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BREAST SELF-EXAMINATION (BSE) PRACTICES AMONG FEMALE STUDENTS IN HIGHER INSTITUTIONS IN IBADAN: IMPLICATIONS FOR CANCER EDUCATION

BY
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A DISSERTATION PRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF PUBLIC HEALTH (Health Education) OF THE UNIVERSITY OF IBADAN, IBADAN

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DEDICATION

To my husband, JIMMY OMONIYI ADEGOKE;
for love, care and concern

ABSTRACT

This study assessed the knowledge, attitude and existing breast self-examination practices among six hundred and ninety female students of the University of Ibadan and the Ibadan Polytechnic, Oyo State, Nigeria; using a set of questionnaire.

Results showed that 66.1% had ever practiced breast self-examination. Hhowever, only 77% reportedly carried out monthly examination of their breasts in the last six (6) months, although 84.6% were aware of it and 33.3% knew that it should be carried out monthly. Knowledge of the correct sequence of breast self-examination and the symptoms to look for was low. The major source of information on breast self- examination was through the mass media. There was a generally positive attitude toward the behaviour.

In light of these findings, some breast self-examination information packages and progammes are proposed for the students. In addition, suggestion regarding the examination of breast, self-examination materials for completeness, accuracy and appropriateness before dissemination to the public were made.

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CERTIFICATION

I certify that this work was carried out by Mrs. Florence Ramatu Adegoke in the Department of Preventive and Social Medicine, College of Medicine, University of Ibadan, Ibadan, Nigeria.

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CHAPTER ONE

INTRODUCTION

Cancer is a disease that arouses emotions of fear and uncertainty amongst people whenever it is mentioned. This not withstanding, the scourge of the disease is seemingly on the increase.

In times past cancer used to be associated with developed countries but the situation is no longer so. According to Stanley et al (1989), developing countries account for approximately 2.3 million of the global 4.3 million cancer deaths and 3 million of the 5.9 million new cancer cases each year. Thus in absolute figures it indicates that the majority of the world's cancer patients are in developing countries.

Of all types of cancer, breast cancer is the most common and the leading cause of cancer death in most developed countries. (Family Health International 1989).

Although accurate data on cancer incidence and mortality are lacking in many developing countries, World Health Organization (WHO) scientists estimate that breast cancer accounts for approximately 14% of new cancers in women in the developing world. Of concern is that a great majority of these cancers go undiagnosed or are not caught early enough to allow for effective treatment, even if treatment is available (Bhiwandiwala 1989).

BACKGROUND OF THE PROBLEM

At the University College Hospital, Ibadan, Nigeria, Cancer Registry, a total of seventeen thousand four hundred and ninety-six cancer cases were registered between 1960 and 1980. Nine thousand and ninety one of this number were females and three thousand and thirty were Ibadan residents. Of this number, one thousand and twenty two had breast cancer. Within this same period only 25 males presented with breast cancer. This shows that breast cancer is largely a woman's disease. Olukoya (1989) reports that women of reproductive age (15-49 years), make up about 25% of the population. It can therefore be expected that there will

be at least about two thousand new cases of breast cancer per year in Nigeria.

This paints a very grim picture for this group of women, especially as Kwhaja et al (1980) report that at least 50% of breast cancer cases present with large and grossly advanced lesions, and 75% of the women already had metastasis to axillary nodes present with 30% occurring in women less than 25 years of age.

Breast cancer in Nigeria is a disease of premenopausal women (Chiedozi 1985). Lawani et al (1973 note that the disease appears one decade earlier in Nigeria than in western countries.

The Ibadan Chapter of the Nigerian Cancer Society, sponsored a television promotion on breast self-examination between 1980 and 1981, and the Cancer Registry noticed an increase in the number of cases registered in the two years that followed this promotional programme. This was evidenced from the observationthat from 1960 to 1980 there was an annual average of 52 cases. However in 1981, the number rose to 73 cases, and 80 cases were registered in 1982, while

another one hundred and seventy six cases were registered as benign tumors of the breast within the same two year period (i.e between 1981 and 1982).

Furthermore, the records in the Cancer Registry, showed that between 1960 and 1984, one thousand and eighty eight of the registered cases were between the ages of 15 and 34 years. In 1989 alone, one hundred and sixty eighty new cases of breast cancer were registered. This shows an increase in the number of women presenting with breast cancer in Ibadan (FIG. 1). Unfortunately most of these cases come to the hospital when the cancers have reached advanced stages.

