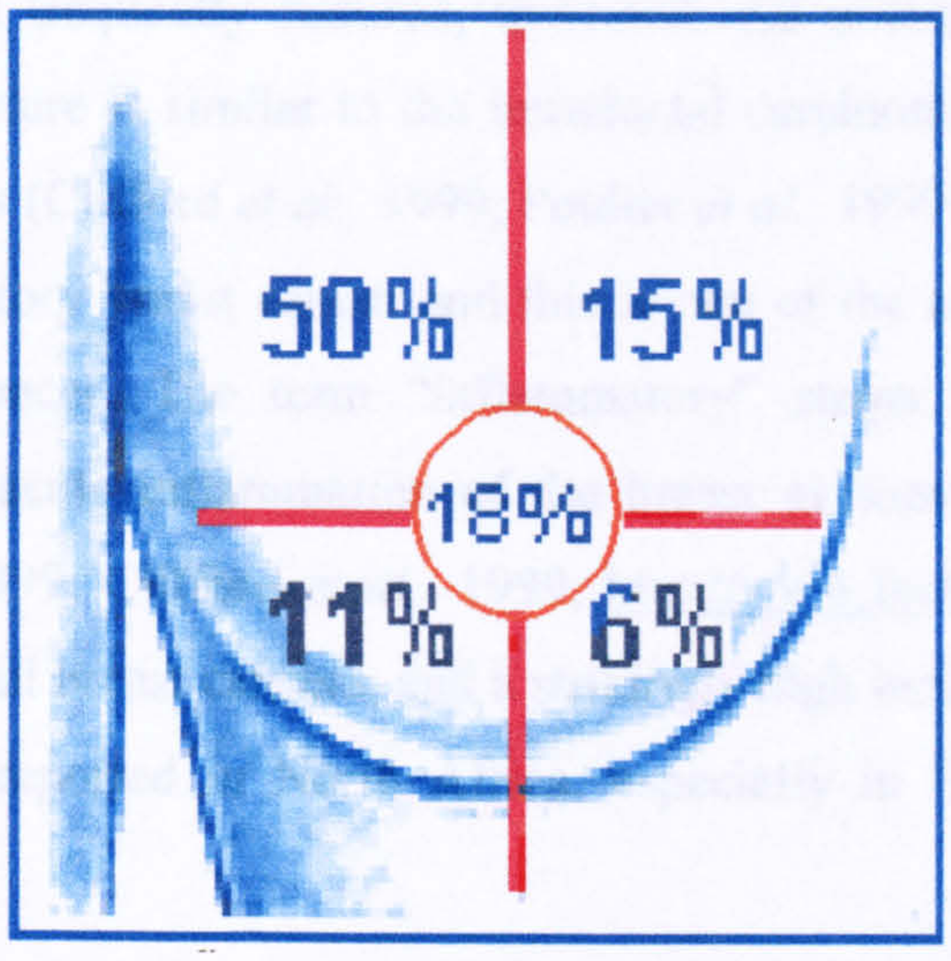
Additional factors that may be related to breast cancer risks (decreased or increased) include exposures to high levels of radiation, chemical and pesticide exposure, smoking and selective estrogen receptor modulators (SERM) such as tamoxifen and raloxifen (Nayfield *et al.*, 1991; Rutqvist and Mattsson, 1991; John and Kelsey, 1993; Verkasalo *et al.*, 2001; ACS, 2004).

2:2:2 Description of Primary Location

The location of the primary disease is best described by dividing the breast into quadrants (figure 2:2:2 page11) (Washington, 1999; Clifford *et al.*, 1999; Bonadonna *et al.*, 2002). Nearly, 50% of all breast cancer occurs in the upper outer quadrant of the breast with 18% developing in the areola region. The upper inner quadrant is the site of 15% of all breast cancer, 11% in the lower outer quadrant and the remaining 6% developing in the lower inner quadrant (Washington *et al.*, 1999; Clifford *et al.*, 1999). The frequency of cancers developing in the upper-outer quadrant is explained by the fact that more breast tissue is contained in this area. The cancer tends to grow slowly, locally involving the ducts and adjacent tissue. Recurrence in the breast (local recurrence) and in the lymphatic system (regional recurrence) or at distance metastatic sites may occur 20-30 years after the initial treatment. Spread to distant sites via the invasion of the blood vessels, followed

by hematogenous spread to such sites as the liver, the lung and the bone is a common feature of breast cancer (Poulter *et al.,* 1999; Clifford *et al.,* 1999).

Figure 2:2:2 Illustration of the Breast Quadrants



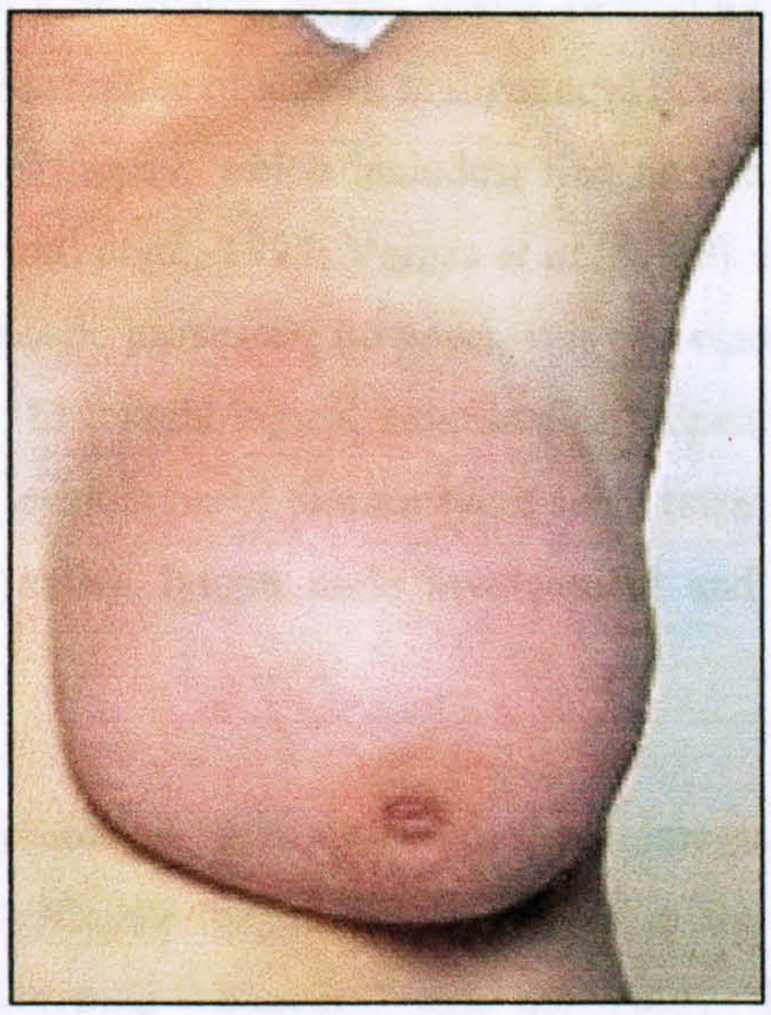
(Bonadonna *et al.,* 2002)

2:2:3Types of Breast Cancer

There are classic types of the disease which include lobular carcinoma in-situ, ductal carcinoma in-situ, infiltrating (invasive) lobular carcinoma, infiltrating (invasive) ductal carcinoma, Paget's disease and inflammatory breast cancer. Lobular carcinoma in-situ is not, in the true sense, a breast cancer, but it increases a woman's risk of developing breast cancer later in life. Ductal carcinoma in-situ is the earliest stage of breast cancer and this type of breast cancer is confined only to the ducts of the breast. Nearly 100% of the people with this type of cancer can be cured if detected early enough (Poulter *et al.,* 1999; Clifford *et al.,* 1999). Infiltrating (invasive) lobular carcinoma is another subtype, which makes up 10-15% of all breast cancer types. Around 30% of patients develop cancer in the same breast or in the other breast. Histologically, cancer cells are mostly small and uniform with a small rate of polymorphism (Poulter *et al.,* 1999; Clifford *et al.,* 1999).

The most common type of breast cancer is the infiltrating (invasive) ductal carcinoma and makes up 80-90% of diagnosed breast cancers and it is also the most aggressive form of breast cancer. Very often it becomes invasive, in half the period of time than the lobular does (Poulter *et al.,* 1999; Clifford *et al.,* 1999). Paget's is a special form of ductal carcinoma, which affects women in older age (Poulter *et al.,* 1999; Clifford *et al.,* 1999). The affected skin is frequently fissured, ulcerated and oozing (Clifford *et al.,* 1999). The morphologic picture is similar to the intraductal carcinoma, but this type of cancer has a better prognosis (Clifford *et al.,* 1999; Poulter *et al.,* 1999). The last subtype to be described is inflammatory breast cancer and this is one of the aggressive types of locally advanced breast cancer. The term "inflammatory" stems from the clinical appearance, which mimics acute inflammation of the breast as shown in figure 2:2:3 (page 12) (Poulter *et al.,* 1999; Clifford *et al.,* 1999; http://www.inctr.org, 2000). This subtype represents 1-6% of all breast cancers, and a strikingly high incidence of this form of breast cancer has been reported in North Africa, especially in Egypt and Tunisia (Clifford *et al.,* 1999)

Figure 2:2:3 Inflammatory Breast Cancer



Source: http://www.inctr.org/publications. The International Network for Cancer Treatment and Research.

2:2:4 Diagnosis and Staging

The first step in the diagnosis of breast cancer is careful attention to factors such as family history, reproductive history and history of fibrocystic diseases, as well as prior biopsy (Tirgan, 2004). The most effective technology currently available is mammography. Mammography utilizes soft x-rays (10-30 keV) to image the breast tissue. Diagnostic techniques other than mammography that are occasionally used for breast cancer detection are Ultrasound, Magnetic Resonance Imaging (MRI) and Positron Emission Tomography (PET) (Heywang *et al.*, 1997; Curati *et al.,* 1998; imaginis, 2004). Breast ultrasound has a significant role in the diagnosis of benign and malignant breast masses. Used in conjunction with fine needle aspiration cytology (FNAC), it provides high diagnostic accuracy for cancers and reduces the need for diagnostic excision biopsies of benign lesions. Fine microcalcifications, detected by mammography, are often associated with any palpable mass in ductal carcinoma-in-situ and are not easily seen with ultrasound (Curati *et al.,* 1998). Current indications for Magnetic Resonance Imaging (MRI) are mainly restricted to;

- Imaging breasts with silicone implants to demonstrate adjacent malignancy or implants defects (leakage).
- Differentiation of scarring from malignancy.
- Detection of malignancy in dense breast tissue (including the diagnosis of multifocal disease in the presence of known malignancy) (Curati *et al.,* 1998).

Another diagnostic procedure is biopsy, which includes; fine needle biopsy, aspiration biopsy and excision biopsy (Curati *et al.,* 1998; Vargas *et al.,* 2000). Fine needle biopsy is the least invasive of the diagnostic processes; however, it is associated with the highest number of missed cases. The histopathological examination depends on the type of biopsy performed and includes evaluation of tumour type, stage (size and spread), grade (aggressiveness of the cancer cells), lymph node involvement and vascular invasion (Vargas *et al.,* 2000).

A point that needs to be stressed is that although these imaging modalities and pathological examinations are efficient diagnostic procedures in the developed world, Ghana, like many other developing countries, can not enjoy the benefits these

technologies offer because of a lack of adequate resources to provide these facilities for all sections of the populations. This assertion was confirmed by some breast cancer patients and the Consultants who participated in the present study (Appendices iv and vii page 178 and 231).

2:2:5 Clinical Manifestations

Early breast cancer is usually asymptomatic, but as it progresses, it causes changes in the breast. It is therefore very important that women pay careful attention to the breast cancer warning signs, which include the following;

- Breast mass, which is usually painless.
- A change in the size of the breast.
- Nipple discharge and or retraction.
- Change in the colour or feel of the skin.
- Alteration of the breast contour.
- Lymphadenopathy.
- Pain or tenderness in the breast (Murphy *et al.,* 1995; Clifford *et al.,* 1999).

2:3 Management of Breast Cancer

Breast cancer is best managed with a multidisciplinary approach, which may include surgery, chemotherapy, radiotherapy and hormonal replacement therapy among others. Decisions regarding choice of a particular treatment are influenced by the extent of the primary tumour, the patient's age, the patient's general medical condition and the patient's preferences and the risk and benefits associated with each treatment modality (Murphy *et al.,* 1995; Clifford *et al.,* 1999; Bomford *et al.,* 2003).

2:3:1 Surgery

Almost all women with breast cancer will have some type of surgery in the course of the treatment including biopsies. Some women may be good candidates for what is called breast conservation therapy (BCT). In breast conservation therapy, a lumpectomy is performed whereby the tumour with adequate margin is removed and the breast is left

intact. Breast conservation therapy is almost always combined with radiotherapy. Sometimes, a larger part of the breast tissue would be removed and this is called segmental or partial mastectomy and this too needs to be combined with radiotherapy (Early Breast Cancer Trialists' Collaborative Group, 1995). In early stage cancers, as in stages i and ii, breast conservation therapy is as effective as total mastectomy. More advanced breast cancers are usually treated with a modified radical mastectomy, where the entire breast and axillary lymph nodes are removed (Clifford *et al.,* 1999).

2:3:2 Chemotherapy

In order to decrease a patient's risk of recurrence, many breast cancer patients are offered chemotherapy. The more advanced the disease, the more important it is that chemotherapy is given. There are many different chemotherapy drugs, and they are usually given in combination for 3 to 6 months. Two of the most common regimes are DC (doxorubin and cycolphosphamide) for 3 months or CMF (cyclophosphamide, methotrexate and fluorouracil) for 6 months (Clifford *et al.,* 1999).

2:3:3 Radiotherapy

The first major use of radiation therapy in the treatment of breast cancer was to reduce locoregional recurrence rates following radical mastectomy (Bentel, 1999; Levitt *et al.,* 1999). Radiation therapy is also used in combination with breast conservative therapy. Radiation and chemotherapy may also be used together to effectively treat cancer of the breast. Radiation therapy can also be used to help relieve symptoms of advanced cancer if a cure is not possible (Bentel, 1999; Levitt *et al.,* 1999). Normally, between two and four weeks post-operatively is allowed before radiation therapy is begun, to allow the breast tissue adequate time to heal. In appropriately selected patients, breast cancer with limited surgery and breast irradiation yields well to excellent cosmetic results. The advantage of preserving the breast is also psychologically beneficial for many patients (Bentel, 1999; Levitt *et al.,* 1999). Together with image guided treatment planning, radiation therapy is an important tool for the management of cancer and is used in the treatment of as many as 50% of all cancer patients (Levitt *et al.,* 1999). Radiation therapy may be used as the primary form of treatment, especially for the early cancers of the breast, in a combined

programme following lumpectomy and, if necessary, axillary nodes dissection. Simulation and treatment planning are critical factors in establishing an appropriate treatment technique. This is more so, if the risks of complications are to be minimized substantially (Bentel, 1999; Levitt *et al.,* 1999).

2:4 Estimating Breast Cancer Risk

Breast cancer is the most widely publicized cancer among the general population (Gail *et al.,* 1999). This heightened public awareness, has however also led to much anxiety and the concern that breast cancer has reached "epidemic" proportions (Gail *et al.,* 1999; Mackarem *et al.,* 2001). The Gail Model, as proposed by Mitchell Gail at the National Cancer Institute of the United States of America, uses a clinical tool to mathematically estimate a woman's risk of developing breast cancer (www.halls.md). This risk estimate is based on known factors including; age at menarche, age at first live birth, the number of first-degree relatives afflicted with the disease, and the number of previous benign breast biopsies (www.halls.md; Mackarem *et al.,* 2001; Steward *et al.,* 2001). There are three main ways of expressing breast cancer risk, which include cumulative risk, incidence and relative risk. Cumulative lifetime risk is a statistically derived number, assuming all women live to a certain age. When estimating the baseline risk of a healthy woman developing breast cancer, the statistic often quoted is one out of eight or 12.5% (Gail *et al.,* 1999; NHS, 2003a). This often leads to much anxiety since a 12.5% risk of developing cancer is frighteningly high. However, this is a cumulative risk over one's lifetime, and half of the risk actually occurs after a woman reaches the age of 65 years (Gail *et al.,* 1999; NHS, 2003a). The incidence describes the number of women who get breast cancer in a defined population, usually per 100,000, in a given time period (Gail *et al.,* 1999; NHS, 2003a). Relative risk on the other hand is a number used to compare the impact of different risk factors associated with the likelihood of developing breast cancer. It is commonly used to tell women their risk when comparing them to women without that particular risk factor (Williams, 1992; NHS, 2003a).

Options that are available include careful surveillance, prophylactic mastectomy, and enrolment in clinical and chemoprevention trials (Cull, 1999; Evans *et al.*, 1993, Evans *et al.*, 1994; ACS, 2004; O'Shaughnessy, 1996).

2:5 Incidence of Breast Cancer

Globally, breast cancer is the most common cancer for women, with a current total of 1.2 million cases per year with an estimated 370,000 deaths. More than half of these cases are from the developing world (Parkin *et al.,* 1994; Chu *et al.,* 1996; Ferlay *et al.,* 2001; Tannerberger *et al.,* 2004). Breast cancer affects all racial groupings; however, there is a large variation in the incidence of breast cancer both between and within different geographical regions. The incidence is increasing, particularly in the industrialized world (ACS, 2004). In Europe, the highest incidence is recorded in Switzerland with 72.2 cases per 100,000 populations, 62.4 in France, 59.7 in Southern Ireland, 59.6 in Italy and 56.1 in England and Wales (Parkin *et al.,* 1994; Tannerberger *et al.,* 2004). The lowest rates of breast cancer have been recorded in Africa and Asia. However, once cancer develops, black women have a dramatically worse prognosis (Parkin *et al.,* 1994; Tannerberger *et al.,* 2004).

Several theories have tried to explain the variations of incidence and mortality between black and white women. These include differences in genetics, reproductive history and tumour biology between black women and white women. Other theories include socioeconomic factors which may result in delayed diagnosis, environmental and dietary variations, as well as differences in available treatment options (Mayberry and Stoddard-Wright, 1992; Parkin *et al.,* 1994; Tannerberger *et al.,* 2004; Adjei, 2006)

Variations have been found to exist in the reproductive histories of black and white women and these may explain the differences in the rates of breast cancer incidence seen between black and white women, with a lower incidence of breast cancer in black women (John and Kelsey, 1993). Early age at menarche, late age at menopause, late age at first full-term pregnancy, and nulliparity all appear to contribute to a higher risk for breast cancer. However, the median age at menarche is slightly lower in black than in white girls, 12.5 years compared with 12.8 years (John and Kelsey, 1993). Black women have an earlier median age of natural menopause, 49.3 years compared with 50 years in white women, and are more likely than white women to have had surgical menopause. Nonetheless, early menopause contributes to a decreased risk for breast cancer in older women (John and Kelsey, 1993). Again, the age at first full-term pregnancy is 2 years

younger in black women than white women (John and Kelsey, 1993). This finding is consistent with the findings of the reproductive history of the respondents in the current study as shown in tables 6:3:2b, c and d (page 55 and 56).

Although the incidence of breast cancer is lower in black women, comparative studies have found a higher incidence of poorly differentiated tumours in black women and an increased frequency of nuclear atypia, higher mitotic activity, and tumour necrosis (Mandelblatt *et al.,* 1993; Chen *et al.*, 1994). The higher frequency of poorly differentiated tumours in black women is compatible with the finding of a higher frequency of hormone receptor-negative tumours in black women, both in the United States and in South Africa (Mandelblatt *et al.,* 1993; Chen *et al.*, 1994). Studies have found that between 60% and 80% of white breast cancer patients have estrogen receptor-positive tumours as compared with 40% to 60% for black women. Similarly, black women are less likely to have progesterone receptor-positive breast tumours; although this characteristic has been less widely studied (Mandelblatt *et al.,* 1993; Chen *et al.*, 1994). Because postmenopausal women are more likely to have hormone receptor-positive tumours, some of the reported racial differences in estrogen and progesterone receptor levels could be the result of the younger median age of black women with breast cancer (Mandelblatt *et al.,* 1993; Chen *et al.*, 1994).

Tumour stage is the most important determinant of outcome in women with breast cancer, and it is well documented that advanced stage disease is more common in black women (Ayanian *et al.,* 1993; Elledge *et al.,* 1994). Black women are disproportionately represented in the lower socioeconomic strata and these factors may explain the advanced disease in this population. It does appear that black women seek medical attention for breast symptoms later than white women (Coates *et al.,* 1992; Pierce *et al.,* 1992). A few studies that have evaluated the treatment of breast cancer in black women suggests that black women were less likely than white women to have surgical treatment for local or regional disease and very little information is available about the efficacy of chemotherapy in preventing relapse or improving survival rates in black women with breast cancer (Coates *et al.,* 1992; Pierce *et al.,* 1992; Elias *et al.,* 1994). It has been

suggested that although the response of black women with metastatic breast cancer to chemotherapy was similar to that of white controls, the survival rate of black women was significantly shorter (Elias *et al.,* 1994). The relative 5-year survival of black women with breast cancer is less than 64% compared to 80% in white women (Elias *et al.,* 1994). This substantially higher case-mortality rate for black women has resulted in a higher age-adjusted breast cancer mortality rate for black women despite the lower incidence of cancer in the black population. The increasing disparity between breast cancer mortality rates in black and white women is disturbing. It appears that the worse prognosis of black women with breast cancer cannot be explained by any single factor but results from a complex interaction of many issues, including tumour stage, tumour biology, comorbid conditions, and socioeconomic variables. A full range of health promotion and cancer control activities are required to close the widening racial gap in breast cancer mortality rates. This, therefore, calls for a comprehensive study in this area which is necessary to substantially help improve survival for black breast cancer patients.

2:5:1 Breast Cancer in the Developing Countries

Developing countries have only about 5% of the global economic resources and this disparity between the developing and the developed countries demonstrates that global resources are not equally distributed. This disparity in resource distribution has a serious effect on the provision of health care for 75% of the world population in the developing countries (Magrath and Litvak, 1993; O'Malley *et al.,* 2001; Steward and Kleihus, 2003; IARC, 2004; CIA, 2004). Available resources often remain insufficient to deal with the most basic of health issues, such as the control of infectious and communicable diseases, malnutrition, sanitation and the provision of safe and adequate water for the population. As a result, cancer care remains a low priority (Reich, 1995). Therefore women in developing countries, although a lower incidence of breast cancer exists, have a poorer outcome and poorer survival rates for the disease when compared to women from the developed countries. It is estimated that over 80% of cancer patients in developing countries present with advanced stages of the disease, with a corresponding high mortality with some 50% of these patients dying from the disease (Forbes, 1997; Jones,

1999; Pannuti and Tannerberger 2000; WHO, 2000; Steward and Kleihus, 2003; Anderson *et al.,* 2003; IARC, 2004).

2:5:2 Breast Cancer in Africa

In Africa there is a great deal of genetic and socio-cultural diversity between the populations, coupled with a very wide range of environments in terms of climate and vegetation. For all these reasons, one might expect to see a wide diversity of cancer patterns (Cavalli- Sofrza, 1997). For example, in North Africa, breast cancer is considerably more common than cervical cancer and the incidence is higher in populations of North Africa than in Sub-Saharan Africa, and in the urban populations than in the rural settings, as a result the current incidence rates are highest in cities such as Abidjan in Cote d' Ivoire and Harare in Zimbabwe (Parkin *et al.,* 2004).

In Africa, breast cancer is relatively less common than in the European and American populations, with an estimated 59,000 new cases annually, representing about 18% of cancers in women European and American populations (Parkin *et al.,* 2004). The disease however, tends to affect younger women in Africa than European and American women (Anim, 1993). Indeed, as low as 39 years is common among pre-menopausal women and in post-menopausal, the commonest age for developing breast cancer in black Africans is 53 years (Adebamowo and Adjayi, 2000; Anderson *et al.,* 2003; Althius *et al.,* 2003).

In sub-Saharan Africa, although epidemiologic studies of breast cancer are not available, the disease is considered to be the second most prevalent cancer among black women in the region, exceeded only by cervical cancer (Anim, 1993; Parkin *et al.,* 2004). In Nigeria (West Africa), breast cancer was the second most common female cancer recorded in earlier years (1960-69) but it is now the most common female cancer (Adebamowo and Adjayi, 2000; Odusanya, 2001; Odusanya and Tayo, 2001; Okobia, 2006). This increase may be related, in part, to the increasing awareness and campaigns about breast cancer, as well as improved diagnosis in some hospitals in the country. Apart from the problem of younger patients, is the issue of poor prognosis for women with breast cancer in sub-Saharan Africa (Anim, 1993; Adebamowo and Adjayi, 2000; Odusanya, 2001; Odusanya and Tayo, 2001; Parkin *et al.,* 2004; Okobia, 2006).

In South Africa, the picture is not different from the Nigerian situation, where again breast cancer has overtaken cervical cancer as the leading cancer among women, but incidence rates remain far lower than in the United States or United Kingdom. Breast cancer accounts for 16.6% of all the cancers in South African women. Between 1993 and 1997, an annual average of 3,785 new cases of breast cancer was reported to the National Cancer Registry of South Africa with 1,572 deaths (CANSA, 2005).

Within South Africa, the incidence of breast cancer is also lower among black women than other racial groups. The statistics from the National Cancer Registry of South Africa indicate an age-standardized rate of 70.2 per 100,000 in white females and 11.3 per 100,000 in blacks (Vorobiof *et al.,* 2001; CANSA, 2005). However, black women present at later stages of disease, due, in part to a lack of access to oncology facilities and to cultural beliefs that link cancer to witchcraft (Pfeffer and Moynihan, 1996; Schlesbush and Van Oers, 1999; Vorobiof *et al.,* 2001; CANSA, 2005).

It has been suggested that, about 70-85% of patients present at the advanced stages of the disease, with attendant poor outcome resulting from poor patient compliance, lack of treatment options, poor drug supplies, inadequate transportation, and a shortage of trained personnel coupled with a negative attitude on the part of patients and some health professionals towards the disease and its treatment (Anim, 1993; Price, 1994; Albert and Schulz, 2003; and Parkin *et al.,* 2004). Cancer care services in Africa are desperately limited. Radiotherapy, which is used effectively on more than 50% of cancer patients in the developed world, is available in only 21 of Africa's 53 countries, or to less than 20% of the total population (PACT, 2007).

2:6 Differences in Breast Cancer situations in the United Kingdom and Ghana

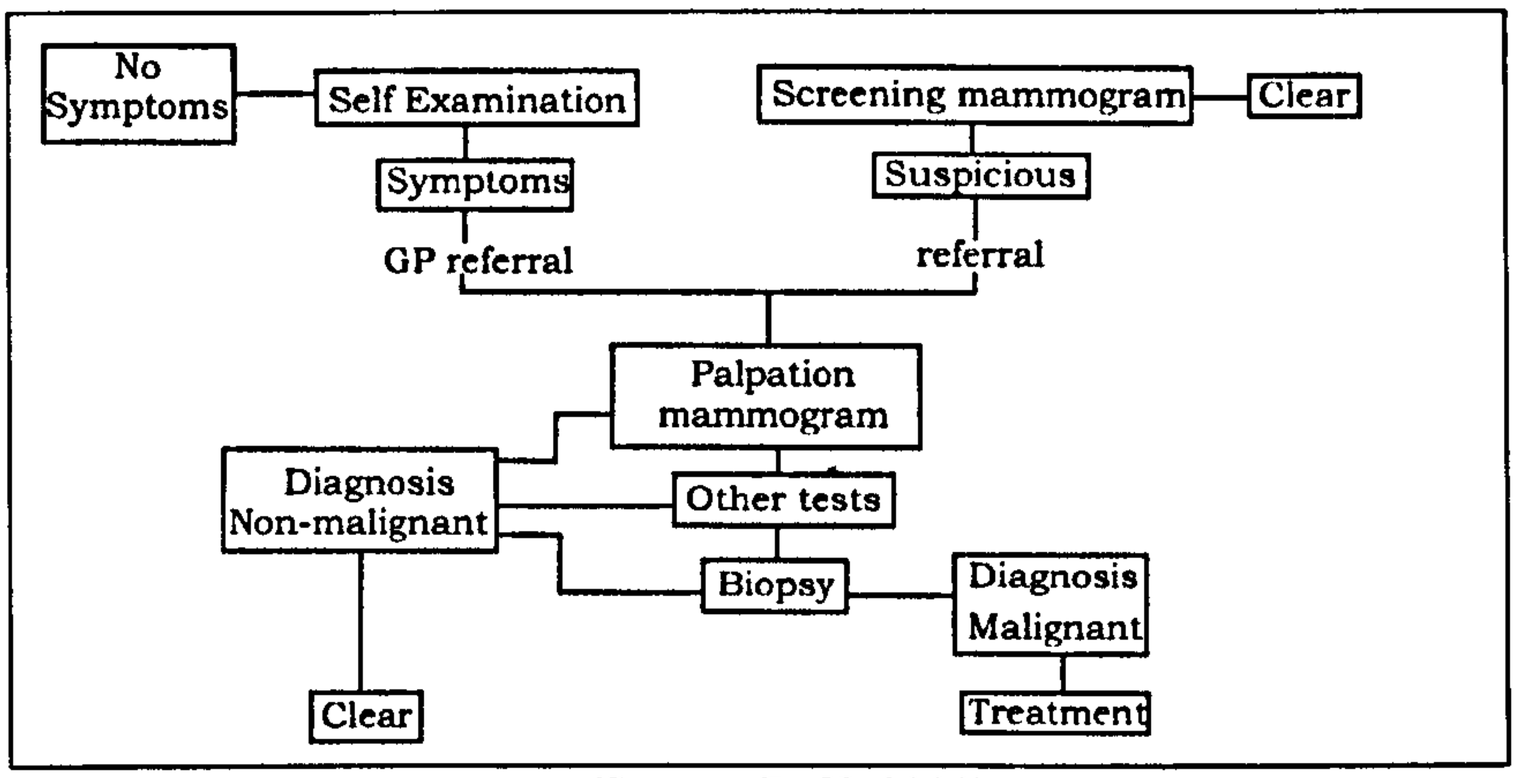
In order to appreciate the reasons for the wide variations in the survival outcomes of the disease between the developed world and developing world, it was considered necessary to look at the breast cancer situations and available interventions in the United Kingdom

and Ghana. This was done with the view of adapting the most appropriate strategies and programmes used in the United Kingdom to the prevailing socio-cultural and economic conditions in Ghana.

In the United Kingdom, breast cancer is the most common cancer in women. Each year almost 44,100 cases of breast cancer are diagnosed accounting for 30% of all cancers in women, with more than 12,500 deaths. One in nine women in the United Kingdom will develop breast cancer at some point in their lives. Four in five new cases are diagnosed in women over the age of 50, with the peak distribution of new cases in the 50-54 age groups (Coleman *et al.,* 1999; Coleman *et al.*, 2004; NHS, 2003b). This peak incidence is however largely as a result of the breast cancer screening programme, because many of these women would have been screened for the first time upon reaching 50 years www.stastistics.gov.org, 2003).

The developed countries have complex and sophisticated models for breast cancer care, run with sufficient resources at great costs (Ferro *et al.,* 1992; Sankaranarayanan *et al.,* 1998; Sankaranarayanan *et al.,* 2001). For example, in the United Kingdom, the annual budget for the NHS Breast Screening Programme alone is about £52 million, which adds up to about £30- £40 per woman (NHS, 2003a: NHS, 2003c; NHS, 2004; DoH, 2000). Women in the United Kingdom have a well organized pathway for breast cancer screening, diagnosis and treatment which can be accessed without much difficulty. The system is such that the screening programme is both accessible and supported by treatment facilities across the country. These too can also be accessed without much difficulty. For example, it only takes a woman who detects a breast abnormality to make an appointment with her General Practitioner for a clinical assessment, referral and treatment, at no direct cost, within a matter of weeks, as illustrated in the breast cancer care model in figure 2:6:1 on page 23.

Figure 2:6:1 Model for Breast Cancer Screening in the United Kingdom



(Source: DoH, 2000)

There are over 90 breast cancer screening centres across the United Kingdom with each centre covering about 45,000 women. The NHS Breast Screening Programme provides free mammographic breast screening every three years for all women aged between 50 and 70 who are routinely invited. Women over 70 are encouraged to make their own appointments. The model of breast cancer care appears to be working well and is benefiting the women who chose to participate. Every year, over 1.5 million women are screened, with a total of 14 million since the inception of the programme, from which over 80,000 cancers have been detected. In addition, all women now have two views of the breast taken at every screen craniocaudal and mediolateral (Blanks, 2004; http://www.cancerscreening).The screening, supported by improved treatment programmes has provided good opportunities for women in the United Kingdom, to the extent that it is not surprising that early stage at diagnosis and early treatments are common, leading to good outcomes. The survival rates for breast cancer have thus been improving for more than 20 years and the estimated relative five-year survival rate increased from 52% in 1971- 1975 to 80% in 2003 and the estimated twenty year survival rate has increased from 44% in the early 1990s to 64% in 2003 (Quinn *et al.*, 2003; Pisani and Forman, 2004; Coleman *et al,* 2004).

In addition to the facilities available to women in the United Kingdom, information on the disease is easily accessible from General Practitioners, mass media and on the internet (BCC, 2005). In view of the increased awareness among the women in the United Kingdom, knowledge of the disease is high among the general population, and there is a relatively positive attitude towards the disease (Selby, 1996; Hopwood, 2000). Knowledge and awareness of the disease among Black Ethnic Minorities in the United Kingdom has however, been found to be very low with these women having a negative attitude towards the disease (Scanlon and Wood, 2003; BCC, 2005). These findings are significant to the current study since there is a large Ghanaian population in the United Kingdom which forms part of the Black Ethnic Minority community. By implication therefore, the negative attitudes and behaviour seen among black women living in Ghana seem to be applicable to the Ghanaian women resident in the United Kingdom. It is particularly worrying that these women have failed to take advantage of the numerous opportunities offered by their host country to improve on their knowledge, attitude and behaviour towards breast cancer.

In Ghana, inadequate resources have been a limiting factor for effective breast cancer care. The overall budgetary allocation to the health sector in Ghana is woefully inadequate and for the year 2007, the total allocation to the Ministry of Health was the equivalent of £301 million (www.ghana.gov.gh). Access to basic health care is a major problem and about 40% of the population lives more than 15 kilometres from a health facility (www.who.int/countries). There are only 5 mammography centres serving the population of 22 million, of which women constitute about 51%. Out of the 10 geographical regions, the mammography centres are found in only 2 regions. Apart from the Center in Kumasi (169 miles north of Accra) all of the remaining 4 centres are located in Southern Ghana in the Accra-Tema area. Women from the northern parts of the country therefore have to travel very long distances to have a screening mammogram and in all cases, the financial cost is high. There are also only 2 radiotherapy facilities in the country catering for the whole population of Ghana and some patients from other countries in the West African Sub-region (NCRNM, 2003).

The average cost of a screening mammogram is ¢250,000, equivalent to £15, and this is paid by the patient at the point of service since there are no health benefits or health insurance operating in Ghana at the moment (Ghartey, 2001). In a country where the minimum daily wage is less than £1.00, this represents a difficulty for the average woman. In addition to the cost of mammography, the cost of transportation from the remote and northern parts of the country, where the majority of these women live, to the southern part of the country is an additional burden.

From the aforementioned, it is quite obvious that large variations exist in the health care settings and the levels of socio-economic development between the United Kingdom and Ghana. These variations make it difficult, if not impossible to introduce the western-type-models or schemes of cancer care, namely the routine mammographic screening and high-technological treatment facilities to Ghana, and other developing countries, because of the lack of appropriate resources, coupled with low awareness, cultural beliefs and negative attitudes towards screening and treatment for breast cancer. As a result of these factors poor outcomes of the disease are common occurrences. In addition to the above limitations imposed by Ghana's health system are the differences in the natural history of the disease between women in the United Kingdom and Ghana. In Ghana, breast cancer tends to affect younger women than their counterparts in the United Kingdom (Anim, 1993; Ghartey, 2001; NRCNM, 2003). This makes a routine mammographic screening not a better option because of the fact that clinical studies have not been able to confirm the efficiency of mammogram in younger women due to its technical limitations in patients with denser breasts (Alexander *et al.,* 1999). There is, therefore, an urgent need to develop socially and culturally specific strategies, based on the natural history of the disease, which could be adequately supported by the economic realities that exist in Ghana, and which can be maintained at every stage of the country's development. The development of such strategies is the main impetus of the present study.

The study, therefore, proposes a breast cancer care model for Ghana (figure 2:6:2 page 27) which can help to improve breast cancer care in the absence of the "sophisticated" breast care models of the western world, including routine national mammographic screening programmes.

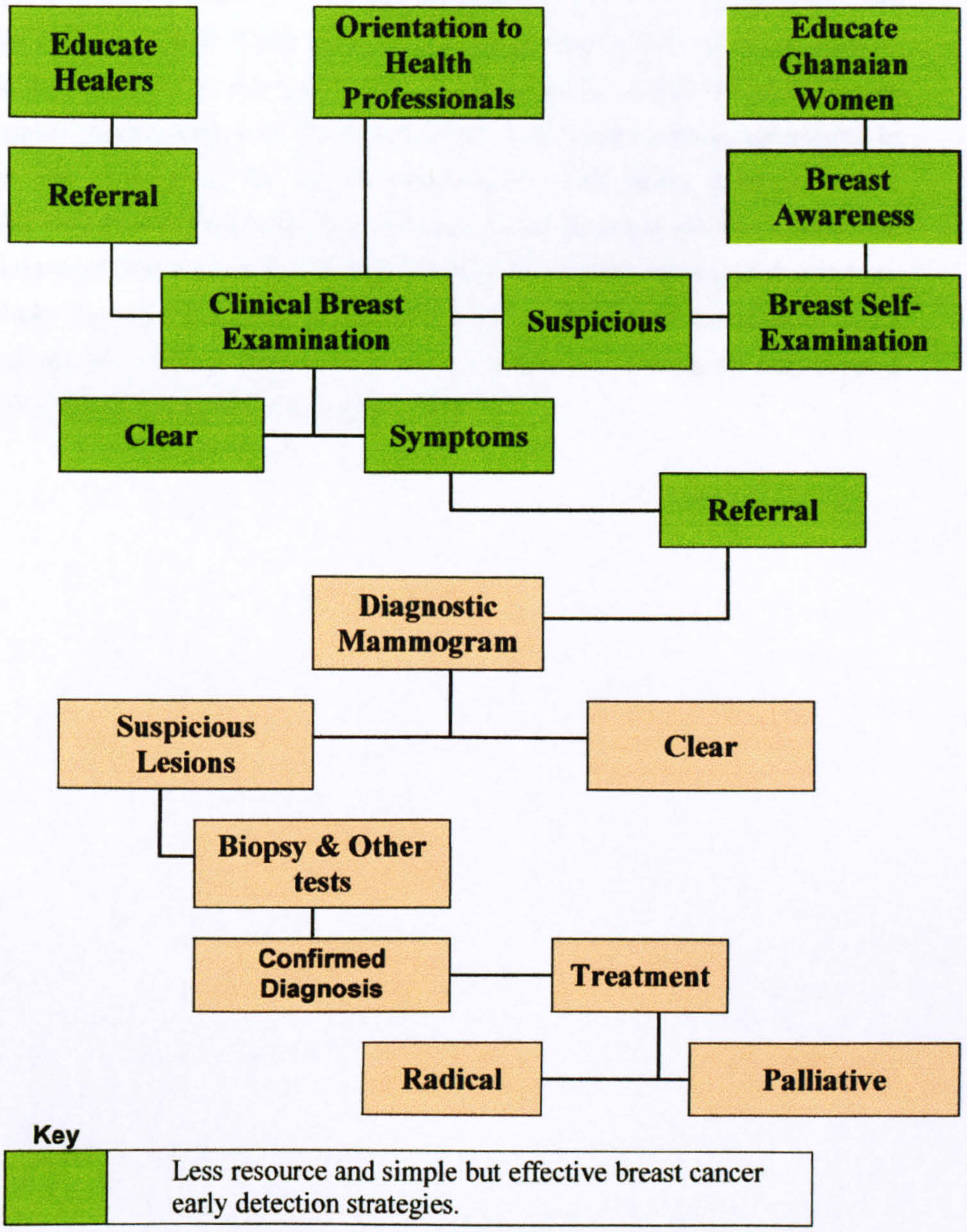
The first approach in the proposed model is to increase awareness about the disease, with more emphasis on the importance of early detection and treatment. The mass media, which has been found to be very effective for disseminating health information in Ghana (table 6:4:1 page 64), can particularly be used together with other methods to talk about the disease in the local languages. Along creating awareness, Ghanaian women can be taught and encouraged to undertake breast self-examination and report to a health professional any suspicious finding for clinical evaluation and referral when necessary.

