

UNIVERSITY OF CAPE COAST

ATTITUDE AND PERCEPTION OF STUDENTS OF WINNEBA
COMMUNITY HEALTH NURSES' TRAINING SCHOOL TOWARDS
BREAST CANCER

ROSEMARY SITSOFE ABLA TETTEY

2013

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BY

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Dissertation submitted to the Department of Health, Physical Education and Recreation of the College of Education Studies, University of Cape Coast, in partial fulfilment of the requirements for award of Master of Education Degree in Health Education

OCTOBER 2013

DECLARATION

Candidate's Declaration

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

Candidate's Signature: Date:

Name: Rosemary Sitsofe Abla Tettey

Supervisor's Declaration

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

Supervisor's Signature: Date:

Name: Dr. Joseph K. Ogah

ABSTRACT

This study sought insight into attitude and perception of students of Winneba Community Health Nurses' Training School (CHNTS) towards breast cancer. The study was an investigation to find out if there was a significant difference between first and second year students of CHNTS in the attitude towards breast cancer.

A descriptive survey design was chosen for this study. The instrument used in collecting the data for the study was a researcher-developed questionnaire. The sample size selected for the study was 120 and comprising 59 first year and 61 second year students. The model of analysis of data involved the use of frequency and percentage tables and Independent Samples t-test.

The results from the findings of the study showed that students had a positive attitude towards breast cancer. The study also showed that students had a good perception of breast cancer. The study also revealed that there was no significant difference in the means of the attitude of the first and second year towards breast cancer.

It was recommended among other things that students should be encouraged to maintain this good attitude and measures should be taken by school taken to improve on the attitude of the students as a better attitude towards breast cancer is more desirable among students in particular and the general population at large. In addition, the use of the media in disseminating information on breast cancer is effective and should be continued.

ACKNOWLEDGEMENTS

I wish to express my heartfelt gratitude to my selfless supervisor, Dr. Joseph Kwesi Ogah of the Department of Health, Physical Education and Recreation (HPER), University of Cape Coast for his support, contributions, suggestions, and guidance. My gratitude also goes to the head, senior lecturers, and staff of (HPER), University of Cape Coast for their immeasurable support. I would like to render special gratitude also to my husband, Kofi Ayebi-Arthur for his immense support throughout the period of writing this work.

My special thanks go to the Principal, staff and students of Community Health Nurses' Training School, Winneba, for their immense support during data collection. I also express my gratitude to Dr. Dora Baaba Aidoo of the Institute for Educational, Planning and Administration and Mr. Emmanuel Tenkorang of the Centre for Development Studies all in the University of Cape Coast, for their various contributions, support and constructive criticisms that have made this work a success.

My gratitude goes to my family, who sacrificed immensely to support and spur me on. I am equally grateful to the authors and publishers of the various articles, papers, books, and other publications that were referenced in this dissertation. I am indebted to them.

DEDICATION

To my family; Mr. Kofi Ayebi-Arthur, Adwoa Ayebi-Arthur, Ekow
Ayebi-Arthur, Mrs Mary Tettey and Theophilus Tettey.

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CHAPTER ONE

INTRODUCTION

Background to the Study

Women's health can negatively be affected by lack of education, inadequate information and lack of awareness of the factors contributing to disease (Mansor, 2001). Low health literacy, contributes to poor treatment compliance, uncontrolled chronic disease and high health care utilization. (Van-Parijs, 1986). It appears that adequate and relevant information helps to facilitate decision making, coping and psychological adjustment (Mansor, 2001). Thus people newly diagnosed with breast cancer need to know the characteristics of the disease to assist in decision making regarding treatment options. While it may be impossible to publish everything, little is published and there is no consensus on what constitutes essential basic information on cancer characteristics (Ariel & Cleary, 2000). Evidence now indicates that breast cancer patients are dissatisfied with information received from health professionals (Odusanya & Tayo, 2001).

According to Basavanthappa (2003), the psychological and physiological impact of cancer on patients and their families result in profound changes in their lifestyle. Breast cancer is the second most common type of cancer after lung cancer and the cause of death worldwide. In 2004, breast cancer caused 519,000 death worldwide (7% of death almost 1% of all deaths and is about

100 times as frequent among women as among men but with equal survival rates in both sexes (World Health Organization, 2009).

The incidence of breast cancer is rising more rapidly in population groups that enjoyed a low incidence of the disease and it is one of the leading causes of death in women aged 30 years and above. It reduces the life expectancy of the population at risk especially those between 31 and 50 years. Breast cancer has become the commonest malignancy (excluding skin cancers) in women worldwide. It has unfavourable prognosis in women aged 40 or younger. The knowledge, attitude and perception towards breast cancer results in majority of affected patients reporting late to the hospital when little or nothing can be done again (Cooper, 2000).

Caucasians, especially of North American descent, seem to have the highest incidence of breast cancer; however, reports from other parts of the world indicate an increasing incidence as the women presumably adopt a “Western” lifestyle. In multi-ethnic societies, the incidence and mortality differ among the various races giving the impression of certain constitutional or genetic factors. The African woman presents late for treatment with a bigger mass and seems afflicted with biologically more aggressive tumour.

There are a lot of epidemiological variations in the occurrence of breast cancer in developed and developing countries. The peak age of incidence of the disease in Ghana is at least a decade earlier compared to the Caucasians. Breast cancer is rare in men, being in the ratio of 1:100 compared to women. It also tends to occur in hypogonadic males, and those with chromosomal abnormalities.

In Ghana, studies from various ethnic populations have reported the demographic profile of breast cancer is mostly limited to the southern part of the country especially Greater Accra Region, Ashanti Region and the Central Region with a few cases from the Northern Region (Acheampong, 2000). A research conducted by Clegg-Lamprey and Hodasi (2007) at the surgical unit of Korle-Bu Teaching Hospital (KBTH) indicated that 158 patients were diagnosed as having breast cancer of which 156 were females and 2 males with age range between 24 and 75 years. It is the leading malignancies and appears and accounts for 15.4% of malignancies and appears to be on the increase. In 1996, 12.8% of all admissions for malignant neoplasm to the KBTH were for breast cancer. Due to lack of knowledge about the disease 50% or more of Ghanaians with breast cancer report to the hospital with advance form of the disease. It was concluded from the study that there has been no improvement in the presentation of breast cancer at KBTH over the past 5-10 years.

In view of the increasing incidence of breast cancer in Ghana, the study was carried out in a selected tertiary institution in the Central Region to assess the knowledge level, attitude and perception of students about breast cancer.

Statement of the Problem

Every woman who discovers a lump in the breast has not unnatural dread or fear that is a cancer. Unfortunately, this dread or fear too often results in concealment of her condition until it is too late to treat or if possible manage, yet the breast remains one of the most favourite sites for the treatment of a new growth (Moroney, 1984).

A lot of education about breast cancer has been going on at the hospitals, through the mass media and health talks at churches and durbars. Most students in our tertiary institutions are not reached due to their busy schedules on the campuses, spending most of their time at the lecture halls and libraries. Therefore, it cannot be certain that students in the tertiary institutions have some or adequate information about breast cancer which now is no respecter of one's age, sex and status in the society. This poses a problem for the society and our country since a lot of money is being spent on treating this preventable condition which is also claiming a lot of lives and putting so much stress on its victims as a result of losing part of the body (the breast). Hence, a study to be conducted among students of tertiary institution thus Community Health Nurses' Training School (CHNTS), Winneba to assess their level of knowledge, attitude and perception regarding breast cancer.

Purpose of the Study

The study sought to find out attitude and perception of CHNTS students about breast cancer and also if there was a significant difference between first and second year students of CHNTS in their attitude towards breast cancer. These were ascertained through questionnaire on attitude and level of perception of CHNTS students.

Research Questions

The study sought answers to the following questions:

- 1) What is the attitude of CHNTS students towards breast cancer?
- 2) What is the perception of CHNTS students about breast cancer?
- 3) Is there a significant difference between first and second year students of CHNTS in their attitude towards breast cancer?

Significance of the Study

The significance of the study was that the findings would:

- 1) bring to light the level of knowledge tertiary students have about cancer.
- 2) motivate tertiary students to do self-breast examination regularly and go for breast screening (mammography).
- 3) motivate further research into the defaulter rates and the large number of deaths associated with breast cancer
- 4) enable health workers to use appropriate strategies to educate people on breast cancer.

Delimitation of the Study

The study considered only student's level of knowledge, attitude and perception about breast cancer. There are other areas of interest which could be studied in relation to breast cancer.

Limitations of the Study

The findings cannot be generalized for all tertiary students in Ghana because the study area was limited to Community Health Nurses' Training School, students, Winneba.

Definition of Terms

Brachytherapy: Radiotherapy delivered into or adjacent to a tumour by means of intestinal radioactive source.

Carcinoma: Malignant growth of epithelia tissue

Chromosome: A structure in animal cell that transmits genetic information

CHNTS: Community Health Nurses' Training School

Hogkins Lymphoma: A malignant condition of reticular endothelia cells

Lymph nodes: structures placed along the course of lymph vessels

Malignant: tending to become progressively worse and to result in death

Mammography: Radiographic or infra-red examination of the breast to detect abnormalities

Menopause: span of time during which the menstrual cycle wanes and gradually stops.

Metastasis: the transfer of a disease from one part of the body to another through blood vessels.

Pathology: the branch of medicine that deals with the essential nature of disease

Radiotherapy: treatment of disease by x-rays

Syndrome: a group of signs and symptoms typical of a distinctive disease which occur together.

Organisation of the Rest of the Study

The remaining chapters of the dissertation are organized as follows:

Chapter two discusses the literature related to the study. The review involves theoretical and empirical studies related to the problem under study.

The third chapter describes the methodology used in the study. Specifically, the research design, the research instrument, sample and sampling technique, the procedure for data collection and the data analysis are discussed.