Considering the fact that development of lumps, whether benign or cancerous in the breast normally starts many years before malignancy steps in, it may be right to suggest that lack of breast self examination practice is responsible for the progression of benign breast tumours to full blown cases of breast cancer.

Presently in Nigeria many young girls are entering higher educational institutions. From personal observations of the author and discussions with some of

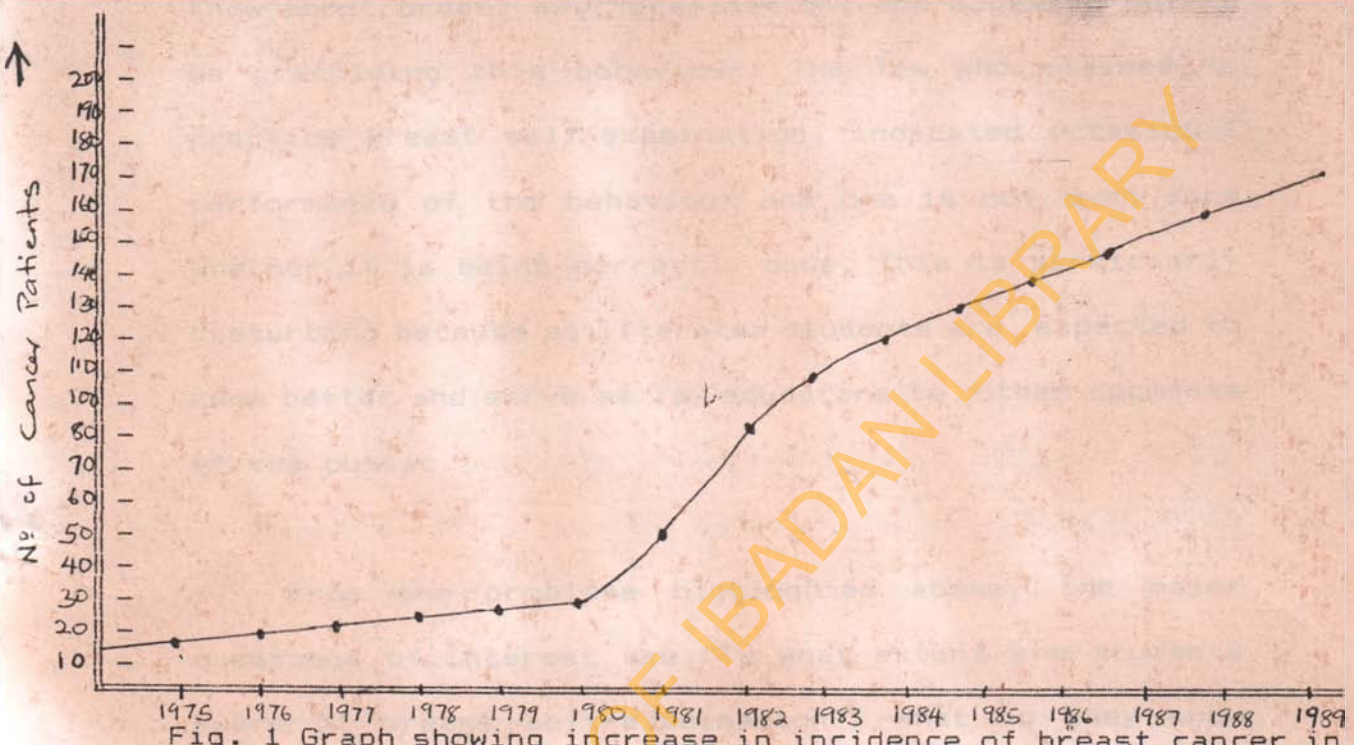


Fig. 1 Graph showing increase in incidence of breast cancer in Ibadan

these students, it is disheartening that many do not know about breast self-examination, and appeared not to be practising this behaviour. The few who claimed to practice breast self-examination, indicated occasional performance of the behaviour and one is not even sure whether it is being correctly done. This is particularly disturbing because as literates students are expected to know better and serve as lay educators to other segments of the public.

From the problems highlighted above, the major questions of interest are "To what extent are students aware of breast self-examination?" What do they know about breast self-examination? and"what are their current practices?"

If students are aware and knowledgeable about breast self-examination, breast cancer could be caught earlier and its advancement arrested. It could also help erase the belief among young ladies that breast cancer is the "other person's disease and therefore I cannot have it".

It is expected that with regular breast self-

examination, a corresponding reduction in deaths among females arising from undiagnosed breast cancer early in life can be envisaged.