The second element of the model, which is equally important, is to encourage wide spread adoption of clinical breast examination at all levels of health care and encourage health professionals to include breast examinations in the overall clinical assessments of their female patients. Traditional healers can also be educated to recognize breast cancer and be encouraged to refer suspicious lesions to the hospitals and clinics for clinical evaluation.

The small number of mammogram centres can then be used for diagnostic purposes and screening for high risk or symptomatic women, rather than for asymptomatic screening, as is the case in the United Kingdom.

The third element of the model is the provision of facilities for treatment. It is important to underscore the inextricable link between breast awareness, early detection strategies and availability of affordable and appropriate treatment opportunities to take care of the increasing numbers of patients who would require treatment as a result of the increased awareness and improved early detection and diagnosis programme. The importance of the development of an early referral system, including the traditional healers is stressed. An important element of the approach is to develop palliative care to cater for patients who will not benefit from radical treatment. To lessen the pressures on the two cancer centres in Accra and Kumasi, to enable them to concentrate on patients who require radical treatments, doctors in the regional and district hospitals could be encouraged to take over the palliative care, a measure that will also spare many breast cancer patients the added burden of travelling long distances for analgesics.

Figure 2:6:2 Proposed Model for Breast Cancer Care in Ghana



The rationale for presenting the model at this early stage of the thesis is because it forms the core of the study from which all the subsequent discussions and recommendations

emanate. The model illustrates a series of possible strategies and programmes. The strategy in the right-hand column (with the first cell labelled 'Educate Ghanaian women' ending in 'Breast Self Examination' and coloured green) are simple but cost-effective strategies for breast cancer early detection and these can be conveniently implemented in Ghana. The strategies in the orange coloured cells of the model, however, require adequate resources to provide facilities for diagnosis and treatment and this is where the Government of Ghana is expected to show serious commitment. The proposed model can only make the expected impact to improve breast cancer if it is implemented in its entirety. Specific strategies and programmes as contained in this model are fully covered in the discussion part of the thesis in chapter eight.

Chapter 3 Health Systems in Ghana

3:1 Brief Description of Ghana

Ghana is a country in West Africa which covers an area of 238,537 square kilometres (92,000 square miles) just below the size of the United Kingdom, about 750 kilometres north of the equator on the Gulf of Guinea, between the latitudes of 4^0- $11{\cdot}5^0$ north. The climate is tropical, characterized most of the year by moderate temperatures generally 21° C – 32°C (70° -90° F), with constant breeze and sunshine. There are two rainy seasons, from March to July and from September to October, separated by a short cool dry season in August and a relatively long dry season in the south from mid-October to March (Ghana High Commission, London, 2004).

The population of Ghana is approximately 22,409,572, of which 51% are females and 49% males. The adult literacy rate is 64.5% and the working population constitutes 48% of which 82% are in some form of employment mostly in the informal sector. Predominantly, Ghana is a Christian country with 69% Christians, 15.6% being Muslims, Traditionalists 8.5% and others 6.6% (Ghana Population Census, 2000; UNDP, 2004; Ghana Statistical Service, 2006; World Health Statistics, 2006).

3:1:1 Vital Statistics for Ghana

0-14 years = 38.8% (*Male 4,395,744/ Female 4,288,720*)

15-64 years = 57.7% (*Male 6,450,828/ Female 6,483,781)*

Over 65 years = 3.5% *(Male 371,428/ Female 419,071)*

Median age = *Total* =19.9 years (*Male: 19.7 years Female: 20.1 years)*

Population growth rate =2.07%

Birth rate =30.52 births/1,000 population

Death rate= 9.72 deaths/1,000 population

Life expectancy at birth = Total population 58.87 years (*Male:* 58.07 /*Female:* 59.69)

Table 3:2:1 Vital Statistics of Ghana

Indicator	Value % (2003)
Total expenditure on health as percentage of gross domestic product	4.5
General government expenditure on health as percentage of total expenditure on health	31.8
Private expenditure on health as percentage of total expenditure on health	68.2
General government expenditure on health as percentage of total government expenditure	5.0
External resources for health as percentage of total expenditure on health	15.8
Social security expenditure on health as percentage of general government expenditure on health	N/A
Out-of-pocket expenditure as percentage of private expenditure on health	100
Private prepaid plans as percentage of private expenditure on health	0.0
Per capita total expenditure on health at average exchange rate (US$)	16
Per capita total expenditure on health at international dollar rate	98
Per capita government expenditure on health at average exchange rate (US$)	5.0
Per capita government expenditure on health at international dollar rate	31.0

(World Health Statistics, 2006)

3:2 Health Structure of Ghana

Before the advent of scientific medicine in Ghana, the traditional medical practitioner was the sole practitioner of medicine. The Traditional medical practitioner employs magico- religious acts and concepts to determine the causes and course of diseases before treatment is initiated in terms of medication (Nukunya, 1992). Currently there are two main types of practitioners of medicine in Ghana, the traditional and the scientific (conventional) medical practitioners. Such a co-existence of the traditional and scientific medical institutions is a common phenomenon in the developing countries (Twumasi, 1995). These two institutions of medicine hold different, though not mutually exclusive, views regarding their respective practices. Any conflict therefore which may arise

between these two forms of medicine has a disruptive effect on the well being of the people in their pursuit of medical attention, especially so in the contemporary setting of many rapid social changes (Twumasi, 1995).

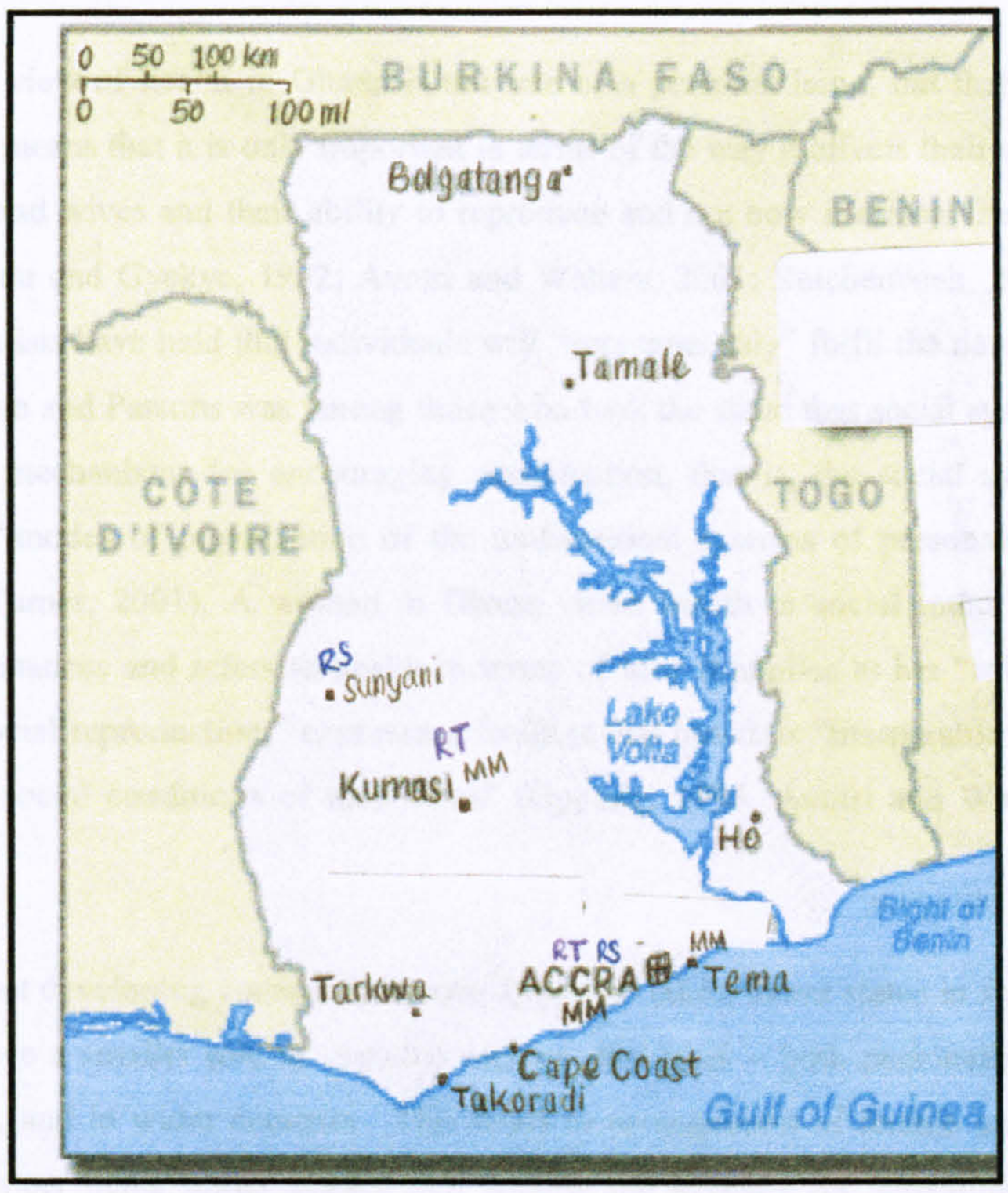
In the developed world, diseases are most often seen as natural phenomena and are therefore subject to investigation and study by scientific methods. Consequently, beliefs about the causes of various diseases require scientific proof to substantiate them. Answers to questions of aetiology are therefore sought with diagnostic investigations and in the field under controlled conditions (Twumasi, 1991). However in the traditional Ghanaian setting, as in many other developing countries, many if not most diseases are seen as manifestations of supernatural powers, thus causal explanations in these settings are sought in that direction (Twumasi, 1991; Marshall, 1995). The obvious question therefore is - to what extent have these cultural and traditional beliefs influenced the women in the developing world leading to negative attitudes and low participation rates in breast cancer screening practices and programmes?

The Ministry of Health in Ghana is responsible for providing all the integrated health services in the country. The constraints under which health care is provided in Ghana have two major consequences for the designing and implementation of health services (Ministry of Health Ghana, 2001). In the first place, health programmes and facilities must reach the rural communities if they are to solve the dual problems of overcoming the distance and effecting the changes in the attitude and behaviour. Secondly, inadequate health facilities and insufficient numbers of health professionals, due to limitations in resources, leads to inequalities in access to health care delivery. Patients pay at the point of service for medical care since there is no system of health benefits; the proposed National Health Insurance Scheme in Ghana is yet to be operational. These situations tend to impact negatively on the health seeking behaviour of many Ghanaians because in many cases the costs of such care are beyond their means.

Ghana has a four-tier health care delivery system, which includes the two Teaching Hospitals located in the national capital, Accra and the second largest city, Kumasi. These facilities are intended to provide tertiary medical care, teaching and research. The

only 2 facilities for the management of cancer patients in the country, including Radiotherapy, are found at these Hospitals. There are 10 Regional Hospitals, one in each of the 10 Regional capitals, which serve as referral centres for the District Hospitals and provide specialist services. The District Hospitals are located in each of the 110 Administrative Districts of the country (Ministry of Health Ghana, 2001).

Figure 3:1 Map of Ghana showing the locations of the facilities for Mammography Screening and Radiotherapy and the Research Sites



Legend

RS	**Research Sites**
RT	**Radiotherapy Ctrs.**
MM	**Mammography Ctrs.**

3:3 Cultural and Social Influences on the Health Seeking Behaviour of Ghanaians

Culture consists of a body of learned beliefs, traditions and guides for behaving and interpreting behaviour that is shared among the members of a particular group (Mona, 1997). It includes values, beliefs, customs, communication styles, behaviours, practices and institutions and influences an individual's behaviour, health beliefs and medical treatment outcomes (Mona, 1997; Bowling, 2002).

The populations' view of health in Ghana is not one of a personal issue, but that of a social issue. This means that it is only important in terms of the way it affects their social roles as mothers and wives and their ability to reproduce and not how it affects them as individuals (Wiredu and Gyekye, 1992; Avotri and Walters, 2001; Reichenbach, 2002). Some social scientists have held that individuals will "spontaneously" fulfil the demands of the social system and Parsons was among those who took the stand that social systems must have some mechanisms for encouraging participation, that is, the social system develops certain "modes of organization of the motivational systems of personalities" (Robertson and Turner, 2001). A woman in Ghana views health in social rather than individual circumstances and refers to health in terms of how it applies to her "roles in production and social reproduction," expressing feelings that health is "inseparable from the material and social conditions of their lives" (Oppong, 1995, Avotri and Walters, 2001).

In Ghana, like most developing countries, women appear to take a lower status in society than men, and have a smaller role in decision making processes – both personally and within the family, and in wider contexts. This leads to management of female cancers such as breast cancer being under funded and lacking the urgency for screening and treatment seen in many western countries (Okojie, 1994; Walters *et al.,* 1999). In Ghana's patriarchal society the role of a woman is first and foremost that of a mother and of a wife (Walters *et al.,* 1999). The importance of these roles has a severe impact on the health of the women, with health needs coming second to these roles, which also limits

their levels of self-determination to exercise control over their lifestyles (Awusabo – Asare and Anarfi, 1997; Walters, 1999).

Ghanaian women explain illness in terms of religious or spiritual factors and maintain that "fate" plays a vital role in determining who becomes ill and the outcome of the disease process (Avotri and Walters, 2001). Diseases whose aetiology cannot easily be explained have been given supernatural explanations in Ghana. Appiah-Kubi (1981) cited in Awusabo-Asare and Anarfi (1997) stated that diseases of such nature may be attributed to the commission of an offence against one's spirits, the ancestors or gods or an omission of duty on the part of an infected person. It can also be attributed to a curse from a jealous neighbour, a rival, a family member, or somebody who has been wronged. Such explanations of disease causation in Africa make it difficult for some people to accept the advantages of some interventions such as breast cancer screening (Awusabo – Asare and Anarfi, 1997). Although in general the people of Ghana accept the germ theory of disease causation, fundamental questions may be raised about the occurrence of a disease at a particular time, or why a disease affects specific individuals. In an attempt to find answers to such questions the supernatural explanation emerges. Such reactions have been observed with tuberculosis, guinea worm, cancer and other rare diseases in Ghana, in spite of the availability of cures for some of them (Awusabo – Asare and Anarfi, 1997). The common diseases such as malaria, diarrhoea and chicken pox are readily accepted as a breakdown of bodily functions. However, under certain circumstances death from common diseases such as malaria and diarrhoea may be questioned (Awusabo – Asare and Anarfi, 1997). On the other hand, the supernatural explanation of ill-health makes it possible to rationalize difficult situations, especially when attempts to treat the patient fail (Castle, 1994). A study in rural communities in the Northern Region of Ghana to determine how the people perceived and coped with lymphatic elephantiasis discovered a great deal of fatalism in the lives of many Ghanaians. It became apparent that the people believed the disease was "mainly attributed to supernatural and spiritual factors" (Gyapong *et al.,* 1996). Gyapong et al (1996) quote an interview where it was stated, "*We will leave God to decide on what will happen to us because we do not know what to do anymore*".

Breast cancer fits into the type of disease whose origin is explained by supernatural causes. Cultural expectations and responses still influence, and at times dominate, the outcome of this disease process, either for good or bad (Awusabo – Asare and Anarfi, 1997; UNICEF, 2004). In view of the supernatural explanation given to breast cancer and also the high mortality of the disease in Ghana, a high level of fatalism has been reported among Ghanaian women (Walters *et al.,* 1999; Mayo *et al.*, 2001). This belief that death is inevitable when cancer is present is confirmed by this study and is expressed particularly by the women who participated in the interviews (Appendices iv and v- page 178 and 203 respectively). These women feel powerless and helpless to impact on their condition so they surrender to fate and divine intervention in some instances. This fatalistic attitude is likely to impact on the way that breast self-examination, clinical breast examination or mammographic cancer screening is going to be perceived or accepted by the women. For example, Ghanaian women are less likely to see the benefit of breast cancer screening as it will simply tell them sooner that they are going to die (Avotri and Walters, 2001; Reichenbach, 2002).

Education will play an important role in modifying these beliefs and attitudes, but this should be underpinned with the provision of support and improved facilities for breast cancer and breast cancer treatment in Ghana, if any effort aimed at improving breast cancer outcomes is to achieve the expected results.

Because of the supernatural explanation given to cancer in some cases, traditional healers, herbalists and spiritualists have become an important health care outlet used in Ghana (Twumasi, 1995; Awusabo – Asare and Anarfi, 1997). However, the extent of their involvement is unclear, and it is also not clear if their contributions impact positively or negatively on the outcome of the disease. As part of this study, the role of traditional healers in breast cancer was explored, but as this constitutes a research question in its own right the findings will require further analysis from an anthropological, medical and pharmacological perspective.

4:1 Introduction

It is virtually impossible to do research without a theoretical framework, which can be used as an interpretative guide to reality and plays a crucial role in generating ideas (Hale, 1995; Alderson, 1998; Peterson and Tremblay, 1999; Gatrell, 2002). Studies on breast cancer in a developing country such as Ghana present a complex phenomenon and it is a grossly understudied area. It was therefore important to take into consideration a broad-range of explanatory theories to help explain the phenomenon, especially to achieve the required attitudinal and behavioural changes which would help to improve breast cancer care in Ghana.

With the recent advances in DNA-related research and knowledge, many people have come to believe that genomic science will uncover the gene responsible for each health condition and obviate the need to tackle behaviour. However it is known that behaviour would continue to account for the greatest variance in the occurrence and progression of disease (Clark *et al.,* 2002). The actions of people play a vital role in health care systems, resources, and disease prevention and progression. A person's behaviour not only influences their expected health outcomes and care pathways, but can also have an influence upon determining their health status in the first place. For example an individual's sexual behaviour will have an influence upon their susceptibility to sexually transmitted diseases (Becker *et al.,* 1977; Glanz *et al.,* 1990).

Behavioural research is central to the prevention, early detection, and control of cancer. Approximately 65% of cancer deaths are attributable to behaviour such as smoking, alcohol and diet. For example, an increased understanding of barriers to cancer screening has made it possible to develop effective strategies to promote adherence to breast and cervical cancer screening (Hiatt, 1997). Behavioural research has also made major contributions to our knowledge of individual and treatment-related variables that impact on quality of life among persons with cancer. Ultimately, the successful application

new knowledge from basic, clinical, and cancer control research will depend on the behaviour of the public, patients, and health professionals (Kaluzny, 1997).

Knowledge, attitudes, behaviour and practices (KABP) surveys are possibly the most frequently used studies in health-seeking behaviour research (Hausmann-Muela *et al.,* 2003). Knowledge is usually assessed in order to see how far community knowledge corresponds to biomedical concepts. Typical questions include knowledge about causes and symptoms, as well as treatment options and outcomes of the disease under study. Peoples' reported knowledge which deviates from biomedical concepts is usually termed 'beliefs' (Good, 1994). Knowledge, attitude, behaviour and practices studies are important in designing health promotion campaigns which aim to change attitudes, for example to improve cancer prevention and to promote condom use for the prevention of AIDS, and usually enquire about the use of preventive measures or different health care options. Above all, knowledge, attitude and practices surveys yield highly descriptive data and one of the major unresolved questions in health-seeking behaviour studies is how far knowledge actually determines practice (Petty *et al.,* 1997; Lane, 1997; Hausmann-Muela *et al.,* 2003). It is quite obvious that apart from the respondents' knowledge on breast cancer in the current study, a range of other factors, including but not limited to; unavailability of health facilities, financial constraints to pay for preventive or treatment services, and cultural practices all contribute to the poor outcome of the disease in Ghana and this calls for multiple approaches to addressing the problem.

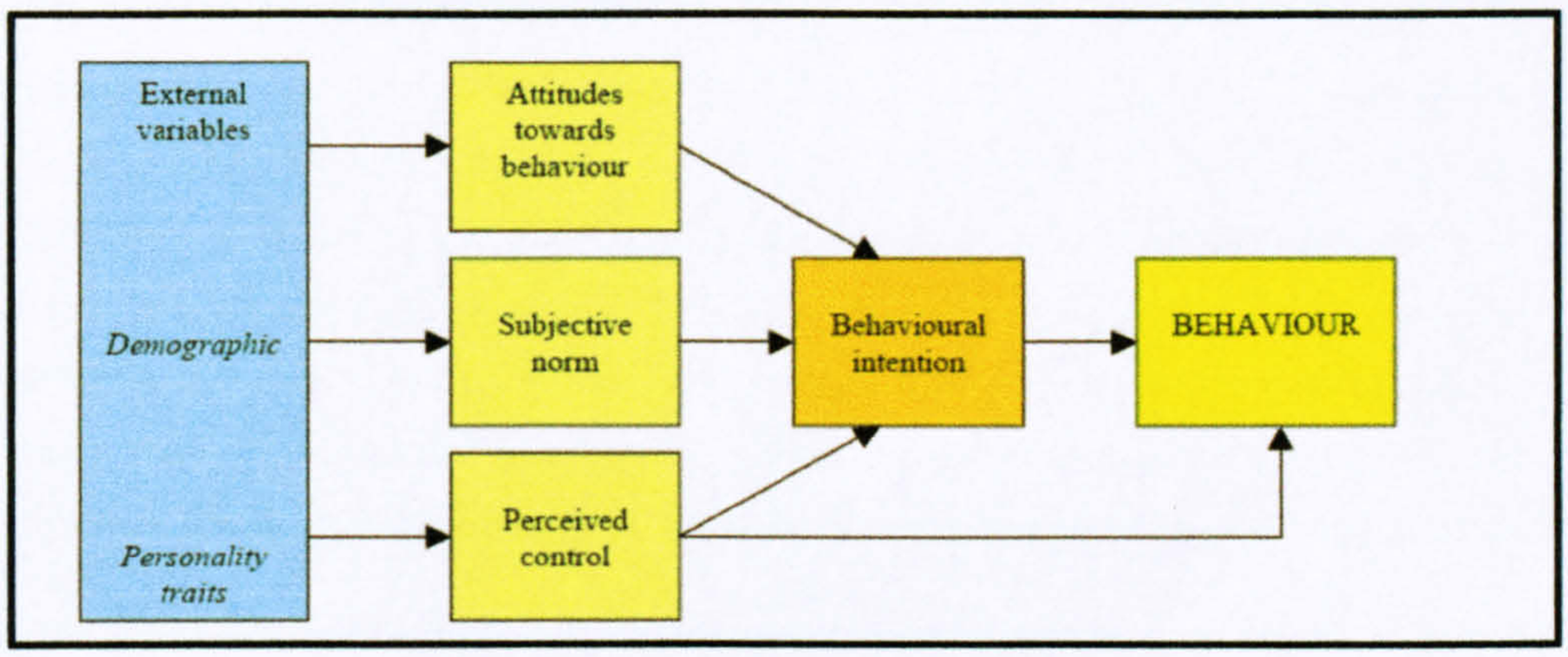
4:2 Theoretical Model for Attitudinal and Behaviour Change

Health beliefs can be categorized in many ways, but the underlying assumption is that these beliefs drive corresponding behaviours (Ajzen, 2000; Hausmann-Muela *et al.,* 2003). Effective public health, health promotion, and chronic disease management programmes help people maintain and improve health, reduce disease risks, and manage chronic illness. Not all health programmes and initiatives are equally successful, however (Ajzen, 2000; Hausmann-Muela *et al.,* 2003). Health interventions and programmes are more successful when they are grounded in the appropriate health behaviour change models. These models are used in strategic planning, development and managing the programmes (Ajzen, 2000; Hausmann-Muela *et al.,* 2003). Several models to predict

health behaviours have been developed over the years. Examples are, social cognitive models such as the health belief model, health locus of control, protection motivation theory, the theory of planned behaviour, and social cognitive theory to name but a few.. In public health, probably the most utilized models are the health belief model, the theory of reasoned action and its later development to the theory of planned behaviour (Godin and Kok, 1996; Conner and Armitage, 1998; Ajzen, 2000; Hausmann-Muela *et al.*, 2003).

Once the critical determinants of the poor outcome of breast cancer in Ghana (poor knowledge, negative attitudes, and limitations in the health care system) have been identified, it is important to develop health communication interventions to change these determinants. This study therefore proposes the use of the theory of planned behaviour as a communication and educational model to help improve breast cancer early detection and treatment and thus improve the overall disease outcome in Ghana. The model centres on factors which lead to a specific intention to act, or behavioural intention, which the theory situates between the attitudes and behaviour (Fig 4:1 on page 38). A person's subjective norm, in turn, is an interactive function of the strength of the person's beliefs about whether specific people want them to do the behaviour or not and the strength of the person's desire to please or otherwise comply with those people (Montano and Kasprzyk, 2002).

Figure 4:1 Theory of Planned Behaviour adapted from Ajzen, 2000



In the theory of planned behaviour, behavioural intention is determined by:

- Attitudes towards behaviour, determined by the belief that a specific behaviour will have a concrete consequence and the evaluation or valorization of this consequence.
- Subjective norms or the belief in whether other relevant persons will approve of one's behaviour, plus the personal motivation to fulfil the expectations of others.
- Perceived behavioural control, determined by the belief about access to the resources needed in order to act successfully, plus the perceived success of these resources (information, abilities, skills, dependence or independence from others, barriers, opportunities etc.)
- Socio-demographic variables and personality traits which condition attitudes, subjective norms and perceived behavioural control. These are the same as in the Health Belief Model (HBM).

An outstanding aspect of the theory of planned behaviour is the central role of social network support and peer group influence (Ajzen, 2000). A key factor emphasized in the theory is the encouragement of feelings of self-control and self-efficacy. The theory has been used in several breast cancer screening studies in order to stimulate and increase screening uptakes (Orbell *et al.*, 1997; Meyer-Weitz *et al.*, 2000; Rutter, 2000; Godin *et al.*, 2001; Drossaert *et al.*, 2003; Steadman and Rutted, 2004; Michie *et al.*, 2004).
The theory as applied to this study is described in section 8:10 under increasing the awareness level, improving the knowledge base and attitudinal change through health education and promotion on page 119.

Chapter 5 Research Design

5:1 Introduction

This chapter describes the aims and objectives of the study and reviews the methods and procedures adopted for data collection that were used to solve the research problem. It includes an overview of sampling techniques, data sources and analysis. Multiple primary methods of data collection were used to ensure reliability and validity of the study and to further give a broader representation. Limitations of the study are also included in this chapter.

A mixed method approach using quantitative and qualitative techniques was adopted to make use of the advantages of each method and to enable triangulation, which helped to gain an insight into the knowledge, attitudes and behaviour of Ghanaian women as regards to breast self-examination, clinical breast examination and mammography. The inherent strengths of both quantitative and qualitative approaches tend to complement each other and go some way to alleviate the weaker aspects of each (Yach, 1992; Hugentobler *et al.*, 1992; Chen *et al.*, 1993; Creswell, 1994; Seale, 1999; Webb, 1997; Lindsay, 2002; Nelson *et al.,* 2005). Mixed methods also provide a powerful means for analysis and interpretation of data from the questionnaires and the interviews which helped to obtain information required to make the appropriate recommendations for Ghana's health decision makers to improve breast cancer.

5:2 Research Sites

Ghana is made up of 10 administrative regions, composed of numerous towns and villages. The majority of the population (65-70%) resides in the rural areas of the country. The Cities of Accra and Sunyani were selected for the study. Accra is the National Capital and it serves as the commercial, business and administrative center of the country. Sunyani, the Capital of the Brong Ahafo Region, is a traditional town, 240 miles from Accra as shown in the map of Ghana in figure 3:1 (page 32). These areas were chosen for two main reasons. Accra has relatively improved health services and facilities compared to Sunyani and supposedly the women in Accra have a higher socio-

economic status (as measured by higher education, secured job and good income) than their counterparts in Sunyani. These areas were therefore selected to represent a cross-section of the female population in Ghana and to determine whether the different levels in health care services and facilities in the two areas, as well as the differences in socio-economic variables would produce any significant outcome.

5:3 Sample size Calculation and Sampling Technique (Quantitative)

With a 95% confidence level and a sampling error of 3% (sample values do not deviate from the true population values by more than 3%) and a sample power of 80%, a sample size of 500 was obtained using a standard formula for estimating sample size (Altman, 1991- Nomogram for calculating power size). The main idea behind the sample size calculations was to have a high chance of detecting, statistically, a worthwhile effect - if it exists, and to be able to reject it if no such effect exists. The greater the power of the study, the more certain one can be, but greater power requires a larger sample (Altman, 1991).

In view of the large geographical area of Accra, it was difficult to cover the entire city. In an attempt to overcome this problem cluster, or area, random sampling was used in addition to systematic sampling. Cluster or area sampling is useful in situations like this, and it was done primarily for efficiency in administration of the questionnaires (Fink and Kosecoff, 1998; Bernard, 2000; Trochim, 2002). The city of Accra was divided into 8 clusters (along geographic boundaries). Each cluster was assigned a digit and the 4 clusters, namely Dansoman, Mamprobi, Asylum Down and Korle Gonno were randomly picked from the 8 clusters. This was meant to represent the cross-section of the female population in Accra. For each of the 4 clusters, a sample frame was developed from a database that had been produced by the Maternal and Child Health Services Division (MCH), from the 2000 Voters' Register compiled by the Electoral Commission of Ghana. The lists were screened to exclude voters under the age of 40 and those of the age of 70, as these age groups were not part of the inclusion criteria.

At this point systematic sampling was used. The *(N)* individuals in the population frame were partitioned into *(k)* groups by dividing the size of the population frame *(N)* by the desired sample size *(n)* (Crookes and Davies, 2004; Hicks, 2004). That is,

$$k = \frac{N}{n}$$

where k was rounded to the nearest integer. To obtain a systematic sample, the first individual to be selected was chosen at random from k individuals in the first partitioned group in the population frame, and the rest of the sample was obtained by selecting every k individual thereafter from the entire population listing (Crookes and Davies, 2004; Hicks, 2004). Thus, the numbers 1-20 were written on pieces of papers and a number was randomly picked which became the reference number; this was the number "6" and using the sample fraction calculations, the figure 15 was obtained. Thereafter, starting with number 6, every 15th number on the list was selected as a potential participant (Crookes and Davies, 2004; Hicks, 2004). Using probability, the process was followed until the names and contact details of 370 women aged between 40 and 70 years were selected from the sample frames in the 4 areas in Accra, namely, Dansoman, Mamprobi, Asylum Down and Korle Gonno as potential respondents. This modified type of cluster sampling was adopted so that every unit in the population would have the same chance of being selected. The same process was also used to select 160 women from Sunyani. A total sample size of 530 was used, rather than 500 as previously suggested.

5:4 Quantitative Data

The quantitative method was a cross-sectional survey that used questionnaires. An extensive literature review was carried out to develop this questionnaire. The Toronto Breast Self-Examination Inventory (www.bmc.med.utoronto.ca) and Champion's (1993) Breast Self-Examination questionnaire were particularly adapted. The questionnaires included both closed- and open-ended questions on women's knowledge of risk factors, the causes as well as the symptoms of breast cancer. Other areas covered included, but were not limited to, perceptions on the incidence and prevalence of the disease in Ghana, attitudes towards breast cancer screening and practices; treatment options and the role of the traditional healers in breast cancer care in Ghana (Appendix iii on page169). The open-ended questions, which provided some qualitative data, were intended to allow the respondents the opportunity to reflect and give answers free of the limitations that are imposed by fixed-choice questions (Taylor and Bogdan, 1998; Gomm *et al.*, 2000).

During the data collection period, the respondents were first contacted in their homes and then administered with the questionnaires. The respondents were told the objectives of the study as well as the confidentiality of their responses. It was a difficult task reaching all the respondents and in some instances, extra efforts had to be made to obtain the consent of some respondents and visits had to be rescheduled at the convenience of the respondents, but at the end of the period it was possible to administer the questionnaire to 500 respondents. Probably, a much easier and more convenient approach would have been a postal questionnaire (Salant and Dillman, 1994; Gibson *et al.,* 1999; Edwards *et al.*, 2002; Athene, 2003), but a number of considerations meant that this method was not suitable to be used. The first consideration was the often unreliable postal system in Ghana. Secondly the postal questionnaire method is not a common practice in Ghana, this is because of cultural and traditional practices which put the responsibility on the person who is seeking "a favour" to make a physical appearance to request for the help needed, this necessitated a face-to-face encounter. These factors made the postal questionnaire a less suitable option because the response rate would have been poorer. This is in sharp contrast to the United Kingdom where postal questionnaires and telephone surveys are commonly used and often with good results (Gibson *et al.,* 1999; Edwards *et al.*, 2002; Athene, 2003; Conway and Harvey, 2005). Another approach was to have engaged more people to administer the questionnaires, but to ensure uniformity; it was decided to personally administer all the questionnaires, although with much difficulty. Overall, the respondents showed great interest in the project and cooperated well in the exercise. However, during the data input, 26 of the questionnaires were found to be incomplete because the respondents could not provide sufficient information. For example, in some instances, respondents could not even provide their birth dates and those questionnaires were considered unmeritorious and were therefore rejected. Difficulty in recalling information is often associated with surveys. The 26 rejected questionnaires were made up of 14 from Accra and 12 from Sunyani, leaving the total number of valid questionnaires at 474 (94.8%), which was well above the expected 60% rate as suggested by Salant and Dillman (1994).

5:4:1 Reliability and Validity

It is good research practice, to demonstrate that the data collected from the questionnaire are valid and reliable so as to avoid doubts being cast over the robustness of the data that were collected. A variety of approaches was therefore undertaken, and included examining the reliability and validity of the questionnaire and a pilot study. To evaluate the validity and reliability of the questionnaire, SPSS version 12.0 was used to calculate Cronbach's Alphas for each item within the instrument. Internal consistency was examined to understand whether the items correlated with each other within the instrument. Cronbach's Alpha is the most commonly used estimate of internal consistency of items in a questionnaire (Bryman and Cramer, 1995; Hopkins, 2000; McColl *et al.,* 2001).

Construct validity was determined to ensure that interpretation of scores on the instrument could be realized based on the objectives of the study (Fink, 1995; Jones and Bearley 1996; Trochim and Donnelly, 2007).

Content validity of the questionnaire was evaluated in order to establish the appropriateness of the instrument's intended use, that is, to calculate the correlations between sociodemographic characteristics of the respondents and their knowledge, attitude and breast cancer screening practices (Fink, 1995; Jones and Bearley 1996; Trochim and Donnelly, 2007).

The Cronbach's Alpha for the questionnaire was 0.95, suggesting a satisfactory level of consistency. The widely accepted social science cut-off of Alpha should be 0.70 or higher for a set of items (Bryman and Cramer, 1995; Hopkins, 2000; McColl *et al.,* 2001). A negative scoring item, that is, one that did not correlate, was deleted from the questionnaire and this gave the instrument the satisfactory Cronbach's Alpha.

A pilot study was carried out primarily before the main study to test for the reliability and validity of the questionnaire and also to evaluate the research methodology in general (Fink, 1995; Jones and Bearley 1996; Trochim and Donnelly, 2007). A total of 64 women aged between 40 and 70 years were randomly selected from Accra. The respondents who participated in the pilot study were excluded from the main study. Although it is recognized that the pilot study should have been carried out at both Accra and Sunyani

(Fink, 1995; Jones and Bearley 1996; Trochim and Donnelly, 2007) resource and time constraint prevented this. However in view of the fact that the questionnaires in both the pilot and the main studies were personally administered, the responses recorded did not seem to show any significant variations in the main study. Due to the long distance from London to Ghana and other logistics constraints, it was not possible to carry out test-retest of the questionnaire after the pilot study.

The factual validity of the questionnaire was further assessed by comparing responses from the pilot study with responses from previous studies on the same topic in the literature, which were similar in most instances (Fink, 1995; Jones and Bearley 1996; Trochim and Donnelly, 2007). Also, comparing the responses from the questionnaires with the responses from the semi-structured interviews (Appendices iv and vii) which were similar, provided an assurance of the reliability and validity of the data generated.

5:4:2 Analyses of the Quantitative Data

The Statistical Package for Social Sciences (SPSS) software version 12.0 was used to analyse the quantitative data based on the objectives and research questions of the study. Analysis of the quantitative data was done in two phases. First, descriptive statistics (Altman, 1991; Bryman and Cramer, 1995; Norusis, 2000) were calculated to characterize demographic and socioeconomic characteristics, use of health services, and the knowledge on the disease, perceived severity of the disease and main causes of death from the disease In the second phase of analysis, the women's self-reported screening rates were calculated. Significance testing of associations was conducted using Spearman's rank correlation coefficient tests (Altman, 1991; Bryman and Cramer, 1995 Norusis, 2000). Significance testing of differences was conducted using the chi-squared test for nominal data and Mann Whitney U test for ordinal data (Altman, 1991; Bryman and Cramer, 1995; Norusis, 2000). Several rates and percentages were generated from the quantitative data and it was much easier and simpler representing the quantitative data in the form of contingency tables which were used to demonstrate variables such as location, age groups, educational levels, marital status as well as job status (Altman, 1991; Bryman and Cramer, 1995). Where comparisons of results were needed graphs and

charts were used to represent some information, which also had the advantage of enhancing visual appreciation (Altman, 1991; Bryman and Cramer, 1995).

5: 5 Qualitative Data

5:5:1 Introduction

In evaluating public health programmes, the tradition has been to design quantitative approaches, relying on epidemiological and statistical techniques to determine if and to what extent a programme has an effect on a predetermined targeted population. More recently, however, the approach has seen the combination of both qualitative and quantitative methods (Yach, 1992; Hugentobler *et al.*, 1992; Chen *et al.*, 1993; Seale, 1999; Lindsay, 2002; Nelson *et al.*, 2005).

After analyzing the data from the 474 questionnaires, it was found necessary to obtain additional information from wider sources to clarify issues and confirm the findings which also ensured the reliability and dependability of the study. The qualitative method was used as a follow-up to the conclusions drawn from the quantitative data analysis and enhanced a better understanding of the quantitative results. One-to-one semi structured interviews were conducted with some key stakeholders in breast cancer in Ghana, which included ten (10) breast cancer patients in Accra, ten (10) women who attended the Breast Clinic at the Korle Bu Teaching Hospital and three (3) Consultants at the Korle Bu Teaching Hospital (2 Surgeons and a Radiation Oncologist), who are involved in breast cancer management in Ghana. Two (2) Traditional Healers (1 from Accra and the other from the Brong Ahafo Region) were also included in this stage of data collection.

5:5:2 Sampling Technique (Qualitative Data)

Statistical sampling methods, such as random sampling, are relatively uncommon in qualitative investigations and statistical representativeness is not a prime requirement when the objective is to understand social processes (Mays, 1995; Nicholas, 2000). However, these principles were followed as much as possible to obtain a sample frame which was a cross-sectional representation of the female population in the study areas, to provide the data suitable for a comparative analysis. The sampling method used to select the participants for the interviews was "theoretical" sampling in which the objective of

developing theory or explanation guides the process of sampling and data collection (Glaser, 1992).

The interview process began with breast cancer patients who were on active treatments at both the Surgical and Radiation Oncology Departments at the Korle Bu Teaching Hospital. After each interview, the data was analyzed and coded, thus leading to the development of preliminary theoretical explanations to emerging issues. These processes were used to interview ten (10) patients to the point where no new information was coming from the patients; in other words, to the point of saturation (figure 5:5:1 pg 50). Being satisfied with this data, it was then considered necessary to elicit the views of attenders at the weekly breast clinic at Korle Bu Teaching Hospital. This is a clinic for the evaluation of perceived or real breast cancer risks or for those women who have detected a breast abnormality. Again, the process of "theoretical" sampling was followed to interview 10 more women who attended 2 weekly clinic sessions. The Consultants were questioned to solicit their observations of Ghanaian women's knowledge, attitudes, and behaviour towards breast cancer and also more importantly, governmental programmes and policies for breast cancer care in Ghana. In Ghana, traditional healers are often the first point of call for many patients and also, against the backdrop of their wide claims to cure breast cancer; it was felt that their involvement in the interviews would yield important information, which could be useful in the development of an appropriate model for breast cancer in Ghana. In view of this, 2 traditional healers, one from Accra and one from a town in the Brong Ahafo Region were, interviewed at their place of practice (clinics).

5:5: 2 Method of Qualitative Data Collection

The qualitative data were collected through in-depth interviews with semi-structured interview guides (Appendices iv-vii). In the interviews, the women provided information concerning demographic and structural variables related to breast screening (age, education, occupation, marital status, access to breast cancer information), and a set of cognitive variables (fatalism, perception of personal risk, health beliefs concerning cancer) and socioemotional variables. Apart from the interviews with the Consultants, the

rest of the interviews were translated and transcribed from Twi (local language) to English.