In chapter four, the main focus is the presentation, analysis and discussion of data collected. Finally, summary, recommendations and areas for further research are presented in chapter five.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter deals with the related theoretical and empirical literature on breast cancer. It focuses on the following: explanation of breast cancer, classification of breast cancer, risk factors of breast cancer, symptoms of breast cancer, detection, screening and diagnosis, treatment of breast cancer, knowledge on breast cancer, attitude towards breast cancer and perception about breast cancer.

Explanation of Breast Cancer

Breast cancer refers to cancers originating from breast tissue, most commonly from the inner lining of milk ducts or the lobules that supply the ducts with milk. Cancers originating from ducts are known as ductal carcinomas; those originating from lobules are known as lobular carcinomas. There are many different types of breast cancer, with different stages (spread), aggressiveness, and genetic makeup; survival varies greatly depending on those factors (Bare & Smeltzer, 2009).

According to World Health Organization (2009), while the majority of new breast cancers are diagnosed as a result of an abnormality seen on a mammogram, a lump, or change in consistency of the breast tissue can also be a warning sign of the disease. Heightened awareness of breast cancer risk in the past decades has led to an increase in the number of women undergoing mammography for screening, leading to detection of cancers in earlier stages

and a resultant improvement in survival rates. Still, breast cancer is the most common cause of death in women between 45-55 years of age (menopausal age). Although breast cancer in women is a common form of cancer, male breast cancer does occur and accounts for about 1% of all cancer deaths in men.

Development of Cancer Cells

Cancer begins in cells, the building blocks that make up tissues. Tissues make up the breasts and other parts of the body. Normal cells grow and divide to form new cells as the body needs them. When normal cells grow old or get damaged, they die, and new cells take their place. Sometimes, this process goes wrong. New cells form when the body doesn't need them, and old or damaged cells don't die as they should. The build-up of extra cells often forms a mass of tissue called a lump, growth, or tumour. Tumours in the breast can be benign (not cancer) or malignant (cancer). Benign tumours are not as harmful as malignant tumours:

Table 1: Characteristics of Benign and Malignant Neoplasms

| Characteristics | Benign | Malignant |
|------------------------|--|--|
| Cell characteristics | Well-differentiated cells that resemble normal cells of the tissue from which the tumour originated | Cells are undifferentiated and often bear little resemblance to the normal cells of the tissue from which they arose |
| Mode of growth | Tumour grows by expansion and does not infiltrate the surrounding tissues; usually encapsulated | Grows at the periphery and sends out processes that infiltrate and destroy the surrounding tissues |
| Rate of growth | Rate of growth is usually slow | Rate of growth is variable and depends on level of differentiation; the more anaplastic the tumour, the faster its growth |
| Metastasis | Does not spread by metastasis | Gains access to the blood and lymphatic channels and metastasizes to other areas of the body |
| General effects | It is usually a localized phenomenon that does not cause generalized effects unless its location interferes with vital functions | Often causes generalized effects, such as anaemia, weakness, and weight loss |
| Tissue destruction | Does not usually cause tissue damage unless its location interferes with blood flow | Often causes extensive tissue damage as the tumour outgrows its blood supply or encroaches on blood flow to the area; may also produce substances that cause cell damage |
| Ability to cause death | Does not usually cause death unless its location interferes with vital functions | Usually causes death unless growth can be controlled |

Breast cancer cells can spread by breaking away from the original tumour. They enter blood vessels or lymph vessels, which branch into all the tissues of the body. The cancer cells may be found in lymph nodes near the breast. The cancer cells may attach to other tissues and grow to form new tumours that may damage those tissues. The spread of cancer is called metastasis (Giordano & Hortobagye, 2003).

Classification of Breast Cancer

Dent, Trudeau, Pritchard, Hanna, Kahn, Sawka, Lickley, Rawlinson, Sun and Narod (2007), agree that breast cancers can be classified by different schemata. They include stage, pathology, grade, receptor status, and the presence or absence of genes as determined by DNA testing:

Stage - The classification for breast cancer according to stage is based on the size of the tumour (T), whether or not the tumour has spread to the lymph nodes (N) in the armpits, and whether the tumour has metastasized (M) or spread to a more distant part of the body. Larger size, nodal spread, and metastasis have a larger stage number and a worse prognosis. These are the stages of breast cancer:

Stage 0 - is sometimes used to describe abnormal cells that are not invasive cancer. For example, Stage 0 is used for ductal carcinoma in situ (DCIS). DCIS is diagnosed when abnormal cells are in the lining of a breast duct, but the abnormal cells have not invaded nearby breast tissue or spread outside the duct. Although many doctors don't consider DCIS to be cancer, DCIS sometimes becomes invasive breast cancer if not treated.

Stage I - is an early stage of invasive breast cancer. Cancer cells have invaded breast tissue beyond where the cancer started, but the cells have not

spread beyond the breast. The tumour is no more than two centimetres (three-quarters of an inch) across.

Stage II - is one of the following:

The tumour is no more than 2 centimetres (three-quarters of an inch) across. The cancer has spread to the lymph nodes under the arm.

The tumour is between 2 and 5 centimetres (three-quarters of an inch to 2 inches). The cancer has not spread to the lymph nodes under the arm.

The tumour is between 2 and 5 centimetres (three-quarters of an inch to 2 inches). The cancer has spread to the lymph nodes under the arm.

The tumour is larger than 5 centimetres (2 inches). The cancer has not spread to the lymph nodes under the arm.

Stage III - is locally advanced cancer. It is divided into Stage IIIA, IIIB, and IIIC.

Stage IIIA - is one of the following:

The tumour is no more than 5 centimetres (2 inches) across. The cancer has spread to underarm lymph nodes that are attached to each other or to other structures. Or the cancer may have spread to lymph nodes behind the breastbone.

The tumour is more than 5 centimetres across. The cancer has spread to underarm lymph nodes that are either alone or attached to each other or to other structures. Or the cancer may have spread to lymph nodes behind the breastbone.

Stage IIIB - is a tumour of any size that has grown into the chest wall or the skin of the breast. It may be associated with swelling of the breast or with

nodules (lumps) in the breast skin. The cancer may have spread to lymph nodes under the arm.

The cancer may have spread to underarm lymph nodes that are attached to each other or other structures or the cancer may have spread to lymph nodes behind the breastbone. Inflammatory breast cancer is a rare type of breast cancer. The breast looks red and swollen because cancer cells block the lymph vessels in the skin of the breast. When a doctor diagnoses inflammatory breast cancer, it is at least Stage IIIB, but it could be more advanced.

Stage IIIC - is a tumour of any size. It has spread in one of the following ways:

The cancer has spread to the lymph nodes behind the breastbone and under the arm.

The cancer has spread to the lymph nodes above or below the collarbone.

Stage IV - is distant metastatic cancer. The cancer has spread to other parts of the body, such as the bones or liver.

Recurrent cancer - is cancer that has come back after a period of time when it could not be detected. Even when the cancer seems to be completely destroyed, the disease sometimes returns because undetected cancer cells remained somewhere in your body after treatment. It may return in the breast or chest wall. Or it may return in any other part of the body, such as the bones, liver, lungs, or brain.

Pathology - Most breast cancers are derived from the epithelium lining the ducts or lobules. (Cancers from other tissues are considered "rare" cancers.) *Carcinoma in situ* is proliferation of cancer cells within the epithelial tissue without invasion of the surrounding tissue. *Invasive carcinoma* invades the

surrounding tissue. Cells that are dividing more quickly have a worse prognosis.

Grade (Bloom-Richardson grade) - When cells become differentiated, they take different shapes and forms to function as part of an organ. Cancerous cells lose that differentiation. Cells that normally line up in an orderly way to make up the milk ducts become disorganized. Cell division becomes uncontrolled. Cell nuclei become less uniform. Cells are described as well differentiated (low grade), moderately differentiated (intermediate grade), and poorly differentiated (high grade). Poorly-differentiated cancers have a worse prognosis.

Receptor status - Cells have receptors on their surface and in their cytoplasm and nucleus. Chemical messengers such as hormones bind to receptors, and this causes changes in the cell. Breast cancer cells may or may not have three important receptors: oestrogen receptor (ER), progesterone receptor (PR), and HER2/neu (Human Epidermal Growth Factor Receptor 2). Cells with these receptors are called ER positive (ER+), ER negative (ER-), PR positive (PR+), PR negative (PR-), HER2 positive (HER2+), and HER2 negative (HER2-). Cells with none of these receptors are called basal-like or triple negative. ER+ cancer cells depend on oestrogen for their growth, so they can be treated with drugs to reduce oestrogen (e.g. tamoxifen), and generally have a better prognosis

All of these receptors are identified by immunohistochemistry. Receptor status is used to divide breast cancer into four molecular classes: (1) Basal-like, which are ER-, PR- and HER2- (triple negative, TN). Most BRCA1 breast cancers are basal-like TN. (2) Luminal A, which are ER+ and low grade

(3) Luminal B, which are ER+ but often high grade (4) HER2+, which have amplified ERBB2.

Finally, receptor status has become a critical assessment for all breast cancers, as it determines the suitability of using targeted treatments e.g. tamoxifen and or trastuzumab. DNA microarrays have compared normal cells to breast cancer cells and found differences in hundreds of genes, but the significance of most of those differences is unknown.

Risk Factors of Breast Cancer

When diagnosed of breast cancer, it is natural to wonder what may have caused the disease. But no one knows the exact causes of breast cancer. And breast cancer is not contagious. It is also known that women with certain risk factors are more likely than others to develop breast cancer. A risk factor is something that may increase the chance of getting a disease.

Some risk factors (such as drinking alcohol) can be avoided. But most risk factors (such as having a family history of breast cancer) cannot be avoided (Giordano & Hortobagyi, 2003). Bare and Smeltzer (2009) and Giordano and Hortobagyi (2003) have found the factors that influence risk of developing breast cancer to include:

- 1) Prior History of Breast Disease
- 2) Family History of Breast Disease
- 3) Age
- 4) Race
- 5) Reproductive and Menstrual History
- 6) Radiation Exposure
- 7) Dietary Factors

The relative effect of these and other risk factors in any given case of cancer is variable and very difficult to determine with accuracy at this time. Some of these and other risk factors are discussed on the following pages.