SIGNIFICANCE OF THE STUDY

Family Health International (1989) reports that breast cancer is the most common type of cancer and the leading cause of cancer death. Since presently, the actual cause of cancer is yet to be identified, and prognosis is largely dependent on the stage of the cancer when diagnosed, it is therefore extremely important that breast cancer is caught early, thereby improving the chances of cure.

One of the ways to detect breast cancer while it is still in its early stages is through breast self-examination. According to Huguley Jr & Brown (1981) breast self-examination on a periodic basis leads to earlier detection of breast cancer. It is safe and without financial cost to women who practice it. In addition, it has the potential for helping more women detect their breast cancer earlier than any other method

now available.

Young women in higher institutions of learning fall into the age group in which women usually begin to present with breast lumps. It is therefore important to examine their knowledge, attitude and practice of breast self-examination, and the factors associated with its practice.

This could facilitate health workers, particularly health educators in designing strategies to adopt in mobilizing and motivating women to examine their breasts regularly. Furthermore, the author is not aware of any study that had investigated breast self- examination practices among female students in higher institutions in Ibadan. This study is therefore expected to produce valuable data, which will provide grounds on which strategies for promoting breast self- examination among college women can be based.

If the mortality rate of breast cancer is to assume a downward trend, early detection promotion programmes involving the training of women on breast self-examination need to be developed. While screening

centres can also contribute to mortality reduction, the present economic status of Nigeria and the high cost of screening equipment, the Government may not be able to set up sufficient screening or testing centres all over the country. An alternative and more promising option is for women to practice breast self-examination.

The report of this study is in five parts. Chapter One presents an introduction into the issue of breast self-examination, the statement of the problem and significance of the study.

Literature review on aspects of breast cancer and breast self-examination relevant to the study is contained in Chapter Two. In Chapter Three, the Methodology which includes description of the study area, objectives of the study, methods of data collection and analysis and limitations of the study are presented.

In Chapter Four, the results of the study are presented while Chapter five contains discussions of the findings and conclusions. Lastly, recommendations made on the basis of the findings are presented.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The most common event leading to the diagnosis of cancer of the breast is the discovery of a lump in the breast by the patient herself either accidentally of by deliberate self-examination (Hickey 1957 & Lesnick 1977). If women are to be primary detectors of breast cancer, then it is logical that they should be trained to improve their diagnostic skills, since there is widespread belief that breast self-examination on a periodic basis leads to earlier detection of breast cancer (Huguley Jr. et al. 1981), the ability to diagnose this disease at an early stage is vital (Goodno 1990).

This section is considered under the following headings:

1. Cancer
2. What causes cancer?
3. The Breast
4. Breast Cancer
5. Detection
6. Breast self-examination
7. Breast self-examination procedure
8. Advantages of Breast self-examination
9. Factors affecting Breast self-examination
10. Conceptual Framework
    - Health Education
    - The Health Belief Model
    - Fishbien's Theory of Reasoned Action
    - The Precede Framework

Cancer

Cancer is a generic term for a wide variety of malignant neoplasms that may result in deleterious effects of the host due to their invasive and metastaising character. Cancer is a disease of the cell that is transferred to the decendants of the cell. It is recognized by the abnormal cells within a normal tissue as manifested by varying degrees of morphologic

disorientation, aggressive growth and invasion, with ultimate destruction of the normal cell population (Regato & Spjut 1977).

Cancer usually starts from a single cell during cell division, when the chromosomes are duplicating. Mutations at this time can be very damaging and could cause a lot of medical problems. One possible outcome is the growth of abnormal cells in a tissue. Due to the mutation of the chromosomes the cells do not develop or function normally, and these cells remain unspecialized. A group of abnormal cells is formed and these continue to grow out of normal control. These cells are then said to be cancerous and as the growth enlarges it can spread between normal cells and damage them (International Union Against Cancer (UICC) 1978).

What Causes Cancer?

This is a question that keeps recurring in the medical circle. Although research is still on to identify specifically what causes cancer, it has been associated with a number of factors. According to Papaionnou (1974), Regato & Spjut (1977) and UICC

(1978), cancer can be triggered by environmental agents such as ultraviolet rays from the sun, ionizing radiation, viruses, parasites, or certain chemicals. A number of natural and man-made chemicals such as vinyl chloride, Asbestos and 2-napthylamine have been implicated as cancer-causing in both animals and humans. Habits and lifestyles in relation to cigarette smoking, betel-nut chewing, diet and some medicinal products such as stilbestrol have also been found to be associated with cancer.