Like their counterparts, who participated in the quantitative data collection, the interviews with the breast cancer patients and the breast clinic attenders centred on their knowledge, attitude, perception and breast cancer screening practices. For the Consultants, the aim was to solicit their observations on knowledge, attitude, perception and behaviours of their clients and also the governmental policies and programmes for breast cancer management in Ghana and the problems and barriers associated with such programmes. Additional areas included their views on the claims made by the traditional healers and how best the healers could be used to improve breast cancer management in Ghana.

The interviews with the traditional healers included their knowledge and perceptions about the disease, their claims for cure and their working relationship with conventional medical practitioners. All the interviews were audio recorded and transcribed and with the exception of the interviews with the Consultants all the other 3 sets of interviews were done in the local language (Twi) and translated into English (Transcripts of the interviews appear in Appendices v-vii).

5:5:3 Analyses of the Qualitative Data

Several software packages designed for qualitative data analysis enable complex organisation and retrieval of data. Among the most widely used are QSR NUD*IST and ATLAS.ti (Tesch, 1990; Richards and Richards, 1994; Muhr, 1997). However, in order to have total control over the data and to become more immersed in it, coupled with the fear of losing some important expressions and sentiments used by the interviewees, it was decided to analyse the data manually without any threat of affecting the results. The qualitative analysis method chosen was the constant comparison method which is designed to generate grounded theory. The data analysis consisted mainly of inductive tactics to organize commonalities and differences found in the interview transcriptions (Glaser, 1992; Miles and Huberman 1994; Charmaz, 1995; Bogdan and Biklen, 1998, Savenye and Robinson, 2004; Hicks, 2004; Finlay and Ballinger, 2006). The transcripts were printed in hardcopies. The analysis involved developing and categorizing the main

themes and patterns. Responses were constantly compared with one another (figure 5:5:1 page 50). With coloured pencils, emerging issues raised by the interviewees were highlighted line-by-line and these were categorized into themes. The recorded tape interviews provided verbatim and authentic responses in which no detail was lost, an element that was important for the analysis. Particular attention was paid to special words and expressions used to describe the feelings and emotions of the interviewees to describe breast cancer. Every passage of the interviews was studied to determine what exactly had been said and labelled (Burnard, 1991). The processes were followed on all the transcripts until no further theory emerged, the saturation stage of the analyses (figure. 5:5:1 on page 50)

Not only were the comparisons made between the responses of respondents in the same categories, for example the breast cancer patients, but the same comparisons were made on the responses involving other groups who participated in the study. For example the observations from the Consultants were compared with those of the traditional healer and that of the breast cancer patients with the breast clinic attenders. These were done to determine any point of agreement and disagreement on the views expressed by the participants and the constitution of the relationship further to conceptualize the issues raised (Kimchi *et al.*, 1991, Glaser, 1992; Denzin and Lincoln, 1994; Strauss and Corbin, 1998; Hewitt-Taylor, 2001; Boeije, 2002; Crookes and Davies, 2004). A further check on the data analysis was ensured by constantly comparing the findings from the interviews with the earlier data collected from the questionnaires.

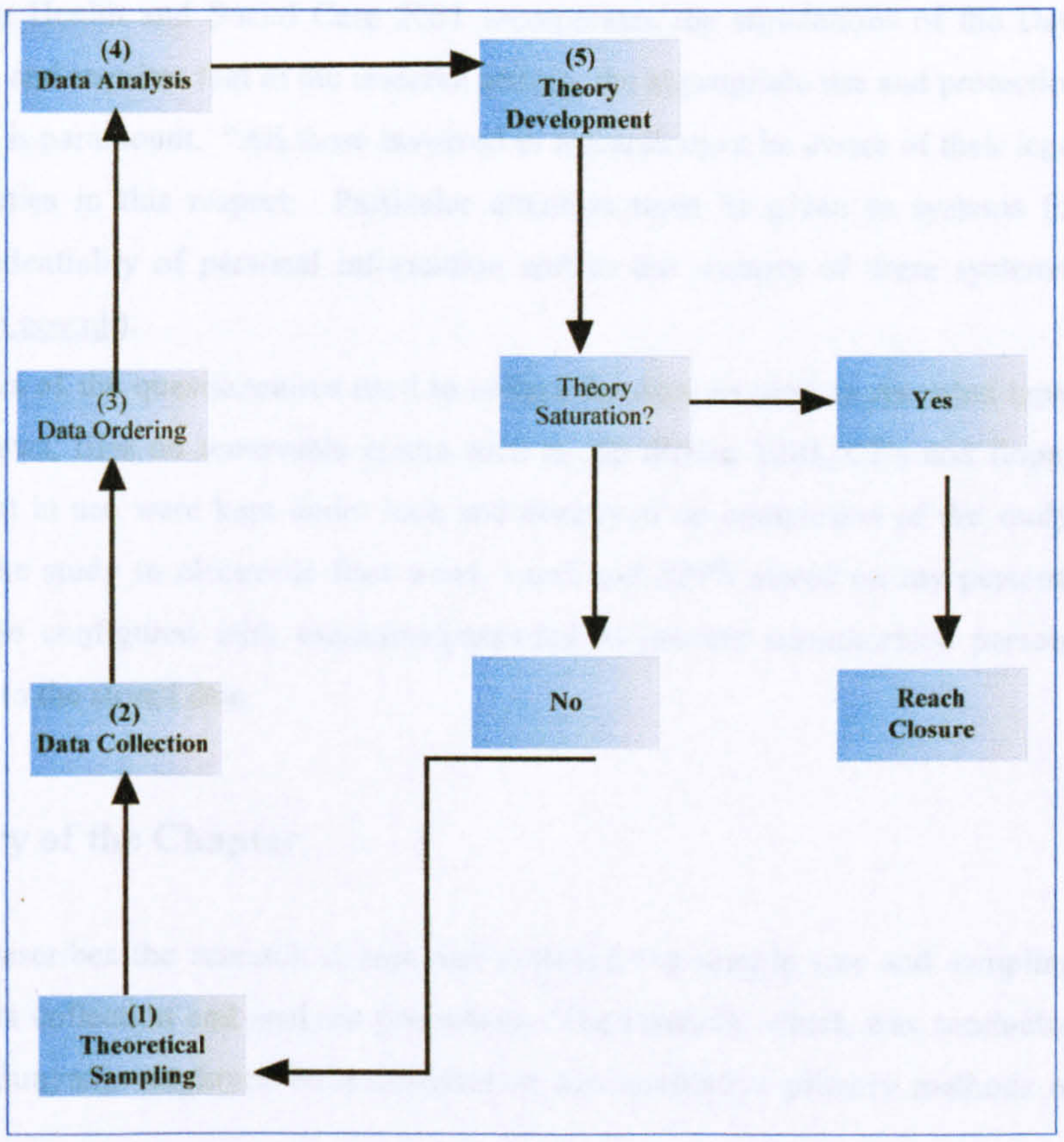
As recommended by Berg (2001) and Sandelowski (1995) detailed excerpts from relevant statements in the transcripts were presented in the analyses to serve as interpretations of the data.

It must be stressed that the method used to analyse the interview data was not without inherent weakness, including potentials for bias (Patton, 1990; Mays, 1995; Pope and Mays, 2000). One method that could be used to overcome this potential bias would be to use independent researchers to audit the process of the analyses and the findings (Patton, 1990; Mays, 1995; Pope and Mays, 2000). Peer groups could also have been involved in the analyses to criticize and offer suggestions where appropriate. These are mechanisms commonly used to ensure good research practices, which are important considerations for

giving the results the credibility and trustworthiness required (Patton, 1990; Mays, 1995; Pope and Mays, 2000). However, in view of the fact this is an academic work and to maintain strict adherence to the principle of independence, devoid of covert or overt outside assistance, this strategy was not available.

In conclusion, the two methodologies used for the study yielded different and valuable information to accurately characterize Ghana's health care needs and the significant socio-economic and cultural barriers to sustainable health care reform for cancer care. The results generated by the quantitative and qualitative methodologies have helped to make the appropriate recommendations to government health officials and for decision makers to set priorities for improving cancer services in Ghana.

Figure 5:5:1 Interrelated Processes of Data Collection, Data Ordering, and Data Analysis to Build Grounded Theory



Adapted from Pandit (1996), the Creation of Theory

5:6 Ethical Approval

The same ethical standards that apply to other social researchers were followed in this study; these conformed to both the ethical standards of City University and Ghana, where the study was conducted. Strict confidentiality, anonymity, neutrality and objectivity were the hallmark of all activities of the study including research design, data collection and analysis and in discussing the findings. The study was carried out with an approval from the Research Ethics Committee, University of Ghana Medical School Accra (ID.MS-Et/ M 10-P11/2003-04- Appendix i on page 165).

5:7 Data Handling and Protection

The importance of secure handling of research data can not be overemphasized, especially in a qualitative study (Murphy *et al.,* 1998). The Research Governance Framework for Health and Social Care 2001 incorporates the stipulations of the Data Protection Act and requires that in the research setting, the appropriate use and protection of patient data is paramount. "All those involved in research must be aware of their legal and ethical duties in this respect. Particular attention must be given to systems for ensuring confidentiality of personal information and to the security of these systems" (http://www.dh.gov.uk).

The hard copies of the questionnaires used to collect the data, as well as recorded tapes for the interviews, files on removable media such as zip drives, USB, CDs and floppy discs, when not in use were kept under lock and destroyed on completion of the study. The data for the study in electronic files word, excel and SPPS stored on my personal computers were configured with username/password to prevent unauthorized persons gaining assess to the stored data.

5:8 Summary of the Chapter

This chapter describes the research design and included the sample size and sampling techniques; data collection and analysis procedures. The research, which was conducted in Accra and Sunyani, employed both quantitative and qualitative primary methods of

data collection. The quantitative method used was a cross-sectional survey that used questionnaires. The questionnaires included both closed- and open-ended questions on women's knowledge of risk factors, the causes as well as the symptoms of breast cancer. Other areas covered included, but were not limited to, perceptions on the incidence and prevalence of the disease in Ghana, attitudes towards breast cancer screening and practices; treatment options and the role of the traditional healers in breast cancer care in Ghana. A pilot study had earlier been carried out in Accra primarily to test for the reliability and validity of the questionnaire and also to evaluate the research methodology in general. Analysis of the quantitative data was done in two phases. Significance testing of differences was conducted using the chi-squared test for nominal data and Mann Whitney U test for ordinal data. The quantitative data established very important themes which were further explored by qualitative interviews.

The in-depth interviews were conducted with semi-structured interview guides. The sampling method used to select the participants for the interviews was "theoretical" sampling in which the objective of developing theory or explanation guides the process of sampling and data collection. The method used to analyse the qualitative data was the constant comparative, which was meant to ensure that theory would emerge from the data.

By employing multiple methods of data collection and analyses, reliability and validity of the study was ensured and also provided a broader representation. It also provided a powerful means for analysis and interpretation of data from the questionnaires and the interviews.

Chapter 6 Findings of the Study

6:1 Introduction

This chapter is dedicated to the presentation of the results of the quantitative data, involving 474 respondents from the questionnaire survey. It deals with the distribution of the respondents according to certain selected background variables. The main background variables are the independent factors that could influence the knowledge, attitudes, beliefs, behaviour and breast cancer screening practices of the respondents. These include age, marital status, level of education, occupational status and religious background. The health seeking behaviour of the respondents, knowledge and attitude towards the disease and breast cancer screening practices and rates as well as the recommendations from the respondents to improve breast cancer care in Ghana are also covered in this part.

6:2 Quantitative data

To explore the knowledge, attitude, behaviour and breast cancer screening practices in Ghana, primary research was undertaken. A range of both closed and opened ended questions were asked to gain more spontaneous results and the answers were subsequently coded. SPSS Version 12.0 was use to analyze the quantitative data from the questionnaires. Descriptive statistics were first used to compute the items and statistical comparisons and relationships were examined for each of the major variables in the study, according to selected demographic and situational variables (Altman, 1991; Bryman and Cramer, 1995). .

6:3 Demographic Characteristics of the Respondents

6:3:1 Geographical Distribution of the Respondents

The table 6:3:1 on page 54 describes the distribution of the respondents who participated in the study selected from Accra, the national Capital of Ghana, and Sunyani, a semi urban Regional capital of the Brong Ahafo Region (figure 3:1 on page32).

Table 6:3:1 Geographical Distribution of Respondents and the Population of the Cities of the Respondents

City	Number Surveyed	Percentage Surveyed	Population of Respective Cities*	Respective Percentage Size of Cities in Sample
Accra	**336**	70.9	**1,640,507**	95.3
Sunyani	**138**	29.1	**80,245**	4.7
Total	**474**	100.	**1,720,752**	100

(*http://www.mongabay.com)

6:3:2 Age of the Respondents

Table 6:3:2a (page on 54) represents the age distribution of the respondents who participated in the study.

Table 6:3:2a Age Group of Respondents compared to Ghana Census in Years

Survey Age Bands	Survey Responses	Percentage of Survey Responses	Census Age Bands	Females in Ghana Population* (2000)	Percentage of Female in Ghana Population (2000)
40 - 45 Years	233	49.1	**40-44 Years**	443,647	22.9
46 - 50 Years	98	20.7	**45-49 Years**	343,042	17.7
51 - 55 Years	64	13.5	**50-54 Years**	288,419	14.9
56 - 60 Years	42	8.9	**55-59 Years**	172,999	8.9
61- 65 Years	17	3.6	**60-64 Years**	189,004	9.8
Over 65 Years	20	4.1	**65 Years and Over**	500,860	25.8
Total	474	100.	**Total**	1,937,971	100

(*http://unstats.un.org)

Table 6:3:2b Age at Menarche of the Respondents

n=473	Missing -1	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10 - 11 years	2	.4	.4	.4
	12-13 years	53	11.2	11.2	11.6
	14 -15 years	165	34.8	34.9	46.5
	>16 years	161	34.0	34.0	80.5
	Can't remember	92	19.4	19.5	100
	Total	473	99.8	100.0	

Table 6:3:2c Age at first childbirth of the Respondents

n=452	Missing =22	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	14- 16 years	21	4.4	4.6	4.6
	17- 19 years	98	20.7	21.7	26.3
	20 - 23 years	173	36.5	38.3	64.6
	24 - 26 years	55	11.6	12.2	76.8
	27 - 29 years	44	9.3	9.7	86.5
	30 -32 years	20	4.2	4.4	90.9
	33- 35 years	7	1.5	1.5	92.5
	>36 years	4	.8	.9	93.4
	Can't remember	30	6.3	6.6	100
	Total	452	95.4	100	

Table 6:3:2d Age at Menopause of the Respondents

The table on page 56 shows the age at menopause and out of the 474 respondents 169 (35.7%) had reached menopause.

n= 196		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	40-45 years	3	0.6	1.8	1.8
	46-50 year	46	9.7	27.2	29.0
	51-55 years	92	19.4	54.4	83.4
	>56 years	16	3.4	9.5	92.9
	Can't remember	12	2.5	7.1	100
	Total	169	35.7	100	

6:3:3 Educational Levels of the Respondents

In the next table the level of education of respondents who participated in the study is presented (table 6:3:3 pg 57). The UN Human Development Index Report (UNDP, 2004) puts the National Female Literacy Rate in Ghana at 51%. The level of education of the respondents in the present study was well above this average.

Table 6:3:3 Educational Level of Respondents					
Educational Level of Respondents	**None**	**Primary**	**Middle**	**Secondary**	**Tertiary**
Survey Responses All	**67**	**74**	**229**	**82**	**22**
Percentage of Survey Responses All	14.1	15.6	48.3	17.3	4.7
All Ghana Females Percentage Government Figures[1]	4.1	40.4	41.2	8.7	5.6
Survey Responses Accra	**53**	**48**	**162**	**63**	**10**
Percentage of Survey Responses Accra	15.8	14.3	48.2	18.8	2.9
Accra Females Percentage Government Figures[1]	1.4	26.1	43.6	17.9	11.0
Survey Responses Sunyani	**14**	**26**	**67**	**19**	**12**
Percentage of Survey Responses Sunyani	10.1	18.8	48.6	13.8	8.7
Sunyani Females Percentage Government Figures[1]	3.4	29.2	46.6	10.1	10.7

[1] Aged 6 and over.

(Source: National Development Planning Commission, Government of Ghana)

6:3:4 Occupations of the Respondents

Data about the job status of the respondents is presented in table 6:3:4a on page 58 and 85.8% of the respondents were in the informal sectors of the economy.

Table 6:3:4a & b Respondents' Occupations

Occupation	Number	Percentage
Farming	21	4.5
Trader	200	42.5
Self-employed	102	21.7
Housewife	10	2.1
Public servant	67	14.2
Unemployed	54	11.5
Pensioners	17	3.6
Total	471	100
Missing	3	

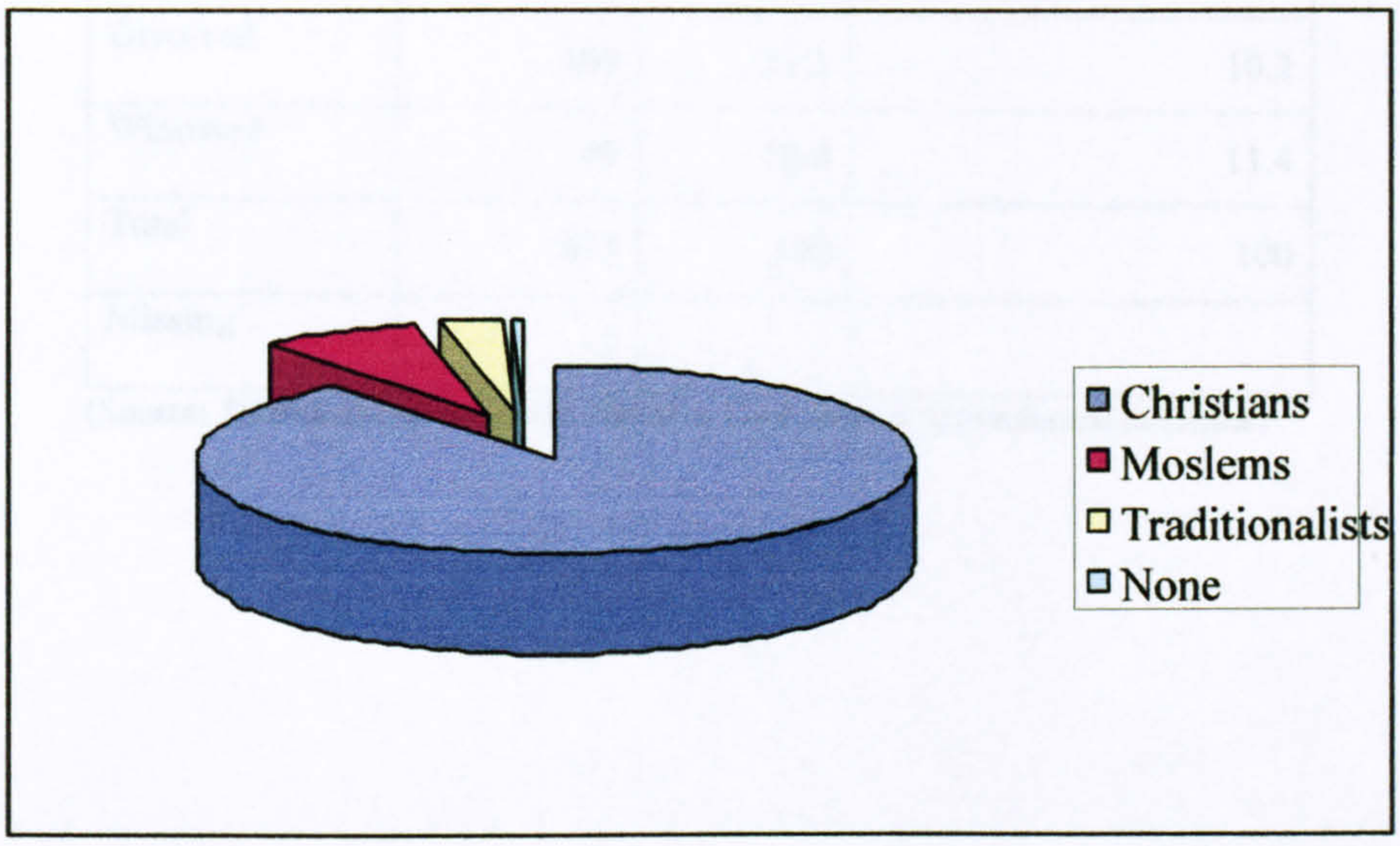
Table 6:3:4b on page 59 describes the female employment distribution in Ghana.

Table 6:3:4b Female Employment in Ghana		
Formal employment, non-agricultural	**Females of Aged 15 or Older (Millions)**	**Percentage**
Formal private wage employees	0.02	0.32
Formal public wage employees	0.09	1.7
Formal, self-employed	0.15	2.8
Formal employment, agricultural		
Formal wage employees	0.01	0.16
Informal employment, non-agricultural		
Informal, self-employed	1.6	29.7
Informal wage workers	0.18	3.3
Unpaid family workers	0.11	2.0
Informal employment, agricultural		
Self-employed	1.3	24.3
Informal wage workers	0.02	0.32
Unpaid family workers	0.8	14.9
Other (unclassified)	0.01	0.16
Unemployed	0.40	7.4
Retired	0.70	13.0
Total	**5.4**	**100**
(Source: GLSS 4, 1998/9. Adapted from Employment, Poverty, and Gender in Ghana)		

6:3:5 Religious Backgrounds of the Respondents

The majority of the respondents, 89.4%, reported to be Christians (n=423) with smaller numbers for the other religions, namely 7.4% (n=35) as Muslims and 2.7% (n=13) representing traditional faiths, with 3 invalid responses.

Figure 6:3:1 Religious Background of Respondents



6:3:6 Marital Statuses of the Respondents

Data in table 6:3:5 on page 61 shows information on the marital status of the respondents obtained from the questionnaires, which is similar to those found from official Ghana government figures, although these only take into account the head of the household rather than everyone in the household.

Table 6:3:5 Marital Status of Respondent			
Marital Status	**Number**	**Percent**	***Head of Household All Ghana (Male or Female)**
Married	307	64.9	53.1
Single	17	3.6	25.4
Divorced	100	21.1	10.2
Widowed	49	10.4	11.4
Total	473	100	100
Missing	1		

(Source: *National Development Planning Commission, Government of Ghana)

6:3:8 Respondents Educational Levels and Occupations

There was a significant difference between the respondents' level of education and occupation with those with higher educational levels indicating regular occupation, as shown in the table 6:3:6 (page 62).

Table 6:3:6 Occupation by the Education Level

Respondents' Occupation	Educational Level of Respondents					Total
	None	Primary	Middle	Secondary	Tertiary	
Farming	**9**	**6**	**6**	**0**	**0**	**21**
%	42.9	28.6	28.6	0	0	100
Trader	**33**	**48**	**87**	**31**	**1**	**200**
%	16.5	24.0	43.5	15.5	0.5	100
Self-employed	**11**	**7**	**62**	**20**	**2**	**102**
%	10.8	6.9	60.8	19.6	2.0	100
Housewife	**1**	**1**	**5**	**3**	**0**	**10**
%	10	10	50	30.0	0.0	100
Public servant	**1**	**2**	**26**	**19**	**19**	**67**
%	1.5	3.0	38.8	28.4	28.4	100
Unemployed	**7**	**8**	**34**	**5**	**0**	**54**
%	12.96	14.81	62.96	9.26	0.00	100
Retired	**4**	**1**	**9**	**3**	**0**	**17**
%	23.5	5.9	52.9	17.7	0	100
Total	**66**	**73**	**229**	**81**	**22**	**471**

Missing = 3 (χ^2 = 163.384(a), df= 24, p < .001)

6:3:9 Locations of the Respondents and their Educational Levels

Analysis was done to determine the differences in the levels of education between respondents from Accra and Sunyani. A Chi-Squared test showed a significance difference between the level of education of the respondents from Accra and Sunyani, with Sunyani respondents having more tertiary education than those from Accra (χ^2 = 11.793, df =4, p< 0.019). This is shown in table 6:3:7 below (page63).

Table 6:3:7 Education Level by Geographical Location of Respondents

Geographical Location of the Respondents	Educational Level of Respondents					Total
	None	Primary	Middle	Secondary	Tertiary	
Accra	53	48	162	63	10	336
%	15.77	14.29	48.21	18.75	2.98	100
Sunyani	14	26	67	19	12	138
%	10.14	18.84	48.55	13.77	8.70	100
Total	67	74	229	82	22	474

(χ^2 = 11.793, df =4, p< 0.019)

6:4 Health Seeking Behaviour of the Respondents

6:4:1 Main Sources of Health Information

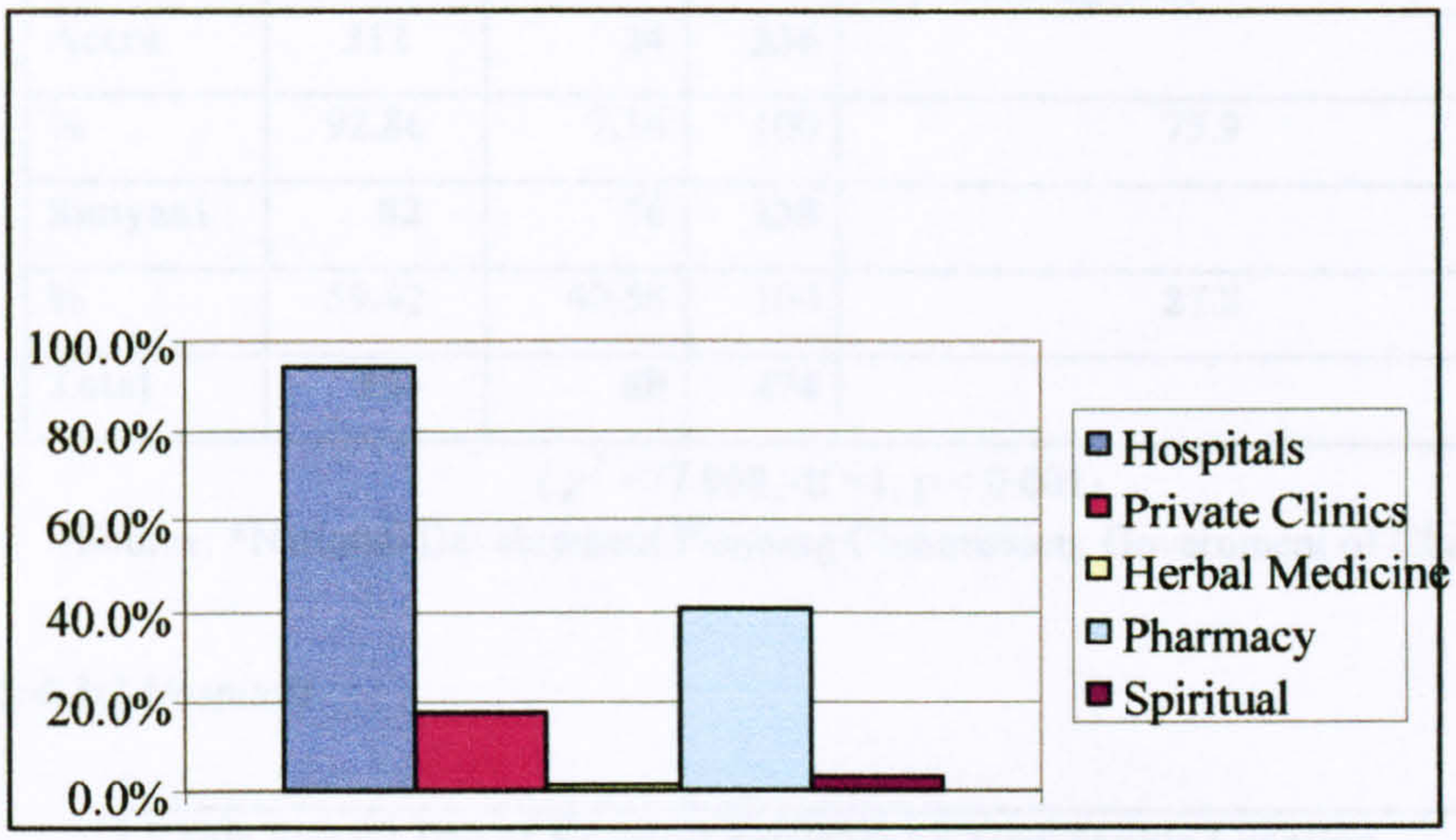
The respondents were asked to mention their sources of health information in general and breast cancer in particular, the main sources mentioned are shown in table 6:4:1 (page 64). The data strongly suggested exposure to multiples sources, but in all respects, the mass media (radio, television, and newspapers) was the major source, totalling 65.4%.

Table 6:4:1 Respondents Main Sources of Health Information

Health Information Source	Number that use the source	Percentage that use the source
Radio	187	39.8
Television	97	20.5
Nurses/Midwives	66	13.9
Doctors	59	12.4
Churches	37	7.8
Friends	31	6.5
Newspapers/Magazines	24	5.1
Women's Groups	23	4.7
Family Members	15	3.2

Figure 6:4:2 1 Respondents Choices of Medical/Health Care

Analyses were done to determine the health behaviour of the respondents regarding the most frequently used health facility and services for disease treatment and prevention.



6:4:3 Geographical Locations and the Choice of Health Facility/Service by the Respondents

The choice of health care facility and or service by the respondents' from the 2 study sites, namely Accra and Sunyani was further explored and again found to be varied.

6:4:3:1 Private Clinics

Table 6:4:3:1 (page 66) shows the respondents' self-reported usage of private clinics. This difference may be due to the fact that although there are more Government Hospitals and Polyclinics in Accra than Sunyani, when compared with Ghanaian government survey data from the Ghana 2003 Core Welfare Indicators Questionnaire, it is clear that Sunyani is considerably wealthier than Accra. In Accra, 75.9% reported that they had had some trouble feeding their households in the past year, whereas in Sunyani the figure was only 27.8%

Table 6:4:3:1 Use of Private Clinics of Respondents by Geography				Ghana Official Statistics
Location	**Do not use the service**	**Use the services**	**Total**	***Percentage of Households with difficulty in satisfying food needs in preceding year**
Accra	**312**	**24**	**336**	
%	92.86	7.14	100	75.9
Sunyani	**82**	**56**	**138**	
%	59.42	40.58	100	27.8
Total	**394**	**80**	**474**	

(χ^2 =77.958, df=1, p < 0.001)

(Source: *National Development Planning Commission, Government of Ghana)

6:4:3:2 Hospitals

Table 6:4:3:2 Use of Hospital Facilities by Geographic Location			
Location	**Do not use the service**	**Use the services**	**Total**
Accra	**26**	**310**	**336**
%	7.7	92.3	
Sunyani	**3**	**135**	**138**
%	2.2	97.8	
Total	**29**	**445**	**474**

(χ^2 = 5.273, df = 1, p<0.022)

6:4:3:3 Traditional Medicine

Unexpectedly, the self- reported use of traditional medicine was very low among the respondents from both Accra and Sunyani

Table 6:4:3:3 Use of Traditional Medicine by Geographic Location			
Location	**Do not use the service**	**Use the services**	**Total**
Accra	**333**	**3**	**336**
%	99.1	0.9	
Sunyani	**135**	**3**	**138**
%	97.8	2.2	
Total	**468**	**6**	**474**

(χ^2 =1.285, df=1, p= 0.257)

6:4:3:4 Buy Drugs from Pharmacy

There were significant differences between the respondents from Accra and Sunyani in the use of pharmacy services (χ^2 =47.782(b), df = 1, p< 0.001)

Table 6:4:3:4 Buying Drugs from Pharmacy by Geographic Location			
Location	**Do not use the service**	**Use the services**	**Total**
Accra	**233**	**103**	**336**
%	69.4	30.7	
Sunyani	**49**	**86**	**135**
%	36.3	63.7	
Total	**282**	**189**	**471**

(χ^2 =47.782(b), df = 1, p< 0.001)

6:4:3:5 Patronize Spiritual Healing

Table 6:4:3:5 Use of Spiritual Healing by Geographic Location			
Location	**Do not use the service**	**Use the services**	**Total**
Accra	**331**	**5**	**336**
%	98.5	1.5	
Sunyani	**126**	**12**	**138**
%	91.3	8.7	
Total	**457**	**17**	**474**

(χ^2 =14.696, df=1, p< 0.001)

6:5 Knowledge on Breast Cancer and Screening

6:5:1 Respondents level of Education and their Self-reported Knowledge of Breast Cancer

Table 6:5:1 (page 68) presents the respondents' subjective knowledge about breast cancer, based on their level of education. Valid responses were not provided by 9 respondents. A strong correlation was found between the levels of education and the self-reported knowledge about the disease, with higher levels of education being associated with higher levels of self-reported knowledge of breast cancer as demonstrated by Spearman's Rank Correlation (r_s=0.316, N= 465, p < 0.001).

Table 6:5:1 Respondents Educational Level and Self-reported Knowledge of Breast Cancer					
Educational Level of Respondents	**Self-Reported Knowledge of Breast Cancer**				**Total**
	Nothing	**Little**	**Quite a lot**	**A lot**	
None	**30**	**32**	**4**	**1**	**67**
%	44.8	47.8	6.0	1.5	
Primary	**27**	**42**	**1**	**3**	**73**
%	37.0	57.5	1.4	4.1	
Middle	**43**	**153**	**15**	**13**	**224**
%	19.2	68.3	6.7	5.8	
Secondary	**13**	**49**	**7**	**10**	**79**
%	16.5	62.0	8.9	12.7	
Tertiary	**0**	**8**	**10**	**4**	**22**
%	0	36.4	45.5	18.2	
Total	**113**	**284**	**37**	**31**	**465**

(r_s=0.316, N= 465, p < 0.001)

6:5:2 Respondents Perception on the Incidence of Breast Cancer in Ghana

Respondents were asked to describe the incidence of breast caner in Ghana based on their personal experiences and information this is shown in table 6:5:2 (page 70).

Table 6:5:2 Respondents Perception on the Incidence of Breast Cancer in Ghana (How common is Breast Cancer in Ghana?)

Perception n =474	Number	Percentage
Very common	168	35.8
Somewhat common	115	24.4
Not common at all	60	12.8
Don't know	127	27.0
Total	470	100
Missing	4	

6:5:3 Factors Mentioned by Respondents as Risks for Breast Cancer

Respondents' knowledge about the risk factors for breast cancer was found to be very low as shown in the table 6:5:3 on page 71. As a result, the disease is still associated with myths and uncertainty surrounding its causes and risk factors

Table 6:5:3 Factors Mentioned by Respondents as Breast Cancer Risks

Response	Number	Percentage
Increasing Age	37	8.2
Female sex	19	4. 0
Family History	39	8 .2
Benign Breast Disease	20	4. 2
Oral Contraceptives	0	0.0
Early menarche	8	1.7
Late menopause	7	1. 5
No childbirth	32	6. 8
No breastfeeding/breastfed	41	8. 6
Radiation exposure	24	5.1
Alcohol	31	6.3
Smoking	50	10. 5
Fatty diet	13	2. 7
Obesity	8	1. 7
Coins under breasts*	95	20.0
Tight/Dirty brassiere*	3	0. 6
When husband sucks the breasts*	28	5. 9

(*Indicates incorrect responses)

6:5:4 Educational Level and Myths about Breast Cancer

Respondents were found to hold a lot of misconceptions about breast cancer especially the causes of disease. A prominent misconception which was held by 20% (n=95) of the respondents, was that women who put coins in their brassieres have an increased risk for the disease. Cross tabulation analysis was performed on this rata and the data relating to formal educational levels, to determine if education had any effect on these misconceptions. However, chi- square test did not show significance difference (χ^2 = 9.434· df =4, p= 0.051) as shown in table 6:5:4 below (page 72).

Table 6:5:4 Educational Levels and the Myth about Breast Cancer (Coins in the Brassieres)			
Educational Level of Respondents	**Coins in the Brassieres**		**Total**
	Yes	**No**	
None	**10**	**57**	**67**
%	14.9	85.1	
Primary	**16**	**58**	**74**
%	21.6	78.4	
Middle	**55**	**174**	**229**
%	4.0	76.0	
Secondary	**14**	**68**	**82**
%	17.1	82.9	
Tertiary	**0**	**22**	**22**
%	0	100	
Total	**95**	**379**	**474**

($\chi^2 = 9.434$ df =4, p= 0.051)

6:5:5 Respondents Educational level and Self-Reported Knowledge of Breast Cancer Signs and Symptoms

Respondents' knowledge of signs and symptoms of breast cancer was generally found to be very low. Specific signs and symptoms mentioned by the respondents are presented in the following tables, according to their educational levels. Generally, respondents with higher education performed better as shown by the results from Mann Whitney and Chi squared analyses. As expected, respondents who correctly mentioned a lump/mass in the breast as a sign of breast cancer have a significantly higher level of education. Statistical

test with Mann Whitney showed a significant difference as shown in the table 6:5:5 (page 73).

Table 6:5:5 Knowledge of Signs and Symptoms: Lump/Mass in the Breast						
Lump/Mass in the Breast	Educational Level of Respondents					Total
	None	Primary	Middle	Secondary	Tertiary	
No	46	49	120	36	2	253
%	68.7	66.2	52.4	43.9	9	53.4
Yes	21	25	109	46	20	221
%	31.3	33.8	47.6	56.1	91	46.6
Total	67	74	229	82	22	474

(U= 21014.5, N= 474, p <.001)

Tests with Mann Whitney did not show any significant difference between the respondents' levels of education and their knowledge of pain in the breast as a symptom of the disease, however a test with chi square showed a weak significant difference seen in table 6:5:6 (page 73).

Table 6:5:6 Knowledge of Signs and Symptoms: Pains in the Breast						
Pains in the Breast	Educational Level of Respondents					Total
	None	Primary	Middle	Secondary	Tertiary	
No	65	69	203	70	22	429
%	97	93.2	88.6	85.4	100	90.5
Yes	2	5	26	12	0	45
%	3	6.8	11.4	14.6	0	9.5
Total	67	74	229	82	22	474

U= 8155.5, N=474, p <0.067 (χ^2 =9.700(a), df =4, p <.046)

Again women who correctly mentioned nipple discharge from the breast as a sign of breast cancer have a significantly higher level of education as shown in table 6:5:7 (page 74).

Table 6:5:7 Knowledge of Signs and Symptoms: Nipple Discharges

Nipple Discharges	Educational Level of Respondents					Total
	None	Primary	Middle	Secondary	Tertiary	
No	63	69	199	72	9	412
%	94	93.2	86.9	87.8	41	86.9
Yes	4	5	30	10	13	62
%	6	6.8	13.1	12.2	59	13.1
Total	67	74	229	82	22	474

(U= 9018, N= 474, p< .001)

Respondents who correctly mentioned nipple retraction in the breast as a sign of breast cancer have a significantly higher level of education as shown in table 6:5:8 (page 74).

Table 6:5:8 Knowledge of Signs and Symptoms: Nipple Retraction

Nipple Retraction	Educational Level of Respondents					Total
	None	Primary	Middle	Secondary	Tertiary	
No	65	73	221	76	13	448
%	97	98.6	96.5	92.7	59	94.5
Yes	2	1	8	6	9	26
%	3	1.4	3.5	7.3	41	5.5
Total	67	74	229	82	22	474

(U= 3138, N= 474, p< .001)

As with the other signs and symptoms, women who correctly mentioned changes in the shape and the sizes of the breast as a sign of breast cancer have a significantly higher level of education as shown in table 6:5:9 (page 75).

Table 6:5:9 Knowledge of Signs and Symptoms: Changes in the Size and Shape

Changes in the Size and Shape	Educational Level of Respondents					Total
	None	Primary	Middle	Secondary	Tertiary	
No	65	70	191	68	6	400
%	97	94.6	83.4	82.9	27.3	84.4
Yes	2	4	38	14	16	74
%	3	5.4	16.6	17.1	72.7	15.6
Total	67	74	229	82	22	474

(U= 3138, N= 474, p< .001)

Test with Mann Whitney did not show any significant difference with the respondents' levels of education and their knowledge to identify lump in the armpit as a sign or symptom of the disease, however a test with chi square showed a weak significant difference as shown in table 6:5:10 (page 76).

Table 6:5:10 Knowledge of Signs and Symptoms: Lump in the Armpit (Axilla)

Lump in the Armpit (Axilla)	Educational Level of Respondents					Total
	None	Primary	Middle	Secondary	Tertiary	
No	67	74	229	80	22	472
%	100	100	100	97.6	100	99.6
Yes	0	0	0	2	0	2
%	0	0	0	2.4	0	0.4
Total	67	74	229	82	22	474

(U= 124, N= 474, p< 0.054; χ^2 =9.601(a), df=4, p< 0.048)

Respondents who correctly mentioned swelling of the breast as a sign of breast cancer have a higher level of education and a statistical test with Mann-Whitney showed a weak significant difference as shown in table 6:5:11 on page 76.