Prior History of Breast Disease

History of breast cancer, regardless of the type, greatly increases an individual's risk for future development of breast cancer. The second occurrence is most likely to be classified as invasive and ductal, rather than a lobular breast cancer. Such women are strongly advised to carefully monitor themselves and receive mammograms on a regular basis.

Family History of Breast Disease

It is possible to inherit defective genes that lead to the development of a familial form of a particular cancer type. Individuals with a family history of breast cancer are therefore at an increased risk of developing the disease. The degree of risk depends upon the type of relative affected. For example, risk is higher if an immediate family member has been diagnosed with breast cancer. The more closely related an individual is to someone with breast cancer, the more likely they will share the same genes that increased the risk of the affected individual. Risk also increases with the number of relatives affected.

Age

Breast cancer risk is low before age 30 and increases with age, levelling off at the age of 80. More information about the relationship between cancer and age can be found in the Cancer Biology section.

Race

African American women are more likely to be diagnosed with early-onset (before age 45) breast cancer compared to white American women. This trend in incidence shifts, however, for women in their fifties. When comparing overall lifetime risk, African American women have a lower risk of developing breast cancer compared to white American women (Newman, Griffith, Jatoi, Simon, Crowe & Colditz, 2006).

Cancer survival rates are greatly affected by the stage at which a cancer is detected. Early-onset cancers are generally more aggressive than cancers that develop later in life. Studies show that African American women have a greater chance of being diagnosed with high-grade and oestrogen receptor (ER)-negative tumours. Regardless of their lower overall lifetime risk of developing the disease, African American women have a significantly higher chance of dying from breast cancer than any other ethnic group in the United States (Whitworth, 2006).

Reasons for these differences in cancer occurrence and death rate are still unclear. One explanation for the disparity is the socioeconomic differences that exist between ethnic groups. In this view, limited access to health care and clinical trials and the high cost of treatments may account for the higher African American breast cancer death rate. New investigations focused on biological differences, however, suggest that African Americans may develop tumours that are harder to treat. Current research seems to suggest that the disparity in cancer death rate is due to a combination of socioeconomic and genetic factors (Whitworth, 2006). Clearly, more work needs to be done in this area.

Reproductive and Menstrual History

Exposure to oestrogen is associated with increased breast cancer risk. For this reason, women who experience menarche (begin their menstrual cycle) before age 12 and the onset of menopause at age 55 or older are at an increased risk of developing breast cancer.

On the other hand, women who carry pregnancy to full term at a young age have a decreased risk of developing breast cancer. During pregnancy, maternal hormone levels change drastically. Studies show that some of these hormones may provide anti-oestrogen effects, protecting individuals from the negative effects of oestrogen. Examples of proteins thought to impact cancer risk include:

Alpha-fetoprotein. Alpha-fetoprotein is a glycoprotein produced by the liver of a developing foetus. Since the protein is at its highest level during the third trimester, a pregnancy that is not carried to full term may not provide a protective effect (Lambe, Trichopoulos, Hsieh, Wu, Adami & Wide, 2003).

Human Chorionic Gonadotropin (hCG). Human chorionic gonadotropin is a hormone produced by the placenta during pregnancy. The protein is elevated during the first trimester of pregnancy. Experiments with breast cancer cells suggest that the effects of hCG may partially explain the higher rate of breast cancer among nulliparous (non-child bearing) women (Rao, Li, Manna, Lei & Aggarwal, 2004).

Hormone Replacement Therapy

Hormone replacement therapy (HRT) is often prescribed to control menopausal symptoms that include decreased bone density, sexual

dysfunction, fatigue, and mood swings. HRT may include treatment with oestrogen alone or a combination of both oestrogen and progesterone. Studies indicate that use of menopausal hormone therapy, currently or within the past five years, is associated with an increased risk of developing breast cancer (Rosenberg, Magnusson, Lindström, Wedrén, Hall, & Dickman, 2006.). Several studies have shown that individuals who have stopped using HRT for more than five years are not at a significantly greater risk. Much of the information regarding HRT and breast cancer risks has come from population studies that may be difficult to compare with each other. The actual impact of HRT on breast cancer risk is still under investigation.

Exposure to Diethylstilboestrol

Diethylstilboestrol (DES) is a man-made oestrogen that was prescribed between 1947 and 1971 to treat complications associated with pregnancy. Women who ingested this chemical during their pregnancy are at a slightly increased risk of developing breast cancer. Female offspring of women who were exposed to DES have a higher incidence of reproductive problems and cancers of the vagina and cervix (Veurink & Koster, 2005).

Radiation Exposure

Exposure to radiation, such as radiation therapy used to treat Hodgkin lymphoma, increases risk of breast cancer throughout the remainder of a woman's lifetime. Relative risk depends on the age at which irradiation occurred, time since treatment, and radiation dose received. Women irradiated at a young age (before age of 30) are at an increased risk of developing breast cancer later in life compared to older women. Advances in therapeutic radiation techniques have resulted in the use of lower doses of radiation and

exposure of smaller regions of the body. Such advances will hopefully reduce breast cancer risk due to irradiation therapy in years to come (Travis, et. al, 2005).

Dietary Factors

It is very difficult to identify dietary items that cause a particular cancer. Factors that may increase breast cancer risk include high fat intake, high alcohol consumption, and a diet rich in overcooked meats.

Alcohol: While studies indicate that consumption of one drink per day or less does not increase risk of breast cancer, there is evidence that heavy consumption of alcohol *is* associated with an increased risk. Findings show that women who consume an average of 4 or more drinks per day, regardless of the type of alcohol, may be at a 50% higher risk of breast cancer than those who do not drink alcohol (MacMahon, 2006).

Overcooked Meats: Heterocyclic amines are chemicals formed in the cooking process of meat products such as fish, beef, pork, and chicken. Exposure to high amounts of these chemicals, caused by a diet rich in broiled, grilled, or fried meat, has been correlated with increased risk of breast cancer in women (Felton, Knize, Salmon, Malfatti & Kulp, 2002).

Signs and Symptoms of Breast Cancer

Bare and Smeltzer (2009) and Haagensen (1986) recognized that early breast cancer usually doesn't cause symptoms. But as the tumour grows, it can change how the breast looks or feels. The common changes include:

- 1) A lump or thickening in or near the breast or in the underarm area
- 2) A change in the size or shape of the breast
- 3) Dimpling or puckering in the skin of the breast

- 4) A nipple turned inward into the breast
- 5) Discharge (fluid) from the nipple, especially if it's bloody

Scaly red or swollen skin on the breast, nipple, or areola, (the dark area of skin at the centre of the breast). The skin may have ridges or pitting so that it looks like the skin of an orange referred to as peau d'orange.

Another reported symptom complex of breast cancer is Paget's disease of the breast. This syndrome presents as eczematoid skin changes such as redness and mild flaking of the nipple skin. As Paget's advances, symptoms may include tingling, itching, increased sensitivity, burning, and pain. There may also be discharge from the nipple. Approximately half of women diagnosed with Paget's also have a lump in the breast.

Occasionally, breast cancer presents as metastatic disease, that is, cancer that has spread beyond the original organ. Metastatic breast cancer will cause symptoms that depend on the location of metastasis. Common sites of metastasis include bone, liver, lung and brain. Unexplained weight loss can occasionally herald an occult breast cancer, as can symptoms of fevers or chills. Bone or joint pains can sometimes be manifestations of metastatic breast cancer, as can jaundice or neurological symptoms. These symptoms are "non-specific", meaning they can also be manifestations of many other illnesses.

Prevalence of Breast Cancer in Ghana

According to Gukas and Mbonde (as cited by Ohene-Yeboah & Adjei 2012), in Ghana data on breast cancer is scanty. However, the disease is a common cause of hospital admissions and mortality among Ghanaian women (Biritwum & Amaning, 2000; Wiredu & Armah, 2006). Reported clinical

studies from Ghana and other communities in sub Saharan Africa indicate that breast cancer in indigenous black African populations is often severe with unfavourable prognostic features (Amir, Kitinya & Parkin, 1994; Gukas, Jennings, Mandong, Igun, Manasseh, Ugwu & Leinster, 2005). Some of these features include young age at presentation, advanced stage at diagnosis, large tumour size, high grade histologic subtypes and low rate of hormone receptor positivity (Gukas, Jennings, Mandong, Igun, Manasseh, Ugwu & Leinster, 2005; Mbonde, Amir, Schwartz-Albiez, Akslen & Kitinya, 2000). The features are believed to explain why African women are more likely than women from the developed countries to die from the disease (Gakwaya, Kigula-Mugambe, Kavuma, Luwaga, Fualal, Jombwe, Galukande & Kanyike, 2008). There are no universally acceptable explanations for the features that characterize breast cancer in women of indigenous African populations.

Data from genetic, clinical and other studies suggest that breast cancer in the indigenous African women has an inherently aggressive biology. (Gao, Adebamowo, Fackenthal, Das, Falusi & Olopade, 2000). Recently other reported studies support the contrary view that these features only reflect the late stage at diagnosis and the adverse influence of lack of awareness of the disease, non- availability of screening methods and some other epidemiologic risk factors (Awadelkarim, Arizzi, Elamin, Hamad, De Blassio, Mekki, Osman, Biunno, Elwali, Mariani-Costantini & Barberis 2008). Also, breast cancer is considered to be a complex and heterogeneous disease with ethnic and racial variations of histologic subtypes and tumour behaviour.

The nature of the disease requires that each community or population must define the characteristics of the disease among its people so as to be able to

determine the most suitable method to control the disease and limit the mortalities. There are some previous reports on breast cancer from Accra (Clegg-Lamprey, Hodasi 2007; Quartey-Papafio & Anim, 1980). However, there are no reported studies on breast cancer characteristics from Kumasi or any other part of the country. A study was designed in Kumasi and the report was on the clinical and some pathological characteristics of breast cancer as seen in medical practice in that region (Ohene-Yeboah & Adjei, 2012). It provided African-based findings that should contribute to the evidence required for the better understanding of the disease in indigenous black African populations. In addition the data may be useful for policy makers who have to decide on funding for screening for breast cancer in Ghana.