The Breast

The human female breast has a distinctive and unique protuberant conical form (Haagensen 1971). Normal breasts are composed of many types of body tissue. The components of the mammary gland are enclosed by a membrane called the fascia, the superficial facia is a membrane directly under the skin and over the breast tissue, the deep facia separates the breast tissue from the underlying muscles of the chest wall. Two muscles lie underneath the breast tissue: the pectoralis major and the pectoralis minor. These muscles cover the ribs and aid in controlling arm movements. The cooper's

ligaments are attached to the skin to keep the breast in position (Breast Cancer Digest 1979).

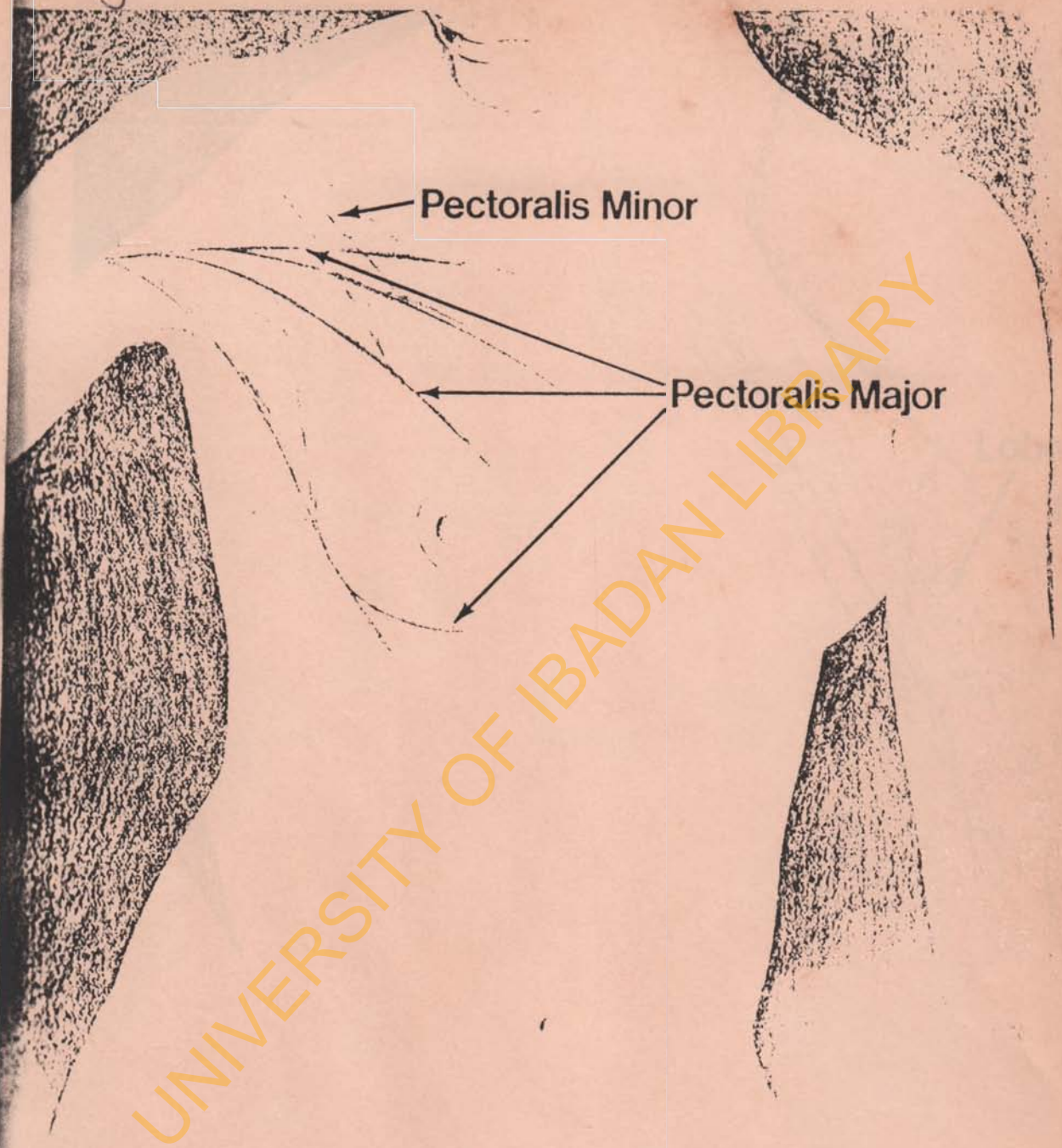
Arranged within each breast like spokes on a wheel are approximately 20 lobes.These lobes are subdivided into lobules and end in tiny milk - producing bulbs called acini. These lobes, lobules and acini are connected to the nipple by a complex network of ducts that enlarge as they enter the nipple. The enlargments are called lacitiferous sinuses. The external openings of the sinuses are the numerous pin-sized holes that secrete milk when it is needed (Haagenseen 1971; Gray 1974).