Table 6:5:11 Knowledge of Signs and Symptoms: Swelling of Breast

Swelling of Breast	Educational Level of Respondents					Total
	None	Primary	Middle	Secondary	Tertiary	
No	66	74	221	76	22	459
%	98.5	100	96.5	92.7	100	96.8
Yes	1	0	8	6	0	15
%	1.5	0	3.5	7.3	0	3.2
Total	67	74	229	82	22	474

(U= 2454, N= 474, p< 0.043)

Statistical tests with Mann-Whitney showed no significant difference with the respondents' levels of education and their knowledge to identify sore breasts as a sign or symptom of the disease, as shown in the table 6:5:12 (page 77).

Table 6:5:12 Knowledge of Signs and Symptoms: Sore of the Breasts

Sore of the Breasts	Educational Level of Respondents					Total
	None	Primary	Middle	Secondary	Tertiary	
No	62	71	222	78	20	453
%	92.5	96	96.5	95	91	95.6
Yes	5	3	7	4	2	21
%	7.5	4	3.5	5	9	4.6
Total	67	74	229	82	22	474

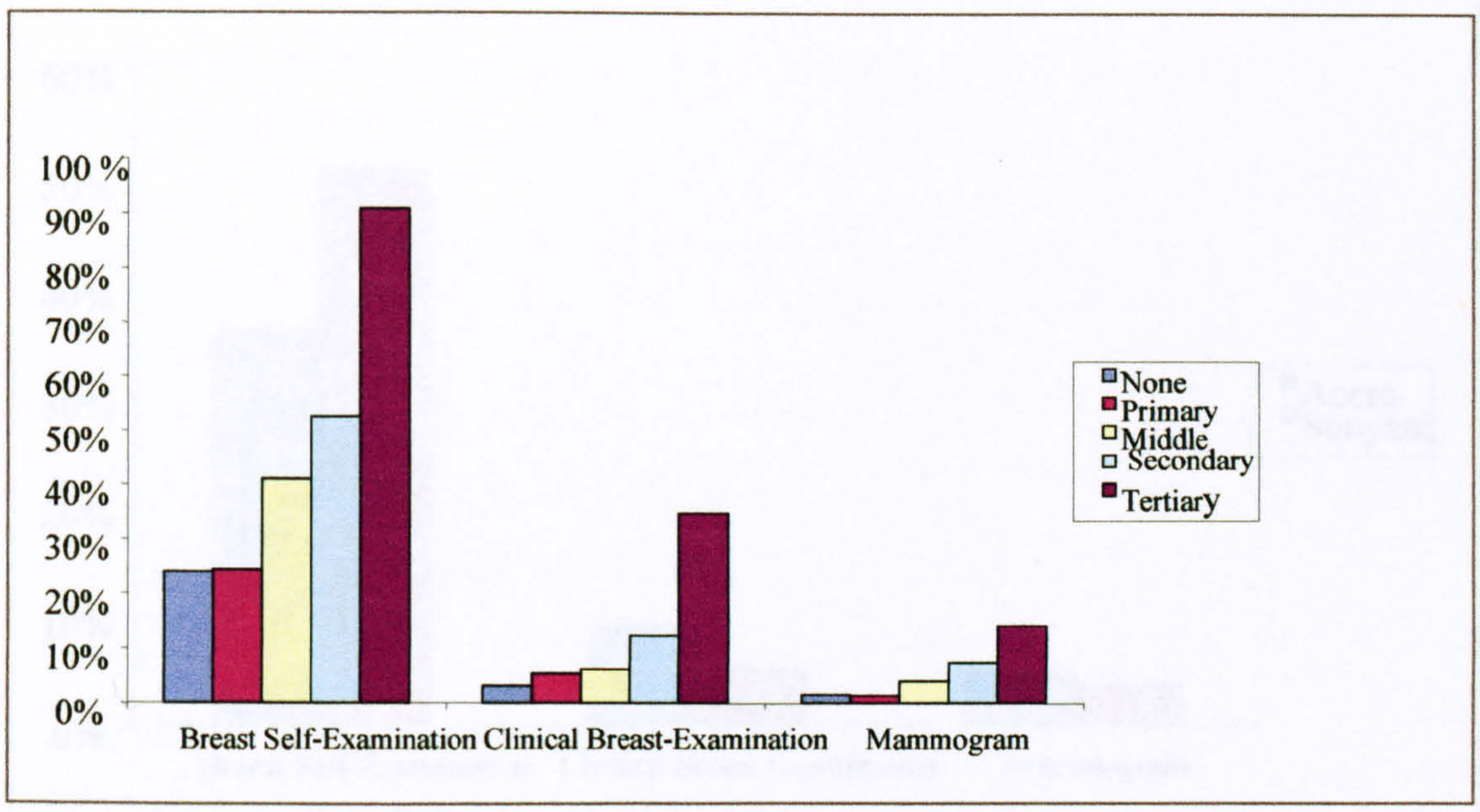
(U= 4167.5, N= 474, p< 0.809)

6:6 Breast Cancer Screening Practices

6:6:1 Educational Level and Breast Cancer Screening Practices

The data revealed that higher education levels also indicated superior knowledge and a more positive attitude towards breast screening. This was evident from differences in the respondents' educational levels and screening practices as illustrated in figure 6:6:1 (page 78).

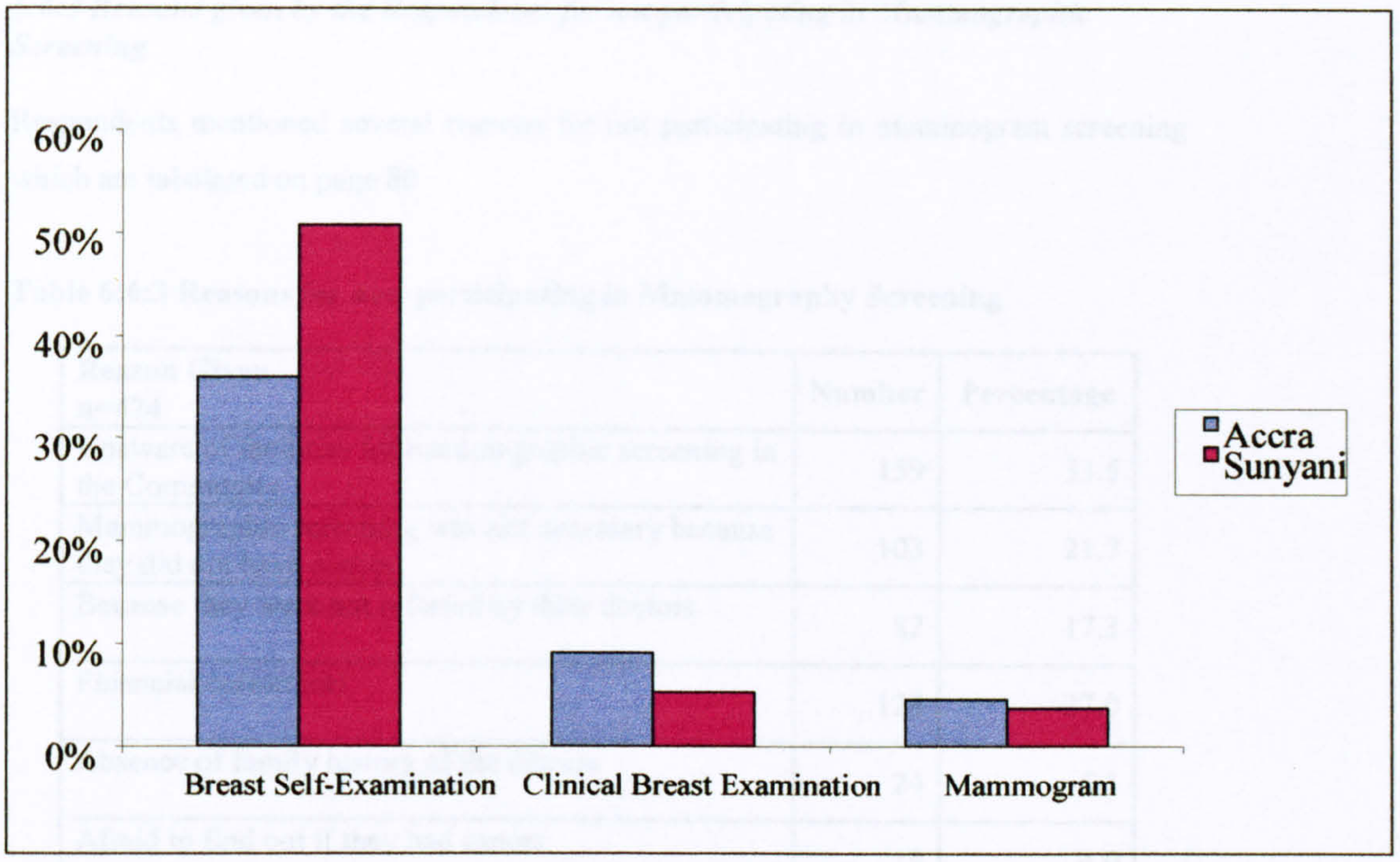
Figure 6:6:1 Respondent's Educational Levels and Breast Cancer Screening Practices



6:6:2 Geographical Location and the Breast Cancer Screening Practices

There were varied rates in the breast screening practices between the respondents from the two study areas, namely Accra and Sunyani. For breast self-examination, the respondents in Sunyani performed slightly better than their counterparts from Accra, which showed significance difference with chi-square test (χ^2 = 8.890, df = 1, p< 0 .003). However, there was no significant difference in the clinical breast examination practices between the respondents from Accra and Sunyani as shown with a chi square test (χ^2 = 1.889, df = 1, p= 0.169). Overall, screening mammogram rates, as expected, were very low, and again there was no significant difference in screening mammogram rates between the respondents' from both Accra and Sunyani as shown by this chi-square test (χ^2 = .177, df = 1, p=0.674).)

Figure 6:6:2 Screening Rates for Respondents in Accra and Sunyani



6:6:3 Reasons given by the Respondents for not participating in Mammographic Screening

Respondents mentioned several reasons for not participating in mammogram screening which are tabulated on page 80

Table 6:6:3 Reasons for non-participating in Mammography Screening

Reason Given n=474	Number	Percentage
Unaware of facilities for mammographic screening in the Community	159	33.5
Mammographic screening was not necessary because they did not have cancer	103	21.7
Because they were not referred by their doctors	82	17.3
Financial constraints	128	27.0
Absence of family history of the disease	24	5.1
Afraid to find out if they had cancer	19	4.0
Did not want to expose their bodies	5	1.1
Afraid of the procedure	5	1.10
Afraid of the effects of x-rays	5	1.1
Because of the negative attitude of health workers	1	0.1

6:7 Respondents Perceptions on the Role of Traditional Healers and Herbalists in Breast Cancer Care in Ghana

Respondents were almost equally divided on the perceived or actual roles of traditional healers in managing breast cancer effectively in Ghana. Figure 6:7:1 on page 81 describes the perception of the respondents about the role of traditional healers in breast cancer care in Ghana.

Figure 6:7:1 Respondents Perception on the Role of Traditional Healers in Ghana (Do you think Traditional Healers can help in breast cancer care?)

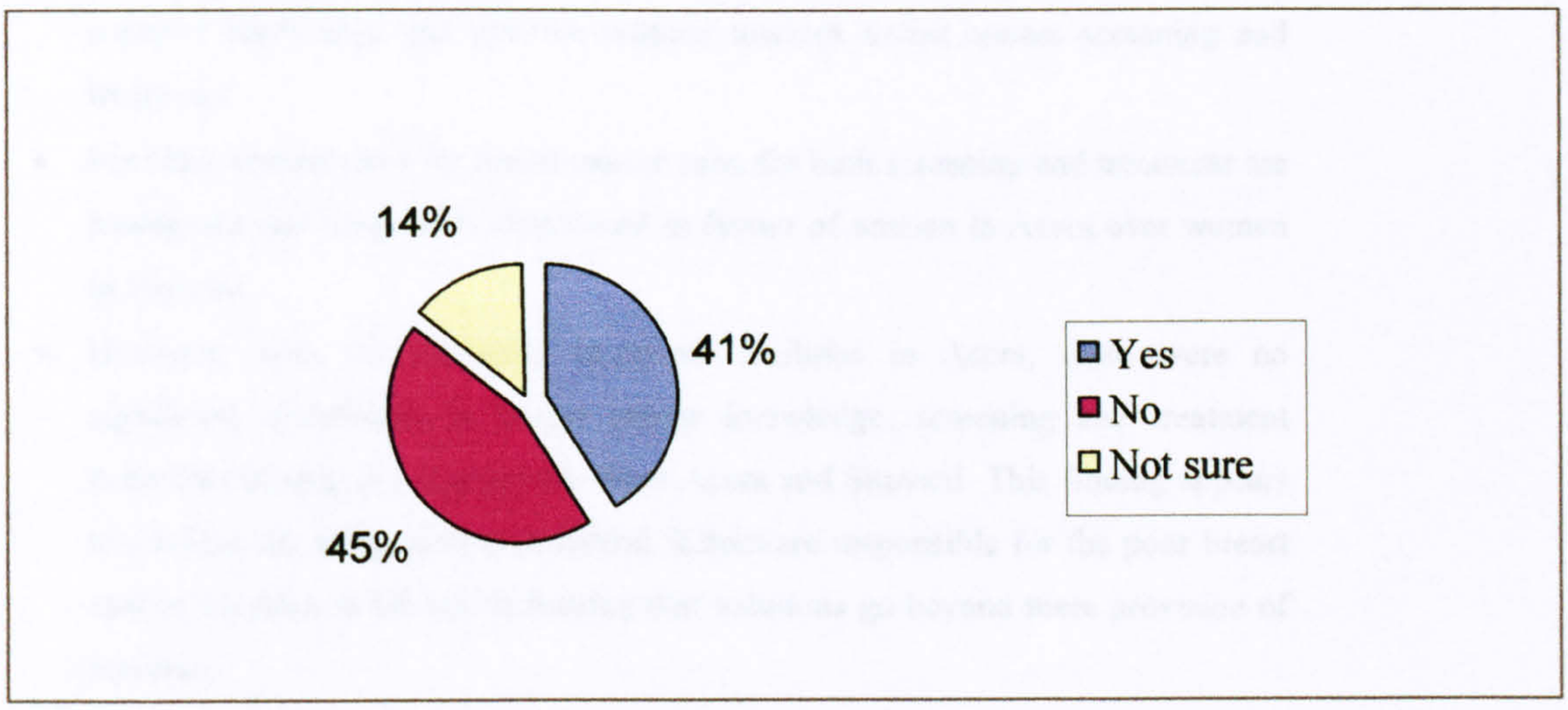


Table 6:7:1 Reasons for or against the Traditional Healers in Breast Cancer Care

Reason mentioned	% of Respondents
Some of them have the cures	33.1%
They have no cure for breast cancer	41.1%
Are not trained to treat breast cancer	34.2%
Would worsen a patient's condition	19.6%

6:8 Summary of Key Findings from the Quantitative Data

- The first key finding of the study is the low breast cancer awareness and knowledge levels among many respondents, leading to several myths being held about the disease
- Breast cancer screening (breast self-examination, clinical breast examination and mammogram) rates among the respondents were also found to be very low.

- The study revealed that higher education levels of the respondents also indicated superior knowledge and positive attitude towards breast cancer screening and treatment.
- Facilities and services for breast cancer care, for both screening and treatment are inadequate and inequitably distributed in favour of women in Accra over women in Sunyani.
- However, with the relatively improved facilities in Accra, there were no significant differences in breast cancer knowledge, screening and treatment behaviour among the respondents from Accra and Sunyani. This finding appears to confirm the suggestion that several factors are responsible for the poor breast cancer situation in Ghana; indicating that solutions go beyond mere provision of facilities.
- Financial constraints on the part of breast cancer patients were found to be a major obstacle to breast cancer treatment for many patients.
- The mass media was cited as the main source for health information by the majority of the respondents.

Chapter 7 Interview Data

7:1 Introduction

This chapter covers the findings from the interviews involving 10 breast cancer patients and 10 breast clinic attenders, 2 traditional healers and 3 Consultants who manage breast cancer at the Korle Bu Teaching Hospital, Accra. Ghana.

7:2 Analyses on the interview data from Breast Cancer Patients

7:2:1 Perceptions on the Incidence and Prevalence of Breast Cancer in Ghana

The Respondents appeared to be aware of the increasing cases of breast cancer in Ghana but were not well informed of the causes of disease. All but one of the 10 interviewees were not aware that family history was a major risk factor in breast cancer. Descriptions of the breast cancer incidence and prevalence in Ghana as reported by some interviewees are reproduced below.

> *"Formerly breast cancer was considered as a disease of the "Western" women who smoke and drink and that it was unknown in Africa and for that matter in Ghana. But now the disease is common in Ghana affecting both old and young women. A lot of women are getting the disease these days but I don't know what causes the disease"- Breast cancer patient-1 @Appendix iv (page 178).*

> *"In the past the disease was not common in Ghana especially among rural women but it appears to me that it is on the increase these days for unknown reasons. You don't get any explanation for the recent increases in the number of cases when you ask people who are supposed to know" Breast cancer patient -2 @Appendix iv (page 178).*

> *"Not much was known about the condition which was described as carbuncle (boil) in the past but it is killing a lot of women these days in Ghana" Breast cancer patient - 4 @Appendix iv (page 178).*

> *"I would like to think that breast cancer is a big problem because it is affecting and killing a lot of women and the disease is becoming a silent-killer in Ghana" Breast cancer patient - 10 @ Appendix I v(page 178).*

> *"The disease is killing a lot of women but not much is being done about the disease; some Ghanaian women do not want to hear about the disease because they do not*

have any control over it since you would certainly die once you get the disease" Breast cancer patient - 10 @ Appendix iv (page 178).

7:2:2 Interviewees Main Sources of Health Information

Like the Respondents in the quantitative data, the interviewees mentioned various sources for general health information and breast cancer in particular and prominent among them were television and radio programmes, as well as family members and friends. Mass media are generally defined as those channels of communication which are capable of reaching heterogeneous audiences simultaneously with uniform messages. These include radio, television, the press and cinema (Elkamel, 1996). Despite the overwhelming evidence of mass media effectiveness in raising awareness, increasing knowledge and changing attitudes and behaviour, it could create a big problem for the society if inaccurate information is disseminated through the media (Elkamel, 1996). It is therefore important that any information put on the media should be accurate so that the target population would not be given inaccurate information about the disease.

7:2:3 Attitudes towards Breast Cancer

The attitude of the interviewees towards the disease was varied; ranging from fear of the disease and its treatment, which was linked to death in most cases; denial and guilt; as well as spiritual and supernatural attributions to the disease. The reactions to the diagnosis of the disease were feelings of helplessness, fatalism and despair as described by some interviewees below.

The interviewees also attached strong emotions to breast cancer and as such used emotional words to describe the disease. These go to confirm the assertions that cancer in the Ghanaian context is not only a physical disease but also has emotional, spiritual and psychological dimensions for the people affected (Walters *et al.,* 1999; Avotri and Walters, 2001).

"Initially I felt hopeless and thought I was going to die but I put my trust in God and hope by His Grace I would be healed" Breast cancer patient – 1 @ Appendix iv (page 178).

"...disease which starts slowly and kills the victims" Breast cancer patient-10 @Appendix iv (page 178).

7:2:4 Social and Family Support in dealing with Breast Cancer in Ghana

The view of health in Ghana is not one of a personal issue alone, but also of a social issue (Walters *et al.,* 1999; Avotri and Walters, 2001). Community and family support is a positive aspect of dealing with cancer and these were observed by the study participants. Examples of this support included decision making, helping with the payment of medical bills, as well as emotional support.

> *"I am paying for the treatment with money from my children and some donations from my Church. ...my children would not allow me to go for herbal treatment" Breast cancer patient -2 @ Appendix iv (page 178).*

> *"My family is very religious and we do not believe in these and moreover my brother who lives in the USA is paying for my treatment and he would not allow me to go for other treatment" Breast cancer patient -6@ Appendix iv (page 178).*

> *"My main problem is how my husband would continue to love and accept me after my breast has been removed" Breast cancer patient-8 @ Appendix iv (page 178).*

7:2:5 Spirituality and Fatalism of the Disease

The women attached a great amount of spiritual and supernatural elements to the disease as well the causes and the treatment of the disease. Although some of the interviewees believed in spirituality and divine healing, they still believed that conventional treatment was the most important intervention, although this could be supplemented with prayers and divine healing. These sentiments were expressed in various forms as described below.

> *"As a Christian I believe in the power of prayers but it is better to seek treatment from the hospital because prayers alone without the appropriate treatment would not help" Breast Cancer patient-1 @ Appendix iv (page 178).*

> *"Only God knows who would get the disease or not" – Breast cancer patient- 6@ Appendix iv (page 178).*

> *"Since nothing happens without a cause and because there are mysteries surrounding the disease it is possible that these spiritual forces have a part to play in the causation of the disease" Breast cancer patient- 7@ Appendix iv (page 178).*

> *"Since the cause of the disease appears unknown one is tempted to believe spiritual and supernatural causes of the disease" Breast cancer patient-9 @ Appendix iv (page 178).*

"God is capable of doing many things and has therefore given the knowledge and skills to the doctors to treat the disease successfully" Breast cancer patient- 8 @ Appendix iv (page 178).

"I have strong faith in God and with prayers my treatment would be successful" – Breast cancer patient- 10 @ Appendix iv (page 178).

However some of the women disagreed with the notion that the disease had spiritual and supernatural attributes and were of the view that the disease was a natural occurrence, similar to other conditions as described below:

"I think that breast cancer is like other diseases such as hypertension which is also common in Ghana these days and therefore it should not be attributed to spiritual and supernatural forces" Breast cancer patient -1@ Appendix iv (page 178).

"I don't believe that the disease is due to an act of God, a curse, the devil or one's fault" Breast cancer patient - 2@ Appendix iv (page 178).

"There is no evidence to suggest that the disease is caused by an action of God, the devil, or one's fault but it is possible" Breast cancer patient- 3 @ Appendix iv (page 178).

7:2:6 Self-Reported Knowledge about Breast Cancer

Similar to the findings from the questionnaire data, the interviewee's knowledge of risk factors, signs and symptoms of the disease, breast cancer screening, and preventive practices was limited. Out of 10 interviewees only 2 (20%) were aware of breast self-examination (BSE) and clinical breast examinations (CBE) and these admitted to only practicing breast self examination (BSE) occasionally. For mammography, 9 out of the 10 women knew nothing about mammography prior to being diagnosed with the disease. Study participants had good knowledge of the burden of breast cancer in women. A large proportion of participants agreed that breast cancer is a major health problem in Ghana and correctly identified breast cancer as the most common cancer in women. However, the participants' knowledge about risk factors for breast cancer was low and many participants attributed the disease to evil spirits, curses and punishments.

Many participants demonstrated a poor knowledge of the symptoms of the disease. Only a few participants knew that breast cancer presents commonly as a painless breast lump

and similarly, few participants were able to respond correctly to questions on other symptoms such as pain in the breast, nipple discharge, and ulceration of the nipple.

7:2:8 Perceptions on the Roles of Traditional Healers in Breast Cancer care in Ghana

Interviewee's views on perceived or actual roles of the traditional healers in breast care in Ghana were sought since traditional medicine is known to be popular (Twumasi, 1995; Awusabo – Asare and Anarfi, 1997; Mona, 1997). The interviewees were aware that some traditional practitioners claimed that they can cure the disease, but unexpectedly only one respondent admitted to using traditional medicine when diagnosed, as mentioned below:

> *"I decided to use herbal medicine partly because it was cheaper and also I thought I could get good treatment but had to come back to the hospital when I did not see any improvement after weeks of herbal treatment" – Breast cancer patient-3 @ Appendix iv (page 178).*

> *"I come from a religious family and we do not believe in Herbal/ Traditional healing and moreover, Herbalists/ Traditional Healers do not have x-rays/ scans, laboratories in their practices and therefore I can not see how they can treat the disease appropriately" Breast cancer patient-6@ Appendix iv (page 178).*

> *"I was afraid to use herbal preparations because of the way and manner the herbs are prepared and the fact that there are no proper dosages" Breast cancer patient-7 @ Appendix iv (page 178).*

7:2:9 Barriers to Breast Cancer Screening and Treatments

The interviewees' views on the barriers to effective breast cancer screening and treatment in Ghana were sought and several factors were mentioned. Prominent among these included the high costs of screening and treatments, and the unavailability and inaccessibility of health facilities and services. The treatment costs ranged from ¢250,000-¢24 million (basic monthly salary in Ghana is about ¢500,000) (www.ghana.gov.gh). Only one interviewee was enrolled on a clinical trial at the Korle Bu Teaching Hospital and as such received free chemotherapy. Delayed treatment was attributed to inaccessibility of health facilities, including mammograms and pathological

services for prompt diagnoses and treatment. Some phrases used by the interviewees to describe barriers to breast cancer screening and treatment are captured below.

> *"The cost of treatment and screening is very expensive and therefore a lot of women cannot afford; then it would be helpful if centres were opened where women can walk in for a mammogram for a small fee especially for the low-income earners" Breast Cancer patient- 4@ Appendix iv (page 178).*

> *"The treatment has brought a very serious financial burden to my family and my husband had to take a loan to supplement family resources but that was not even enough to pay for the full cost of treatment" Breast cancer patient- 9 @ Appendix iv (page 178).*

> *"I was not aware of any mammogram facility in my area and also did not have the money to travel to Accra just to have a mammogram. I had to wait for two months to start the treatment after been diagnosed with the disease because of money to pay for treatment" Breast Cancer patient -8 Appendix iv (page 178).*

> *"There is no mammogram facility in the hospitals in my area" Breast cancer patient - 9 @ Appendix iv (page 178).*

7:2:10 Recommendations by the Interviewees to Improve Breast Cancer in Ghana

In order to overcome some of the perceived barriers and to improve breast cancer care in Ghana, the interviewees made various suggestions and recommendations including increasing the awareness level about the disease, provision of financial assistance to breast cancer patients and improvement and provision of facilities and services for breast cancer care.

> *"Efforts should be made by the Government to create and/or increase public awareness about the disease to correct the wrong information people have about the disease to ensure early detection and treatment, as this can save many lives. It is also important that the education on the disease is done in the local languages instead of the English language which majority of women do not understand" Breast cancer patient-3 @ Appendix iv (page 178).*

> *"Efforts should also be made by the Government and other Health Agencies to improve the Pathology Services in the Public Hospitals because of the difficulties in obtaining pathology investigations and also the fact that not all patients could afford the services of Private Laboratories for investigations" Breast cancer patient- 5 @ Appendix iv (page 178).*

> *"The Government should consider subsidizing the cost of treating the disease because a lot of women in Ghana die of the disease because they could not afford to pay for the high cost of treatment" Breast cancer patient -7 @ Appendix iv (page 178).*

7:3 Analyses on the interview data from Breast Clinic Attendees

7:3:1 Introduction

A weekly Breast Clinic is organized at the Korle Bu Teaching Hospital where women are either referred by a health provider, or self-refer due to a perceived or real threat of breast cancer. At this clinic, women are examined and educated about the disease. Women who require clinical follow up and assessment are sent for a mammogram and other investigations to either confirm a diagnosis or to rule out the perceived threat. Ten (10) women who attended two of the clinic sessions were interviewed on their knowledge, attitude, perceptions, behaviour and breast cancer screening practices.

7:3:2 Interviewees Main Sources of Health Information

The interviewees' main sources of health information, especially information related to breast cancer, were the mass media, families and friends. This finding is consistent with the data from the questionnaires where the mass media was mentioned by the respondents as the predominant source of health information.

7:3:3 Interviewees Attitude towards Breast Cancer

The study revealed that the perceptions of most of the interviewees were similar to those expressed by the breast cancer patients. They too viewed breast cancer as a dreaded major health problem in Ghana and in most cases linked the disease with death. They also attached strong emotions, superstitions and fatalism towards the disease, and acknowledged the increasing cases of breast cancer with the corresponding high mortality rate. These views were expressed by some interviewees as described below;

> *"The disease is becoming a common problem because a lot of women are getting it these days" Breast clinic attender- 1 @ Appendix v (page 203).*

> *"The disease is on the increase without any help to the women of Ghana" Breast clinic attender -3 @Appendix v (page 203).*

> *"A lot of women are getting the disease and die usually between 1-2 years after undergoing operation to remove the breast" Breast clinic attender-4 @ Appendix v(page 203).*

"Breast cancer was thought to be a disease of the White women but it is becoming very common in Ghana these days and killing many women" Breast clinic attender-8 @ Appendix v (page 203).

" You see the breasts are very important to every woman without which, a woman is never complete and no man would be happy to marry a woman whose breast is removed and I would prefer to die than to live without my breasts" Breast clinic attender- 10 @ Appendix v (page 203).

7:3:4 Interviewees Knowledge on Breast Cancer

The interviewee's knowledge was found to be limited, especially regarding the risk factors and causes of breast cancer. For example only 2 interviewees (20%) were aware that family history was a risk factor for breast cancer, and smoking and alcohol were also only mentioned by 2 interviewees. Many interviewees openly admitted their ignorance about the disease.

> *"I have very little knowledge about the disease" Breast clinic attender 3 @ Appendix v (page 203).*
>
> *"I don't know much about the disease but have heard that if the disease is not treated early it enters the veins and at that point the breasts would have to be removed" Breast clinic attender- 4 @ Appendix v (page 203).*

As with the breast cancer patients previously interviewed, misconceptions about breast cancer were wide-spread amongst the breast clinic attenders. Some of the misconceptions included;

> *"I heard that if coins are put in the brassieres or if a man plays with the breasts it can cause the disease" Breast clinic attender -5 @ Appendix v (page 203).*
>
> *"I have heard several times those women who put money in their brassieres may get the disease and I have even been warned by my husband not to engage in such a practice" Breast clinic attender -8 @ Appendix v (page 203).*

7:3:5 Breast Screening Practices of the Interviewees

Most of the interviewees believed that early detection and prompt treatment of the disease could prevent the unfavourable outcome of the disease such as breast removals and death. However, the breast screening practices among the interviewees were disappointedly low and only one out of 10 participants (10%) practised breast-self examination (BSE), although, this was not on a regular basis.

7:3:7 Spirituality and Fatalism towards Breast Cancer

The high levels of fatalism, spirituality, superstition and emotions that were associated with breast cancer by the breast cancer patients who had been previously interviewed were also demonstrated by some of the breast clinic attenders. These beliefs and attitudes have been known to impact negatively on the outcome of the disease process (Powe, 1997; Salzmann *et al.,* 1988). Although many interviewees believed in divine intervention in overcoming the menace of the disease, they nevertheless believed that conventional treatment was the most appropriate treatment option, which can be supplemented with prayer, rather than by relying on prayer alone. These observations were based on the views expressed by some interviewees, as described below.

> *"As a Christian I have strong faith in the power of prayers but I think it would be better to go to hospital for treatment once you get the disease and supplement that with the prayers, but to rely on prayers alone would not be the best thing to do and as for Traditional Healers I don't think they can help with breast care in Ghana" Breast clinic attender-2 @ Appendix v (page 203).*

> *"By the Grace of God, I would successfully be treated" Breast clinic attender- 5 @Appendix v (page 203).*

> *"Since nobody seems to know the actual cause of the disease it is possible that curses, spiritual or supernatural forces could be responsible for causing the disease" Breast clinic attender – 7@Appendix v (page 203).*

> *"For now the only thing our doctors are capable of doing is to remove the affected breast and most patients die shortly after the surgery so I don't know if complete cure is possible" Breast clinic attender – 8 @ Appendix v (page 203).*

> *"God's intervention is the only means that protection from the disease could be achieved. Whatever is said in the Bible would come to pass and the fact that scientists have not been able to come out with the actual causes of the disease points to the spiritual nature of the disease" Breast clinic attender –9@ Appendix v (page 203).*

7:3:8 Interviewees Perceptions on the roles of Traditional Healers/Herbalists in Breast Cancer care in Ghana

The perception of the role of the traditional healers on breast cancer care was sought. Many of these interviewees were aware of the claims made by some healers to cure the

disease, but some interviewees did not believe in this. Similar to the findings from the questionnaires, the patronage of traditional medicine was very low.

> *"I have not heard of or seen any healer who has successfully treated a patient with breast cancer and therefore I don't think they can help in breast care in Ghana" Breast clinic attender – 1 @ Appendix v (page 203).*

> *"I can not imagine what the Traditional Healers can do if doctors who are well trained can not do much other than removing the breasts. Some Healers regularly make wide claims to cure all kinds of diseases but I think they only play on the ignorance of the people to make money" Breast clinic attender – 8 @ Appendix v (page 203).*

7:3:9 Recommendations by the Interviewees to improve Breast care in Ghana

When asked for the views on how breast cancer care could be improved in Ghana, various suggestions and recommendations, similar to those by the breast cancer patients, were made. These include awareness creation, provision and improvement in the facilities and services for breast cancer screening and treatment, and finally provision of financial assistance for breast cancer screening and treatment, as evident below.

> *"More education on the disease is very important because a lot of women are ignorant about the disease. If more women become aware of the disease they would report to the hospital early when they notice changes in the breasts. Government should give financial support to women who can not afford the high cost of screening and treatment" Breast clinic attender –2 @ Appendix v (page 203).*

> *"The Government should embark on programmes on the radio and television to educate women on breast cancer to increase awareness about the disease especially in the rural areas of Ghana" Breast clinic attender –6 @ Appendix v (page 203).*

> *"Government should send more doctors abroad to study how to treat the disease instead of removing women's breasts" Breast clinic attender –10 @ Appendix v (page 203).*

7:4 Analyses on the interview data from Traditional Healers

7:4:1 Introduction

Traditional healing and herbal medicine continue to be an integral part of Ghanaian society and many sections of the population of Ghana continue to patronise the services of healers and in most cases they are the first points of call when medical help is needed (Twumasi, 1995; Awusabo – Asare and Anarfi, 1997; Mona, 1997). Cancer is one of the many conditions in Ghana which is embedded in mystery and viewed with spiritual and superstitious connotations and as such help is sought from spiritual and supernatural sources, usually from traditional healers (Awusabo – Asare and Anarfi, 1997; Mona, 1997). Acknowledging the fact that any effort to improve breast cancer care in Ghana without including traditional healers would not achieve the desired impact, two (2) healers in Ghana were involved in the study. According to the healers, they have been in practice for periods raging between 20-50 years, a profession they inherited from their parents.

7:4:2 Healers Perceptions of the Incidence and Prevalence of Breast Cancer in Ghana

The traditional healers maintained that breast cancer was a common condition in Ghana and acknowledged the increasing incidence of the disease. They claimed to be seeing between 150 – 300 breast cancer patients annually.

> *"Breast cancer is a common condition and it is next to AIDS" Healer-1 @ Appendix vi (page 222).*

> *"Cancer is the biggest problem of the time in Ghana" Healer – 2 @ Appendix vi (page 222).*

Breast cancer was described by the healers in many ways including *"Obosam disease"* (literally meaning the devil's disease) and supernatural disease. They attributed the causes of the disease to curses, punishments from the gods and spiritual forces.

> *"Cancer is "Obosam disease" (devil's disease) and for which reason doctors are unable to treat the disease" Healer– 1 @ Appendix vi (page 222).*

> *"Cancer is a supernatural disease and can only be treated by spiritual powers but not by doctors in the hospitals" Healer – 2 @ Appendix vi (page 222).*

7:4:3 Traditional Healers Perceptions of Conventional Medicine in managing Breast Cancer in Ghana

The two traditional healers contended that conventional medicine cannot treat breast cancer because according to them the doctors lacked the spiritual powers to find the underlying causes of the disease. They indicated that doctors were only capable of removing the breasts of women who subsequently die. Describing their methods of treatment, which are based on their concept of disease and healing, the healers use herbal preparations which they claimed were provided to them by their gods. According to them cancer should not be operated upon and they attribute death from breast cancer to surgery.

> *"Doctors use a knife to remove the breast but we do not cut off the breast. Our grandfathers used herbs which were provided by "dwarfs" (agents of the gods) and we are using the same herbs today to treat our patients" Healer – 1 @ Appendix vi (page 222).*

> *"You see the doctors are killing the women with the operations because cancers should not be touched with a knife. As said earlier one could only cure the disease if he possesses the power to talk to the gods and ask for the directions to treat the disease. The herbs that we use in treating the patients are provided by our gods" Healer-2 @ Appendix v i (page 222).*

When asked about the motivating factors for cancer patients to patronize their services they gave the responses below.

> *"The fact of the matter is that doctors do not have the right treatment for breast cancer. The only thing they are capable of doing is to cut off the breast. We give our patients herbs for local application to apply on the affected breast and together with some oral preparations they get healed by the Grace of God, and that is the difference" Healer–1 @ Appendix vi (page 222).*

> *"As I have stated earlier, doctors do not have the cure for the disease and patients are becoming aware of this fact and are therefore coming to us for the right treatment. If doctors would realize that the knife is causing a lot of havoc and stop operating on breast cancer patients the better it would be for the cancer patients in the country. There are some conditions which doctors can manage successfully and those they cannot and the earlier they realize this and refer cases which are beyond their scope to us the better it would be for the patients" Healer– 2 @Appendix vi (page 222).*

> *"Cost, according to the healers was another determining factor why many patients use their services and maintained that their charges are low, ranging from*

¢200,000 -¢ 1 million depending on the patients' condition" Healers 1&2 Appendix vi (page 222).

7:4:4 Traditional Healers Attitude and Perceptions towards Breast Cancer Screening in Ghana

Experience has shown that recommendations from health care providers promote women to engage in breast cancer screening (O'Connor and Perrault, 1995). The views of the traditional healers were therefore sought on breast cancer screening in Ghana. Surprisingly, the healers were not very enthused about breast screening because according to them no significant differences would be made in the disease outcomes with or without screening. They wondered why women continue to die from the disease in the advanced world despite "*all the big machines*" available in the hospitals. The views of the traditional healers on breast cancer screening are produced below.

"Breast Screening is a useless exercises and cannot stop a woman from getting the disease; even the white people do not have the answers as the disease continues to kill their women with all the big machines in their hospitals" Healer– 1 @ Appendix vi (page 222).

"It is only by the Grace of God that a woman would be prevented from contracting the disease. The main thrust of our healing is faith and if a woman has faith in God she would be protected" Healer- 1 @ Appendix vi (page 222).

"Breast self-examination would only be useful only if the women would be able to detect the abnormalities in the breasts but I doubt the capabilities of most Ghanaian women to do this examination well. But as for mammogram, I don't want to talk about it because with all the big machines abroad they have not been able to find the solutions to the disease" Healer- 2 @ Appendix v i (page 222).

"Women who receive treatments from us also undergo special purification rites to give them protection against the disease" Healer- 2 @ Appendix vi (page 222).

7:4:5 Relationships between the Traditional Healers and Conventional Medical Practitioners

The healers working relationship with the conventional health system was found to be fraught with mistrust, pride and competition. They were not happy to refer patients to the hospitals because, according to them, they were more capable of dealing with the disease than doctors and paradoxically wanted doctors to refer patients to them. They were of the

view that mortality from the disease could be reduced if doctors come to this realization and cooperated with them.

> *"You see as I have said earlier doctors cannot cure the disease and I would therefore not like to send my patients to them only to have their breasts removed" Healer –1 @ Appendix vi (page 222).*

> *"More lives can be saved if the doctors would begin to cooperate with the herbalists in the Ghana" Healer- 1 @ Appendix vi (page 222).*

> *"The hospitals should rather refer the patients to us because doctors cannot compete with us when it comes to treating the disease. They can only treat malaria with their chloroquine but not diseases such as cancer or infertility" Healer- 2 @ Appendix vi (page 222).*

> *"The lives of many cancer patients could be saved if our doctors would realize that cancer is "not a hospital disease" and begin to cooperate with us and send the patients to us" Healer – 2 @ Appendix vi (page 222).*

7:5 Analyses on interview data from Consultants at the Korle Bu Teaching Hospital

Ghana has few facilities and services for breast cancer, which are located in Accra and Kumasi. In order to have a fair idea about governmental policies and programmes for breast cancer in Ghana, it was considered appropriate to involve the Consultants who manage breast cancer patients. The involvement of the 3 Consultants also offered an opportunity to gain better insight into the barriers to effective breast cancer care from both a health provider's perspective as well as from the patients' perspective.

7:5:1 Incidence and Prevalence of Breast Cancer in Ghana

All the 3 Consultants (2 Surgeons and a Radiation Oncologist) acknowledged that the number of breast cancer cases was on the increase. They could not give the actual incidence because of the absence of a cancer registry in Ghana and gave the conservative estimates of 200-300 new cases of breast cancer annually. What was not clear, however, was whether this increase was due to an increased awareness about the disease, which was resulting in more patients going to the hospitals, or due to an actual increase in the prevalence of the disease. They submitted that the figures could be higher if one considers the rural nature of the communities where most of the women live, and also the fact that only a small percentage of cancer patients actually report to the hospitals for treatments.