Management of Breast Cancer

Detection, Screening and Diagnosis

Breast cancer screening refers to testing otherwise-healthy women for breast cancer in an attempt to achieve an earlier diagnosis (Bare & Smeltzer, 2009; Ariel & Cleary, 2000). The assumption is that early detection will improve outcomes. A number of screening test have been employed including: clinical and self-breast, mammography, genetic screening, ultrasound, and magnetic resonance imaging (MRI).

Clinical Breast Exam

During a clinical breast exam, a health care provider checks the breasts. The patient may be asked to raise her arms over your head, let them hang by the sides, or press the hands against the hips. The health care provider looks for differences in size or shape between the breasts. The skin of the breasts is

checked for a rash, dimpling, or other abnormal signs. The nipples may be squeezed to check for fluid.

Using the pads of the fingers to feel for lumps, the health care provider checks the entire breast, underarm, and collarbone area. A lump is generally the size of a pea before anyone can feel it. The exam is done on one side and then the other. The health care provider checks the lymph nodes near the breast to see if they are enlarged.

If there is a lump, the health care provider will feel its size, shape, and texture, and also check to see if the lump moves easily. Benign lumps often feel different from cancerous ones. Lumps that are soft, smooth, round, and movable are likely to be benign. A hard, oddly shaped lump that feels firmly attached within the breast is more likely to be cancer, but further tests are needed to diagnose the problem. It is recommended that women have regular clinical breast exams and mammograms to find breast cancer early.

Mammogram

A mammogram is an x-ray picture of tissues inside the breast. Mammograms can often show a breast lump before it can be felt. They also can show a cluster of tiny specks of calcium. These specks are called micro calcifications. Lumps or specks can be from cancer, precancerous cells, or other conditions. Further tests are needed to find out if abnormal cells are present. Before they have symptoms, women should get regular screening mammograms to detect breast cancer early.

Women who are younger than 40 and have risk factors for breast cancer can ask their health care provider whether to have mammograms and how often to have them. Women in their 40s and older should have mammograms

every 1 or 2 years. If the mammogram shows an abnormal area of the breast, a more clearer detailed images of that area is ordered. Doctors use diagnostic mammograms to learn more about unusual breast changes, such as a lump, pain, thickening, nipple discharge, or change in breast size or shape. Diagnostic mammograms may focus on a specific area of the breast. They may involve special techniques and more views than screening mammograms.

Other Imaging Tests

If an abnormal area is found during a clinical breast exam or with a mammogram, the doctor may order other imaging tests:

Ultrasound: A woman with a lump or other breast change may have an ultrasound test. An ultrasound device sends out sound waves that people can't hear. The sound waves bounce off breast tissues. A computer uses the echoes to create a picture. The picture may show whether a lump is solid, filled with fluid (a cyst), or a mixture of both. Cysts usually are not cancer. But a solid lump may be cancer.

Magnetic Resonance Imaging (MRI): MRI uses a powerful magnet linked to a computer. It makes detailed pictures of breast tissue. These pictures can show the difference between normal and diseased tissue.

Biopsy

A biopsy is the removal of tissues to look for cancer cells. A biopsy is the only way to tell for sure if cancer is present. It is usually done if an abnormal area is found during clinical breast examination. Biopsy is done in several ways:

Fine-needle aspiration biopsy: A thin needle is used to remove cells or fluid from a breast lump.

Core biopsy: A wide needle is used to remove a sample of breast tissue.

Skin biopsy: If there are skin changes on the breast, a small sample of skin may be taken.

Surgical biopsy: A surgeon may remove a sample of tissue.

An incisional biopsy takes a part of the lump or abnormal area.

An excisional biopsy takes the entire lump or abnormal area.

Staging

If the biopsy shows a breast cancer, the extent (stage) of the disease helps to choose the best treatment. The stage is based on the size of the cancer, whether the cancer has invaded nearby tissues, and whether the cancer has spread to other parts of the body.

Staging may involve blood tests and other tests:

Bone scan - A small amount of a radioactive substance is injected into a blood vessel. It travels through the bloodstream and collects in the bones. A machine called a scanner detects and measures the radiation. The scanner makes pictures of the bones. The pictures may show cancer that has spread to the bones.

CT scan - CT scan are used to look for breast cancer that has spread to the liver or lungs. An x-ray machine linked to a computer takes a series of detailed pictures of the chest or abdomen. A contrast material may be received by injection into a blood vessel in the arm or hand. The contrast material makes abnormal areas easier to see.

Lymph node biopsy - The stage often is not known until after surgery to remove the tumour in the breast and one or more lymph nodes under the arm.

Surgeons use a method called sentinel lymph node biopsy to remove the

lymph node most likely to have breast cancer cells. A blue dye, a radioactive substance or both is injected near the breast tumour. Or a radioactive substance is injected under the nipple. A scanner is used to find the sentinel lymph node containing the radioactive substance or looks for the lymph node stained with dye. The sentinel node is removed and checked for cancer cells. Cancer cells may appear first in the sentinel node before spreading to other lymph nodes and other places in the body.

These tests can show whether the cancer has spread and, if so, to what parts of the body. When breast cancer spreads, cancer cells are often found in lymph nodes under the arm (axillary lymph nodes). Also, breast cancer can spread to almost any other part of the body, such as the bones, liver, lungs, and brain.

When breast cancer spreads from its original place to another part of the body, the new tumour has the same kind of abnormal cells and the same name as the primary (original) tumour. For example, if breast cancer spreads to the bones, the cancer cells in the bones are actually breast cancer cells. The disease is metastatic breast cancer, not bone cancer. For that reason, it is treated as breast cancer, not bone cancer.

Treatment of Breast Cancer

According to DeVita, Hellman and Rosenberg (1989), and Bare and Smeltzer (2009), there are many treatment options for breast cancer.

The options are surgery, radiation therapy, hormone therapy, chemotherapy, and targeted therapy. The treatment options are described below. Surgery and radiation therapy are types of local therapy. They remove or destroy cancer in the breast. Hormone therapy, chemotherapy, and targeted

therapy are types of systemic therapy. The drug enters the bloodstream and destroys or controls cancer throughout the body.

Surgery - Surgery is the most common treatment for breast cancer. There are different options:

Breast-sparing surgery - This is an operation to remove the cancer but not the breast. It's also called breast-conserving surgery. It can be a lumpectomy or a segmental mastectomy (also called a partial mastectomy). Sometimes an excisional biopsy is the only surgery a woman needs because the surgeon removed the whole lump.

Mastectomy - This is an operation to remove the entire breast (or as much of the breast tissue as possible). In some cases, a skin-sparing mastectomy may be an option. For this approach, a little skin is removed as possible.

The surgeon usually removes one or more lymph nodes from under the arm to check for cancer cells. If cancer cells are found in the lymph nodes, other cancer treatments will be needed. In breast-sparing surgery, the cancer in the breast and some normal tissue around is removed. Lymph nodes under the arm may also remove. In total (simple) mastectomy, the whole breast is removed. Some lymph nodes under the arm may also be removed.

In modified radical mastectomy, the whole breast is removed and most or all of the lymph nodes under the arm. Often, the lining over the chest muscles is removed. A small chest muscle also may be taken out to make it easier to remove the lymph nodes.

Removing the lymph nodes under the arm slows the flow of lymph fluid. The fluid may build up in the arm and hand and cause swelling. This swelling

is called lymphodema. It can develop soon after surgery or months or even years later.

Radiation Therapy

Radiation therapy (also called radiotherapy) uses high-energy rays to kill cancer cells. It affects cells only in the part of the body that is treated. Radiation therapy may be used after surgery to destroy breast cancer cells that remain in the area. Two types of radiation therapy are used to treat breast cancer:

External radiation therapy - The radiation comes from a large machine outside the body. Treatments are usually 5 days a week for 4 to 6 weeks. External radiation is the most common type used for breast cancer.

Internal radiation therapy (implant radiation therapy or brachytherapy) - one or more thin tubes are placed inside the breast through a tiny incision. A radioactive substance is loaded into the tube. The treatment session may last for a few minutes, and the substance is removed. When it's removed, no radioactivity remains in the body. Internal radiation therapy may be repeated every day for a week.

Hormone Therapy

Hormone therapy may also be called anti-hormone treatment. If lab tests show that the tumour in the breast has hormone receptors, then hormone therapy may be an option. Hormone therapy keeps cancer cells from getting or using the natural hormones (oestrogen and progesterone) they need to grow.

Options before Menopause

If patient have not gone through menopause, the options include:

Tamoxifen - This drug can prevent the original breast cancer from returning and also helps prevent the development of new cancers in the other breast. As treatment for metastatic breast cancer, tamoxifen slows or stops the growth of cancer cells that are in the body. It's a pill that is taken every day for 5 years.

Surgery to remove your ovaries - Until a woman goes through menopause, her ovaries are the body's main source of oestrogen. When the ovaries are removed, this source of oestrogen is also removed. (A woman who has gone through menopause wouldn't benefit from this kind of surgery because her ovaries produce much less oestrogen.) When the ovaries are removed, menopause occurs right away.

Options after Menopause

If a woman who has gone through menopause, the options include:

Aromatase inhibitor - This type of drug prevents the body from making a form of oestrogen (estradiol). Examples are anastrozole, exemestane, and letrozole.

Tamoxifen - Hormone therapy is given for at least 5 years. Women who have gone through menopause receive tamoxifen for 2 to 5 years. If tamoxifen is given for less than 5 years, then an aromatase inhibitor often is given to complete the 5 years. Some women have hormone therapy for more than 5 years.

Chemotherapy

Chemotherapy uses drugs to kill cancer cells. The drugs that treat breast cancer are usually given through a vein (intravenous) or as a pill. Chemotherapy kills fast-growing cancer cells, but the drugs can also harm normal cells that divide rapidly: Blood cells, Cells in hair roots, Cells that line the digestive tract.