> *"We do not have reliable National data due to the absence of a Cancer Registry in Ghana, but we at the Surgical Dept at Korle Bu alone are seeing about 200 new cases annually. The incidence appears to be rising probably due to an increasing level of awareness and random screening programmes. However, the incidence is nowhere near the level of Europe and America" – Consultant 1 @ Appendix vii (page 231).*

> *"We do not have very reliable data but I believe the incidence is increasing. At the Korle Bu Teaching Hospital, the number of cases has doubled over the past 10 years. On average 300 patients are seen annually at the Surgical Department. Some patients are also referred directly to the Radiotherapy Department for which figures are not readily available –Consultant 2@ Appendix vii (page 231).*

"I would not like to say that the incidence is on the increase, but if anything I think because of the increasing awareness more and more people are now coming to the hospitals. Unfortunately, most of these patients are in the younger age group and with a very aggressive tumour. Breast cancer is the number one cancer in Ghana" –Consultant 3 @ Appendix vii (page 231).

7:5:2 Attitude and Perception of Ghanaian Women towards Breast Cancer as described by the Consultants

The Consultants were asked their views of Ghanaian women's attitudes and perceptions towards breast cancer. All 3 Consultants were unanimous in their description of the spiritual and superstitious causations that Ghanaian women attached to the disease. The Consultants stated that blaming curses, fatalism and supernatural forces to a large extent, influenced their health-seeking behaviours. These views as perceived by the Consultants appear below.

"Some believe it is an act of God, a family disease, an act of the devil or a curse; others people see the disease as someone's fault– Consultant 1 @ Appendix vii (page 231).

"A lot of women think there is a spiritual element to it, a curse. Some women are educated but their knowledge about the disease is limited but certainly they think the hospital treatment would the best option" – Consultant 2@ Appendix vii (page 231).

"They now are becoming more aware but most of them are still scared because they think once you get the disease you would certainly die. There is also the problem of the traditional healers and herbalists who are causing a lot of havoc with their claims for cure which result in patients coming to the hospitals late with very advanced disease" –Consultant3@ Appendix vii (page 231).

Poor outcome of breast cancer is a major problem in Ghana and the Ministry of Health has cited several instances where traditional cultural beliefs appear to influence health-seeking behaviours among the population (Mona, 1997). The Consultants perceptions, regarding the health seeking behaviour of Ghanaian women appears below.

"Unfortunately they come to the hospital with very advanced forms of the disease. They are afraid of mastectomies linking it to death. If counselled properly, the outlook is good and they are positive about it. A lot depends on the practitioners and the counsel they give to the patients" – Consultant 1@ Appendix vii (page 231).

"For some of them once the diagnoses are made, they leave to seek other forms of treatments like herbal treatments, prayers camps and homeotherapy, but in most cases they go back to the hospital with worse forms of the disease" –Consultant 2 @ Appendix vii (page 231).

"The social status of some of the women is that their first line of call is a traditional healer/herbalist for medical care before going to the hospital. They also link the disease to supernatural and spiritual causes and therefore believe that answers could only be sought from the traditional healers and spiritualists" – Consultant 3 @ Appendix vii (page 231).

The Consultants described an attitude, which is linked with death due to the poor prognosis of the disease, especially for those who present with very advanced disease. They indicated that the majority of women viewed the disease with fear of losing the breasts, which have very strong emotional and marriage implications, which prevents the women from reporting to the hospital early. It was further observed that not only did the women link the disease with death, but they also associated breast surgery with death and as one of the Consultants described it, "some doctors perform surgery on very advanced diseases and these patients die shortly after the operations thereby leading to negative attitude towards surgery"

"For most women the disease is associated with death. Some doctors in an attempt to help these patients perform mastectomies for very advanced diseases and these patients die soon after the surgery. There is therefore a link between breast cancer intervention and death. People believe that once you have the surgery, you will die, making the women more afraid of the disease leading to a negative attitude towards the disease. People do not want to talk about the disease or to find out their risk status" – Consultant 1@ Appendix vii (page 231).

"A lot of women are not breast aware and whenever they notice a lump in the breasts, they tend not to report to the Hospital for fear that the breast would be removed, or they would certainly die. Because of these misconceptions the patients do not come to the Hospital early and come in as a last resort" – Consultant 2 @ Appendix vi i (page 231).

" Another problem is the fear of removal of the breasts which has several social and marriage implications with the husbands and which prevents the women from reporting to the hospitals" Consultant 3@ Appendix vii (page 231).

7:5:3 Ghanaian Women's Knowledge of Breast Cancer as described by the Consultants

Several studies have shown that women's participation in breast cancer screening practices and the outcomes of the disease process is influenced by their knowledge of the disease (McPhee *et al.*, 1997; Sung *et al.*, 1997; Chan *et al.*, 2002; Leslie *et al.*, 2003; Tanneberger *et al.*, 2004). Knowledge and awareness levels about breast cancer among Ghanaian women, as described by the Consultants were very low and this led to misconceptions about the disease.

> *"There is very low knowledge and awareness level on breast cancer among most Ghanaian women" – Consultant 1 @ Appendix vii (page 231).*

> *"A lot of misconceptions are held about the disease which include myths such as placing coins into the brassieres and deodorants increasing the risks for breast cancer" – Consultant 2@ Appendix vii (page 231).*

> *"Some media houses and some individuals are helping to create the awareness. Some activities are going on at the Breast Clinic at the Korle Bu Teaching Hospital. Of course most of these activities are happening in Accra and other big cities. Hopefully, these activities will be extended to other parts of the country especially in the rural areas" Consultant 3 @ Appendix vii (page 231).*

7:5:4 Stages at Diagnosis and Prognosis of Breast Cancer Patients in Ghana

Late diagnosis of cancer is a common phenomenon in most developing countries including Ghana and, according to the Consultants, the majority of the patients seen at the Korle Bu Teaching Hospital presented with advanced forms of the disease. The Consultants described the age groups of the patients as mainly between 25 and 60 years.

> *"The stages at diagnosis are varied but usually with advanced disease with over 40% with stage 3, about 25% with stage 4 whilst less than 5% is for stage 1 and the remaining being stage 2" Consultant 1 @Appendix vii (page 231).*

> *"More than 58% of the patients come with very advanced disease. Early stage breast cancers are not very common in Ghana. Stage 2 cancers account for about 30%. Stages 3 and 4 cases are more than 50%" – Consultant 2 @ Appendix vii (page 231).*

> *"Mostly stages 3 and 4. Over 40% for stage 3 disease, about 25% for stage 4 and less than 5% for stage 1 and the remaining percentage for stage 2 Consultant 3@ Appendix vi i(page 231).*

"Most patients are between 40 and 60 years, but for age specific, it follows the global trend where incidence increases with advance in age" – Consultant 1@ Appendix vii (page 231).

"About 30% of the patients are between 40 and 49 years. The real peak is between 40 and 45 years. There are few postmenopausal cases. We are seeing cases which are 10 or more years younger than in Europe and the US" – Consultant 2 Appendix vii (page 231).

"The exact figures are not readily available but mostly very young women between the ages of 25 and 45 years-Consultant 3 Appendix vii (page 231).

The 5-year breast cancer survival rate in Ghana, according to the Consultants is low.

"Very wide range, between 6 months and 10 years and this is linked to the stage at diagnosis and treatment" – Consultant 1@ Appendix vii (page 231).

"The overall 5-year survival in Ghana is about 25% which is very disappointing because in African Americans in the United States, it is well over 50% and that is even considered low" – Consultant 2@ Appendix vii (page 231).

"I do not think we have that statistic because our patients do not come for follow-up treatments. Follow-up is very poor and it would therefore be very difficult to develop this kind of information" – Consultant 3@ Appendix vii (page 231).

7:5:5 The Consultants perceptions on the role of Traditional/ Healers in Cancer Treatment in Ghana

One contentious issue was the Consultants perception about the activities of some traditional healers who claim to cure all kinds of diseases including breast cancer and how they could be controlled and/or supported to improve breast cancer care in Ghana. All the Consultants admitted that with all that was available, and with the perceived weakness and dangers of the activities of the traditional healers, Ghanaian women continue to patronize their services. They partly blamed the late presentation of women to the hospital on the activities of the traditional healers. It was the view of the Consultants that for as long as traditional healers continue to be, in most cases, the first point of call for patients, it was important that they are taught and encouraged to recognize what was cancer and to refer these patients to hospitals early.

"If well educated enough they can be advocates for early referrals. They could also subject their drugs to clinical trials and if found to be effective, it will be good for

all of us. Along these lines, I think they have some roles and other than these, they are doing some disservice" –Consultant 1 @ Appendix vii (page 231).

"Traditional healers/herbalist can be advised to refer patients to the hospitals early" – Consultant 2 @ Appendix vii (page 231).

"Traditional Healers/Herbalists are causing a lot of problems with their claims of cure which result in patients coming to the hospitals late with very advanced diseases and they should be encouraged to refer the patients early Consultant 3@ Appendix vii (page 231).

7:5:6 Breast Screening Programme in Ghana

The Consultants were unanimous that a national screening programme would benefit the people in Ghana in the early detection of breast cancer and prompt treatment. However, they did recognize the fact that it would be difficult to establish such a programme due to a lack of appropriate resources at the present time. According to the Consultants for a long time to come, mammographic breast screening would be opportunistic rather than routine. They believe that it could be much easier and feasible to educate Ghanaian women on simple screening methods, such as regular breast self examination and to encourage health practitioners to take every opportunity to examine the breasts of their patients.

"National screening programme would be difficult to fund at this stage of our development. Until we have the resources to start such a programme, it is much easier to educate the women on simple methods such as regular breast self-examination and to encourage doctors to use every opportunity to examine the breasts of their patients. For the high-risk individuals, they could continue to use the services of the existing services" – Consultant 1@ Appendix vii (page 231).

"We do not have a routine national screening programme. Certainly it is the cost and the Government does not have the money for such a programme. A mammogram costs about ¢260.00 and obviously the Ministry of Health cannot afford such a programme at this stage of the national development. I suspect that when the National Health Insurance Scheme becomes fully operational, such a programme may be considered. Currently, only a small percentage of the women do breast self-examination and clinical breast examination and for screening mammography, the patronage is poor" – Consultant 2 @ Appendix vii (page 231).

"What I think could also be done is for every doctor to use every contact with women to talk about the disease and also perform clinical breast examination as part of clinical assessments" – Consultant 3@ Appendix vii (page 231).

7:5:7 Barriers to Effective Breast Cancer Care in Ghana

It was the view of the Consultants that some factors impede effective breast cancer management in Ghana. These factors, they maintained, included inadequacies in the health system (unavailability of pathological services, lack of facilities for screening and treatment, improper and delayed referrals) and socio-economic factors among others.

> *"The biggest problem is the pathology services which delay the results. Sometimes, we are compelled to use the services of private pathologies such as Medilab, which is not cost effective" – Consultant 1@ Appendix vii (page 231).*

> *"The first thing I would like to mention is the provision of screening facilities/services. I would also like to see well organized palliative care for pain management for cancer patients" – Consultant 2 @ Appendix vii (page 231).*

> *"Many women cannot afford the cost of mammogram in Ghana which is about ¢400,000 in Private Health Institutions and around ¢250,000 in Public Health Institutions, considering the fact that the average basic salary is about ¢500,000 a month"– Consultant 3@ Appendix vii (page 231).*

7:5:8 Recommendations by Consultants to Improve Breast Cancer in Ghana

The Consultants made several recommendations which, in their views, if implemented would improve breast cancer management in Ghana.

> *"Every woman should be taught to examine her breasts. Every doctor who examines a woman should examine the breasts as well. Some subsidy should be given to some of the patients who cannot pay for the surgery which is about ¢2 million" Consultant-1@ Appendix vii (page 231).*

> *"Efforts to increase the awareness level about the disease for the majority of Ghana women would help to remove the many misconceptions held about the disease and thereby improve treatment outcomes" – Consultant 2@ Appendix vii (page 231).*

> *"The Ministry has a responsibility for all cancer patients including breast cancer patients. I think education and awareness creation is very important and also to incorporate the traditional healers into the mainstream of the health system which will give us the floor to educate them to recognize what is cancer and to refer such cases to the hospitals early. Whether we like it or not, they are the first point of contact for most people for medical care" –Consultant 3@ Appendix vii (page 231).*

7:6 Summary of Key Findings from the Qualitative Data

- The poor awareness and knowledge found in the questionnaire data was also found in women who participated in the interviews.
- Participation in breast cancer screening practices was also in this stage of the research similar to what had been found previously.
- As found in the data from the questionnaire, lack of access to facilities and services for breast cancer care is a major hindrance.
- In addition the activities of some traditional healers were also found to contribute to the delay in seeking appropriate treatment at the hospitals.
- High levels of fatalism were associated with breast cancer, and these impacted negatively on breast cancer screening and treatment seeking behaviour among the respondents.

Chapter 8 Discussions

8:1 Introduction

This was a descriptive study aimed at evaluating the knowledge, attitudes, belief and breast cancer screening practices among women of Accra and Sunyani in Ghana. The study has provided valuable information on factors associated with breast cancer and screening practices among women in Ghana and adds to the literature on the topic. This information is critical not only in identifying the obstacles impeding effective breast cancer care but also it will serve as a guide for the development of appropriate programmes and initiatives to improve breast care in Ghana, which would also have implications for other developing countries.

8:2 General Observations

This study provided new insights into the perceptions, knowledge, beliefs, attitudes, and practices of the Ghanaian women in Accra and Sunyani with respect to breast cancer and the breast cancer screening programmes. Several issues are worth mentioning regarding the attempt to address the poor outcome of the disease in Ghana. These include limitations of the health system in terms of inadequate health facilities and personnel to provide screening and treatment services; low knowledge about the disease , namely, risk factors and symptoms, and low rates for breast cancer screening (breast self-examination, clinical breast examination and mammography). Others are financial constraints and fatalistic attitudes. The women's knowledge of breast cancer and screening practices were found to be largely related to their education, with women with higher education demonstrating a better appreciation of the disease and better screening performances.
Respondents mentioned their main sources of health information and overall, the mass media (radio, television, and newspapers) were the main sources of health information (table 6:4:1 page64). Health workers as well as families/friends were deemed ineffective or less effective. The data strongly suggested the usefulness of exposure to multiple sources. However, this is in sharp contrast with a study in the United Kingdom where as many as 92% of the general population mentioned that General Practitioners were the main source of health information (BCC, 2005). There is overwhelming evidence of the

effectiveness of the mass media in raising awareness, increasing knowledge and changing attitudes and behaviour, however, care should be taken to make the sure that the information provided is accurate (Elkamel, 1996). In the light of the evidence that demonstrates high levels of misinformation about breast cancer in the study population, the mass media could effectively be used to provide the correct information about the disease.

8:2:1 Geographical Distributions of the Respondents

As indicated earlier, there are improved educational and health facilities in Accra compared to Sunyani and, normally, one would have expected to see some level of difference in the knowledge and behaviour regarding breast cancer and breast cancer screening practices among the respondents from the two study areas. However, there were not significant differences in the knowledge and practices between the Accra and the Sunyani respondents. Considering the improved educational and health facilities in addition to the higher socio-economic status for the respondents from Accra as against the rural nature of Sunyani it was difficult to appreciate the unexpected trend where the knowledge, attitude and behaviour among the respondents' from Accra were not better as demonstrated in figure 6:6:2 (page 79). Further investigation will be necessary to identify other factors responsible for this trend.

8:3 Breast Screening Practices of the Respondents

In view of the continuous increase in incidence of breast cancer, with its corresponding high mortality, as well as its high cost of treatment, breast cancer screening remains the most cost effective way of cancer management (Parkin and Fernandez 2006). However, most developing countries, including Ghana face resource constraints that hinder the capacity to improve early detection, prompt diagnosis and appropriate treatment of the disease. This means that every country should develop evidence based, economically feasible and culturally appropriate guidelines that could be utilized to improve breast cancer care (Anderson *et al.*, 2006).

Due to the limitations of the health system, financial constrains and other socio-cultural factors, mammography in Ghana has been more of diagnostic tool, rather than one for

routine screening, and is only undertaken on physician referral when breast cancer is suspected. This was reflected in the low uptake of mammography among the women who participated in the study (figure 6:6:2 page 79). The uptake of mammography that was recorded was based on self-reports because it was not possible to validate these from the medical records of the respondents.

Mammography screening in premenopausal women is a contentious issue since clinical studies have not been able to confirm that routine screening in younger women is beneficial, in part because of the technical limitations of mammography in denser breasts (Tabar *et al.,* 1995; Feig, 1995; Glasziou *et al.,* 1995; National Institute of Health Consensus Development Panel, 1997; Curati *et al.,* 1998; Alexander *et al.,* 1999). Therefore, applying the recommended mammography screening guidelines in Ghana would only benefit a small portion of Ghanaian women, since over 60% of breast cancer cases in Ghana occur in women below the age of 50 years (Anim, 1993; Ghartey, 2001; NCRNM, 2003; Adjei, 2006). The actual burden of breast cancer in the population is also unknown due to the lack of adequate cancer statistics. Therefore the age specific incidence of the disease also needs to be established before a case for routine mammographic screening can be justified, especially because there are several worthy, but competing demands on the national budget, namely, control of several infections diseases, education and provision of basic amenities and infrastructure.

Given the non-availability of adequate resources and other social-cultural factors which make routine mammography screening not feasible in Ghana, current efforts at breast cancer screening must rely on a combination of breast self-examination and clinical breast examination. Women can be taught the techniques of monthly breast self-examination (BSE) and nurses, midwives, and other health professionals can be trained to augment physicians in the performance of clinical breast examinations (Elizabeth *et al.,* 1997; Baxter, 2001).

Overall breast self-examination, clinical breast examination and mammography screening rates were found to be very low among the respondents. It was however noted that in many instances, respondents with higher education levels participated more in screening,

which could be due to differences in education and information perception (figure. 6: 6:1 page 78). These observations support the findings of previous studies (Potosky *et al.,* 1998; Hall *et al.,* 2002; Tannerberger *et al.,* 2004) that demonstrated a positive correlation between socioeconomic indicators, such as lower education, low levels of awareness and financial difficulties with lower screening rates.

Low rates of breast self-examination, clinical breast examination and mammography were apparent among the respondents from both Accra and Sunyani. The respondents from Accra have a higher socio-economic status and much improved health care and educational facilities than the respondents from Sunyani. One would have therefore thought that the respondents in Accra would undertake screening practices more regularly than their counterparts from Sunyani. Although there are a marginal difference in use of clinical breast examination and mammography in favour of Accra these were not significant differences. Breast self-examination was performed more frequently in Sunyani than Accra, these differences are shown in (figure 6:6:2 on page 79). This confirms the complexity of the breast cancer problem in Ghana, which has several dimensions other than the inadequacy of facilities. Therefore a multi-targeted approach, which includes awareness creation through appropriate health education and promotion activities, attitudinal and behaviour change towards the disease which is then supported by the provision of facilities for screening and treatment, are required to improve breast cancer care in Ghana (as seen in the proposed breast cancer care model figure 2:6:2 on page 27).

In conclusion, the low screening rates among this group of women are of great concern as it invariably leads to late detection and diagnosis of the disease with the corresponding poor outcomes. Minimizing barriers to breast screening will help improve the breast cancer situation in Ghana.

8:4 Knowledge of the Respondents' on Breast Cancer

Several studies have shown that women's participation in breast cancer and other screening practices is influenced by their knowledge of the diseases as well as other socio-economic factors (Kogevinas *et al.,* 1991; McPhee *et al.,* 1997; Sung *et al.,* 1997; Chan *et al.,* 2002; Leslie *et al.,* 2003; Tanneberger *et al.,* 2004).

Despite the relatively high educational level of the participants, these women displayed a knowledge deficit about both breast cancer and breast cancer screening. The respondents were also poorly informed about the risk factors and the signs and symptoms of the disease. Overall, respondents with higher education performed better, with more correct responses. Previous studies have demonstrated that knowledge of breast cancer and screening guidelines are related to screening rates (Black *et al.,* 1995; Tannerberger *et al.,* 2004). Therefore the lack of knowledge demonstrated by the study participants may have partly contributed to the low screening adherence (McGrath, 2002; Mirick *et al.*, 2002).

The same levels of misconception were observed with the traditional healers. The single most important factor in whether or not a woman has ever undertaken screening or whether they have been recently screened is a recommendation from a health care provider, as shown in other studies (O'Connor and Perrault, 1995). The misconceptions of traditional healers are therefore worrying in view of the fact they are often the first point of call for many women, therefore any misconceptions held by the healers are more likely to be passed on to their unsuspecting clients. It therefore becomes essential that any effort at improving the knowledge level among Ghanaian women should also include these healers to ensure that they have the correct information about the disease. Particularly disturbing was their opposition to breast screening which could thwart all the efforts at encouraging Ghanaian women to adopt breast screening practices, especially breast self- examination

Poor knowledge of breast cancer risk is generally found in studies that include women of low socio-economic status, and particularly those that include women from the developing countries (Narimah *et al.,* 1999; Uche, 1999; Leslie *et al.,* 2003). For example, in a survey on breast cancer knowledge in Nigeria, Uche (1999) noted that only 32% of the respondents knew that a breast lump was a warning sign for breast cancer, 58.5% were unaware of most warning signs and only 9.8% knew of methods to detect breast cancer.

The findings from this study and other developing countries, contrast sharply with reports from the developed world. For example, a study by Grunfeld et al (2002) undertaken to

elicit knowledge and beliefs about breast cancer among a sample of the general United Kingdom female population noted that 90%, 70%, and 60% respectively, were able to quantify the relative risk of breast cancer that was associated with family history, previous history of breast cancer and smoking. It was further found that over 70% of the surveyed women were able to identify painless breast lump, lump under the armpit and nipple discharge/bleeding as symptoms of breast cancer (Grunfeld *et al.*, 2002). Older women were however poor at identifying symptoms of breast cancer, risk factors associated with breast cancer and their personal risk of developing the disease. Poorer knowledge of symptoms and risks among older women may help to explain the strong association between older age and delay in help seeking (Grunfeld *et al.*, 2002).

8:5 Respondents Perception of the Incidence and Prevalence of Breast Cancer in Ghana

Nearly all the participants in the study acknowledged that the number of breast cancer cases was increasing. What was not clear, however, was whether this was due to the increased awareness about the disease and better diagnostic methods, or due to an actual increase in prevalence. The absence of cancer registries in Ghana makes it extremely difficult to determine the actual incidence and prevalence of the disease. In order to make a strong case for more resources to be spent on cancer in Ghana, and ensure cost-effectiveness, it is important that the actual disease burden is known. This therefore calls for the establishment of cancer registries especially, at the 2 Teaching Hospitals in Accra and Kumasi and the Regional Hospitals. In addition to the increasing numbers of patients, it is also worrying that Ghanaian women tend to get breast cancer at a younger age (Anim, 1993; Ghartey, 2001, Adjei, 2006), a view also shared by the 3 Consultants who participated in the study.

8:6 Attitudes of the Respondents' towards Breast Cancer

The attitudes towards the disease of both the breast cancer patients and the breast Clinic attenders in the interviews were similar to findings from the quantitative data, ranging from fear, of the disease which was linked to death in most cases; denial and guilt; as well as the spiritual and supernatural attributes of the disease. The respondents not only

linked the disease with death but also linked surgical treatment of the disease with death. This is because many women only present for treatment once they are in the advanced stages of the disease and as such many patients die shortly after surgical intervention. The attitude suggests that these women are not aware that early diagnosis and treatment are associated with better outcomes.

The reactions to the diagnosis of breast cancer were; feelings of helplessness, fatalism and despair which have strong influences and impacts on the choice/type of medical care, when to seek help and the prognostic outcome (Million-Underwood *et al.,* 1993; Dibble *et al.,* 1997; Graham, 2002). These observations were corroborated by both the traditional healers and the Consultants. Breast cancer creates an identity crisis with the initial loss of body image and many women in the study expressed great sentiments relating to the changes in body image that are associated with mastectomy, leading to emotional distress, and disruption in family relations, some of the expressions of these sentiments are provided below.

> *"The greatest problem has to do with their marriages since no man would be happy to have a wife whose breast is removed"-Breast Clinic Attender @Appendix v (page 203).*

> *"You see, the breast is very important to every woman without which, a woman is never complete and no man would be happy to marry a woman whose breast is removed and I would prefer to die than to live without my breasts" (Breast Clinic Attender @Appendix v (page203)*

> *"My main problem is how my husband would continue to love and accept me after my breast is removed" – Breast Cancer Patient8 @ Appendix iv (page 178).*

The women displayed a high level of reliance on God for protection from the disease, as well as on divine intervention and healing. However, whilst acknowledging the benefit of divine intervention, they nevertheless believed that appropriate treatment from the conventional medical system was the best approach, which according to some of the women could be complemented simultaneously by prayers. The healthcare system can take advantage and develop such beliefs positively. For example, the study participants' strong personal faith in God and His actions can actively be used to support the healthcare system and health promotions, and the churches and mosques could be used to

disseminate information about the disease. However, any tendency by the subjects to accept their fate passively must be confronted through education. Encouragement, hope and emotional support from loved ones, family/friends, someone with common experience, and health care professionals can help prevent the guilt, fear and hopelessness these women go through when diagnosed with the disease (Awusabo – Asare and Anarfi 1997).

> *"Initially I felt hopeless when I was diagnosed with the disease and I thought I was going to die but I put my faith in God and hope by His Grace I would be cured" (Breast Cancer Patient @Appendix iv page 178)*

A related finding by Mitchell et al (2002) in a study in Eastern North Carolina suggested that a majority of the participants believed that God works through doctors to cure breast cancer and this was labelled as "religious intervention with treatment." The minority however, believed that medical treatment was unnecessary because only God could cure breast cancer which was labelled as "religious intervention in place of treatment". The study concluded that religious intervention in place of treatment contributed significantly to the delay in presentation of breast cancer among African-Americans which contributed largely to the advanced stage of cancer of diagnosis.

Stigma may prevent women from obtaining a diagnosis, accessing care, practicing preventive behaviours such as breast screening, or participating in research studies designed to find solutions to their condition (Miller and Kaiser, 2001; Aziz, 2003). As the incidence of breast cancer appears to be rising in Ghana, the importance of addressing the stigma attached to the disease, and its surgical treatment, becomes more essential.

Traditional beliefs dominate the Ghanaian women's lifestyle and the negative attitude of society towards cancer can be a greater killer than the disease itself. Misinformation and negative societal attitude towards the disease may have led to a situation where some Ghanaian women do not want to talk about the disease. The views expressed by some respondents suggest that cultural attitudes and beliefs of fatalism may deter the women from participating in breast awareness and screening activities. Some sentiments expressed by the respondents from the questionnaire (table 6:6:3 page 80) include; *"Do*

not want to expose my body"; "Afraid of the procedure"; Afraid to find out if I have the disease".

The same sentiments were expressed by some women in the interviews who described the personal fear that a woman experiences a diagnosis of the disease.

> *"I did not go for any mammogram for fear of being told that something was wrong with by breast" (Breast Cancer Patient @Appendix iv page 178)*

There were, however, some positive attitudes noted among some respondents' such as recognition of their knowledge deficits about the disease and their eagerness to learn, and also their willingness to participate in breast cancer screening The increased breast awareness and education in Ghana as contained in the proposed breast cancer model (figure 2:6:2 page 27) must reinforce the perceptions that lead to good practices and alter those that discourage such practices For example, the fears and concerns about cancer, as expressed by the patients, can be used in a non-threatening and supportive manner to encourage women to adopt early detection activities and seek early treatment. Dismissing such feelings may lead to avoidance and denial that would be counterproductive for early detection and treatment efforts (Tessaro and Smith, 1994).

8:7 Socio-Cultural Influences on Breast Cancer

In Ghana, as in most developing countries, women appear to take a lower priority in society than men, leading to the management of female related cancers, such as breast cancer, being under funded and lacking the urgency for the screening and treatment seen in many western countries (Oppong, 1995; Walters *et al.,* 1999). Participants in the study have a very closed, traditional, conservative and male dominated life style. It is therefore important to involve husbands in cancer educational programmes so that they support their wives and prevail on them to adopt early detection activities, in order that they seek appropriate early treatment (Chamot and Perneger, 2002). It is also important that men who are involved in decision and policy making in Ghana show serious concern for the plight of Ghanaian women and place conditions that primarily affect women as a high priority on the national development agenda.

8:8 Healthcare Services and the Social System and the role of the Government of Ghana to provide effective Breast Cancer Care

The inequitable geographical distribution of health facilities and services in Ghana has long been recognized as a problem that has continued despite immense progress to provide quality health care for the population (Ministry of Health, 2001). Health personnel, like those in many other professions, tend to locate in large towns and cities. Specialization in medicine, nursing, and many other healthcare professions has made it necessary for practitioners to be located in areas with larger populations to ensure an adequate patient base. However, in the current study, there were no significant differences both in the attitude towards breast cancer and breast screening practices among the respondents from Accra, the National Capital and Sunyani, the semi- urban Capital of Brong Ahafo Region (figure 3:1 on page 32).

The first step in cancer management is to make an accurate diagnosis (Nyström *et al.*, 2002). This calls for a combination of careful clinical assessment and diagnostic investigations, including histopathology, imaging, cytology, and laboratory studies. However, lack of adequate pathological services was mentioned by the Consultants and some of the breast cancer patients as a major obstacle to effective breast cancer management in Ghana. Efforts must therefore be made to improve the pathological services to enhance the quality of care for breast cancer patients in Ghana if improvements to early detection, through breast self-examination and clinical examination, are to have any impact and progress

The community and family support felt by the study participants is a very positive aspect of their coping system and should be supported by the breast care programme and healthcare system. Women who already are knowledgeable about breast cancer could be recruited to participate in peer teaching and support, which would strengthen the peer support network already present in the community (Hurley *et al.*, 1994; Erwin *et al.*, 2005).

With increased awareness through education, Ghanaian women would be in a better position to seek help early when they notice unusual signs and symptoms in the breasts.

The Government of Ghana has a responsibility to provide adequate treatment facilities for an increasing number of patients that might present with signs and symptoms of breast cancer as a result of the increased awareness being created about the disease. There is no doubt that there are heavy demands on the national budget from other sectors such as control of childhood infectious, malaria, education and provision of infrastructure, however, the provision of treatment facilities for breast cancer needs to be placed high on the national development agenda. Some additional investments in health services infrastructure may be required for the extra disease burden resulting from early detection. It is important to underscore the close link between early detection and treatment. An excellent early detection programme of breast self-examination and clinical breast examination would be inappropriate without effective treatment measures. Similarly, it will not be beneficial to develop treatment capacity without encouraging early detection activities.

The worse situation likely to arise is when breast self-examination and clinical breast examination rates increase without corresponding improvement in the facilities for diagnosis and treatment. There would be little point in making a woman aware of her having breast cancer without a prospect for treatment, as this will only exacerbate Ghanaian women's already fatalistic attitude towards the disease and therefore discourage them to participate in early detection activities.

Therefore, this study proposes a model for breast cancer in Ghana (figure 2:6:2 on page 27). The principal components of the model include:

- Intensive educational campaigns through the mass media and other appropriate channels to create and increase breast cancer awareness among the population.
- The educational campaigns should also be directed at traditional healers to help them to recognize breast cancer and refer suspicious conditions to health professionals.
- Teach and encourage Ghanaian women to practice breast self-examinations and report any abnormality detected to a health professional where clinical breast examination would be carried out. The importance of scheduling an annual clinical breast examination by a health professional also needs to be stressed.

- Orientate and encourage health professionals in all levels of health care settings to perform clinical breast examination as part of the overall clinical assessments. Abnormalities found on examination can then be referred for further evaluation including diagnostic mammography, biopsy and other tests. Such services should be affordable and easily accessible for the majority of the women.
- High risk women (those with a strong family history, women with certain benign breast conditions; women with lobular carcinoma in-situ) can utilize the few mammogram facilities for regular screenings. The cost of the mammography should be affordable.
- The Government of Ghana is expected to show serious commitment by providing adequate resources for diagnosis and treatment for the potentially large number of patients who will require these services as a result of the increased awareness that would have been created.
- Until adequate resources are available to provide cancer centres in all Regions of Ghana, doctors in the various Regional hospitals can be taught to take over the palliative care of patients who will only require analgesics. This will allow the only 2 oncology centres in Accra and Kumasi to concentrate on patients who will benefit from more radical treatments.

Inexpensive psychosocial support and care can improve the quality of life for women with breast cancer and their families (Cooper and Mullin, 2001). The need for well developed palliative services in Ghana can not be overemphasized because of the fact that the majority of patients report at the hospital with advanced form of the disease and can only benefit from palliative treatment. This point was stressed by one of the Consultants who participated in the study when he said *"I would also like to see well organized palliative care for pain management for cancer patients"* (Appendix vii page 231). A key element of palliative care is relief of symptoms with access to appropriate analgesics (Nyström *et al.*, 2002). As the cancer progresses, women will need nursing care, typically provided by a woman's family. Palliative care should offer these family members practical advice and emotional support. Education of the patient and family members should thus be considered as components of the management of cancer.

Women worry about the stigma of disease, whether they will be able to continue caring for their families, and whether changes in their appearance will disrupt their intimate relationships. They may find support in individual counselling sessions, patient-education classes, peer support groups, or spiritual activities. Equally important is that these interventions can give women access to information about their condition, including treatments, prognosis, and self-care, which doctors often fail to explain (Harris, 1998; Dow, 2000). A good example is found in Malaysia where a breast cancer organization, Penang Breast Care Society has trained volunteers, usually breast cancer survivors themselves, to offer newly diagnosed women emotional support and practical advice (Bishop *et al*., 2001). The Society has also stocked a room in the local hospital with pamphlets and books on breast cancer, video cassettes on rehabilitation, and samples of wigs and breast prostheses. These innovations can conveniently be adapted into Ghana to offer psychosocial support to breast cancer patients.

In conclusion, it must be noted that efficient implementation of the treatment policy for breast cancer will require careful consideration of the health system organization and an infusion of adequate resources and equitable distribution of such resources, and also the establishment of clear guidelines on referral between the various levels of breast cancer treatment centres in the country.

8:9 Cost of Breast Cancer Care in Ghana

The discussion of breast cancer care in Ghana will be incomplete without considering the economic barriers which prevent Ghanaian women from seeking appropriate treatment. This is because costs for diagnosis and treatment was strongly expressed by many women who participated in the study as a major barrier to breast cancer care in Ghana, a concern also corroborated by the Consultants. Many developing countries including Ghana have introduced user fees for publicly provided health services, often as part of structural adjustment programmes (McPake *et al.* 1993).

The national health insurance is yet to be fully operational and as a result, patients in Ghana are required to make out-of-pocket payments to pay for health care including screening, diagnosis and treatment at the point of service. However, this system has great

potential to negatively affect access to health care, especially for women. Considering the limitations on Ghanaian women's earnings in both formal and informal employment, it is to be expected that many patients would be unable to afford the cost of breast cancer care in Ghana.

A mammogram in Ghana costs about ¢260,000.00 (£14) and the cost of surgical treatment for breast cancer is over ¢2 million (£108) and between ¢ 3-4 million (£162-£217) for radiotherapy. The full cycles of chemotherapy cost between ¢6- 24 million (£325-£1300) (Consultants @ Appendix vii on page 231). In a situation when the daily minimum wage is less than ¢15,000.00 (less than £1) with an average basic monthly salary of about ¢500,000 (£27) (www.ghana.gov.gh), this obviously presents a major difficulty for many patients, particularly women from the rural areas without good and stable incomes. In addition to the direct payment for medical care, are other costs, such as transport, accommodation and food, and also lost income which constitute additional financial burdens to the patients and their families. According to some of the patients, the financial constraints were so critical that they took loans and also relied on the benevolence of family members, friends and church donations to supplement family resources to enable them to undertake treatment (Breast Cancer Patient @ Appendix iv page178). This situation will undoubtedly affect the patients' treatment seeking behaviour and contribute to late presentation of breast cancer, with its associated poor outcome. It is not surprising therefore that nearly all the respondents, including the Consultants, asked the Government to intervene by providing financial assistance to cancer patients in Ghana.

Whilst encouraging breast cancer patients to seek appropriate treatment early, it is absolutely essential the barriers that impede effective breast cancer care are removed. To this end, it is of the considered opinion that mechanisms are put in place to provide financial support to breast cancer patients in Ghana. Until such a time that the national health insurance becomes fully operational to cover cancer care, some form of exemptions and subsidies for the patients will provide considerable relief and improve the outcome of the disease. The combination of well-targeted subsidies and exemptions

appears to constitute a promising channel for the government and other agencies who want to help with breast cancer in Ghana. Additionally, the government should consider providing hostel facilities at the two cancer centres in Accra and Kumasi for patients who travel long distances for treatments. Women advocacy groups in Ghana can also help by establishing foundations and lobby for funds to support needy breast cancer patients. Specific recommendations to address the financial burden of breast cancer patients are provided in the conclusion section of the thesis.

8:10 Increasing awareness levels, improving the Knowledge and Attitudinal Change through Health Education

Timely diagnosis of symptomatic disease relies on breast health awareness in the potential patient population and in primary health care professionals, and thus increased breast health awareness is a key element of interventions at all resource levels. Although awareness is an elusive concept, it clearly has great potential for improving the outcome for breast cancer patients. An important aspect of awareness is dissemination of the knowledge that breast cancer is not rapidly fatal if diagnosed early and in many cases is "curable". It is clear from the very advanced stage of breast cancer at presentation in Ghana that diagnosis is often delayed in patients who must have been aware of symptoms for some time. Fear of diagnosis, among other factors, is a major contributor for the late presentation.

Although some awareness activities are taking place in Ghana, it is important to question the tools which are being utilized to educate Ghanaian women about breast cancer and how effective these activities have been. Just telling people that they are at risk of developing a disease or that early detection can reduce mortality is rarely sufficient to change behaviour (Ajzen, 2000). However, tools based on evidenced-based theories have been proved to be successful in creating the awareness required to effect behaviour change (Michie *et al.*, 2004). For this reason, the study proposes the theory of planned behaviour as a model for planning and implementing breast cancer education and awareness programmes to improve the outcome of the disease in Ghana. The model has successfully been used in several breast cancer screening studies (Orbell *et al.*, 1997; Meyer-Weitz, 2000; Rutter, 2000; Godin *et al.*, 2001; Drossaert *et al.*, 2003; Steadman

and Rutted, 2004; Michie *et al.*, 2004). The theory provides a road map for studying problems, developing appropriate interventions, and evaluating the successes of such programmes. It can inform the planner's thinking during all of these stages, offering insights that translate into stronger programmes. The theory can also help to explain the dynamics of health behaviours, including the processes for changing them, and the influences of the many forces that affect health behaviours, including social and physical environments (Cooke, 1995; Elder *et al.*, 1998; Ajzen, 2000).

The first step in applying any behavioural prediction or behavioural change model is to identify the specific behaviour of interest. First, it is important to distinguish between behaviours, behavioural categories, and goals. The most effective health communication interventions are directed at changing specific behaviours, for example a monthly breast self-examination, rather than behavioural categories such as breast screening, or goals, for example early detection (Cooke, 1995; Elder *et al.*, 1998; Ajzen, 2000). First, and foremost, sound epidemiological evidence should link the expected behaviour change to a positive health outcome. Second, the recommended behaviour must be one that members of the target population can perform. For example, trying to get women to have screening mammograms that are not available or are too expensive for most women will be inappropriate.

The second step in applying theory of planned behaviour is to identify the specific population. For any given behaviour change, both the relative importance of attitudes, norms, and self-efficacy as determinants of intention and the substantive content of the behavioural, normative, and control beliefs underlying these determinants may vary as a function of the population under consideration. Once one or more behaviours and target populations have been identified, the theory can be used to understand why some members of a target population are performing the behaviour change and others are not. That is, by obtaining measures of each of the central variables in beliefs, attitudes, norms, self-efficacy, intentions, and behaviour (figure 4:1 on page 38), one can determine whether a given behaviour or behaviour change for example, breast self-examination, is not being performed because people have not formed intentions to do breast self-

examination or because they are unable to act on their intentions.. It is important to recognize that behavioural theory focuses on the behaviour of interest, and thus its primary focus is on beliefs about the performance of the behaviour (Middlestadt *et al.*, 1996; Fishbein *et al.*, 2001).

Mass media which was mentioned as the main sources of health information by the respondents (table 6:4:1 on page 64) could be used in the health education campaigns and activities. Particularly, the 130 local FM radio stations spread across Ghana (InterMedia, 2005) can effectively be used to disseminate the information in local languages to the women in the catchments area. Mass media communication can play a vital role in creating breast cancer awareness, motivating the women to take advantage of the policies and programmes from the government for breast cancer care in Ghana.