Targeted Therapy

Some patients with breast cancer may receive drugs called targeted therapy. Targeted therapy uses drugs that block the growth of breast cancer cells. For example, targeted therapy may block the action of an abnormal protein (such as HER2) that stimulates the growth of breast cancer cells. Trastuzumab (Herceptin) or lapatinib may be given to a patient whose lab tests show that her breast tumour has too much HER2:

Trastuzumab - This drug is given through a vein. It may be given alone or with chemotherapy. Side effects that most commonly occur during the first treatment include fever and chills.

Lapatinib - The tablet is taken by mouth. Lapatinib is given with chemotherapy. Side effects include nausea, vomiting, diarrhoea, tiredness, mouth sores, and rashes. It can also cause red, painful hands and feet.

Treatment Choices by Stage

The treatment options depend on the stage of the disease and factors such as:

- 1).The size of the tumour in relation to the size of the breast.
- 2) The results of lab tests (such as whether the breast cancer cells need hormones to grow).
- 3) Whether the patient have gone through menopause.
- 4).General health.

Most patients with DCIS have breast-sparing surgery followed by radiation therapy. Some patients instead choose to have a total mastectomy. Patients with DCIS may receive tamoxifen to reduce the risk of developing invasive breast cancer.

Patients with Stage I, II, IIIA, or operable IIIC breast cancer may have a combination of treatments. (Operable means the cancer can be treated with surgery.) Some may have breast-sparing surgery followed by radiation therapy to the breast. This choice is common for patients with Stage I or II breast cancer. The choice between breast-sparing surgery (followed by radiation therapy) and mastectomy depends on many factors such as

- 1) The size, location, and stage of the tumour.
- 2) The size of the breast.
- 3) Certain features of the cancer.
- 4) How the patient feels about how surgery will change her breast.
- 5) How the patient feels about radiation therapy.
- 6) The patient's ability to travel to a radiation treatment centre.

Patients with Stage IIIB (including inflammatory breast cancer) or inoperable Stage IIIC breast cancer have chemotherapy first, and then may be offered other treatments. (Inoperable means the cancer can't be treated with surgery without first shrinking the tumour.) They may also have targeted therapy. If the chemotherapy or targeted therapy shrinks the tumour, then surgery may be possible.

Mastectomy - The breast is removed. In most cases, the lymph nodes under the arm are removed. After surgery, a patient may receive radiation therapy to the chest and underarm area.

Breast-sparing surgery - In rare cases, the cancer is removed but not the breast. The lymph nodes under the arm are usually removed. After surgery, a patient may receive radiation therapy to the breast and underarm area.

After surgery, chemotherapy may be recommend, targeted therapy, hormone therapy, or a combination. This therapy may help prevent the disease from coming back in the breast or elsewhere. Patients with recurrent breast cancer will be treated based on where the cancer returned. If the cancer returned in the chest area, surgery, radiation therapy, chemotherapy, hormone therapy, or a combination may be suggested.

Patients with Stage IV breast cancer or recurrent cancer that has spread to the bones, liver, or other areas usually have hormone therapy, chemotherapy, targeted therapy, or a combination. Radiation therapy may be used to control tumours in certain parts of the body. These treatments are not likely to cure the disease, but they may help a patient to live longer.

Patients can have supportive care along with anticancer treatments. Anticancer treatments are given to slow the progress of the disease. Supportive care helps manage pain, other symptoms of cancer, or the side effects of treatment (such as nausea). This care can help a patient feel better physically and emotionally.

Research from literature show that some patients with breast cancer opt for the use of traditional medicine in treatment. As Rockwell, Liu, and Higgins (2005) in a research on alteration of the effects of cancer therapy agents on breast cancer cells by the herbal medicine black cohosh warn, herbal medicines being used by patients undergoing cancer therapy can have effects on cancer cells that alter their response to the agents commonly used to treat breast cancer. A research by Carpenter, Ganz and Bernstein (2009) on complementary and alternative therapies among very long-term breast cancer survivors inferred that breast cancer patients may have different

complementary and alternative medicine (CAM) usage rates and may turn to CAM for different reasons than healthy adults. Some breast cancer patients may be more compliant with conventional treatments due to fear that their cancer may worsen if they do not follow a strictly western medical regimen. On the other hand, some breast cancer patients may be more likely to turn to CAM because of their beliefs that conventional therapies are not working, or more commonly, may use CAM in addition to their conventional therapy.

A systematic review of complementary and alternative medicine use among women with breast cancer by Wanchai, Armer and Stewart (2010) insist that although few studies have been conducted regarding clinical efficacy of CAM and no studies have shown altered disease progression from CAM use. The authors asserted that many women with breast cancer turn to CAM as they suffer from side effects of conventional treatments. This may contribute to issues such as a delay in seeking medical treatment or serious interactions between CAM and conventional treatments when the safety of CAM is unknown. In a proposed natural treatments for Cancer by NYU Langone Medical Centre, (2011) the Centre recommends that If a patient receiving cancer treatment should not use any herbs or supplements except under the supervision of a physician. The Centre reports that various natural supplements have shown some promise for improving the effectiveness of conventional cancer therapy (specifically, surgery, chemotherapy, and radiation) or reducing its side effects. In most cases, however, the supporting evidence remains weak, and the most rigorous studies have often failed to find benefit.

MacDonald (2002) noted that about 87% of women in the UK do regular check for lump in the breast, but many lack knowledge about the full range of the symptoms of breast cancer. Sung, Blumenthal, Coates and Alema-Mensah (2007) found that women with breast cancer particularly those who are older do not have internet access are often not told about hormone treatment that can stop their cancer from coming back.

In survey of 547 postmenopausal women with early breast cancer from nine European Countries, fewer than one in five said they know about hormone treatment options or had a say in whether to take drugs after undergoing surgery to remove their tumours.

Attitude towards Breast Cancer

Rastogi, Hildesheim and Sinha (2004), in a research conducted in Iraq, found that breast cancer ranks the first among the commonest malignancies among all the population and accounts for approximately one-third of the registered female cancers according to the latest Iraqi Cancer Registry which shows a trend for the disease to affect younger women. Sung, Blumenthal, Coates, and Alema-Mensah (2007) also found out that, among the patients with breast cancer, depression and helplessness were associated with significantly reduced chance of what they termed as an 'event-free survival. While their minds do not change the numerical time of survival, it did matter for the quality of the time. According to Kornblith et. al. (2001) there are people and groups who can support breast cancer patients and this helps them to cope better. These include family members, friends, nurses, counsellors and members of the clergy as well as support groups.

Alwan, Al-Attar, Eliessa, Madfaie and Tawfeeq (2012) conducted a research on knowledge, attitude and practice regarding breast cancer and breast self-examination among a sample of the educated population in Iraq. The researchers found out that almost three-quarters of the study population answered that the best way to control breast cancer was through early detection. Alwan et al. in their research discovered that the main source of knowledge about breast cancer and breast self-examination (BSE) in the sample of their study was the television; particularly among teaching staff and students. This discovery emphasises the potential effectiveness of the visual media in modifying health behaviour and promoting education.

In a research by Irurhe, Raji, Olowoyeye, Adeyomoye, Arogundade, Soyebi and Eniyandunni (2012) on knowledge and awareness of breast cancer among female secondary school students in Nigeria, they reported that 97% of their sample was aware of BSE mainly through television/radio. The respondents in their sample reported that television/radio was their first source of information about breast cancer. Anderson, Braun, Lim, Smith, Taplin and Thomas (2003) acknowledge in their research on early detection of breast cancer in countries with limited resources that public education and awareness can promote earlier diagnosis, and these goals can be achieved in simple and cost-effective ways, such as dissemination of messages through mass media.

Perception about Breast Cancer

Kathleen and Pritchard (2001) suggested that, the high rates of breast cancer seen in Western Countries may be related to certain features of the typical western diet. Since most of the established risk factor for breast cancer are hormonal. Nutrition may affect breast cancer risk through changes in

hormone metabolism. For example, obesity is known to increase breast cancer risk. Although dietary fat itself has not been clearly shown to alter circulating hormone levels or increase breast cancer risk, data on dietary phytoestrogen level of growth factors such as insulin-like growth factor.

Lane, Polednak and Burg (1989) confirm in a research on the impact of media coverage of Nancy Reagan's experience on breast cancer screening that a media event can serve as a cue or a trigger for an individual to take a preventive health action but the effectiveness of the external cue depends on a complex host of variables including the perceived benefits of an action, the structural barriers to taking an action, as well as the intensity and duration of the cue.

Summary

Breast cancer refers to cancers originating from breast tissue, most commonly from the inner lining of milkducts or the lobules that supply the ducts with milk. The build-up of extra cells often forms a mass of tissue called a lump, growth, or tumour. Tumours in the breast can be benign (not cancer) or malignant (cancer). Benign tumours are not as harmful as malignant tumours. Breast cancers can be classified by different schemata. They include stage, pathology, grade, receptor status, and the presence or absence of genes as determined by DNA testing. No one knows the exact causes of breast cancer and the condition is not contagious. It is also known that women with certain risk factors are more likely than others to develop breast cancer. A risk factor is something that may increase the chance of getting a disease and some risk factors for getting breast cancer such as drinking alcohol can be avoided.

But most risk factors such as having a family history of breast cancer can't be avoided.

CHAPTER THREE

METHODOLOGY

This chapter describes the methodology and strategies used for data collection and analysis. It focuses on the research design, population, research setting, and sample size, sampling technique, instrumentation, data collection procedure and data analysis.

Research Design

Anthony-Krueger and Sokpe (2006) defined research design as a plan and structure of the research. The type of design used in this study was the descriptive survey. Babbie (1990) recommended the descriptive survey for the purpose of generalizing from a sample to a population, so as to make inference about some characteristics or behaviour of a population. Descriptive survey involves collection of data to test hypothesis or to answer questions about the status of the subject of study (Gay, 1987).