Outreach programmes can also be used as a valuable supplement to mass media campaigns. Community based activities, including support groups and volunteer health promoters, hold special promise since they can tap into the energies and resources of the women themselves as well as the wider community (Miller, 1996; Baxter, 2001).

It is equally important in the breast cancer awareness campaign to make government officials and policy makers realize the importance of placing breast cancer high on the national agenda, encourage the development of systematic health policies and service protocols, and increasing women's access to detection and treatment services. Efforts must also be made to raise the awareness of front-line providers and teach them skills to perform clinical breast examinations and recognize the symptoms of breast cancer and make appropriate referrals. Husbands are also an important audience that must be targeted, since they are frequently the decision-maker in the family and may control women's access to the health care system.

By speaking openly about breast cancer, awareness campaigns have the added benefit of reducing the stigma associated with breast cancer. Breast cancer survivors are especially credible spokespersons. Their first-hand testimony can defuse stigma and gather public support for breast cancer initiatives. In Brazil, nongovernmental organizations are training community volunteers to raise the awareness of local women, teach breast self-

examination techniques, and help women access screening, diagnostic, and treatment facilities. In Nigeria, some schools have added cancer awareness to the health curriculum (Schwartsmann, 2001; Breast Cancer Advocacy, 1999). These innovative strategies can be adapted to suit the Ghanaian context to improve breast cancer in Ghana.

In conclusion, it is important to acknowledge that the availability of culturally appropriate health education and educational materials in the local languages will be vital to guarantee informed and healthful decision making. The barriers to preventive care that arise as a result of beliefs, attitudes and other personal characteristics and the limitations of Ghana's health system must also be addressed.

8:11 Improving Traditional Medicine and Breast Cancer Care

Health care utilization depends on health-seeking behaviour which in turn is a product of various factors including physical, socio-economic, cultural and political (Fatima and Avan, 2002). Despite the recent advancements in modern medicine, many people, especially those in the developing countries, continue to patronize traditional medicine (Shaikh and Hatcher, 2005). Cultural beliefs and practices in rural areas often lead to self-care or home remedies and consultation with traditional healers for treating chronic conditions including cancer, infertility, and diabetes (Shaikh and Hatcher, 2005; McNee, 1995; Nakagawa et al., 2001; Nyamango, 2002). The health-seeking behaviour of the people, especially in developing countries, therefore calls for bringing all traditional healers into the mainstream by providing them with proper training, facilities and back-up for referral (WHO, 2001).

The World Health Organization (WHO) defines traditional medicine as health practices, approaches, knowledge and beliefs that incorporate plant, animal, and mineral based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination, to treat, diagnose, and prevent illness, or maintain well-being (WHO, 1996). According to the World Health Organization, in the United States and Western Europe, allopathic or Western medicine is the dominant healthcare for the general public. But strikingly, within these countries, the use of alternative medicine is significant.

Studies show that up to 75% of Americans, and up to 50% of Europeans use one form or another of alternative medicine. In places, such as, Asia and Latin America, traditional medicine is used to help meet some primary health care needs and in Africa, 80% of the population uses traditional medicine for their primary health care (WHO, 2001).

Ghanaians have been consulting traditional healers for generations and would continue to patronize traditional medicine, often simultaneously with conventional care, despite its obvious limitations. This is for many reasons which are mainly economic, sociocultural and because of the accessibility of such practitioners (Twumasi, 1995; Awusabo – Asare and Anarfi, 1997; Mona, 1997). In this current state of health system utilization and health-seeking behaviour of Ghanaians, it is highly desirable to reduce the antagonistic attitude between the traditional healers and conventional medical practitioners, which leads to polarization in health system utilization, by exploring more opportunities for the integration of traditional and modern medicine. Unfortunately, incorporating traditional medicine into mainstream medicine is not easy. In part, this resistance stems from the primary philosophical distinctions between conventional medicine, which is based on the results of experiments and views illness as the result of pathological agents, and traditional medicine, which accepts that disease can have supernatural causes.

Another problem with integrating traditional and conventional medicine, however, is resistance on the part of the traditional practitioners themselves (Twumasi, 1995; Awusabo – Asare and Anarfi, 1997; Mona, 1997). The main contributing factor (for poor cooperation between traditional and conventional medical practitioners) has been lack of confidence, since the traditional medical practitioners are seldom legally protected. At the same time, the traditional practitioners affirm that there are inherent differences in the philosophy and training between traditional and conventional medicine, and that these distinctions make traditional medicine fundamentally a parallel medicine, not a substitute (Twumasi, 1995; Awusabo – Asare and Anarfi, 1997; Mona, 1997). The healers consider their knowledge of plants and medicines to be inherently secretive, because it is a gift from the ancestors and perfected through years of apprenticeship and training (Sofowora, 1996; Tumwesigye, 1996; Wilder, 2001).

A critical aspect of the study was to determine the perception or the actual roles of traditional healers in breast cancer management in Ghana, against the background of their wide claims to cure the disease and the counter accusations from the conventional medical practitioners as being mainly responsible for the late presentation of patients to the hospitals. Therefore the traditional healers' own assessment of their strengths, shortcomings, and their expectations as they relate to breast cancer were explored. An attempt was also made to find out where traditional and conventional medicines meet, where they diverge, and how the relationship between conventional and traditional medicine could be improved.

A common observation from the two traditional healers interviewed in Ghana was their claim to treat every condition and they were not particularly modest in their self-claimed abilities. Another disturbing phenomenon was the unwillingness on the part of the traditional healers to refer breast cancer patients to the hospitals based on their sense of supremacy over conventional medical practitioners in dealing with the disease. Contrary to the earlier works of Twumasi, (1995), Awusabo and Anarfi (1997) and Mona (1997), the traditional healers who participated in the current study considered their practice as an alternative rather than complementary to conventional medicine. They described the current method of surgical treatment for breast cancer as harmful, which according to them is responsible for the deaths of many breast cancer patients in Ghana.

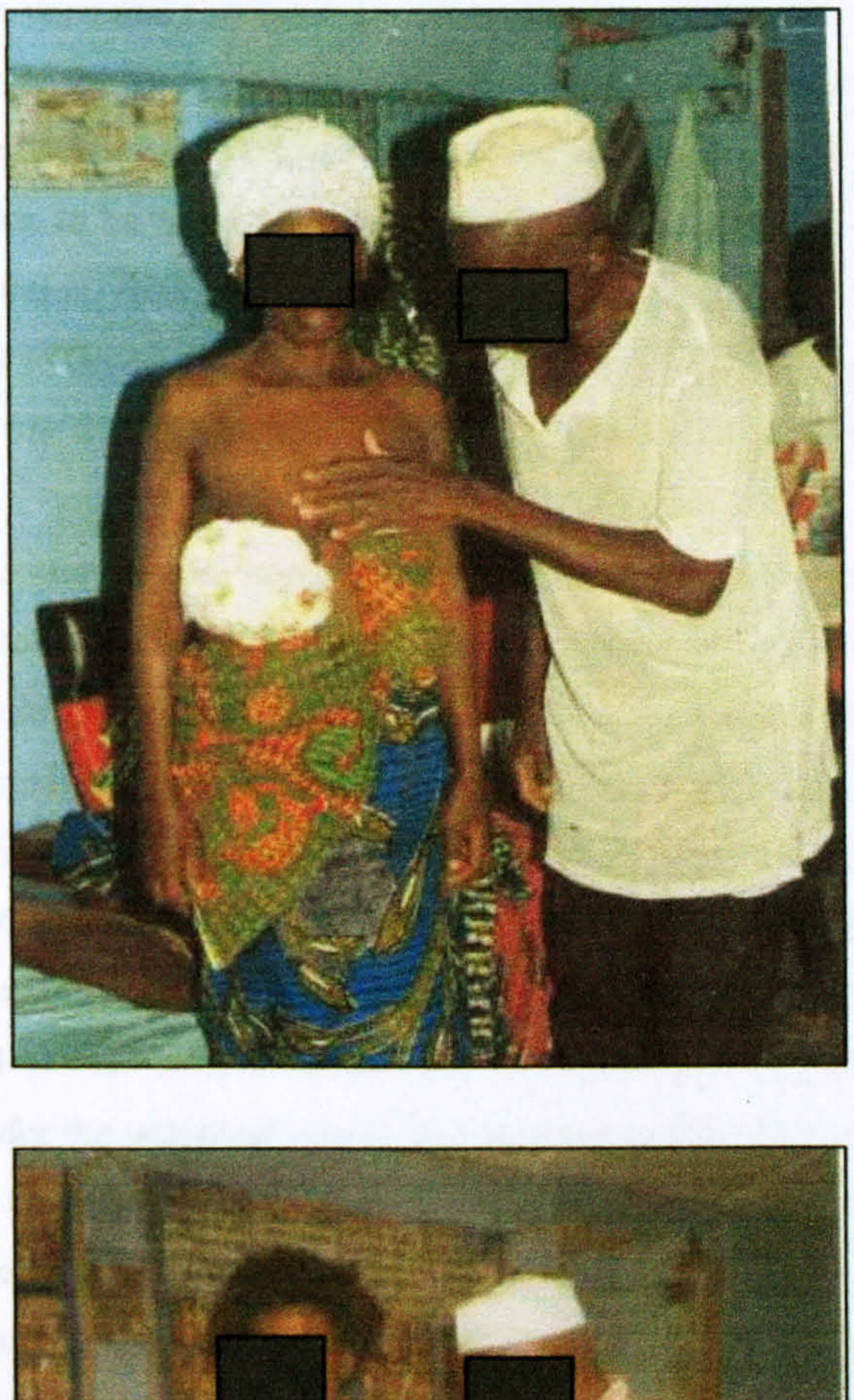
The Consultants on the other hand argued that traditional medicine was fraught with problems of imprecise dosage, poor diagnosis, exaggerated claims of abilities, and inadequate knowledge of the conditions they claim to have the cure for and failure to refer patients to hospital where and when necessary. They were, however, of the opinion that given the necessary education and support, the traditional healers could encourage women to adopt screening and breast care practices and more importantly, to be able to identify breast cancer and refer the patient to hospital early. The traditional healers, however, maintained that conventional medical practitioners and research scientists were only interested in condemning their art and healing power. With this attitude of the healers any effort to integrate them into the mainstream health care in Ghana may not be easy but it could be done through dialogue. However, in view of the diversity of the practice of traditional healing it might be possible to find some traditional healers in

Ghana who would be open-minded and prepared to work with the conventional medical practitioners. By providing them with proper training, facilities and back-up for referral some of the problems encountered might be eliminated. It is important that the healers are oriented to recognise the limitations of their practises and shed some of the over-confidence and exaggerated potentials of their herbal preparations; and should be encouraged to refer breast cancer patients to the hospitals (Sofowora, 1996; Tumwesigye, 1996). A positive interaction between all health providers, academics, policy makers and researchers has to be harnessed to work for a common goal to improve the health of the people. It is important to note that as the global use of healing practices outside conventional medicine is on the increase, therefore integration of the two systems, at least in terms of evidence-based information sharing, ought to be encouraged (Pearce, 2000). Through more rigorous research, the evidence-based recommendation of some herbal therapies and the evidence-based rejection of others will become more definitive so that the "quacks" in the system would be prevented from exploiting cancer patients. Solicitation of the healers' opinions and concerns may be an early step in that direction (Pearce, 2000).

It is difficult to explain why 41% of the women questioned in phase 1 of the study perceived traditional healers to have a role in breast cancer care in Ghana whilst only a small percentage of women who have, or suspect themselves to have, breast cancer claim to have actually used them (table 6:4:3:3 on page 67 and figure 6:7:1 on page 81). Possible reasons for this could be due to the stigmatization associated with traditional medicine in Ghana and "social desirability" in which the respondents wanted to "satisfy" the researcher, by providing responses they thought the researcher wanted to hear. In spite of this inconclusive evidence of the actual role that traditional medicine plays in breast cancer care it is still important to bring the practice of traditional medicine into the main stream of the health system, even if this only benefits the small number of patients who admitted to using the service. The healers seem to treat their patients for long periods of time without providing actual help, which results in patients reporting to hospitals much later, with a more advanced form of the disease, as shown in the pictures in figures 8:11 a and b (page 126). At this advanced stage, many of the patients will die

at the onset of treatment, or in the course of treatments for which the conventional medical practitioners then get blamed.

Figure 8:11a and b Breast Cancer Patients with a Traditional Healer in Ghana



This state of affairs reinforces further the Ghanaian women's attitude of correlating breast cancer with death. A paradigm shift that would encourage patients to seek early treatment at the hospitals has to be vigorously pursued by integrating the traditional medicine into the mainstream health system in Ghana. Whilst acknowledging the difficulty of the incorporation against the background of negative attitudes and postures of the traditional healers, every effort needs to be made to find the appropriate solutions to the problem through continuing education, dialogue and legislation to control the activities of the healers. The Government of Ghana through the Ministry of Health could bring the healers under one umbrella, or work with existing networks to implement such programmes.

This study therefore proposes a new concept of a two-way referral system which is termed "Reciprocal Benefits Referral System" through which the traditional healers would be encouraged to refer life-threatening conditions such as cancer, HIV/Aids and tuberculosis to conventional medical practitioners and in return receive referrals for non-life threatening conditions like menopausal syndrome or arthritis. As has been observed, most cancer patients in Ghana would continue to patronize traditional medicine and by adopting this concept many patients who would have otherwise been treated by traditional healers would be sent to the hospitals early for treatment that would improve the disease outcome. Under the proposed system, the Healers on their part would be able to manage successfully some of these non-life threatening conditions, which in most cases require only psychological, emotional and social support for which the Healers may have a comparative advantage over the conventional medical practitioners. By so doing, the Healers would not be placed at the disadvantage of losing the money which they would have otherwise lost by referring the cancer patients and this system could also enhance their social recognition and values as contributing positively to providing quality health care for the population. Initially, this recommendation could be implemented as a pilot phase, say in the Dormaa District in the Brong Ahafo Region, where there is a large concentration of healers and who have been organized under the Dormaa Presby Primary Health Programme where one-way referral is being strengthened (Ministry of Health, 2001).

Resistance from both traditional and conventional practitioners is to be expected and a method of facilitating this may be to bring in traditional birth attendants to act as intermediaries between the Healers and the Conventional Practitioners. The birth attendants are the natural allies of the healers and it is presumed that the Healers may be more comfortable dealing directly with them than the conventional practitioners. To a large extent, the activities of the birth attendants are integrated into the Ghana's health system by organizing antenatal clinics, family planning counselling and performing uncomplicated deliveries and referring complicated labour cases to the hospitals (Ministry of Health, 2001). At the community level, the healers could be encouraged to work closely with the birth attendants and refer the patients to them who in turn will use the existing structures at their disposal to send the patients to the hospitals if the healers still feel reluctant to refer the patients directly to the hospitals because of pride, rivalry or bias.

Although no data has been collected in the present study about the role of the birth attendants, this is a direction for possible future research to investigate the role of traditional birth attendants as an intermediary between traditional healers and conventional medical practitioners.

It is also important to educate the population to appreciate the dangers of over-reliance on the healers, which in many cases results in delays in seeking appropriate medical treatment with its corresponding poor outcomes of breast cancer cases in Ghana.

8:12 Reflections and Limitations of the Study

The topic of the knowledge, perception and attitude to breast cancer screening practices is one of the seriously understudied subjects in most developing countries including Ghana. Data on the topic was found to be very scanty during the literature search. The absence of reliable literature on the subject was a limiting factor to provide any external point of reference for comparison and for determination of whether findings were mutually consistent. Such a comparison in developing countries may be of extreme importance when one considers the fact that the existing literature is usually from the developed countries with health and socio-economic conditions which are very different to those of developing country populations.

Knowledge, perceptions, attitude and practice assessment from population surveys invariably pose the problem of social desirability, whereby respondents are reluctant to admit poor knowledge, perceptions, attitude and practices to avoid giving a negative impression. Interviewees may give answers that they think the researcher wants to hear rather than their own opinions. They may exaggerate about their behaviour or influence within a group and may not wish to talk about behaviours they are ashamed of or embarrassed about (Aubert *et al.,* 1998). This has a potential to affect the reliability and trustworthiness of the results and to reduce social desirability bias, respondents were not informed of key research hypotheses, but the aims and objectives were presented in general terms.

The use of multiple assessment modalities and the resulting complexity of this study involve several limitations that require consideration.

The study participants were aware that their participation was entirely voluntary and that they would not receive compensation.

As in all self-reported surveys the data are subject to inaccurate recall or acquiescence bias. The problem of inaccurate recall was manifested in the study, which accounted for the rejection of 26 questionnaires because of insufficient information provided by the respondents. Moreover, several studies have shown that self-reports tend to indicate overestimation of participation in cancer screening (Stratton, 1994). However, it is

believed that overestimation in self reports has had little effect on the results of the study. This belief is strengthened by the fact that the self-reported breast cancer screening rates were considerable low (Figure 6:6:2 on page 79), probably reflecting the real situation among the respondents.

The process of quantitative data collection was not an easy task especially with one person reaching 500 respondents with the questionnaires. This involved working during the evenings and on the weekends which was quite tedious. This has a potential to affect the quality of the data collection and could have affected the overall study. A much better approach was to have a smaller sample size or involve additional persons in the data collection.

The information extracted from the semi-structured interviewees provided a rich and diverse source of information for the validation and clarification of the main data from the questionnaire by 474 women selected from Accra and Sunyani. However, the weaknesses of structured interviews are that the adherence to the interview guide may prevent collecting unexpected, but relevant information and also that interviewees hear and understand questions in different ways. A major setback of the qualitative approach is that the interviewer himself is an instrument in the data collection and any negative attitudes from the researcher towards the clients would elicit negative behaviour and responses in return (Seale, 1999). Efforts were therefore made not to influence the process with professional background; personal preferences, cultural background and earlier experience, when generating theories, instead these were actively used during the entire research process to maintain a balance between objectivity and sensitivity to ensure the quality of the study, as suggested by Seale (1999). A neutral attitude was maintained throughout the interviewing by not giving strong impressions or personal views to the responses from interviewees. This approach was to encourage the interviewees to openly express views on a subject, which gives the interviewees the impression that the interviewer has not come with preconceived notions and conclusions, but is open to new information and ideas (May, 1997; Frerichs and Shaheen, 2001; Gubrium and Raulin, 2002). The second strategy was that familiarity on the subject was demonstrated by stating both sides of the issue, but without taking a position and personal views were candidly expressed and engaged the interviewees in an honest dialogue.

Every effort was made during the transcription of the data to ensure accuracy and completeness of the data collected, however, due to logistics and time limitation, it was not possible to present the transcript of the interviewees for them to either accept or reject the true reflections of the responses provided (Frerichs and Shaheen, 2001; Gubrium and Raulin, 2002). However, in order to minimize the possibility of bias, the recorded interviews were replayed to the interviewees, and where necessary, clarifications were sought and omissions included. The inability to secure feedback from the respondents on the actual transcriptions of these recordings has a potential to affect the trustworthiness and reliability of the study (Frerichs and Shaheen, 2001; Gubrium and Raulin, 2002).

The process of qualitative data analysis with the constant comparative method was extremely time-consuming and daunting and involved long periods of uncertainty. This initially presented a great deal of apprehension and a challenge as a first time user of the method in a study. However with support and guidance from an Academic Supervisor, which generated high levels of confidence, creativity and experience, things later became clearer. One particular difficulty encountered was how to present the findings of the data from the questionnaires and the interviews in a way that can readily be understood by readers. It was considered appropriate to present the findings separately but to discuss them together by relating to each data. This marriage of the two methods of data collection and analysis in a straightforward and trustworthy manner had provided a bigger picture and better understanding (Frerichs and Shaheen, 2001; Gubrium and Raulin, 2002) on the knowledge, attitude and breast cancer screening practices in Ghana.

The tape recording of interviews offered the opportunity to focus primarily on the discussions and spared the trouble of taking notes during the interviews. However, the use of tape recorders for interviews are not without limitations and their use requires extreme caution as the interviewees may feel intimidated and may well be reluctant to discuss sensitive issues, especially people in developing countries who may not be accustomed to their use (May, 1997; Frerichs and Shaheen, 2001; Gubrium and Raulin, 2002). Another known problem with this method of data collection is that respondents may feel uneasy about tape recorders and may say things that would not cause 'trouble' if

overheard, they may also be nervous and less apt to respond freely (Frerichs and Shaheen, 2001; Gubrium and Raulin, 2002). In addition to recording the verbal responses of the interviewees, their nonverbal behaviours and facial expressions, which reveal more than what an informant says were noted, since some interviewees might be sceptical or uncomfortable responding to some questions such as a family history of breast cancer or the use of traditional medicine. Again to overcome this limitation, the interviewees were assured on the anonymity and confidentiality of the data and no major problem was encountered with the tape recorder during the interview sessions which could have affected the process. Finally personal impressions, feelings, and insights were also noted for the purpose of reflection as part of the studies.

Chapter 9 Conclusion and Recommendations

9:1 Conclusions

The findings from the study support all but one of the initial hypotheses of the study as outlined in section 1:5 (page 6), indicating that, several factors contribute to the poor prognosis for breast cancer in Ghana.

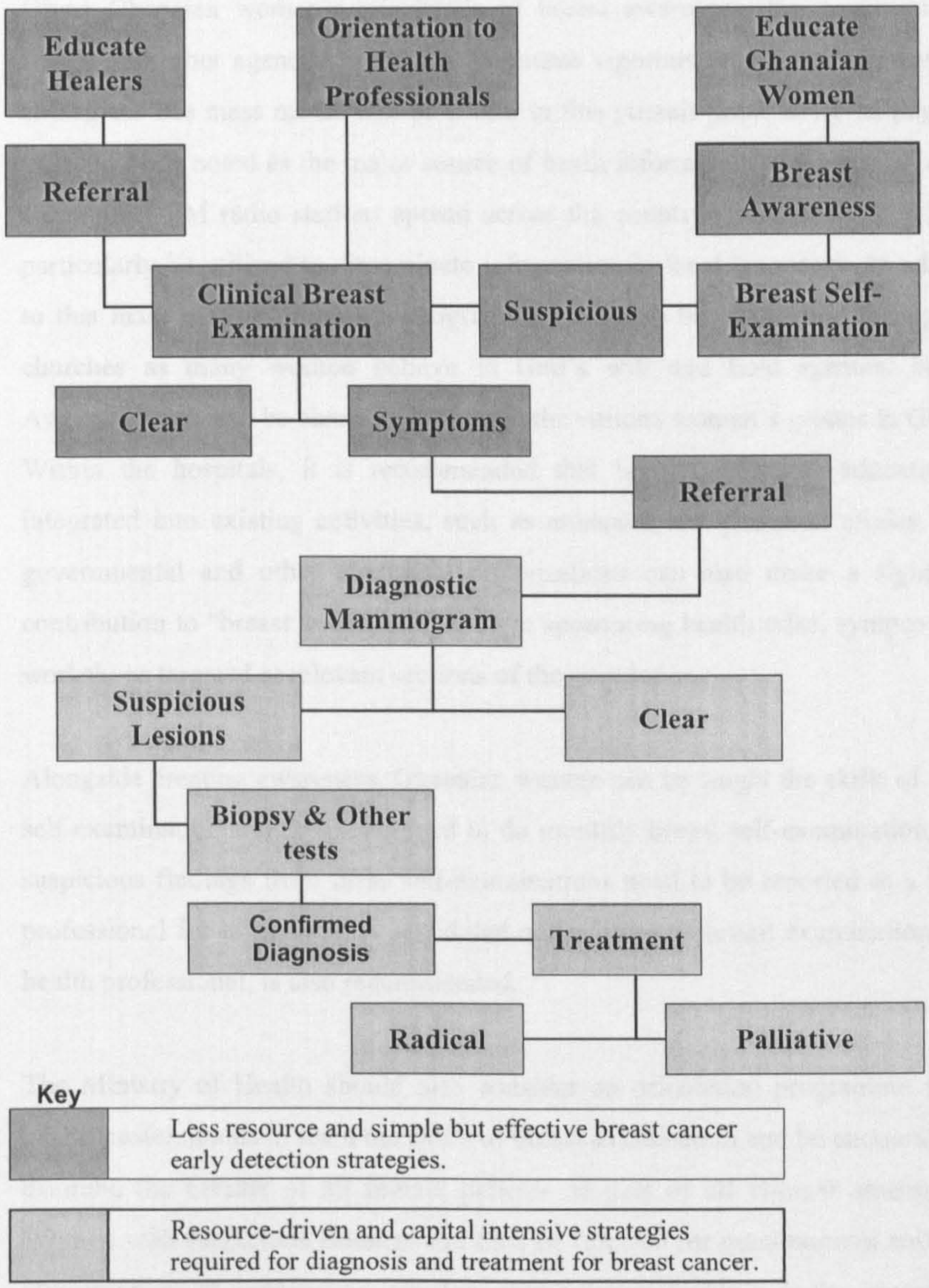
1. The low level of breast cancer awareness among the respondents (tables 6:5:1 on page 69; 6:5:3 on page 71; sections 7:2:1 on page 83 and 7:3:4 on page 90), supports the first hypothesis of the study. This finding indicates that the public educational campaigns, intended to educate women in Ghana on breast cancer, are inadequate and ineffective for all groups of women, especially women in the rural areas of Ghana.
2. Not only did the respondents, most of whom are relatively well educated, display high levels of knowledge and practice deficit, but they also demonstrated a lot of misconceptions about breast cancer (table 6:5:4 on page 72) this supports the second hypothesis. The misconceptions include spiritual and supernatural causes of the disease and the belief that surgical intervention leads to death. The lack of knowledge about the disease was particularly exhibited by the low perception of the risk factors as well as the signs and symptoms of the disease.
3. The initial suggestion that cancer fatalism was a common phenomenon in Ghana (hypothesis 3), was also supported by the findings of the study (table 6:6:3 on page 80).
4. The lack of adequate facilities for breast cancer screening, diagnosis and treatment was found to be a major factor in the poor outcome of breast cancer in Ghana (figure 3:1 on page 32) which again supports the study hypothesis. The study also identified financial constraint as a major obstacle to accessing health care in general and breast cancer care in particular. This conclusion was drawn from the reported difficulty, encountered by many of the respondents, in paying for the cost of care and which was also corroborated by the Consultants.

5. The women's knowledge of breast cancer and screening practices were found to be largely related to their education, women with higher education demonstrated a better appreciation of the disease and better screening performances (table 6:5:4 on page 72; figure 6:6:1 on page 78; tables 6:5:5-12 on pages 73-77 and sections 7:3:4 on page 90 and 7:5:3 on page 100 respectively). These findings support the initial hypothesis of a positive correlation between the level of education and knowledge and practices of breast cancer.
6. As expected, breast self-examination, clinical breast examination and mammography practices among the respondents were found to be low, which supports the initial hypothesis (figure 6:6:2 on page 79; section 7:3:5 on page 90 respectively). This low breast cancer screening rate was found to be mainly due to low awareness, unavailability of facilities and mammography for screening, financial constraints (resulting from lack of health insurance and benefits), breast cancer fatalism and other sociocultural factors. These factors also contributed to the advanced stage of the disease often presented to the hospitals for treatment with the associated poor outcomes.
7. In spite of the relatively better health and educational facilities available to the respondents in Accra, as well as the improved socioeconomic conditions in favour of Accra as compared to Sunyani (figure 3:1 on page 32), there were not significant differences in the knowledge and practices between the Accra and the Sunyani respondents (figure 6:6:2 on page 79). This was the only finding which did not support the initial hypothesis of the study.

In addition to the above specific conclusions (1-7) other conclusions were drawn from the study. These include the activities of some traditional healers in Ghana which were identified as a contributing factor to the poor outcome of the disease. These negative activities include non-referral of patients to hospital based on the exaggerated claims by the traditional healers that they can cure the disease and the antagonistic attitudes with conventional medical practitioners, which restricted meaningful cooperation and collaboration between the practitioners.

The study has also come to the realization that the sophisticated strategies for breast cancer care in the developed countries such as routine mammographic screening cannot be implemented in Ghana. This is because the country lacks the capacity in both human and material resources to effectively implement such programmes. This therefore calls for the development of economically feasible and culturally appropriate programmes and strategies for breast cancer care which can be sustained at every stage of the country's development. To this end, the study makes the following recommendations based on the proposed model for breast care on Ghana in page 136.

Proposed Model for breast cancer in Ghana



9:2 Recommendations to improve Breast Cancer Care in Ghana

- Given Ghanaian women's low levels of breast awareness, the government of Ghana and other agencies are urged to pursue vigorous breast cancer awareness strategies. The mass media will be useful in this pursuit (table 6:4:1 on page 64) as it has been noted as the major source of heath information in Ghana. The 130 community FM radio stations spread across the country (InterMedia, 2005) can particularly be utilized to disseminate information in local languages. In addition to this mass media, awareness programmes can also be channelled through the churches as many women believe in God's will and hold spiritual beliefs. Awareness can also be channelled through the various women's groups in Ghana. Within the hospitals, it is recommended that breast awareness education be integrated into existing activities, such as antenatal and postnatal clinics. Non-governmental and other charitable organizations can also make a significant contribution to "breast awareness" through sponsoring health talks, symposia and workshops targeted at relevant sections of the population.

- Alongside creating awareness, Ghanaian women can be taught the skills of breast self-examination and be encouraged to do monthly breast self-examinations, any suspicious findings from these self-examinations need to be reported to a health professional for evaluation. A scheduled annual clinical breast examination, by a health professional, is also recommended.

- The Ministry of Health should also consider an orientation programme for all health professionals to learn the skills of breast examination and be encouraged to examine the breasts of all female patients as part of all clinical assessments. Women with suspicious findings can then be referred for mammogram and other investigations as appropriate. The few mammogram facilities in the country can then be used for the diagnosis of symptomatic women and the screening of asymptomatic high risk women.

- To reduce the problem of non-referral or delayed referral caused by traditional healers, it also recommended that an education programme be organized for the traditional healers to help them to recognize breast cancer and refer these patients to the hospital early. Perhaps, one way of encouraging this would be, the two-way referral, termed "Reciprocal Benefits Referral System" proposed by this study. Initially, this could be implemented as a pilot phase in areas where there is a large concentration of traditional healers. For example, in the Dormaa District of Brong Ahafo, the traditional healers have been organized under the Dormaa Presby Primary Health Care Programme where one-way referral is being strengthened (Ministry of Health, 2001). The traditional healers should also be encouraged to recognise the limitations of their practice and to cooperate with conventional medical practitioners.
- To encourage the women in Ghana to make optimal use of the existing facilities and services for breast cancer care, it is recommended that the government consider subsidizing the cost of breast cancer care in Ghana. It is further recommended that standard breast cancer care be covered under the national health insurance scheme when it becomes fully operational.
- It is expected that the Government of Ghana show serious commitment to breast cancer care by providing adequate resources required for the diagnosis and treatment of the disease. Perhaps this is the most important of all the recommendations, because without appropriate and early treatment for the disease when diagnosed, all the efforts aimed at creating awareness and early detection will come to nothing. There will be no point in making a patient aware of the disease without the prospects for treatment. This will only succeed in fuelling the fatalistic attitude among Ghanaian women towards breast cancer.

The provision of facilities for palliative care and follow-up care should be integral parts of cancer care services. To decrease the burden on the two cancer centres, and make optimal use of the few resources available for patients who will benefit from radical treatment, the Regional hospitals can be equipped to offer palliative care and follow-up care to patients who will only require pain and symptom

control. This will reduce the burden to patients who have to travel long distances for analgesics.

- Finally, the study recommends that until adequate resources are made available to provide facilities for affordable treatment for breast cancer patients, it will be a worthless effort to organize any breast awareness creation and screening activities in Ghana. It is absolutely essential to underscore the important link between early detection and treatment as it is the only means to improve breast cancer care in Ghana and thus reduce the high mortality from breast cancer. The slogan should be "all or nothing".

In conclusion, it must be stressed that the findings and recommendations of study, the first of its kind in Ghana, will be particularly critical for the development and implementation for every intervention needed to improve breast cancer care in Ghana. It is the expectation that the recommendations will not be allowed to remain in office cabinets and shelves, as often is the case in Ghana, but government officials responsible for health and non-governmental organizations interested in breast care will seriously study the recommendations emanating from the proposed breast cancer care model for Ghana and take the appropriate actions to address the limitations of breast cancer care in Ghana.

Chapter 10 Personal Reflections of the Study

Personal reflexivity involves reflecting upon the ways in which our own values, experiences, interests, beliefs, political commitments, wider aims in life and social identities have shaped the research (Nightingale and Cromby, 1999). It also involves thinking about how the research may have affected and possibly changed us, as people and as researchers (Nightingale and Cromby, 1999).

Reflecting on my work, I was aware of strengths and weaknesses. For a start, the fact that I was doing my PhD on a topic which has not been well studied in the Ghanaian context made me nervous as information in the literature was very scanty. However, I accepted the challenge to produce a study the findings and recommendations of which can be used as a blueprint for breast cancer in Ghana and which will also have implications for other developing countries.

My starting point in the research was to respect the knowledge and experience of the people who would take part in the study, rather than to see them as mere sources of data. Therefore, in my dealings with the participants, I placed great emphasis on developing good interpersonal relationship based on respect. I tried not to be judgemental and scornful even in instances when some responses did not make sense to me. This had a positive influence as it put me into the position of accepting what they had to say, wishes, attitudes, and experiences as valid rather than simply as a means for my theory building. However, I had to go a step further to control my emotions during my interactions with the traditional healers considering some outrageous remarks and demands they made about the over-exaggerated claims of cures for breast cancer. I was particularly taken aback when the healers demanded that doctors rather refer breast cancer patients to them since, according to them, the doctors have nothing to offer when it comes to cancer treatment.

I was very happy to observe the commitments and enthusiasms of the Consultants in their efforts to help cancer patients in Ghana in spite of the many difficulties they face in their work. Basic facilities such as pathologies, chemotherapy and modern radiotherapy

equipment for effective treatment planning and delivery were lacking. Also the absence of health insurance and benefits compounded the problem for the medical personnel as patients in many cases are unable to pay for the full course of treatment. Being a woman herself, the Radiation Oncologist particularly exhibited great concern about the plight of her patients and for which I was highly impressed.

I can also not hide my respect and admiration for the Ghanaian women who against all the odds, including financial constraints, lack of access to health care and other sociocultural factors, still strive to seek treatment when afflicted with the disease. This resoluteness is evident from the fact that some of these patients have to travel across the length and breadth of the country, in some instances over 200 miles to Accra for treatment and also the way and manner some patients have to struggle to mobilize funds to pay for treatment. Previously, I tended to be angry and scornful when breast cancer patients came to the hospital with very advanced stage of the disease. But having gone through the study, I have realised that these women face many difficulties and barriers, and that has made me change my thinking and attitude. I am convinced that when adequate facilities and services are provided for breast cancer care in a favourable socioeconomic environment, most Ghanaian women would avail themselves of such opportunities and thereby improve the disease outcome in Ghana.

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Appendix i – Ethical Approval

UNIVERSITY OF GHANA MEDICAL SCHOOL
COLLEGE OF HEALTH SCIENCES
ACADEMIC AFFAIRS OFFICE

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P O Box 4236
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Ghana

My Ref. No:MS/
Your Ref. No.

10th September 2004

ETHICAL CLEARANCE

I.D. NO.: MS-Et/M.10-P.11/2003-04

The Ethical and Protocol Review Committee of the University of Ghana Medical School on the 24th June 2004 unanimously approved your research proposal.

TITLE OF PROTOCOL: **KNOWLEDGE, ATTITUDE, BELIEF, BEHAVIOUR AND BREAST CANCER SCREENING PRACTICES IN DEVELOPING COUNTRIES – A CASE STUDY FOR GHANA, WEST AFRICA**

PRINCIPAL INVESTIGATOR: **SAMUEL YAW OPOKU**

This approval requires that you submit three-monthly review reports of the protocol to the Committee and a final full review to the Ethical and Protocol Review Committee at the completion of the study. The Committee may observe, or cause to be observed, procedures and records of the study during and after implementation.

Please note that any modification of this project must be submitted to the Committee for review and approval before its implementation.

You are required to report all serious adverse events related to this study to the Ethical and Protocol Review Committee within seven (7) days verbally and fourteen (14) days in writing.

As part of the review process, it is the Committee's duty to review the ethical aspects of any manuscript that may be produced from this study. You will therefore be required to furnish the Committee with any manuscript for publication.

Please always quote the protocol identification number in all future correspondence in relation to this protocol.

Signed:.....
PROFESSOR A.G.B. AMOAH
(CHAIRMAN, ETHICAL AND PROTOCOL REVIEW COMMITTEE)

cc: Dean
Head of Department
Members. Ethical & Protocol Review Committee

Appendix ii - Information and Consent Form

City University
London

INSTITUTE OF HEALTH SCIENCES
DEPARTMENT OF RADIOGRAPHY
CITY UNIVERSITY

TITLE OF THE PROJECT:

KNOWLEDGE, ATTITUDE, BELIEF, BEHAVIOUR AND BREAST CANCER SCREENING PRACTICES IN GHANA, W/AFRICA

NAME OF RESEARCHER-: SAMUEL YAW OPOKU (PHD. STUDENT}

NAME OF RESEARCH SUPERVISOR-: DR. MARTIN BENWELL

WHAT IS THE PURPOSE OF THE STUDY?

The Study is aimed at creating awareness about the increasing incidence of breast cancer among Ghanaian women through community health education and promotional activities, and to encourage active participation in the breast cancer-screening programme. It is also aimed at determining to what extent the traditional beliefs and cultural practices have contributed to the low participation in breast cancer screening as well as effects of health-related behaviours, knowledge of breast cancer and breast screening and other contributing factors. The ultimate aim is to help develop culture-specific strategies to improve breast care in Ghana and reduce the high mortality from breast cancer.

WHY HAVE YOU BEEN CHOSEN?

You have been chosen because being a woman and aged 40 years and above you have a relative risk of developing breast cancer in your life- time. It is therefore important that you know everything about your risk factor and what needs to be done to reduce your risk and to detect early any development of breast cancer for appropriate early treatment.

WHO IS ORGANISING THE STUDY?

The Study is being conducted independently as part of my PhD. Research work based at the City University, London. The information collection part of the study is to be completed within 12 weeks (between October and December 2004)

WHAT WILL HAPPEN TO ME IF I TAKE PART?

If you decide to take part you would be requested to complete a questionnaire, which would be read and explain and your responses recorded exactly. This would take approximately 30 minutes to complete.

WHAT WOULD HAPPEN TO THE INFORMATION I PROVIDE?

The Researcher and the Supervisor would be the only people to know that you are taking part in the study and to have access to the information collected from you during the course of the study. All information that is collected would be kept strictly confidential. Any information about you would be anonym zed so that you would not be recognized.

WHAT IS TIIE RISKS IN TAKING PART?

The Study would not involve any invasive procedure (no physical examination, no medication, no surgery, etc) and therefore there would be no real or perceived risks.

WIIAT WOULD I GAIN FROM TAKING PART?

You may find it helpful to talk about your knowledge, experience and concerns about breast cancer. Benefits would also include an opportunity to learn about breast cancer, what your risks are, where to go for help and what you can do to help yourself. However, there would not be any monetary reward. From the information from the study it may be possible to enhance the effectiveness of interventions aimed at improving the breast cancer care for women in Ghana.

If you have concerns about this study and wish to contact someone independent, you may contact- Prof. Wiredu, Dean, School of Allied Health, College of Health Sciences University of Ghana. Legon. Accra. Ghana. Tel. +233 21 687974

RESEARCH PARTICIPANT INFORMED CONSENT FORM

I agree to take part in the above research. I have read /read to me the attached Participant Information Sheet. I understand what my role will be in this research, and all my questions have been answered to my satisfaction.

I understand that my participation is totally voluntary and that I am free to discontinue participation at any time for any reason without negative consequences.

I have been informed that the confidentiality of the information I provide will be safeguarded and that privacy and anonymity will be ensured in the collection, storage and publication of the research material

I,.....have fully understood the aims, methods and conditions of participation in the Study. All my questions were answered and I consent to my participation.

Participant's Signature/ Thumbprint..... Date.....

Witness (Name& Signature/ Thumbprint..... Date.....

Researcher's Signature..... Date.....

Thank you for participating in the Study

Appendix iii - Questionnaire

This Questionnaire is to be used to assess the Knowledge, Attitude, Beliefs, and Breast Cancer Screening Practices among Women in Ghana

SECTION A DEMOGRAPHIC INFORMATION

1.Code Number.....

2. Age (Years)
- 40 - 45 ☐
- 46 - 50 ☐
- 51 - 55 ☐
- 56 - 60 ☐
- 61- 65 ☐
- > 65 ☐

3. Religion
- Christian ☐
- Moslem ☐
- Traditionalist ☐
- Others Specify.....

4. Marital Status.
- Married ☐
- Single ☐
- Divorced ☐
- Widowed ☐

5. Highest Educational Level?
- Primary ☐
- Middle ☐
- Secondary ☐
- Tertiary ☐
- None ☐

6. What work do you do?
- Farming ☐
- Trader ☐
- Self-employed ☐
- Housewife ☐
- Public Servant ☐
- Unemployed ☐
- Other Specify.....

7. Highest Educational Level of your husband?
- Primary ☐
- Middle ☐
- Secondary ☐
- Tertiary ☐
- None ☐

8. What work does your husband do?

Farming ☐
Trader ☐
Self-employed ☐
Unemployed ☐
Public Servant ☐
Others Specify.....

9. Have you ever smoked? Yes ☐ No ☐

10. If yes, do you still smoke? Yes ☐ No ☐

11. How many sticks a day?.....

12. Have you ever drunk alcohol? Yes ☐ No ☐

13. If yes do you still drink? Yes ☐ No ☐

14. What type of drink?

Beer ☐
Guinness ☐
Hard Liquor ☐
Palm Wine ☐
Pito ☐
Every drink ☐
Others Specify

15. How often do/did you drink?

Daily ☐
Weekly ☐
Regularly ☐
Occasionally ☐
Rarely ☐
Others Specify ☐

REPRODUCTIVE HISTORY

16. What was your age at menarche (first time of menstruating)?.....

17 Do you have children? Yes ☐ No ☐

18. If yes, at what age did you have your first child?.....

19. How many children do you have?.....

20. Do/ did you breastfeed your children? Yes ☐ No ☐

21. If yes, for how long? 0-4 months. ☐
5-12 months. ☐
13-18 months ☐
>18 months. ☐

22. Have you reached your menopause (cessation of menstruation)?
Yes ☐ No ☐

23. At what age did you reach menopause?.....

SECTION B KNOWLEDGE, BELIEFS & ATTITUDE

24. What would be your first choice when you and family need health/ medical services (Tick as many as appropriate)?
Hospital ☐
Pastor ☐
Herbalist ☐
Fetish shrine ☐
Pharmacy/Drugstore ☐
Others Specify .....

25. Have you ever heard about breast cancer?
Yes ☐ No ☐ Not sure ☐

26. Where do you get <u>most</u> of the information about breast cancer?
Doctor ☐
Midwife/Nurse ☐
Radio ☐
Television ☐
Women's Group ☐
Family ☐
Friends ☐
Church ☐
Magazines / Newspapers ☐
Others Specify.....

27. How much do you know about the disease?
Nothing ☐ Little ☐ Quite a Lot ☐ A lot ☐

28. Do you know some of the risk factors for breast cancer?
Yes ☐ No ☐ Not Sure ☐

29. If yes, can you mention some the risk factors.
.....
.....

30. Do you personally known anyone who has breast cancer?
Yes ☐ No ☐ Not sure ☐

31. Is there any member of your family who has/had breast cancer?
Yes ☐ No ☐ Not sure ☐

32. If yes, what was the relationship? (Tick as many as appropriate)

Mother	☐
Sister	☐
Grandmother	☐
Cousin	☐
Daughter	☐
Aunt	☐

Others Specify.....

33. Do you think many women die from breast cancer in Ghana?
(If yes answered yes, go to Q.34)
Yes ☐ No ☐ Not sure ☐

34. What do you think are the reasons? (*Tick as many as appropriate*)

Doctors in Ghana can't cure the disease.	☐
Breast cancer is not a "hospital disease".	☐
Women go for treatment too late	☐
Most women don't know where to go for treatment	☐
Cost of treatment is not affordable	☐

Others Specify.....

35. Do you know of any one who has died of Breast cancer?
Yes ☐ No ☐ Not Sure ☐

36. How common is breast cancer in Ghana?

Very common	☐
Somewhat common.	☐
Not common at all	☐
Don't know	☐

37. What would you say are the chances of you getting the disease?

Very likely	☐
Somewhat likely	☐
Possible but not likely	☐
Unlikely	☐
Don't know	☐

38. For your answer to ***question 37 above***, what makes you think this way?
.....

39. Can you tell me the main signs and symptoms of breast cancer?
Yes ☐ No ☐ Not sure ☐

40. If yes, mention those you know.....

41. Have you heard about breast cancer screening?

Yes ☐ No☐ Not sure ☐

42. If yes, from whom /where? (Tick as many as appropriate)

Doctor	☐
Midwife/Nurse	☐
Radio	☐
Television	☐
Family	☐
Friends	☐
Women's Group	☐
Church	☐
Magazine/ Newspaper	☐
Others. Specify.....	

43. Can you tell me the activities involved in the breast cancer screening?

Yes ☐ No ☐ Not sure ☐

44 If yes, mention them.

Breast self-examination	☐
Clinical Breast Examination	☐
Mammography	☐
Others. Specify.....	

45. When you heard about breast cancer screening what did you do?

I learned how to do breast self-examination	☐
I arranged to have clinical breast examination	☐
I arranged to have a mammogram	☐
Nothing	☐

46. Are you of the facilities/services in your community for breast cancer screening?

Yes ☐ No ☐ Not sure ☐

47. If yes, can you mention the facilities / services?

48. Would you like to be screened for breast cancer?

Yes ☐ No ☐ Not sure ☐

49 Would you please give reason for your answer?

50. Would you say that you a have

High risk for breast cancer	☐
No risk for breast cancer	☐
A small chance of getting the disease	☐
Don't know	☐

51. What makes you think this way? (Tick as many as appropriate)

Breast cancer is a family disease	☐
The disease is unknown in my family	☐
I don't deserve to the get the disease	☐
The disease is infectious/ contagious	☐
The disease is a curse	☐
I am not sure	☐

52. Would you say that death from breast cancer could be reduced in Ghana?
Yes ☐ No ☐ Not sure ☐

53. If you answered yes to 52, please tell me how that could be done
.....

54. Do you think breast cancer can be cured?
Yes ☐ No ☐ Not sure ☐

55. What makes you think this way?
.....

56. Have you ever been invited to participate in breast cancer screening?
Yes ☐ No ☐

57. If yes, by whom?.....

58. What examinations were done for you?
.....

59. Did you pay any money for the screening? Yes ☐ No ☐
If yes, how much?.....

SECTION C. PRACTICE

60. Have you ever practiced breast self-examination Yes ☐ No ☐

61. If yes, who taught how to do it? (Tick as many as appropriate)

Doctor	☐
Midwife/Nurse	☐
Family	☐
Friend	☐
Radio	☐
Television	☐
Church	☐
Women's Group	☐
Others Specify.....	

62. At what age did you start the breast self-examination?

20-25	☐	26-30	☐
31-35	☐	36-40	☐
>41	☐		

63. How often do you perform the examination?

Monthly	☐
Bi-monthly	☐
Quarterly	☐
Half-Yearly	☐
Annually	☐
Occasionally	☐

64. Do you normally go for Clinical Breast examination? Yes ☐ No ☐

65. If yes, how often?

Quarterly	☐
Half yearly	☐
Annually	☐
Occasionally	☐

66. When was the last time you had the examination?

< 6months	☐
7- 12 months	☐
13-18 months	☐
> 18 months	☐

67. Who did the clinical breast examination?

Doctor	☐
Nurse	☐
Midwife	☐
Others Specify.....	

68. Have you had screening mammogram before? Yes☐ No ☐

(If YES answer questions 69- 76. If NO answer question 77)

69 When was the last time?

2004	☐	2003	☐
2002	☐	2001	☐
2000	☐	>5 Years	☐

70. Why did you have the mammogram? (Tick as many as appropriate)

On the advice of my doctor	☐
Influenced by my family member(s)	☐
I was afraid I had breast cancer	☐
Others Specify.....	

71. How much did you pay for the last mammogram?.....

72. Would you consider the cost of the examination as?

Affordable	☐
Moderate	☐
Expensive	☐
Very expensive	☐

73. Would you like to have another mammogram? Yes ☐ No ☐

74. Please give reasons for your answer

.....

75. How long was the waiting time after the initial appointment for the mammogram?

< 1 week	☐	< 2 weeks	☐
<4 weeks	☐	<6 weeks	☐
< 8 weeks	☐	> 9 weeks	☐

76. How far did you have to travel for the screening mammogram?

< 10 miles	☐	11-20 miles	☐
21-30 miles	☐	31-50 miles	☐
51-80 miles	☐	81-100 miles	☐
101-150 miles	☐	151-200 miles	☐
> 201 miles	☐		

77. If no, what were the reasons? (***Tick as many as appropriate***)
(Only answer if you never had a mammogram)

I believed do not have breast cancer	☐
I should not expose my body	☐
I was afraid to go because I am not sure about the procedure	☐
I was afraid of the side effects of X-Rays	☐
I was afraid to find out if I have breast cancer	☐
Because of financial difficulties	☐
Because I was not aware where I could go for the mammogram	☐
Because no one in family has suffered from breast cancer	☐
Because of the attitude of the health workers	☐

Others Specify.....

78. How would you grade breast cancer screening programme in Ghana?

Poor	☐
Very poor	☐
Good	☐
Very Good	☐

79. Give reasons for your answer

.....

.....

80. Do you think Traditional Health Practitioners / Herbalists could play any significant role in breast cancer screening and treatment?

Yes ☐ No ☐ Not sure ☐

81. What makes you think this way?

.....

82. What do you think the Government / Ministry of Health should do towards Breast cancer screening and treatment in Ghana? (Tick as many as appropriate)

To open more screening centers ☐
Subsidize the cost of screening and treatment ☐
Embark on breast cancer awareness campaigns ☐
Breast cancer screening should be free ☐
Involve Traditional healers in the screening and the treatment ☐
Screening should be made compulsory but free of charge ☐
Others Specify.....

Appendix iv -Transcript from Breast Cancer Patients

Interview Guide used to interview Breast Cancer Patients in Ghana (Responses were be recorded)

1. How do you perceive breast cancer?
    a. Causes?
    b. Incidence
    c. Screening / prevention?
    d. Curability?

2. How did you know that you have breast cancer?
    b). How did you feel when you were told of the diagnosis?
    c). Why do you think you got the disease?
3. Before you were diagnosed, did you attend breast screening?
    b). Why? When?
4. Did you receive any treatment before coming down to the Hospital?
    b). Why? Where? When?
    c). Why did you change treatment?
5. Do you think breast cancer can be prevented? How? When?
    b). Cured? How? When? Where/
6. Is any member of your family with the disease/ treated with the disease/ died of the disease?
7. Are you happy with the current treatment? Why?
8. How would you describe breast cancer in Ghana?
    a). Availability of services for screening / treatment?
    b). Affordability
    c). Attitude of health personnel
    d). Awareness level
9. Do you think traditional healers/ herbalists can help in the management of breast cancer in Ghana? -How? Why? When?
10. Will a woman get breast cancer if she puts money in the brassieres? Why? How?
11. What do you want Ministry of Health do to help breast cancer patients in Ghana?

The interviews were conducted in Twi (Ghanaian local language) and transcribed directly into English

Interviewee 1- A 56-year Teacher Breast Cancer patient at Korle Bu Teaching Hospital

Q. What do you know about breast cancer including the causes?

Formerly breast cancer was considered as a disease of the "Western" women who smoke and drink and that it was unknown in Africa and for that matter in Ghana. But now the disease is common in Ghana affecting both old and young women. A lot of women are getting the disease these days but I don't know what causes the disease.

Q. How did you know that you have the disease?

I had some pains in my right breast and I reported to my doctor who referred me to a Surgeon in Korle Bu Teaching Hospital where a tissue was removed from my breast. This was sent to pathology for examination and the results came out as a cancer.

Q. How did you feel when you were diagnosed of the disease?

Initially I felt hopeless and thought I was going to die but I put my trust in God and hoped by His Grace I would be healed.

Q. What made you feel hopeless?

Many women who suffer from breast cancer die in Ghana without any help.

Q. Do you think breast cancer is preventable?

I have heard on the radio and TV that women should report to hospital early whenever they notice changes in their breasts so that the disease could be detected early for treatment to be given. It was said that if the disease was not treated early death always results.

Q. How long did it take you to start treatment when you noticed the pains in your breast?

It took me about one month to have the lump removed and another 3 months for the whole breast to be removed. This was followed with some drugs (chemo) and treatment on the machine (radiotherapy).

Q. Besides the surgery, chemo and the radiotherapy did you use other treatments?

I did not use any other treatment.

Q. Why didn't you use traditional healing/herbal treatment?

I suffered from a stroke about two years ago and went for herbal treatment. However, after several weeks of treatment with the herbal preparations without any appreciable improvement I went back to the hospital; so this time round I decided not to waste my time on them.

Q. Where did you go for the herbal treatment?

I went to the Onnipa Hia Mmoa Herbal Clinic at Abeka, a suburb of Accra and Aponkye Herbal Clinic in Tema.

Q. Are you saying that these Herbal Clinics offer treatment for breast cancer?

No but they only claim to have a cure for stroke.

Q. What about Spiritualists/Pastors- did you visit them?

As a Christian I believe in prayers but I think it was more appropriate to seek treatment from the hospital before thinking of prayers as prayers alone without the appropriate treatment would not help.

Q. Do you think an act of God, Spiritual/Supernatural forces may be responsible for the disease?

Not at all; breast cancer is just like any disease such as hypertension which is also common these days.

Q. Is someone in your family suffering from breast cancer or died of the disease?

I cannot remember.

Q. Are you satisfied with the treatment you have received so far?

I have observed some improvement in my condition since I started the treatment. I see a lot of patients both old and young; some coming from the neighbouring countries for treatment and since some of these patients have successfully been treated I think a cure is possible.

Q. How far did you have to travel to the hospital for treatment?

About one hour travel to get the hospital.

Q. How would you describe the cost of the treatment?

The cost of treatment is expensive and I am finding it difficult to find money to pay for the radiotherapy treatment which alone is about ¢5 million (£350) so I have arranged to pay the hospital bill in instalments.

Q. What are your views on the role of Traditional Healers/Herbalists in breast cancer care in Ghana?

There are claims by some of these Healers to treat all kinds of diseases including hypertension and diabetes but I have not heard of any herbal treatment for breast cancer.

Q. What would you like the Government do to improve breast cancer care in Ghana?

To create more awareness about the disease to ensure early detection and treatment as this could save many lives. The Government should also help with the high cost of treatment.

Q. Before you noticed the pains in the breast did you go for breast screening?

No because I was not aware of any screening activities.

Q. Do you think the risk of breast cancer would increase in women who put money in their brassieres?

I have heard that but I don't know if it is true.

Interviewee 2 - A 48-year Trader with Breast Cancer at Korle Bu Teaching Hospital

Q. What do you know about breast cancer including the causes?

It is a disease which takes a very long time to come out, but I don't know what causes it.

Q. How did you know that you have the disease?

I noticed a lump in my breast last year and reported to my doctor who referred me to Korle Bu Teaching Hospital for investigations after which I was diagnosed with the disease.

Q. How did you feel when you were diagnosed of the disease?

I was shocked and sad when I was told that I have the disease and asked myself why that should happened to me, but I prayed to God to help me out.

Q. Do you think breast cancer is common in Ghana?

In the past the disease was not common in Ghana especially among rural women but it appears to me that it is on the increase these days for unknown reasons. You don't get any explanation for the recent increases in the number of cases when you ask people who are supposed to know.

Q. Do you think breast cancer is preventable?

I don't know and when you ask the doctors they don't tell you anything.

Q. And do you think the disease can be cured?

I don't know but I hope with the help of God I would be cured so that I would live for few more years to care for my children.

Q. How long did it take you to start treatment when you notice the lump in your breast?

It took me about 6 weeks to have the pathological examinations completed.

Q. Before you were diagnosed did you ever have a mammogram?

For those of us in the rural areas, we don't know anything about mammogram.

Q. What about breast self-examination and clinical breast examinations?

I was not aware of these examinations.

Q. Besides the surgery chemotherapy and radiotherapy, did you use other treatments?

I did not use any of these treatments because my doctor advised me to go to Korle Bu Teaching Hospital and moreover my children would not allow me to go for any herbal treatment.

Q. Would you have gone for the herbal treatment if had been allowed?

I was advised by a friend to go to a Herbalist at Praso in the Central Region who she claimed was popular for breast cancer treatment but I did not go.

Q. What about Spiritualists/Pastors-did you visit them?

Prayers can do many things but I think it is more appropriate to go for treatment in addition to the prayers.

Q. Is someone in your family suffering from the disease or died of the disease?

I cannot remember.

Q. Do you think an act of God, a curse or supernatural forces may be responsible for the disease?

Ah well... (pause)...I don't believe that.

Q. How would you describe the cost of treatment?

The treatment is very expensive especially for those of us in the rural areas with low incomes. Apart from the difficulty in raising money to pay for the high hospital bills, are travelling and accommodation expenses; I have to stay in Accra for the entire period of my treatment which is causing a lot of difficulties and inconveniences.

Q. How much have you spent so far on treatment?

About ¢12 million (£800) and this includes the surgery, chemotherapy and the radiotherapy.

Q. How did you raise this amount?

From my children and some donations from my Church.

Q. What would you like the Government do to improve breast cancer care in Ghana?

More education on breast cancer as is being done for HIV. The Government should consider subsidizing the cost of cancer treatment.

Interviewee 3- A 36-year old (Trader) Breast Cancer patient at Korle Bu Teaching Hospital

Q. What do you know about breast cancer including the causes?

I don't know what causes the disease.

Q. Do you think an act of God, the devil, or a curse may be responsible for the disease?

I am not sure but it is possible.

Q. How did you know you have the disease?

I noticed a lump in my breast and after 2 months I went to the hospital where a lump was taken from my breast for investigation and when the results came out it was found to be cancerous and I was referred to Korle Bu Teaching Hospital.

Q. Do you think that the disease is common in Ghana?

In the past only few women died from the disease in Ghana but it is now common. I see a lot of women both old and the young also with the disease anytime I come to the hospital. I heard that as many as 400 women participated in the last free breast screening campaign at Korle Bu and out of these, about 70 women were identified with breast lumps but I don't the reasons for the increasing number of cases these days.

Q. Do you think breast cancer is preventable?

With increasing knowledge about the disease it is hoped that doctors in Ghana would be able to come out with some preventive measures.

Q. Did you ever have before you were diagnosed?

I have heard about it but I never had one.

Q. What prevented you from having the mammogram?

I did not consider that.

Q. What about breast self-examination and clinical breast examination?

I never had any of these examinations.

Q. Besides the surgery, chemo and radiotherapy, did you sue other treatments?

I used a lot of herbal preparations because it was cheaper and I also thought I could be helped.

Q. Did you get the help you expected?

It helped to some extent but I decided to go for hospital treatment.

Q. How much did you spend on the herbal medicine?

About ¢1 million (£80).

Q. How would describe the cost of the treatment?

I was fortunate to be put on the Breast Cancer Project Protocol at Korle Bu which provided me with free chemotherapy but I have spent about ¢3 million (£200) on radiotherapy alone.*

** This is a Clinical Trial Programme sponsored by Mayo Clinic of the USA*

Q. Is there any member of your family with a history of breast cancer?

I am not aware of that.

Q. What would like the Government do to improve breast cancer care in Ghana?

The treatment is very expensive and a subsidy could be given to the patients. Awareness about the disease is low and more educational campaigns should be organized especially in the rural areas.

Interviewee 4- A 55-year old housewife Breast Cancer patient at Korle Bu Teaching Hospital

Q. Would you please mention some causes of the disease?

I have heard that the disease could be found in some families ... (.pause)...but I am not sure of the causes.

Q. How did you know you have the disease?

I found a lump in my breast.

Q. Would you consider breast cancer as a major problem in Ghana?

Not much was known about the condition which was described as carbuncle (boil) in the past but it is killing a lot of women these days in Ghana.

Q. How would you describe the awareness level of the disease among Ghanaian women?

Most women don't want to hear about the disease because they think that it always leads to death.

Q. Do you think breast cancer can be prevented?

I don't know how the disease can be prevented because I don't know the causes of the disease.

Q. Would you describe breast cancer as a curable disease?

I have heard that the disease can be cured if it is detected and treated early.

Q. How can the disease be detected early?

We should begin to talk about the disease as is being done for malaria and HIV.

Q. Did you notice the lump yourself or were you told?

I detected the lump myself.

Q. How did you detect the lump?

I noticed the lump during a bath and reported to my doctor.

Q. Before you detect the lump did you go for breast screening?

I did not go for any mammogram for fear of being told that something was wrong with by breast.

Q. What was done for you when you reported to the hospital?

Some blood was drawn from my breast for investigations and I was also referred for a mammogram and the results of the mammogram confirmed the diagnosis for the disease.

Q. Where did you go for the mammogram and how much did you pay?

At the SSNIT Hospital in Accra, and I paid ¢250,000 (£20) for the mammogram

Q. Was the amount affordable?

It was okay for me but I think a lot of women cannot afford. It would be helpful if more centres would be opened where women can just walk in for a mammogram for a small fee especially for the low-income earners.

Q. What are your views on the role of traditional healers/Herbalists in breast cancer care in Ghana?

It depends on peoples' beliefs but personally I do not believe that they can help in any way.

Q. What are your reasons for this?

Prayers are good but hospital treatment is important.

Q. What would you like the Government do to improve breast cancer care in Ghana?

The treatment is very expensive and a Foundation such as Cardio Foundation can be formed to sponsor patients who cannot afford to pay for their treatment. Also efforts should be made to create more awareness about the disease especially in the rural areas.

Q. How can the awareness be best created?

Church groups could organize talks and invite speakers to talk about the disease.

Interviewee 5- A 48- year old (Caterer) Breast Cancer patient at Korle Bu Teaching Hospital

Q. What do you know about breast cancer including its causes?

I don't really know what causes the disease.

Q. How did you know that you have the disease?

During one of my occasional breast self- examinations, I noticed an unusual lump in my right breast and then reported to my Doctor who requested a mammogram. After the mammogram surgery was scheduled for a part of the lump to be removed for investigations. It took me about 4 months to have the surgery and after a series of investigations I was diagnosed with the disease.

Q. Before you were referred for the mammogram did you ever have a screening mammogram?

No and I never thought about that.

Q. What about Clinical Breast Examination?

I examined by breast occasionally and I was also examined by nurses and doctors on a few occasions.

Q. Do you think breast cancer is common in Ghana?

The disease is common these days because a lot of women are dying from the disease.

Q. Do you think the disease is preventable?

Yes, especially if more women would become aware of the disease and avoid lifestyles such as smoking and alcohol which are known to cause the disease.

Q. Do you think an act of God, Spiritual, Supernatural forces may be responsible for the disease?

(Subject laughs a lot) I don't think so and more education on the disease is needed. It is a disease which every woman is susceptible to and therefore it would not be right to attribute the disease to anyone or spiritual actions. It would be more appropriate to first go to the hospital and then complement the treatment with prayers.

Q. Do you think the risk of breast cancer would increase in women who put money (coins) disease in their brassiere?

In the first place why should one put money in the brassiere instead of the purse? It is not a good practice but I don't know if that can cause the disease.

Q. But have you heard about this?

I have heard it from a lot of women, but I am not sure if it is true.

Q. So you heard this from other women but not on the radio or television?

Oh no; not on the radio or television.

Q. Before you started treatment at the Hospital did you use other treatments?

I did not use any other treatment.

Q. What are your views on the role of Traditional Healers /Herbalists in Ghana?

I think some of them could help.

Q Are you therefore planning to go for such treatment?

I have not thought of that yet because I would like to concentrate on the current treatment.

Q. But do you really believe in Herbal medicine?

Those who have used these herbal preparations say they worked for them and because we are different individuals our responses would differ; what may be good for one individual may not work for another.

Q. Is someone in your family suffering from breast cancer or died of the disease?

No and I was therefore surprised when I was diagnosed with the disease because we have been made to believe that the disease only runs through families.

Q. How would describe the cost of breast cancer treatment in Ghana?

The treatment is very expensive and a lot of women die of the disease because they could not afford the cost of treatment. I have so far spent about ¢ 24 million (about £1800) and I am still finding it difficult to get additional money to continue with treatment.

Q. What would you like the Government do to improve breast cancer care in Ghana?

To increase public awareness about the disease and correct the wrong information people have about the disease. It is also important that the education on the disease is done in the local languages instead of the English language which the majority of women do not understand.
The Government should also cover breast cancer treatment- including surgery, chemotherapy and radiotherapy under the Health Insurance. Efforts should also be made to improve the Pathology Services because of the delay in getting pathology results and also the fact that not all patients can afford the services of Private Laboratories for investigations. It would be helpful if the same assistance that is offered to sickle-cell patients would be extended to cancer patients. Women in the country play important roles and therefore the Government and the society should come to the aid of breast cancer patients.

Q. How would you describe the facilities for breast cancer care in Ghana?

There is a weekly Breast Clinic organized at the Korle Bu Teaching Hospital and these services should be extended to other Regions and Districts in the Country.

Q. What are your impressions about your treatment?

I am very happy with the treatment but the only problem is the high cost of treatment.

Q. I am bringing the interview to an end and would like to thank you for your cooperation, but what would you like to ask me a question?

I would like to know if complete cure is possible after the treatment?

(Response- Normally, it depends on the stage of diagnosis and treatment. The good thing is, that like many other cancers, the earlier treatments are started, the better the chances for cure).

Interviewee 6- A 48-year old self-employed woman with Breast Cancer at Korle Bu Teaching Hospital

Q. What do you know about breast cancer including its causes?

The disease is very common in Ghana because I have seen a lot of women with the disease in the hospital but I am not sure of the causes the disease.

Q. How did you know that you have the disease?

I noticed a lump in my left breast and I had surgery to remove part of the lump for investigations when I reported to the doctor. The results came out as a case of breast cancer and I had another operation to have the entire breast removed. All these happened in Togo (Republic of Togo) and I was then referred to Korle Bu in Ghana for radiation therapy and chemotherapy.

Q. Do you think an act of God; Spiritual/Supernatural forces may be responsible for the disease?

I am not sure of that and I believe that only God knows who would get the disease or not.

Q. Do you think breast cancer is curable?

By the Grace of God, cure is possible.

Q. Before you noticed the lump in your breast did you have your breasts examined regularly?

Occasionally I did breast self-examination but never got examined by a doctor or a nurse.

Q. Besides the surgery, chemo and the radiotherapy did you other fore you started treatments?

My family is very religious and we do not believe in these and moreover my brother who lives in the USA is paying for my treatment and he would not allow me to go for other treatment.

Q. So are you saying that you do not believe in these treatments?

I don't know if the Healers would be capable of managing the disease well.

Q. Do you think risk of breast cancer would increase in women who put money (coin) in their brassiere?

I have heard of this since my childhood but I am not sure if it is true or not.

Q. Where and how did you get this information?

I heard if from some people around but not on the Radio or TV.

Q. Is someone in your family suffering from the disease or died of the disease?

Not to my knowledge.

Q. How far did you have to travel to the hospital for treatment?

My hometown is over 200 miles away from Accra but I am temporary staying in Accra with a relative for my treatment.

Q. What are your views on the role of Traditional Healers in breast cancer care in Ghana?

These herbalists do not use X-Rays or Scans or Laboratories in their practices and therefore I can not imagine how they could manage the disease effectively.

Q. What would you like the Government do to improve breast cancer care in Ghana?

Financial assistance could be offered by the Government to breast cancer patients because the cost of treatment is so high that not many patients can afford the treatment.

Interviewee 7- A 50-year Teacher Breast Cancer patient at Korle Bu Teaching Hospital

Q. What do you know about breast cancer including its causes?

In the past it was thought that breast cancer was not common in this country but many women are getting the disease these days.

Q. How did you know you have breast cancer?

I noticed a mass in my left breast about 6 months ago and I applied some liniment but when there was no improvement after about 2 weeks I went to see my doctor and after some investigations and x-rays I was diagnosed with cancer.

Q. How did you feel when you were first diagnosed with the disease?

I was very sad but I put my trust in God to help me out of this problem.

Q. What made you sad?

Because many women die from the disease in this country.

Q. Do you think breast cancer is preventable?

I don't know how it can be prevented because I don't know what causes the disease. The doctors may know what could be done to prevent the disease but if it was preventable why so many women do continue to die of the disease?

Q. How long did it take you to get treatment after you noticed the mass in the breast?

It took me about 2 months to have the breast mass removed because it was difficult getting money to pay for the operation and the drugs.

Q. Besides the surgery, chemotherapy and radiotherapy did you use other treatments?

Whilst I was trying to raise money to go back to the hospital I went for prayers.

Q. Why didn't you go for herbal treatment?

I was not aware of where to go for such treatment moreover I was also afraid to use herbal preparations.

Q. Why were you afraid to use the herbal preparations?

The way and manner the herbs are prepared and the fact that there are no standard dosages for herbal preparations made me scared and I didn't want to take anything into my body which could worsen my condition.

Q. So you went for prayers because of lack money to go the hospital?

As a Christian, prayer is my first option when faced with a problem and I am very hopeful that together with prayers my treatment would be successful; God is the answer to all problems.

Q. Do you think an action of God; Spiritual/Supernatural forces may be responsible for the disease?

I don't know what causes the disease but since nothing happens without a cause and because there are mysteries surrounding the disease it is possible that these forces have a part to play in the causation of the disease.

Q. Are you satisfied with your treatment?

By the Grace of God I have seen some improvement in my condition since the treatment was started and hope I will be okay at the end of the treatment.

Q. How far did you have to travel to the hospital for treatment?

I come from the North, over 300 miles away from Accra and I am residing in a Hostel during the period of the treatment.

Q. How would you describe the cost of treatment?

The treatment is expensive and I am finding it difficult to raise money to pay for the treatment in addition to paying for my accommodation. It is a big problem for my husband and family to manage.

Q. What are your views on the role of Traditional Healers/Herbalists in breast cancer care in Ghana?

I have not heard of any Healer who has successfully treated the disease; the Government could conduct a research into the activities of these healers to determine if they could offer cheap and effective treatment for the disease.

Q. What would you like the Government do to improve breast care in Ghana?

To organise public educational campaigns about the disease because a lot of Ghanaian women, especially, those of us in the Northern part of the country know

nothing about the disease. The Government should also consider subsidizing the cost of treating the disease.

Q. Before you noticed pains in the breast did you go for screening?

No because I was not aware of any screening activities in my area.

Q. Do you think the risk of breast cancer would increase in women who put money (coin) in their brassieres?

I have heard of this and it is also said that if your husband sucks the breasts it could also cause the disease but I don't know if these are true.

Interviewee 8- A 45-year Trader with Breast Cancer at Korle Bu Teaching Hospital

Q. What do you know about the disease including the causes?

I know that very woman is at risk of the disease so it is important to have regular check-ups so that the disease could be detected and treated early but I don't have any idea about what causes the disease.

Q. How did you know that you have the disease?

My right breast became swollen and I went to the hospital where it was found to be a cancer.

Q. How did you feel when you were diagnosed with the disease?

I became very worried because there was a woman who died in my area recently shortly after undergoing surgical treatment to remove the breast and I prayed that God would help me out of this predicament. My main problem is how my husband would continue to love and accept me after my breast has been removed and also how to finance the high cost of the treatment.

Q. Do you think breast cancer is common in Ghana?

A lot of women are getting the disease these days for unknown reasons.

Q. Do you think breast cancer is preventable?

I don't know if there are drugs which can prevent the disease or the things to do or avoid which can offer protection against the disease.

Q. Do you think the disease could be cured?

God is capable of doing every thing and has given the knowledge and skills to the doctors to manage the disease.

Q. How long did it take you to start the treatment after you were diagnosed?

It took me about 2 months.

Q. Before you were diagnosed did you go for breast screening?

I was not aware of any mammogram facility in my area and I did not have the money to come down to Accra just to have a mammogram.

Q. What about breast self-examination

I did not practise breast- self examination.

Q. Besides the surgery, chemotherapy and radiotherapy did you use other treatments?

I was referred by my doctor to Korle Bu where the treatment was started. There has been some improvement in my condition since I started the treatment and I would like to wait and see the outcome of treatment and I would then decide what to do next. As for prayer I believe it works but it would be better to first seek an appropriate treatment from the hospital in addition to the prayers.

Q. Is someone in your family suffering from the disease or died of the disease?

I am not aware.

Q. Do you think an act of God, curses or supernatural forces may be responsible for the disease?

Nothing happens without a cause and since nobody knows the cause of the disease it would not be out of place to attribute the disease to these forces; it is important that everything was done to find out the causes of the disease so that we can protect ourselves against the disease.

Q. How would you describe the cost of treatment?

More Ghanaian women die of the disease because they cannot afford the high cost of treatment especially women in the rural areas and the Government should definitely do something about the high cost of treatment.

Q. How much have you spent so far on treatment?

About ¢8 million (£500) which included the cost of surgery, chemotherapy and radiotherapy.

Q. How did you raise this amount?

My husband and my children are paying for the treatment which has brought a big financial burden on the family and this has affected the education of my daughter who is in Senior Secondary School (College).

Q. What would like the Government do to improve breast cancer care in Ghana?

More education on breast cancer should be carried out especially in the rural areas. The Government should also consider providing some financial assistance to breast cancer patients.

Interviewee 9- A 40-year (Housewife) Breast Cancer patient at Korle Bu Teaching Hospital

Q. What do you know about breast cancer including its causes?

The breasts become sore and the victims finally die; the disease is surrounded with some mysteries and I found it difficult to understand why this strange disease should affect me.

Q. IIow did you know that you have the disease?

I became very scared when I noticed some bloody discharges from my right breast and when I informed my sister who is a nurse, she advised me to see a doctor. At the hospital a needle was inserted into my breast and some blood was drawn for investigations and I was also sent for an x-ray of the breast which confirmed a diagnosis of breast cancer and was referred to Korle Bu Teaching Hospital.

Q. Do you think an act of God, curses or supernatural forces may be responsible for the disease?

Since the cause of the disease appears unknown one is tempted to believe that.

Q. Do you think the disease is common in Ghana?

There was a TV programme recently which reported that breast cancer was the commonest cancer in Ghana and I have seen a lot of women with the disease in the hospital but I don't know the reasons for the recent increases in the number of cases of the disease in Ghana.

Q. Do you think the disease can be prevented?

I am not sure of this since the cause of the disease is unknown.

Q. Before you were diagnosed with the disease did you go for breast screening?
I have heard that it is an x-ray of the breast but I never had one.

Q. What prevented you from having the mammogram?

There is no mammogram facility in any of the hospitals in my area.

Q. What about breast self-examination and clinical breast examination?

I did not have any of these examinations.

Q. Besides the surgery, chemotherapy and radiotherapy did you use other treatment?

I did not use traditional medicine.

Q. And are you planning to do that?

I would want to wait and see the outcome of the treatment.

Q. How would you describe the cost of treatment?

We have spent lot of money on the treatment which has brought very serious financial burden to my family and my husband had to take a loan to supplement family resources but that was not even enough to pay for the full cost of treatment.

Q. Is someone from your family suffering from breast cancer or died of the disease?

A cousin of mine died three years ago with sore breast but I don't know if it was due to cancer

Q. What would you like the Government do to improve breast cancer care in Ghana?

Something should be done about the high cost of treatment because it was difficult raising the money to pay for the treatment and I decided at a certain point in time to stop the treatment and wait for my death. There is also the urgent need to create more awareness about the disease by organizing more educational campaigns especially in the rural areas.

Interviewee 10- A 53-year old Civil Servant patient with Breast Cancer at Korle Bu Teaching Hospital

Q. What do you know about breast cancer including its causes?

I have heard that it is a disease which starts slowly and kills the victims; it is believed to be hereditary.

Q. Would you say it is a common condition in Ghana?

I would like to think that breast cancer is a big problem because it is affecting and killing a lot of women and the disease is becoming a silent-killer in Ghana.

Q. Why would you describe the disease as a silent killer?

The disease is killing a lot of women but not much is being done about the disease; some Ghanaian women do not want to hear about the disease because they do not have any control over it since you would certainly die once you get the disease.

Q. Do you think breast cancer can be prevented?

I don't know how the disease can be prevented because I am not aware of any vaccine or drug which could protect a woman against the disease.

Q. Do you think the disease is curable?

I have heard that the disease is treatable if detected early and it is my hope and prayer that my treatment would be successful.

Q. How can the disease be detected early?

We should begin to talk about the disease, have regular check-ups and report to a doctor whenever we see some abnormal changes in the breast.

Q. How did you know that you have breast cancer?

My right breast became sore and swollen.

Q. What did you do when you noticed these signs?

I showed it to my husband and he advised me to go the hospital.

Q. What was done when you reported to the hospital?

I was asked to go for a mammogram and other examinations which confirmed the diagnosis of breast cancer.

Q. Before you detected the lump did you go breast screening?

I never thought about that.

Q. Where did you go for the mammogram and how much was paid?

SSNIT Hospital in Accra and I paid ¢250,000 (£20).

Q. Do you consider this amount affordable?

It was expensive considering my monthly salary and I think that not many women could afford to pay for the examination.

Q. What are your views on the role of Traditional Healers/ Herbalists in breast cancer care in Ghana?

Some of them claim to have a cure for the disease as they do in case of AIDS but I am not sure if their claims are true. It would be appropriate for the Government to conduct some investigations into the claims and if found to be true they could be used to treat some patients.

Q. How do you find your treatment?

The treatment is alright but very expensive.

Q. What would you like the Government do to improve breast cancer care in Ghana?

The Government should subsidize the cost of the treatment and extend the facilities for screening to other parts of the country. It is also very important to create more awareness about the disease especially in the rural areas.

Q. How do you think the awareness could be created?

Public education on the radio and the TV as is being done for HIV and the talks can also given to women and social groups and in the churches.

Appendix v -Transcript from Breast Clinic Attenders

A Guide used to interview Breast Cancer Clinic Attenders (Responses were audio recorded)

1. How would you describe breast cancer in Ghana?
    a. Causes?
    b. Incidence
    c. Screening / prevention?
    d. Curability?
2. Would you describe the disease as a common condition in Ghana?
    a. How
    b. Why
3. Why did you decide to come to the Breast Clinic today?
4. Do you know what causes of the disease?
    a. If yes, what are the causes? Who taught you?
    b. If no why?
5. Do you think breast cancer can be prevented? How? When?
    b). Cured? How? When? Where?
6. Do you think curses and spiritual actions may be responsible for the disease?
    a. What makes you think so?
7. Are you happy with the current treatment? Why?
8. In your opinion can the disease be prevented?
    a. How?
    b. Why?
9. How can abnormal changes in the breast be noticed?
10. Do you examine your breasts?
    a. How?
    b. When?
11. Do you think Traditional Healers can play any role in the management of the disease?
    -How? Why? When?
12. What suggestions would you make to improve breast cancer care in Ghana?

(The Interviews were conducted in the local language (Twi) and transcribed into English)

Interviewee 1- A 58-year old woman at the Breast Clinic at Korle Bu Teaching Hospital

Q. How would you describe breast cancer in Ghana?

Breast cancer is a very serious and dreaded disease killing a lot of women.

Q. Would you describe the disease as a common condition in Ghana?

It is becoming a common problem because a lot of women are getting the disease these days.

Q. Why did you decide to come to the Breast Clinic today?

I experienced pains in my breasts and decided to come for a check up when I heard an announcement on the TV about the Breast Screening at Korle Bu Teaching Hospital.

Q. Do you know the causes of the disease?

I am not sure of about the causes of the disease.

Q. Do you think curses and spiritual actions may be responsible for the disease?

I don't believe that.

Q. In your opinion can the disease be prevented?

I think the disease can be prevented if one reports to doctor as soon as changes in the breasts are noticed.

Q. How can the changes in the breast be noticed?

There was a TV programme which showed how women could examine their breasts and report to a doctor if any abnormality is found.

Q. So do you examine your breasts?

Occasionally I do.

Q. How did you do the breast self-examination?

I lay in bed and with the flat fingers palpated my breasts and the axilla.

(Advice: For the examination to be effective it should be done regularly on monthly basis. It is important that a day is set out in the month for the examination, for example a day after the menstrual period. For menopausal women, say the 1st Sunday of the month could be earmarked for the examination}.

Q. Do you think Herbalists/Traditional Healers can play any role in the care of the disease?

I have not heard of or seen any healer who has successfully treated a patient with the disease and I therefore don't think they can help.

Q. What suggestions would you make to improve breast cancer care in Ghana?

The Government should establish more centres for breast cancer screening and treatment all over the country and these services should be free of charge or subsidized. Also more education on the disease should be carried out especially in the rural areas.