Descriptive survey was chosen for this study because the purpose of the study is to observe, document and describe the situation as they occur naturally rather than explaining them. The design has the merit of producing a good amount of response from a wide range of population. It also involves extracting information from a large number of individuals using the same set of questions either through personal contact, e-mails or on phones. It gives way to more accurate picture of events and seeks to explain the perceptions and behaviours

of individuals on the basis of data collected at different points in time. It is apt when an investigator makes an effort to describe aspects of the population by selecting sample, who is asked to complete questionnaires, interview schedules and test. Another merit of the descriptive survey design is that it has an ability of providing information from quite a number of individuals (Ary, Jacobs & Razavieh, 1994). A descriptive survey was selected because it provides an accurate portrayal of the characteristics, for example behaviour, opinion, abilities, beliefs, and knowledge of the selected respondents. This design was chosen to meet the objectives of the study, namely to determine the attitude, and perception of first and second year students offering certificate programme with regards to breast cancer

Population

The Community Health Nurse's Training School in Winneba, established in 1980 is the only one in Central Region. It runs a two-year certificate programme and a three year diploma programme to train nurses who would provide preventive health services to the rural communities of Ghana. As part of the practice training, the school provides health services to the communities around Winneba: Gyahadze, Nsuekyir, Gyangyenadze, Atekyedo, Ateitu, Osubonpanyin, Worabeba, Sankor and Winneba township.

The population for the study was the first and second year students of the Community Health Nurses' Training School, Winneba in the Effutu Municipality of the Central Region, offering certificate programme in community health nursing. The population of the first year students was 250 and that of the second year students was 350. The total population for the study was therefore 600. In 1980 the Government following careful analyses

of the impact of the health policies and strategies on the health status of Ghanaians decided to adopt the Primary Health Care approach to health care delivery.

The Ministry of Health found it necessary to train a multi-purpose health worker at the district and sub district levels of the health service thus the training of the Community Health Nurse. The Community Health Nurses Training School in Winneba was the fourth to be established in Ghana in 1980 after Akim Oda, Ho, and Tamale. It was established against the background of training preventive auxiliary nurses to help reduce the disease burden of the country. The diseases affecting the people were mainly of preventable causes. Their motto is Education for Health Promotion

The school came out of the then existing enrolled nursing programme which was phased out in 1980. Initially the entry requirement was the Middle School Leaving Certificate and attempted secondary education. Later on it became the Junior Secondary School Certificate and then in the 1990's it was the O' Level Certificate with four passes. In the year 2000 when the Senior Secondary school came into existence the O'- level phased out and now the entry requirement is Senior Secondary School passes in three electives and credits in three core subjects. The vision of the school is to be a health training institution producing nurses of academic excellence who will provide quality nursing care and its mission is for the training of polyvalent nurse who will practice quality nursing care to individuals, families and communities within the health delivery system in a humane, efficient and effective manner, through efficient selection of candidates and the use of modern teaching methodology.

The school currently runs two programmes The Certificate in Community Health Nursing requiring SSCE/WASSE certificate with aggregate from 25-30 in six subjects thus at least passes in three core subjects i.e. English, Mathematics, Integrated Science and 3 passes in any three elective subjects, (A1-E8 in WASSCE) OR (A-E in SSSCE). This is an auxiliary level programme that run for four semesters in 2 years. The second programme is the Diploma in Community Health Nursing. The entry requirements are Senior Secondary School Certificate with Aggregate 24 or better in six subjects, 3 core which should all be credits. The cores subjects are English, Mathematics and Integrated Science and three electives only thus in Science, General Arts, Home Economics (Food option), Agriculture (Science option). This is a professional level programme that runs for 6 semesters. It was started in 2006 in Winneba and Akim Oda.

Sample and Sampling Procedure

Mouton (1996), defines a sample as elements selected with the intention of finding out something about the total population from which they are taken. This is because according to Best and Kahn (1993), the primary purpose of a research is to discover principles that have universal application but to study a whole population is to arrive at generalization that would be impracticable if not impossible. Gay (1987) advises that for a population of 600, 20% sample selected is representative. The sample size selected for the study was therefore 120.

Stratified sampling was done proportionate to size of the classes. As nursing has always been a female dominated profession, the males in the

various classes are very few as such all males in the two classes were involved in the study thus a census as they are in a minority and the probability of them being part of the sample when randomly selected is minimal or not at all. The remaining numbers were females.

Instrument

The instrument used in collecting the data for the study was a self-developed questionnaire. The questionnaire was developed with the research questions as a guide with each item directed towards answering the research questions. It had 22 items with three main sections A to C which will be:

A – Background information of the respondents.

B – Attitude of students towards breast cancer.

C – Perception of students towards breast cancer.

The sections A to C will contain items that sort to provide relevant information to the headings. The items were either closed ended. There were 21 closed-ended and one open-ended item. Possible responses/options were provided for the closed-ended type and space will be provided for the open-ended item for respondents to express their options on the subject matter.

The questionnaire had an introduction which sought the attention, consent and assured respondents of strict and high confidentiality on all information collected from them, thus preparing them psychologically in answering questionnaire. Clear and simple instructions on answering the questionnaire were also stated.

Validity and Reliability

Validity refers to the extent to which an instrument measures or assesses what it is intended to measure. This means that the instrument should be able

to help in answering the research questions. In order to ensure validity of the questionnaire, it was first given to the supervisor for the necessary corrections and suggestions in order to achieve content validity.

Reliability of a questionnaire refers to the degree of consistency with which it measures its intended subject or the questionnaire being able to give dependable results.

Data Collection Procedure

Data collection involves activities such as obtaining permission to proceed with data collection, collection of data, and data handling. The data collection process will begin with obtaining approvals, introductory letters and consent to proceed with data collection from relevant authorities and individuals. An approval to proceed with data collection was first sought from my supervisor. Following the approval from my supervisor, I obtained a letter of introduction from the Department of Health, Physical Education and Recreation, University of Cape Coast, introducing the purpose of the study. Consent of the potential respondents to participate in the study was also sought before distribution of questionnaire commences.

The researcher went to the school for the study and used table of random numbers to select participant and administer the questionnaires to the community health nursing students in the first and second years. As Nursing is known to be dominated mainly by females, the male population is minimal as such all males were involved in the study. Respondents were assured of maximum confidentiality of their responses. Administration and collection of the questionnaire was done by the researcher on the same day.

Following the approvals, introductions and permissions, data collection commenced. The purpose of the study and the duration of the data collection were explained to potential respondents. In addition, potential respondents were assured that their identity and all information provided would be held in strict confidence. Questionnaires were distributed at break time in the classroom with minimal distractions between 10.00 a.m. and 11.00 a.m. At the end of the proceeding, respondents were thanked and verbally appreciated for spending time to participate in the study. Data collection proceeded and was completed in one class before moving on to the other. Data handling involved cleaning, sorting and storage of data. Notwithstanding measures put in place to ensure quality of data, each completed data collection instrument was cleaned by checking for any inconsistency, incompleteness and/or inaccuracy and correcting them before leaving the community. After ensuring that the responses on the completed data collection instruments were consistent, complete and accurate, the instruments were sorted into two categories; namely, first year and second year. The sorted completed data collection instruments were then stored in their raw state into separate paper bags, respectively.

Data Analysis

The data collected was first checked to make sure the right numbers of questionnaires have been returned. Responses for the questions were categorised and coded. The main statistical tools used for analysing the data were frequencies, and percentages. This helped to describe the data and enable the researcher to have overall view of findings to identify trends and to display the relationships between the findings. Data from open ended questions were

grouped and analysed into meaningful and useable categories. The analysed data was compared to the literature review to draw valid conclusions.

CHAPTER FOUR

RESULTS AND DISCUSSION

In this chapter, the findings from the study into attitudes and perception of CHNTS students towards breast cancer. The results from the study are presented in three parts. The first part deals with the attitudes of CHNTS students towards breast cancer, the second part deals with the perception of CHNTS students about breast cancer while the third part deals with the difference in attitude between first and second year students towards breast cancer. The research questions are discussed based on quantitative data that compared the responses of first and second year students.

Research Question 1: What is the Attitude of CHNTS Students towards Breast Cancer?

Table 2 presents the attitudes of CHNTS students towards breast cancer from the Likert-type items. Results from Table 2 shows that only three out of 11 of the items had mean scores of three or higher. The remaining eight items had mean scores ranging from 1.23 to 2.90. The results show that the majority of the students had a positive attitude towards breast cancer. For instance, a majority of the respondents (mean = 3.8) either strongly agreed or agreed that, “Breast self-examination is a must for every woman in their reproductive age.” As reported by Rastogi et al. (2004), in Iraq, breast cancer ranks the first among the commonest malignancies among all the population and accounts for approximately one-third of the registered female cancers according to the

latest Iraqi Cancer Registry which shows a trend for the disease to affect younger women. As women move into their 30s, oestrogen and progesterone levels begin to fall. These hormones can promote breast cancer cell growth so their levels should be monitored.

In addition, all of the respondents (mean = 3.17) either agreed or strongly agreed to the item “A little lump in the breast calls for prompt medical care.” Most breast lumps, particularly in younger women, are not caused by cancer. They may be benign, non-cancerous lumps, infection or cysts. An appointment with a medical officer should be scheduled as soon as possible when a lump is detected in the breast.

Furthermore, most the respondents (mean = 2.90) had positive attitude to the item “Breast cancer is curable.” In a study by Alwan et al. (2012) on Knowledge, attitude and practice regarding breast cancer and breast self-examination among a sample of the educated population in Iraq, the researchers found out that almost three-quarters of the study population answered that the best way to control breast cancer was through early detection. The cure for breast cancers actually has a very high probability, but if lymph nodes have been scattered, the prognosis for recovery is becoming increasingly declining. In fact, literature suggests that if cancer cells have spread to other organs, the treatment is only intended to prolong patient’s life and prevent cancer to develop further. Therefore, to avoid a cancer develops further, the early detection becomes an important thing to be done primarily by women. The majority of breast cancer cases are treatable and curable, and much of that treatability and curability depends on early detection.

Also, a mean of 1.53 to the item “Breast cancer is a disease of old women” by respondents in the sample indicated that they did not agree that simply being a woman is the main risk factor for developing breast cancer. This is as a result of female hormones oestrogen and progesterone, which can promote breast cancer cell growth. The risk of developing breast cancer increases as one get older. From literature, about 1 out of 8 invasive breast cancers are found in women younger than 45, while about 2 of 3 invasive breast cancers are found in women age 55 or older.

Moreover, a mean of 2.9 to the item “Breast cancer is curable” indicates that a majority of the respondents had a positive attitude towards the item. Likewise, a low mean of 1.79 to the item 'Traditional/herbal medicine is more effective than hospital medicine' in the questionnaire shows that students have a good attitude that breast cancer is best treated with orthodox medicine than traditional medicine. As stressed by a report from NYU Langone Medical Centre (2011, p. 2) “if you are receiving cancer treatment, do not use any herbs or supplements except under the supervision of your physician”. Traditional medicine may help alleviating the pain and suffering from breast cancer but not cure it.

Table 2: Attitude of CHNTS Students Towards Breast Cancer

| Statement | Responses | | | | M | Standard deviation. |
|--|-----------|----|----|----|------|---------------------|
| | SA | A | D | SD | | |
| A little lump in the breast calls for prompt medical care | 85 | 35 | 0 | 0 | 3.71 | 0.456 |
| If your wife /husband / colleague is diagnosed of breast cancer, your reaction will be that of pity rather than sympathy | 16 | 36 | 43 | 25 | 2.36 | 0.960 |
| Breast self- examination is a must for every woman in their reproductive age | 99 | 19 | 1 | 1 | 3.80 | 0.478 |
| Women in their reproductive age are to voluntarily go to the hospital for their breast to be x-rayed (mammogram). | 34 | 36 | 29 | 21 | 2.69 | 1.067 |
| Breast cancer is a disease of old women | 1 | 8 | 44 | 67 | 1.53 | 0.661 |
| Exposing ones breast to the doctor is not good for a married woman | 78 | 33 | 5 | 4 | 3.5 | 0.73 |
| Breast cancer is curable | 34 | 54 | 18 | 14 | 2.90 | 0.947 |
| Breast cancer is a spiritual disease | 1 | 1 | 23 | 95 | 1.23 | 0.498 |
| Traditional/herbal medicine is more effective than hospital medicine | 0 | 18 | 59 | 43 | 1.79 | 0.685 |
| When adult men suckle breast, it can lead to breast cancer | 6 | 23 | 48 | 43 | 1.93 | 0.867 |
| It is better for a woman with breast cancer to die | 4 | 5 | 32 | 79 | 1.45 | 0.732 |

There is a postulate that when adult men suckle breast, it can lead to breast cancer. A search through literature has not confirmed the existence of such a myth. Respondents of the sample had a negative attitude (mean = 1.93) to the item in the questionnaire that when adult men suckle breast, it can lead to breast cancer.

Respondents disagreed with the statement (mean = 1.45) that “It is better for a woman with breast cancer to die.” This confirms literature that a person who survives five years after diagnosis with some types of cancer is likely to live out a normal lifespan but this is not true with breast cancer. More than half the women whose breast cancer comes back have survived more than five years after their original diagnosis. While 10-year survival rates give a better measure of lifetime survival, breast cancer can recur at any time. A woman whose breast cancer is detected before it has spread beyond its original location is more likely to survive than a woman whose cancer was detected at a later stage.

Most of the respondents (mean = 2.69) indicated that “Women in their reproductive age are to voluntarily go to the hospital for their breast to be x-rayed (mammogram).” Younger females may have their breast examined with an ultrasound to check for lumps rather than using a mammogram. This is because it is difficult to take a mammogram of the breast of a younger woman as the set-up of the mammogram is not suitable for smaller breasts. Breast of older women can be x-rayed using a mammogram.

The overall mean of the attitudes of the students towards breast cancer was 2.5. This shows that the students had a positive attitude towards breast cancer.

Students having a mean of 1.23 towards the item “Breast cancer is a spiritual disease” indicated that the students strongly disagreed with the item. There is a belief among the populace that behind every health issue is a spiritual lining. It is refreshing to note that as student-nurses, the respondents do not ascribe to this notion. Their knowledge in issues relating to cancer and by extension, breast cancer will help dispel this belief. From literature, it has been found out that breast cancer refers to cancers originating from breast tissue, most commonly from the inner lining of milk ducts or the lobules that supply the ducts with milk and has nothing to do with spirituality. Breast cancer involves cells in the breast that have made changes, and the changes include loss of control of growth. No one knows the exact causes of breast cancer and the condition is not contagious.

From the results, the good attitude towards breast cancer by students at CHNTS confirms findings by Cooper (2000) there are people and groups who can support breast cancer patients and this helps them to cope better. This attitude of students will be most useful when these students complete their studies and become nurse practitioners. This opinion is supported by findings of Sung et al. (2007) that, among the patients with breast cancer, depression and helpless or hopeless were associated with significantly reduced chance of what they termed as an ‘event-free survival. These students may encounter patients and families of patients with breast cancer and can offer counselling and moral support.

Research Question 2: What is The Perception of CHNTS Students About Breast Cancer?

Table 3 shows the perception of CHNTS students about breast cancer. In the item “In your opinion, which of the following best explains breast cancer,” 71% of the respondents chose the option “Malignant tumour of the breast.” From literature, with regard to breast cancer, the cancer begins in the tissues that make up the breasts. The cancerous cells may form a mass of tissue called a malignant tumour. The cells of a malignant tumour may spread to other parts of the body and threaten life. The high percentage of students that had the perception that malignant tumour of the breast best explains breast cancer is indicative that the students can explain what breast cancer is.

The percentage of the respondents that chose the option “Media” to the item “Where did you hear of breast cancer for the first time?” was 81. The source of this awareness of breast cancer was mainly from the media as the study found out thus campaigns on the media is having a good impact. This confirms a finding in a study by Alwan et al. (2012) that the main source of knowledge about breast cancer and Breast Self-Examination (BSE) was the television particularly among teaching staff and students. Such confirmatory findings emphasize the potential effectiveness of the visual media in modifying health behaviour and promoting education among the general population. Also, a study among female medical students in Nigeria by Iruhe et al. (2012) reported that 97% were aware of BSE mainly through television/radio. As Anderson et al. (2003) acknowledge public education and awareness can promote earlier diagnosis, and these goals can be achieved in simple and cost-effective ways, such as dissemination of messages through mass media.

All women have the right to education about breast cancer, but it must be culturally appropriate and targeted and tailored to the specific population. Lane et al., (1989) confirms that a media event can serve as a cue or a trigger for an individual to take a preventive health action but the effectiveness of the external cue depends on a complex host of variables including the perceived benefits of an action, the structural barriers to taking an action, as well as the intensity and duration of the cue.

In the item “Which of the following are appropriate treatments for breast cancer?” 7% of the respondents chose the option “Herbal Preparation.” Only 7% chose the option of herbal preparation as appropriate treatment for breast cancer. As Rockwell et al. (2005) warns, the herbal medicines being used by patients undergoing cancer therapy can have effects on cancer cells that alter their response to the agents commonly used to treat breast cancer. From literature, Carpenter et al. (2009) discovered that some breast cancer patients may be more compliant with conventional treatments due to fear that their cancer may worsen if they do not follow a strictly western medical regimen.

On the other hand, some breast cancer patients may be more likely to turn to CAM because of their beliefs that conventional therapies are not working, or more commonly, may use CAM in addition to their conventional therapy. Also, Wanchai et al. (2010) insist that although few studies have been conducted regarding clinical efficacy of CAM and no studies have shown altered disease progression from CAM use. The authors asserted that many women with breast cancer turn to CAM as they suffer from side effects of conventional treatments. This may contribute to issues such as a delay in seeking medical treatment or serious interactions between CAM and conventional treatments when the safety of CAM is unknown.

Table 3: Perception of CHNTS Students About Breast Cancer

| Statement | Responses | Frequency | Percentage |
|--|--|-----------------------|------------|
| In your opinion, which of the following best explains breast cancer? | Infection of the breast | 27 | 22.5 |
| | Overgrowth of the breast | 8 | 6.7 |
| | Malignant tumour of the breast | 85 | 70.8 |
| | Removal of the breast | 0 | 0 |
| Where did you hear of breast cancer for the first time? | Media (radio, TV, etc.) | 97 | 80.8 |
| | Clinic/Hospital | 2 | 1.7 |
| | School | 17 | 14.2 |
| | Market | 4 | 3.3 |
| | Friend | 0 | 0 |
| | Which of the following are appropriate treatments for breast cancer? | Removal of the breast | 45 |
| | Radiotherapy | 30 | 25.0 |
| | Herbal Preparation | 8 | 6.7 |
| | Oral Medication | 16 | 13.3 |
| | Chemotherapy | 19 | 15.8 |
| | Removal of the breast/ radiotherapy | 2 | 1.7 |
| What age are people most likely to suffer from breast cancer | Below 20 | 4 | 3.3 |
| | Between 30 and 40 | 65 | 54.4 |
| | Above 40 | 18 | 15.0 |
| | At any age | 33 | 27.5 |
| What is the cardinal sign of breast cancer? | Lump or thickening of the breast | 94 | 78.3 |
| | Bloody nipple discharge | 2 | 1.7 |
| | Soreness of the breast | 17 | 14.2 |
| | No cardinal sign | 7 | 5.8 |

The percentage of respondents that chose the option “Below 20” to the item “What age are people most likely to suffer from breast cancer?” was 3. This low percentage of respondents to the item suggests that the majority of respondents believe that the age bracket at which people are affected with breast cancer is higher. This belief by the respondents confirms literature that breast cancer is the most common cause of death in women between 45-55 years of age (menopausal age). However, 54% of the respondents chose the age range of 30 – 40 as the age most people likely suffer from breast cancer. From literature, Bare and Smeltzer (2009) and Giordano and Hortobagyi (2003) have found the factors that influence risk of developing breast cancer to include age so perhaps, it is a good idea to look for symptoms of breast cancer if there is prior history of breast disease in a family. As Surg (2003, p.25) points out, “risk also increases with the number of relatives affected.”