Interviewee 2- A 34-year old woman at the Breast Clinic at the Korle Bu Teaching Hospital

Q. How do you describe breast cancer in Ghana?

Gradually it is becoming a common condition in Ghana these days because a lot of women with the disease are regularly shown on the TV.

Q. Do you know the causes of the disease?

I heard that a woman could get the disease if the husband or the boyfriend plays with or squeeze the breasts to the extent of causing pain.

Q. And do you believe this?

I don't know, but it may be true.

Q. Would you describe the disease as common condition in Ghana?

The disease is on the increase because a lot of women with the disease are shown on the TV and I have also heard of many women whose breasts have been removed because of the disease.

Q. Why do you think the breasts are removed?

I heard that if a woman fails to report for early treatment the breast becomes sore and in which case the only thing that could be done is for doctors to remove the breasts.

Q. Do you think curses and spiritual actions may be responsible for the disease?

I have heard about that but I don't think it is true.

Q. Do you think Traditional Healers/Herbalists can play any role in the care of the disease?

I have a strong believe in the power of prayers as a Christian but it would be better to go to hospital for treatment and add the prayers but to rely on prayers alone would not be the best thing to do.

Q. And what about the Traditional Healers and Herbalists?

I don't believe that they can help in any way.

Q. What suggestions would like to make to improve breast cancer care in Ghana?

More education about the disease is very important because there is so much ignorance about the disease. When I started to experience pains in my breast my mother advised me to apply some rub on the breast because of her ignorance about the disease. If more women become aware of the disease they would report to the hospital early anytime they notice changes in the breast. It is importance that the same attention is given to breast cancer education as is being done for HIV education.

Q. In addition to the education what other things would you like to be done?

The Government should give financial support to women who can not afford the high cost of screening and treatment.

Q. Do you think the risk of the disease would increase in women who put coins in their brassieres?

Oh! I have heard of this and it is also said that if a mobile phone is placed very close to the breast it can also cause the disease.

Q. From where did you get this information?

From friends and some people around.

Q. And do you think this is true?

Oh! Yes because coins are made of chemicals and also the way and manner the phone vibrates can be harmful to the breast.

Interviewee 3- A 34-year old lady at the Breast Clinic, Korle Bu Teaching Hospital, Accra.

Q. How would you describe breast cancer in Ghana?

The disease is on the increase but there is not much help available to Ghanaian women.

Q. Why do you think the disease is on the increase?

I see a lot of breast cancer patients on the TV.

Q. Do you know the causes of the disease?

I am not sure of the causes.

Q. Do you think curses, spiritual actions may be responsible for the disease?

I heard of these things in the past, but recent information on the TV and radio suggest that these are not true. The food we eat and some lifestyles may be responsible for causing the disease.

Q. From where did you get most information about the disease?

Mostly on the TV and Radio.

Q. What are some of the things that mostly shown or said on the TV and Radio about the disease?

Pictures of patients with the disease were shown; some with very bad sores of the breast.

Q. Did they talk about what you women could do about the disease?

They talked about breasts self-examination but I have not started the practice yet.

Q. Is someone in your family suffering from breast cancer or died of the disease?

Not to my knowledge.

Q. Do you think Traditional Healers can play any role in the care of the disease?

Apart from the hospital treatment I don't think that any of these people can help. A story is told about a woman who lived in the UK and when she was diagnosed with the disease refused surgery on the advice of her Pastor in Ghana. This woman travelled down to Ghana and went to a Prayer Camp and died after a period of

fasting and prayers. The Healers/Pastors don't have the knowledge to deal with the disease. It would be better to go to the hospital for the treatment and complement that with the prayers or the herbs.

Q. What suggestions would like to make to improve breast cancer in Ghana?

The most important thing to do is to train more doctors to treat the disease and also do a lot more screening.

Q. Do you think many Ghanaian women are aware of the disease?

Some of them yes but the majority, especially those in the rural areas, are not well informed of the disease.

Q. So how do you think the message can reach these women?

Public education about the disease is very important especially in the rural areas and to encourage women to go for regular checks. I was unaware of the existence of the Breast Clinic in Korle Bu until about 2 weeks ago when I met a couple from the Northern Region who had travelled all the way to Accra to attend the Breast Clinic. I also decided to come to the Breast Clinic to be examined and I am carrying this message to my sisters and friends.

Interviewee 4- A 39-year old lady at the Breast Clinic, Korle Bu Teaching Hospital, Accra.

Q. How would you describe breast cancer in Ghana?

I know very little about the disease.

Q. Why did you decide to come to the Breast Clinic today?

I came to the Breast Clinic to be examined because occasionally I experience pains in my breasts.

Q. Would you describe the disease as a common condition in Ghana?

A lot of women are getting the disease and usually die between 1-2 years after they have had an operation to remove the breasts.

Q. Why do you think these women die?

I don't know the reason but what happens is that after the operation these women become very unhappy, dull and finally die.

Q. Are you saying that the patients become unhappy after the surgery because they have the disease or the fact that the breasts have been removed?

The greatest problem has to do with their marriages because no man would be happy to have a wife whose breast is removed.

Q. Why do you think the breasts have to be removed in the first place?

I don't know much about the disease but I have heard that if the disease is not treated early it then enters the veins and at which stage the breasts would have to be removed.

Q. In your opinion do you think the disease can be cured?

I think the disease is curable.

Q. How can the cure be achieved?

If a woman will make the right decision to have regular breast examinations so that the disease would be detected and treated early, but most Ghanaian women are afraid to find out if they have the disease because of the fear of having the breasts removed and die from the disease.

Q. Do you think Traditional Healers/ Herbalists can play a role in care of the disease in Ghana?

Sometimes you hear people attributing the disease to spiritual or supernatural forces and therefore some women would like to seek help by going for prayers and through other spiritual means. When I decided to go to the Breast Clinic for the screening my friend in the church advised against it. According to her my breast would be removed even with the slightest abnormality detected. She rather wanted me to go for prayers which she said could cause any abnormality in the breast to disappear spiritually but I insisted on going to the clinic. I trust in the power of prayers but it would be more appropriate to seek treatment at the hospital which could be backed with prayers for God's intervention.

Q. Did you say the disease is caused by supernatural forces?

That is the information going round but I think breast cancer is just like any other disease which every woman is at risk from.

Q. What suggestions would you like to make to improve cancer care in Ghana?

To organise public educational campaigns as is being done for HIV and also help the patients financially with the cost of treatment.

Interviewee 5- A 33-year old lady at the Breast Clinic, Korle Bu Teaching Hospital, Accra.

Q. How would you describe breast cancer in Ghana?

The disease is affecting many women in the country.

Q. Why did you decide to come to the Breast Clinic?

I experienced pains and burning sensations in my right breast and therefore decided to come to the Clinic for an assessment.

Q. How did you hear of the Breast Screening in Korle Bu?

I was referred to the Breast Clinic when I reported to my doctor.

Q. Is there any member of your family with the disease or died from the disease?

I am not aware of that.

Q. Do you think the disease can be prevented and how can it be done?

It could be prevented by the Grace of God.

Q. Do you think that Traditional Healers/Healers can play any role in breast cancer care in Ghana?

Some of them claim to have a cure for the disease but I think it is better to seek treatment from the hospital.

Q. What about prayers?

A lot of advertisements appear on the radio and TV by some Pastors to the effect that they can cure the disease but I still believe that it would better to go to the hospital.

Q. Do you know the causes of the disease?

I heard that if coins are put in the brassieres or if a man plays with the breasts it can cause the disease.

Q. Do you believe this?

I am not sure but it's only God who knows who gets the disease.

Q. Are you therefore suggesting spiritual or supernatural forces to the disease?

As I have stated earlier it all depends on the will of God.

Q. How would you describe the breast cancer awareness level among Ghanaian women?

I think for majority of the women awareness levels on breast cancer is very low.

Q. What suggestions would you make to improve breast cancer care in Ghana?

Public education to increase awareness about the disease should be taken seriously and also the Government should offer some financial support to breast cancer patients.

Interviewee 6- A 45 year old lady at the Breast Clinic, Korle Bu Teaching Hospital, Accra.

Q. How would you describe breast cancer in Ghana?

Formerly the disease was not common in Ghana but it is now killing a lot of women.

Q. Why do you think many women die of the disease?

Because many patients do not go to the hospital early for treatment and also the fact that the cost of treatment is very expensive for many women.

Q. Do you know the causes of the disease?

Since the cause of the disease is not known, one is tempted to assign supernatural or spiritual causes to it. I have also heard the risk of getting the disease increases in women who put coins into their brassieres but I don't know if this is true.

Q. In you opinion can the disease be prevented?

I don't know how that can be done since the cause of the disease is not known but I have heard that it could be treated successfully if it detected early.

Q. Do you think Traditional Healers/Healers/Pastors play any role in the care of the disease?

It is very difficult for me to say yes or no because I am not aware of any Healer who has successfully treated a breast cancer patient. However it would be better for the government to investigate the claims of these healers and if their treatments are found to be effective they could then be involved in breast cancer care.

Q. Do you think the disease can be cured?

I have heard that some patients were treated about 15 – 20 years ago and think that the disease is treatable especially if treated early.

Q. How far did you have to travel to the Clinic?

I live Accra and it took me about one hour to get here.

Q. What suggestions would you make to improve breast cancer care in Ghana?

The Government should embark on programmes on the Radio and TV to educate women on breast cancer to increase awareness about the disease especially among the rural women.

Interviewee 7- A 50-year old woman at the Breast Clinic at Korle Bu Teaching Hospital

Q. How would you describe breast cancer in Ghana?

Breast cancer is a serious condition in Ghana but unfortunately not much help is available to the women in Ghana.

Q. Would you describe the disease as a common condition in Ghana?

It is common because many women are dying from the disease these days.

Q. Why did you come to the Breast Clinic today?

I heard on the TV about the breast screening at Korle Bu Teaching Hospital so I decided to come for a check up to make sure I don't have the disease.

Q. Do you know the causes of the disease?

I have heard that smoking and alcohol could cause the disease.

Q. Do you think curses and spiritual forces may be responsible for the disease?

I am not very sure but it is possible since nobody seemed to know the actual causes of the disease.

Q. In your opinion can the disease be prevented?

It can be prevented if the causes of the disease are known.

Q. Do you regularly examine your breasts?

I have not started that yet.

Q. Do you think Traditional Healers can play any role in the care of the disease?

Some of them claim to have a cure and I think the Government can research into these claims and those found to have good treatments could be involved in treating the patients.

Interviewee 8- A 42-year old woman at the Breast Clinic at the Korle Bu Teaching Hospital

Q. How do you describe breast cancer in Ghana?

Breast cancer was thought to be a White women's disease but it is becoming very common in Ghana these days and killing many women.

Q. Do you the causes of disease?

It is said that one might get the disease if the husband or boyfriend sucks the breasts and I have also heard that women who smoke and drink are at higher risk of getting the disease than non-smokers and non-drinkers, which is the reason why the disease is more common among white women.

Q. And do you believe these?

It could be true.

Q. Would you describe the disease as a common condition in Ghana?

You see these days most women in Ghana are emulating the lifestyles from abroad including drinking and smoking and also indulging in all sorts of lifestyles which were previously unknown in this country. I don't think my father ever sucked the breasts of my mother but that practice has become very popular so why wouldn't the disease be common?

Q. Would you say the disease is curable?

For now the only thing our doctors are capable of doing is to remove the affected breast and most patients die shortly after the surgery so I don't know if complete cure is possible.

Q. Why do you think the breasts are removed?

It is said that if treatment is not started early the breast becomes sore and at that stage the only option is to remove the affected breast.

Q. Do you think curses and spiritual actions may be responsible for the disease?

I have heard about these things but I don't think they are true because; if that was the case why would the disease also affect white women who do not believe in superstitions? If anything at all we should change our lifestyles including what we eat and drink.

Q. Do you think Traditional Healers/ Herbalists can play any role in breast cancer in Ghana?

If doctors who are well trained could not do much other than removing the breasts it would be difficult to imagine what these Healers could do. Some of them regularly make wide claims to cure all kinds of diseases but I think they are only playing on the ignorance of the people to make money.

Q. What suggestions would you make to the Government to improve breast cancer care in Ghana?

The Government should as a matter of urgency establish more screening facilities throughout the country and also to embark on public education about the disease. Doctors say that the disease is curable if detected early so if more women become aware of the disease they would report to the hospital early anytime they notice changes in the breasts to save the lives of many women who die from the disease.

Q. In addition to the education what other things would you like to be done?

The Government should also do something about the high cost of screening and treatment especially for those women who could not afford it.

Q. Do you think the risk of breast cancer would increase in women who put money (coins) in the brassieres?

I have heard of this several times and my husband has warned me not to engage in such a practice.

Q. From whom did you get the information?

The information is all over the place, from friends and family.

Q. And do you think this is true?

I am not sure but it could be possible, after all you people (doctors) are not able to tell us what causes the disease.

Interviewee 9- A 41-year old lady at the Breast Clinic, Korle Bu Teaching Hospital, Accra.

Q. How would you describe breast cancer in Ghana?

All of a sudden cancer has surfaced this country killing women both young and old. It is very scaring and I pray to God that I do not catch this dreaded disease. It may be true that the end time is near as stated in the Bible that strange diseases, wars and natural disasters would visit mankind and these things happening; God should help us.

Q. Are you therefore attributing the disease to spiritual or supernatural forces?

You see whatever is said in the Bible would come to pass. Why is it that doctors have not been able to come out with the actual cause of the disease?

Q. Would you then describe breast screening as unnecessary?

I don't want to believe that because God who works through human has given knowledge to doctors to do something about the disease. Doctors say that the disease is curable if found early therefore screening is still relevant.

Q. Where do you get most information about the disease?

Mostly on the radio; and some times at the hospital, doctors and nurses talk about the disease and also last year some nurses came to our church to talk about the disease.

Q. What things were said about the disease?

They talked about the need for women to regularly examine their breasts and to see a doctor any time an unusual thing is found with the breasts and we were also shown pictures of patients with the disease.

Q. Is someone in your family suffering from the disease or died of the disease?

My grandmother died of breast sore but I don't know if it was cancer.

Q. Do you think many Ghanaian women are aware of the disease?

The majority of the women especially those in the rural areas don't know much about the disease.

Q. How best can the message reach these women?

The message should be given in local languages on the radio and TV as well as in Churches.

Q. Do you think Traditional healers can play any role in breast cancer in Ghana?

It is difficult to answer this question because nobody seems to know what causes the disease but if anything at all it would be better to go to the hospital and by the help of God, one can be cured.

Q. What suggestions would you make to the Government to improve breast cancer care in Ghana?

The most important thing is to find out what causes the disease so that appropriate treatment can be given and also education on the disease should be intensified. The Government should also try to establish more screening facilities and provide financial assistance to women who can not afford these services.

Interviewee 10- A 47year old lady at the Breast Clinic, Korle Bu Teaching Hospital, Accra.

Q. How would you describe breast cancer in Ghana?

The disease gradually makes the breast become sore and the victim finally dies.

Q. Would you describe the disease as a common condition in Ghana?

I know a lot of women with the disease or who have died shortly after an operation to remove the diseased breast.

Q. Why do you think they die after the surgery?

I am not sure but it could be due to the fact that they did not seek treatments early enough or probably was due to the surgery because it has been said that cancer should not be touched with a knife but I don't know if it is true.

Q. How do these patients feel after the breasts have been removed?

You see the breasts are very important to every woman without which, a woman is never complete and no man would be happy to marry a woman whose breast is removed and I would prefer to die than to live without my breasts.

Q. Why do you think the breasts have to be removed in the first place?

Maybe doctors in Ghana do not have the cure for the disease and only perform the operations to remove the breasts.

Q. Are you then saying that the disease is not curable?

There may be a cure abroad but not in Ghana at the moment because a lot of women die of the disease without help.

Q. Do you think Traditional Healers/ Herbalists can play any role in breast care in Ghana?

Obviously not Traditional Healers or Herbalists because if doctors are unable to treat the condition I can therefore not imagine what these people could do; for now God's intervention to me is the only available hope.

Q. Do you think curses and spiritual actions may be responsible for the disease?

That is very possible because the disease is surrounded with many mysteries and uncertainties- the cause is unknown and no known treatment is available.

Q. What suggestions would you like to make to the Government to improve breast cancer care in Ghana?

The Government should send more doctors abroad to study the best way to treat the disease so that they will stop removing women's breasts.

Appendix vi - Transcript from Traditional Healers

(Traditional Healers involved in Breast Care Management in Ghana. (Responses were audio recorded)

A Guide used to interview the Traditional Healers

1. How do you perceive breast cancer in Ghana?
    a). Causes?
    b). In term of incidence?
    c). Attitude of Ghanaian Women towards breast cancer?
    d). Behaviour of the women towards breast cancer?
    e). Awareness levels among the patients.

2. On the average, how many breast cancer patients are seen in a month / year?
    a). Age groups?
    b). Stages at diagnosis?
    c). Walk- patients/ referrals?
    d). Number successfully treated? – Records?
3. With your experience, how do Ghana women perceive breast cancer?
    a). Causes?
    b). Prevention/ screening?
    c). Curable- by whom, where?
4. How did you get involved in breast cancer management?

5. Why do you think the patients come to you?

6. Do your patients go the hospital pre/ post your consultations and treatment?
    b). Reasons?
7. What methods do you treat your patients?
8. Do you refer patients to Hospitals – When? Why?

9. What is the cost of your services?

10. Would you like to share your experience with medical practitioners?

Interviewee 1 – A Traditional Healer from Wenchi in the Brong Ahafo Region

Q. How long have you been in the healing practice?

I understudied my father who was a popular healer of his time about 50 years ago.

Q. Would you describe breast cancer as a common disease in Ghana?

The disease is a very common problem and next to AIDS.

Q. What in your opinion causes the disease?

Cancer is "Obosam" disease literally meaning the devils disease and for this reason doctors are unable to treat the disease.

Q. What method do you use in treating your patients?

Doctors use a knife to remove the breast but we do not cut off the breast. Our grandfathers used herbs which were provided by "dwarfs" (agents of the gods) and we are using the same herbs today to treat our patients.

Q. How do you get your patients: are they referred to you from Hospitals?

Some of them go to the hospital and are advised by some nurses to come to us.

Q. Do you think patients come to you because they are not able to get the expected cure or because of the high cost of hospital treatment?

The fact of the matter is that doctors do not have the right treatment for breast cancer. The only thing they are capable of doing is to cut off the breast. We give our patients herbs for local application to apply on the affected breast and together with some oral preparations they get healed by the Grace of God.

Q. On average how long does it take you to treat a patient?

It depends on the individual and the nature of her disease but the period ranges from 2 weeks to 6 months.

Q. How long do your patients live after your treatment?

A picture of a woman whom the Healer claimed was treated 15 years ago was shown to me and according to him, the woman died early this year (2005). Another

picture of a woman he claimed to have treated some 5 years ago and was still breastfeeding with the affected breast was shown to me.

Q. Apart from the herbs do you perform spiritual actions as well?

We got the herbs through spiritual means from the "dwarfs" (agents of the gods) therefore when we give the herbs to the patients they do not require any additional spiritual work. The herbs alone are enough to perform the wonders these patients need.

Q. Do you think breast cancer is preventable?

It is only by the Grace of God that a woman would be prevented from contracting the disease. The main thrust of our healing is faith and if a woman has faith in God she would be protected.

Q. We normally advise women to do breast examinations and if possible to go for mammogram. Do you think these would help the women?

These are useless exercises and cannot stop a woman from getting the disease; even the White people do not have the answers as the disease continues to kill their women with all the big machines in their hospitals.

Q. Would you be happy to refer any of your patients to hospital?

For what? You see as I have said earlier doctors cannot cure the disease and I would therefore not like to send my patients to them only to have their breasts removed.

Q. On the average how many patients do you see in a year?

Between 500 and 600 patients with all kinds of cancers and diseases but for breast cancer it is about 300.

Q. How much do you charge for treating a patient?

It depends on individual patient but the highest fee paid is about ¢500,000 (£30).

Q. How do people get information about your healing power?

Patients who have successfully been treated go about spreading the news and I also appear on some Radio Stations to talk about the disease. A lot of patients from the hospitals come to me for treatment on the advice of some nurses.

Q. Do you see patients with recurrent disease after your treatment?

By the Grace of God we have not experienced such situation. One thing is that if a patient comes to us with very advanced disease which is too bad to be treated we don't waste our time and only advise them to go for some pain medicines.

Q. What would you do if a patient goes to the Hospital and comes back to you?

Some of them try to hide from me the fact that they have been to the Hospital for fear of being charged high fee but we treat them as normal.

Q. You have said that breast cancer "is a disease of the devil" but what do your patients also think?

Some patients believe the same whilst others do not.

Q. Do your patients know the causes of the disease?

They do not know and only mention the pain in the breast as the cause of the disease.

Q. Do you think death from breast cancer can be reduced?

More lives can be saved if the Doctors would begin to cooperate with the herbalists in the Ghana.

Q. Apart from the breast cancer what other conditions can you manage?

A lot of conditions- asthmas, ulcers, earaches, cholera and guinea worm.

Q. In your practise do you see patients with family histories of the disease?

I have seen a few of them.

Q. Have you ever referred a patient to hospital in your practise?

No because the doctors have no cure for the disease.

Q. What age groups of patients do you normally see with the disease?

All age groups some of them are as young as 20 years.

Q. How safe and effective are your herbal preparations?

Very safe and effective and I have successfully treated a lot of women with the herbs.

Q. You have said that you acquired you profession from your father and are you also willing to pass on to other people?

I have trained and prepared my children and brothers to take over from me in future so that Ghanaian women would continue to benefit from our treatment.

Interviewee 2- A Traditional Healer in Accra

Q. How long have you been in the healing practice?

I started about 20 years ago and have since cured many women with cancer and other conditions.

Q. Would you describe breast cancer as a common disease in Ghana?

Cancer is a big problem in the country and it is becoming the commonest disease of the time.

Q. What in your opinion causes the disease?

Cancer is a supernatural disease and could only be treated by those with spiritual powers and not by doctors in the hospitals.

Q. What method do you use in treating your patients?

You see the doctors are killing the women with the operations because cancers should not be touched with a knife. As said earlier one could only cure the disease if he possesses the power to talk to the gods and ask for the directions to treat the disease. The herbs that we use in treating the patients are provided by our gods.

Q. How do you get your patients: are they referred to you from Hospitals?

I am well known in the country as a person who can offer successful treatment for all the diseases which doctors in the hospitals are unable to treat. Some patients run to me if they realize that the doctors cannot help them and some doctors even send some patients to us.

Q. Do you think patients come to you because they are not able to get the expected cure or because of the high cost of hospital treatment?

As I have stated earlier, doctors do not have the cure for the disease and patients are becoming aware of this fact and are therefore coming to us for the right treatment. If doctors would realize that the knife is causing a lot of havoc and stop operating on breast cancer patients the better it would be for the cancer patients in the country. There are some conditions which doctors can manage successfully and those they cannot and the earlier they realize this and refer cases which are beyond their scope to us the better it would be for the patients.

Q. On average how long does it take you treat a patient?

The duration of treatment depends on the individual and the nature of her disease but the period ranges from 2 weeks to 3 months.

Q. How long do your patients live after your treatment?

There are patients who were treated about 10 years ago and are going about in good health.

Q. Apart from the herbs do you perform spiritual actions as well?

You see you can not successfully treat a disease which has some spiritual element with spiritual power. The herbs work because we have the power to ask from the gods the healing for our patients without which the patients could not be cured.

Q. Do you think breast cancer is preventable?

Women who receive treatments from us also undergo special purification rites to give them protection against the disease.

Q. We normally advise women on breast examinations and if possible to go for Mammogram. Do you think these would help the women?

It would be useful if only the women would be able to detect the abnormalities in the breasts but I doubt the capabilities of most Ghanaian women to do this examination well but as for mammogram, I don't want to talk about it because with all the big machines abroad they have not been able to find the solutions to the disease.

Q. Would you be happy to refer any of your patients to the hospital?

The hospitals should rather refer the patients to us because doctors cannot compete with us when it comes to treating the disease. They can only treat malaria with their chloroquine but not diseases such as cancer or infertility.

Q. On average how many patients do you see in a year?

About 3 patients every a week; in all about 200 women every year.

Q. How much do you charge for treating a patient?

The amount of fees charged depends on so many things- the individual patient and the nature of the disease but the charges range from ¢20,000 (£15) to ¢1million (£60) and sometimes my gods ask me to treat some patients free of charge.

Q. How do people get information about your healing power?

Apart from those patients treated here spreading the news, some health workers also advise patients to come to us and occasionally we put advertisements on the radio about healing fortunes.

Q. Do you see patients with recurrent disease after your treatment?

Some patients fail to come for follow up whilst some also fail to perform the rituals which would offer them protection against the disease and for such women getting the disease again is possible.

Q. What would you do if a patient goes to the Hospital and comes back to you?

Well if a patient made a mistake and went to the hospital, she would be treated if she came back to us; after all we are doing this job to help people but not punish them and remember we could also be punished by our gods if we do harm to others.

Q. You have said that breast cancer is a spiritual disease but what do your patients think?

The majority of the patients know this as a fact and that is the reason they choose to come to us instead of going go the doctors to have the breasts be removed.

Q. Do your patients know the causes of the disease?

They do not know what causes the disease because it is beyond ordinary human beings understanding and you need to have spiritual powers to be able to know the mysteries surrounding the disease.

Q. Do you think death from breast cancer can be reduced?

The lives of many cancer patients could be saved if our doctors would realize that cancer is "not a hospital disease" and begin to cooperate with us and send the patients to us.

Q. Apart from the breast cancer what other conditions can you manage?

With the help of our gods we have successfully treated conditions such as infertility, impotency, high blood pressure and sugar disease (diabetes). We consult our gods whenever a patient comes with a problem and they would direct us to what could to be done to treat that particular condition.

Q. In your practise do you see patients with family histories of the disease?

You see if your grandmother was cursed with the disease or was punished for a wrong doing and until that curse is broken the disease would continue to run through that family.

Q. Have you ever referred a patient to hospital in your practise?

I would not send my patients to the hospital to hasten their deaths because all that the doctors would do is to remove the breasts and these women die shortly after the operations.

Q. What age groups of patients do you normally see with the disease?

A lot of them, of all ages, if fate has it that one would get the disease it will certainly happen and I have seen 2 sisters aged 19 and 24 years with the disease. For this family we had to do a lot to break that evil covenant hanging over them to prevent other women in the family from getting the disease.

Q. How safe and effective are your herbal preparations?

We are very sure of the safety and efficacy of our preparations and challenge doctors and pharmacists to test our preparations and you can even send people from abroad to come down to investigate what we do here.

Q. You have said that you acquired your profession from parents and are you also willing to pass on to people?

I would be very happy to do that on condition that they would not take the credit from us and give the respect and recognition to us; my healing power is a gift from God and I would be willing to pass it on to others.

Appendix vii - Transcript from Consultants

A Guide used to interview the Consultants involved in Breast Cancer care in Ghana (Responses were audio recorded)

1. How would you describe breast cancer in Ghana?

    a) In term of incidence?
    b) Attitude of Ghanaian Women towards breast cancer?
    c) Behaviour of the women towards breast cancer?
    d) Attitude of Medical/ Health personnel towards breast cancer?

2. On the average, how many breast cancer patients are seen in a month / year?

    e) Age groups?
    f) Stages at diagnosis?
    g) Walk- patients/ referrals?

3. With your experience, how do Ghana women perceive breast cancer?

    a. Causes?
    b. Prevention/ screening?
    c. Curable- by whom, where?

4. Do patients who come to you use alternative medicine treatments (herbalists? Spiritualists, etc) pre/ post consultations and treatment? Reasons?

5. What percentages of the patients are good candidates for surgery/ surgery/? chemotherapy?

6. Do you think traditional healers/ herbalists play any significant role in breast cancer? care in Ghana? Why, How?

7. What is the mean survival period of breast cancer patients in Ghana?

8. What facilities are available to breast cancer patients in Ghana?

    a) Screening
    b) Diagnosis
    c) Treatment
    d) Referral
    e) Cost of such services

9. Would you describe breast cancer as a major public health problem in Ghana and a national priority?

10. What are the Ministry of Health's policies and strategies for breast cancer care in?
Ghana?

b) Suggestions to improve breast cancer care in Ghana?

Consultant 1- A Surgeon at the Korle Bu Teaching Hospital

Q. How would you describe breast cancer in Ghana in terms of the incidence?

We do not have reliable National data due to the absence of a Cancer Registry in Ghana, but we at the Surgical Dept at Korle Bu alone are seeing about 200 new cases annually. The incidence appears to be rising probably due to an increasing level of awareness and random screening programmes. However, the incidence is nowhere near the level of Europe and America.

Q. What age groups of Breast Cancer patients do you regularly see?

Most patients are between 40 and 60 years, but for age specific, it follows the global trend where incidence increases with advance in age.

Q. With your experience, how would you describe the attitude of Ghanaian women towards breast cancer?

For most women the disease is associated with death. Some doctors in an attempt to help these patients perform mastectomies for very advanced diseases and these patients die soon after the surgery. There is therefore a link between breast cancer intervention and death. People believe that once you have the surgery, you will die, making the women more afraid of the disease leading to a negative attitude towards the disease. People do not want to talk about the disease or to find out their risk status through screenings.

Q. How would you describe the perception of Ghanaian women towards the disease?

Some believe it is an act of God, a family disease, an act of the devil or a curse whilst others people see the disease as someone's fault.

Q. Do the women think that the disease can be cured?

Unfortunately they come to the hospital with very advanced forms of the disease. They are afraid of mastectomies linking it to death. If counselled properly, the outlook is good and they are positive about it. A lot depends on the practitioners and the counsel they give to the patients.

Q. You said the patients come to you late; do they seek alternate treatment before coming to you?

They go to herbalists, spiritualists. Most of the time, they believe it is an act of God and therefore seek God's intervention.

Q. In your experience do they get the sort of the help they seek?

Not in my practice- all they do is to delay the patient in coming to the hospital.

Q. Talking about the Healers, do you think they can play any significant role?

Yes, if well educated enough they can be advocates for early referrals. They could also subject their drugs to clinical trials and if found to be effective, it will be good for all of us. Along these lines, I think they have some roles and other than these, they are doing some disservice.

Q. How would you describe the 5-year breast cancer survival in Ghana?

Very wide range, between 6 months and 10 years and this is linked to the stage at diagnosis and treatment.

Q. Would you describe breast cancer as a National public health problem?

Yes, screening yields results by identifying the disease much earlier for cost effective treatment to be given.

Q. Are you therefore considering National Screening Programme?

A National Programme would be difficult to fund at this stage of our development. Until we have the resources to start a routine National Screening Programme, it is much easier to educate the women on simple methods such as regular breast self-examination and to encourage doctors to use every opportunity to examine the breasts of their patients. For the high-risk individuals, they could continue to use the services of the existing services.

Q. What are the Ministry of Health/ Korle Bu Teaching Hospital strategies and policies for breast cancer care in Ghana?

For the Ministry, there are no specific programmes in place at the moment. However, there are some NGOs, which are engaged in some activities, but these do not trickle down to the periphery.

Q. Do you get good referrals from the districts and the regions?

We do get referrals from the regions and the districts and from private practitioners. As part of continuing medical education, the importance of early referrals is stressed.

Q. What percentage of your patients are good candidates for surgery?

Virtually all patients; there is a surgery termed toilet mastectomy after which the patient dies, and which is a waste of resources. They would then blame the surgeon for causing the death of the patient. Other than the very advanced diseases, with proper patient selection, one can achieve good results. The biggest problem is the pathology services which delay the results. Sometimes, we are compelled to use the services of private pathologies such as Medilab, which is not cost effective.

Q. What suggestions would you like to make to improve breast cancer care in Ghana?

Every woman should be taught to examine her breasts. Every doctor who examines a woman should examine the breasts as well. Some subsidy should be given to some of the patients who cannot pay for the surgery which is about ¢2 million.

Consultant 2- A Surgeon at the Korle Bu Teaching Hospital, Accra

Q. Would you please describe breast cancer in Ghana in terms of the incidence?

We do not have very reliable data but I believe the incidence is increasing. At the Korle Bu Teaching Hospital, the number of cases has doubled over the past 10 years. On average 300 patients are seen annually at the Surgical Department. Some patients are also referred directly to the Radiotherapy Department for which figures are not readily available.

Q. What are the age groups of the patients you regularly see?

About 30% of the patients are between 40 and 49 years. The real peak is between 40 and 45 years. There are few postmenopausal cases. We are seeing cases which are 10 or more years younger than in Europe and the US.

Q. With your experience, how would you describe the attitude of Ghanaian women towards Breast Cancer?

A lot of women are not breast aware and whenever they notice a lump in the breasts, they tend not to report to the Hospital for fear that the breast would be removed, or they would certainly die. Because of these misconceptions the patients do not come to the Hospital early and come in as a last resort.

Q. You have said that on average, you see around 300 patients every year; what stages of the disease do you regularly see?

More than 58% of the patients come with very advanced disease. Early stage breast cancers are not very common in Ghana. Stage 2 cancers account for about 30%. Stages 3 and 4 cases are more than 50%.

Q. How would you describe the perception of Ghanaian women towards the disease?

A lot of women think there is a spiritual element to it, a curse. Some women are educated but their knowledge about the causes of the disease is limited but certainly they think the Hospital treatment would the best option.

Q. You have said that the patients come to you late; do they seek alternate treatment before coming to you?

Certainly, they do. For some of them once the diagnoses are made, they leave to seek other forms of treatments like herbal treatments, prayers camps and homeotherapy, etc.

Q. In your experience do they get the sort of the help they seek?

I would say no because most of them come back with a worse form of the disease. About 30% of the patients default treatment either when the diagnoses are made or in the course of treatment and about 10-15% of the patients stop during the follow-ups.

Q. Talking about the healers, do you think they can play any significant role?

I must admit that we have not considered this suggestion but I think we can start to talk to them to refer patients to the hospitals early.

Q. How would you describe the 5-year breast cancer survival rate in Ghana?

The overall 5-year survival in Ghana is about 25% which is very disappointing because in African Americans in the US it is well over 50% and that is even considered low.

Q. Would you describe breast cancer as a national health public problem?

I want to believe that. The Health Ministry and the Planners know that breast cancer is the commonest cancer and have therefore made some strides towards its management. Under the National Health Insurance Scheme, surgical treatment is covered and for the fact that other cancers are not presently covered under the scheme is a recognition that something is being done for breast cancer patients and we will push for more.

Q. Are you therefore considering National screening programme?

We do not have a routine national screening programme. Only a few of the women do breast self-examination and for clinical breast examination, the percentage is much lower. For screening mammography the patronage is disappointedly poor. Certainly it is the cost and the Government does not have the money for such a programme. A mammogram costs about ¢260.00 (£15.00) and obviously the Ministry of Health cannot afford such a programme at this stage of the national development. I suspect that when the National Health Insurance becomes fully operational, such a programme may be considered.

Q. During my interaction with some women it was observed that a lot of women think that women who put coins in their brassieres increase their risks for breast cancer. Are you also aware of this and where do you think this misinformation originated from?

I have heard of this but don't know the source. I could understand why the women would think that way. They believe that anything touching the skin of the breast can

cause trauma. Some even say deodorants can cause the disease but we try to tell them these are not true.

Q. Do you get good referrals from the districts and the regions?

Apart from those patients who are diagnosed at the Breast Clinic, all other patients are referred. It could still be better. Some of our colleagues delay in sending the cases to us. Others also miss diagnosis. The only thing is that we would have to continue to educate them through continuing education sessions.

Q. How much does it cost to have a surgical treatment for breast cancer in Ghana?

Surgical treatment is not very expensive at all. In Korle Bu Teaching Hospital, surgery costs between ¢2- ¢3million, Radiotherapy is between ¢ 3-4million and Chemotherapy is between ¢6-24 million.

Q. What suggestions would you like to make improve breast cancer care in Ghana?

The first thing I would like to mention is the provision of screening facilities/services. I would also like to see well organized palliative care for pain management for cancer patients. Efforts to increase the awareness level about the disease for the majority of Ghana women would help to remove the many misconceptions held about the disease and thereby improve treatment outcomes.

Consultant 3- A Radiation Oncologist at the Korle Bu Teaching Hospital, Accra

Q. How would you describe the breast cancer in Ghana in terms of incidence?

It is very difficult to mention figures because of the absence of a Cancer Registry, but I think breast cancer makes about 25-27% of all cancer patients in Ghana. I would not like to say that the incidence is on the increase, but if anything I think because of the increasing awareness more and more people are now coming to the hospitals. Unfortunately, most of these patients are in the younger age group and with a very aggressive tumour. Breast cancer is the number one cancer in Ghana.

Q. What age groups of breast cancer patients do you regularly see?

The exact figures are not readily available but mostly very young women between the ages of 25 and 45 years.

Q. With your experience, how would you describe the attitude of Ghanaian women towards the disease?

They now are becoming more aware but most of them are still scared because they think once you get the disease you would certainly die. There is also the problem of the traditional healers and herbalists who are causing a lot of havoc with their claims for cure which result in patients coming to the hospitals late with very advanced disease. Another problem is the fear of removal of the breasts which have several social and marriage implications with the husbands and which prevent the women from reporting to the hospitals early.

Q. Talking about the healers, do you think they can play any significant role?

I think they have to be educated to recognize that cancer is different from breast abscess so that they can refer the patients to the hospitals early. I think they are not being fair to the patients. They make all sorts of claims for cure and end up making the conditions worse for the patients by delayed referral. The healers should be encouraged to refer the patients early.

Q. In spite all these problems, why do you think the patients continue to use their services?

I think the cost may be a factor and also because some of them are just not aware of the disease they mistake it as breast abscess. The social status of some of the women is that their first line of call is a traditional healer/herbalist for medical care before going to the hospital. They also link the disease to supernatural and spiritual causes and therefore believe that answers could only be sought from the traditional healers and spiritualists.

Q. How would you describe the 5-year survival of breast cancer in Ghana?

I do not think we have that statistic because our patients do not come for follow-up treatments. Follow-up is very poor and it would therefore be very difficult to develop this kind of information.

Q. What stages at diagnosis do you mostly see?

Mostly stages 3 and 4. Over 40% for stage 3 disease, about 25% for stage 4 and less than 5% for stage 1 and the remaining percentage for stage 2.

Q. Do you get good referrals from the districts and the regions?

I would say it is not the best. It is somehow better at the Teaching Hospitals. The biggest problem is at the District levels where some mastectomies are performed even without confirmed biopsies and in most cases they fail to refer the patients for adjuvant radiotherapy. I think the whole system needs to be worked on.

Q. How can this problem be addressed?

We have organized a couple of courses and I think this ought to be included in the curriculum of the Continuous Medical Education Programme.

Q. How would you describe the cost of breast cancer treatment in Ghana?

I have always said that cancer treatment is very expensive and beyond the reach of most patients in Ghana considering the incomes of these people. Surgery takes a fraction of the cost, chemotherapy the most expensive of all the treatment modalities and radiotherapy. This is for adjuvant treatment and ironically for palliative treatment the more advanced the disease the more expensive it is to treat and which in many instances does not work.

Q. Is breast cancer treatment covered under the National Health Insurance Scheme?

Surgical treatment is covered under the scheme and not chemotherapy nor radiotherapy but I think it is better than nothing. Women's groups were able to lobby for the inclusion of surgical treatment under then scheme.

Q. What suggestions would you like to make to improve breast care in Ghana?

I do not think that they are doing much to help the women of this country. However, it is encouraging that they recognize that breast cancer is the 4th cause of death and I believe with this recognition, more attention would be paid to the care of cancer patients in Ghana. Maybe if the relatives and wives of the people in authority are

afflicted with the disease they will then see the need to pay more attention to this area.

Q. In your opinion how can the awareness level be raised about the disease?

A lot of media houses and some individuals are helping to create the awareness. Some activities are going on at the Breast Clinic at the Korle Bu Teaching Hospital. Of course most of these activities are happening in Accra and other big cities. Hopefully, these activities will be extended to other parts of the country especially in the rural areas.

Q. On average how much does it cost to have a mammogram in Ghana?

I think it is about ¢400,000 (four hundred thousand cedis) an equivalent of £30 in Private Health Institutions and around ¢250,000 about in Public Health Institutions. Remember the average basic salary is about ¢500,000 per month less than so you see not many women can afford to have the mammogram even if the service is readily available.

Q. Still talking about the role of the Ministry of Health, what do you think the Ministry could do to improve breast cancer care in Ghana?

The Ministry has a responsibility for all cancer patients including breast cancer patients. I think education and awareness creation is very important and also to incorporate the Traditional Healers/Herbalists into the mainstream of the health system which will give us the floor to educate them to recognize what is cancer and to refer such cases to the hospitals early. Whether we like it or not, they are the first point of contact for most people for medical care.