In the item “What is the cardinal sign of breast cancer?” 78% of the respondents chose the option “Lump or thickening of the breast.” The findings from the study confirms literature that according to World Health Organization (2009), while the majority of new breast cancers are diagnosed as a result of an abnormality seen on a mammogram, a lump, or change in consistency of the breast tissue can also be a warning sign of the disease. Students of CHNTS are thus aware of the diagnosis of breast cancer. Bare and Smeltzer (2009) and Haagensen (1986) uphold the view that early breast cancer usually doesn't cause symptoms. But as the tumour grows, it can change how the breast looks or feels. There are several signs of breast cancer but the most common is a lump or thickening in or near the breast or in the underarm area. It seems the students are aware of this as most of them chose

the option of lump or thickening in or near the breast or in the underarm area as the cardinal sign of breast cancer.

The results from the findings of the study show that students of CHNTS had a proper perception of about breast cancer. This perception guarantee that will be able to propagate the message about breast cancer to their clients who access health centres. As early detection of breast cancer may lead to early treatment improve the survival rate of people with breast cancer it is hoped that the clients and who access services at health centres are served by professional who have a good perception about breast cancer.

Research Question 3: Is There a Significant Difference Between First and Second Year Students of CHNTS in Their Attitude Towards Breast Cancer?

The difference in attitude between first and second year students towards breast cancer was investigated using independent sample t-test. The results as presented in Table 4 shows that with a p-value of 0.08, there was no significant difference in attitude among the first and second year towards breast cancer.

Table 4: Independent Samples T-Test on Differences Between first and second years Attitude Towards Breast Cancer

| Variable | Year of study | N | M | SD | t | p-value |
|--------------------------------|---------------|----|------|------|------|---------|
| Attitude towards breast cancer | First | 59 | 2.52 | 0.42 | 1.76 | 0.08* |
| | Second | 61 | 2.41 | 0.26 | | |

* Not significant $p > 0.05$ $df = 118$

It was expected that there would be a significant difference between the first and second year CHNTS students as the second years have had a course

on cancers. The result validates literature which showed that a lot of education about breast cancer has been going on at the hospitals, through the mass media and health talks at churches and durbars. The fear by advocates of educating the populace about breast cancer is that most students in tertiary institutions are not reached due to their busy schedules on the campuses, spending most of their time at the lecture halls and libraries appear incorrect as indicated by the first year CHNTS students. Therefore, it is certain that students in the tertiary institutions have some or adequate information about breast cancer.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this concluding chapter, the most important findings of the research are highlighted. In addition, some recommendations are offered to improving the attitude and perception of students towards breast cancer.

Summary

This study sought insight into attitude and perception of students of Winneba CHNTS towards breast cancer. It was expected that if the students had good attitude and perceptions towards breast cancer then this may eventually influence positively the way they interact with clients who have been diagnosed with breast cancer and the relations of clients who have been diagnosed with breast cancer.

The results from the findings of the study showed that students had a good attitude towards breast cancer. The study also showed that students had a good perception of breast cancer. The study also sought insight find out if there was a significant difference between first and second year students of CHNTS in the attitude towards breast cancer. This was because whereas the second year students had studied a course on cancers the first year students were yet to study that course in school. Findings from the study showed that there was no significant difference in the means of the attitude of first and second year students towards breast cancer. A descriptive survey is chosen for the study. This design was chosen to meet the objectives of the study.

The study involved the administration of a questionnaire to a sample of first and second year students. Stratified sampling technique was employed for selecting female and male participants of the study. The questionnaire gathered information on attitude and perception of the respondents towards breast cancer. The data collected was analysed using means, percentages and a t-test.

Key Findings

The key findings of the research are as follows:

- 1) The overall mean of the attitudes of the students towards breast cancer was averagely high. This showed that the students had a positive attitude towards breast cancer. On the attitude towards the diagnosis of breast cancer of a wife/husband/colleague the students exhibited pity rather than sympathy. The expression of regret/disappointment rather than expression of fellow feeling/compassion gives an impression that causes of breast cancer is not well understood by students.
- 2) There was a perception among some of the students that traditional/herbal medicine is more effective than hospital medicine. The results from the findings of the study showed that students of CHNTS had a perception good about breast cancer. The students had a good perception of what best explains breast cancer. Most of the participants in the study heard of breast cancer for the first time in the media. Students had a poor perception of the combination therapy of removal of the breast/ radiotherapy in treating breast cancer.
- 3) The study revealed that there was no significant difference in the means of the attitude of the first and second year towards breast cancer

as the differences in their mean responses were statistically insignificant.

Conclusions

In the research I investigated the attitude and perception of students of Winneba CHNTS towards breast cancer. The findings from the study lead to a number of conclusions about attitude and perception of students of Winneba CHNTS towards breast cancer.

Firstly, there was a positive attitude towards breast cancer by students of Winneba CHNTS. This was evident through the analysis of the data collected

In addition, results from the research showed that students of CHNTS appeared to have a good perception of about breast cancer. There was however poor perception of the use of the combination therapy of removal of the breast/ radiotherapy in treating breast cancer.

Finally, there was no significant difference between the first and second year students of CHNTS in their attitude towards breast cancer. This was in spite of the fact that the first years had not had a course on cancers although the second year students had taken such a course at CHNTS.

Recommendations

From the findings of this study the following recommendations are offered:

- 1) Students exhibited a positive attitude towards breast cancer. Students should be encouraged to maintain this good attitude and measures should be taken by school to improve on the attitude of the students as a better attitude towards breast cancer is more desirable among students in particular and the general population at large.
- 2) The perception that traditional/herbal medicine is more effective than hospital medicine in treating breast cancer should be minimised, if not, eliminated among the students. This may be done through dissemination of findings on the use of herbal treatment in treating breast cancer in the media since the use of the media in disseminating information on breast cancer is effective and should be continued. The findings should also be disseminated during lectures, at seminars and during presentations on breast cancer in class. The treatment of breast cancer using the combination therapy of removal of the breast/radiotherapy should be promoted in the media as another form of breast cancer treatment. The type of information given in the media on educating the public should be reviewed so that the reaction of partners who receive information on diagnosis of breast cancer of their wife/husband/ colleague will be of sympathy rather than pity.

- 3) Although there was no significant difference in attitude among the first and second year towards breast cancer it is recommended that the course about breast cancer still be taught at the second year so as to dispel any misconceptions that students may have about breast cancer

Suggestions for Further Research

The following suggestions are provided for further studies:

- 1) The present study focused on students in a Community Nurses' Training School. Further studies will be required to elicit responses of students from other sister nursing training institutions in the country to collaborate the findings of the present study and to ensure their generalizability.
- 2) It will be interesting to find out if there is a significant difference in the means of male and female students' attitude and perception of breast cancer in nursing training institutions.

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APPENDIX A
QUESTIONNAIRE

I am a graduate student of the Department of Health Physical Education and Recreation, University of Cape Coast. I am conducting research as one of the requirements for graduation. The topic of my research is ‘Assessing the knowledge and attitude of community health nursing students, Winneba on Breast Cancer’. As one of the students of the school, you have been selected to respond to this question. I shall therefore be grateful if you spend about 20minutes to respond to the items on the questionnaire. Please note that this is not a test and the answers you provide will not be traced back to you. You should not write your name or index number on the questionnaire.

Please tick (√) correct responses or provide answers as required.

1. Age of respondent. (Please write)_____
2. Sex
 - a. Male []
 - b. Female []
3. Marital Status
 - a. Married []
 - b. Single []
 - c. Other, please specify.....
4. Religion
 - a. Christian []
 - b. Islamic []
 - c. Traditional []
 - d. Other []

5. Year of study
- a. First year []
 - b. Second year []
6. In your opinion, which of the following best explains breast cancer?
- a. Infection of the breast []
 - b. Overgrowth of the breast []
 - c. Malignant tumour of the breast []
 - d. Removal of the breast []
- Other, please specify.....
7. Where did you hear of breast cancer for the first time?
- a. Media (radio, TV, etc.) []
 - b. Clinic/Hospital []
 - c. School []
 - d. Market []
 - e. Friend
- Other, please specify.....
8. Which of the following are appropriate treatments for breast cancer?
- a. Removal of the breast []
 - b. Radiotherapy []
 - c. Herbal Preparation []
 - d. Oral Medication []
 - e. Chemotherapy []
- Other, please specify.....

9. What age are people most likely to suffer from breast cancer?

- a. Below 20 []
- b. Between 30 and 40 []
- c. Above 40 []
- d. At any age []

10. Which of the following will predispose a person to breast cancer? (Tick as many as apply)

- a. Exposure to radiation []
- b. Early initiation of sex []
- c. Micro-organism []
- d. Early childbirth []
- e. Late childbirth []
- f. No childbirth []

11. What is the **cardinal** sign of breast cancer?

- a. Lump or thickening of the breast []
- b. Bloody nipple discharge []
- c. Soreness of the breast []
- d. No cardinal sign []

Other, please specify.....

Please tick (✓) in the appropriate box the extent to which you agree or disagree with the following statements.

| | Strongly agree | Agree | Disagree | Strongly disagree |
|---|----------------|-------|----------|-------------------|
| 12. A little lump in the breast calls for prompt medical care | | | | |

| | | | | |
|--|--|--|--|--|
| 13. If your wife / husband / colleague is diagnosed of breast cancer, your reaction will be that of pity rather than sympathy. | | | | |
| 14. Breast self- examination is a must for every woman in their reproductive age. | | | | |
| 15. Women in their reproductive age are to voluntarily go to the hospital for their breast to be x-rayed (mammogram). | | | | |
| 16. Breast cancer a disease of old women. | | | | |
| 17. Exposing ones breast to the doctor is not good for a married woman. | | | | |
| 18. Breast cancer is curable. | | | | |
| 19. Breast cancer is a spiritual disease. | | | | |
| 20. Traditional/herbal medicine is more effective than hospital medicine. | | | | |
| 21. When adult men suckle breast, it can lead to breast cancer. | | | | |

| | | | | |
|---|--|--|--|--|
| 22. It is better for a woman with breast cancer to die. | | | | |
|---|--|--|--|--|