Each breast contains a network of lymphatic vessels that drain either into the lymph nodes of the axilla or into the internal mammary nodes (see Figs 2-4).

Breast Cancer

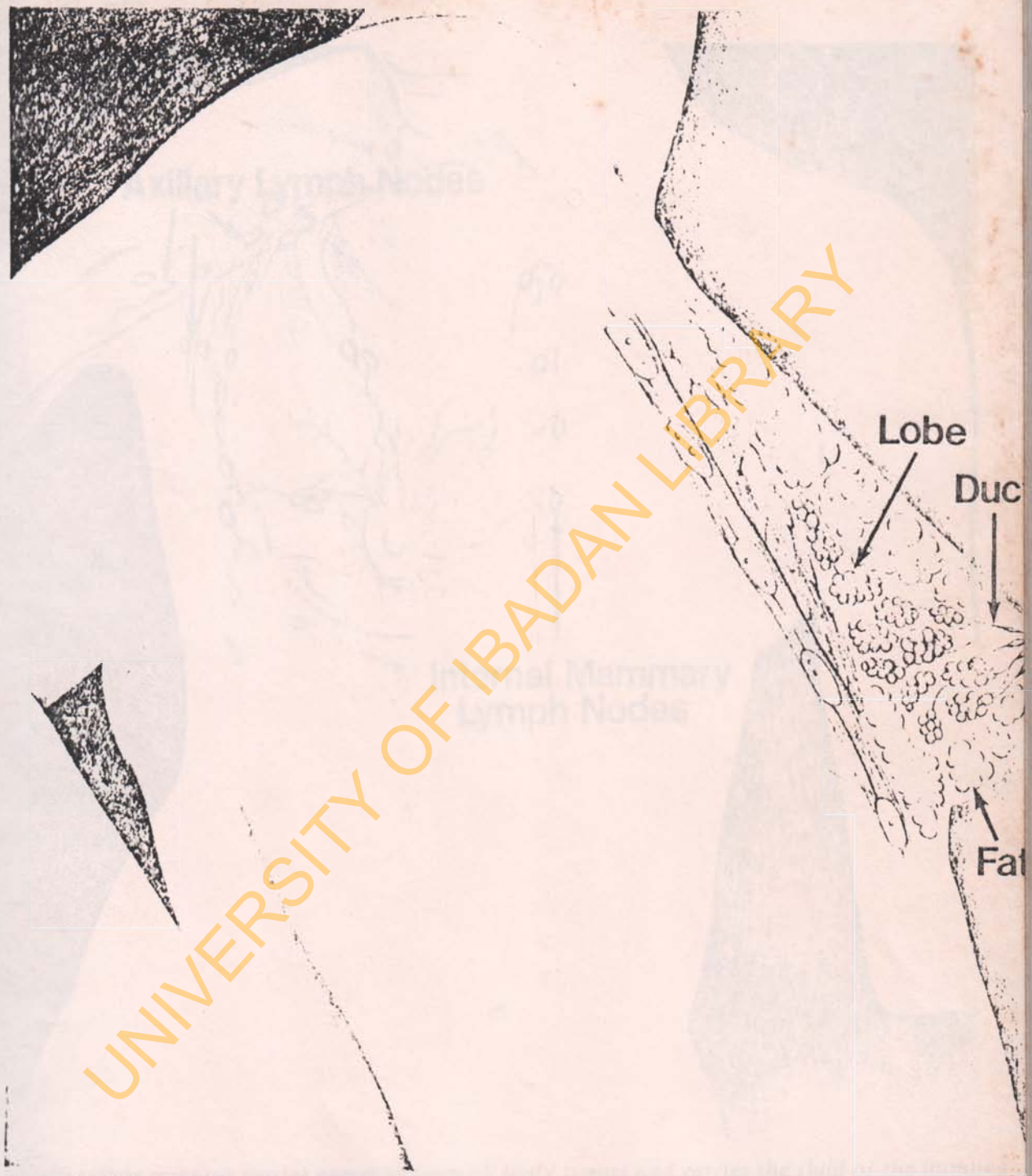
Cancers are usually named by the body organ or tissue in which they originated. Therefore, breast cancer is cancer that originated in the breast. There are two

Fig 2



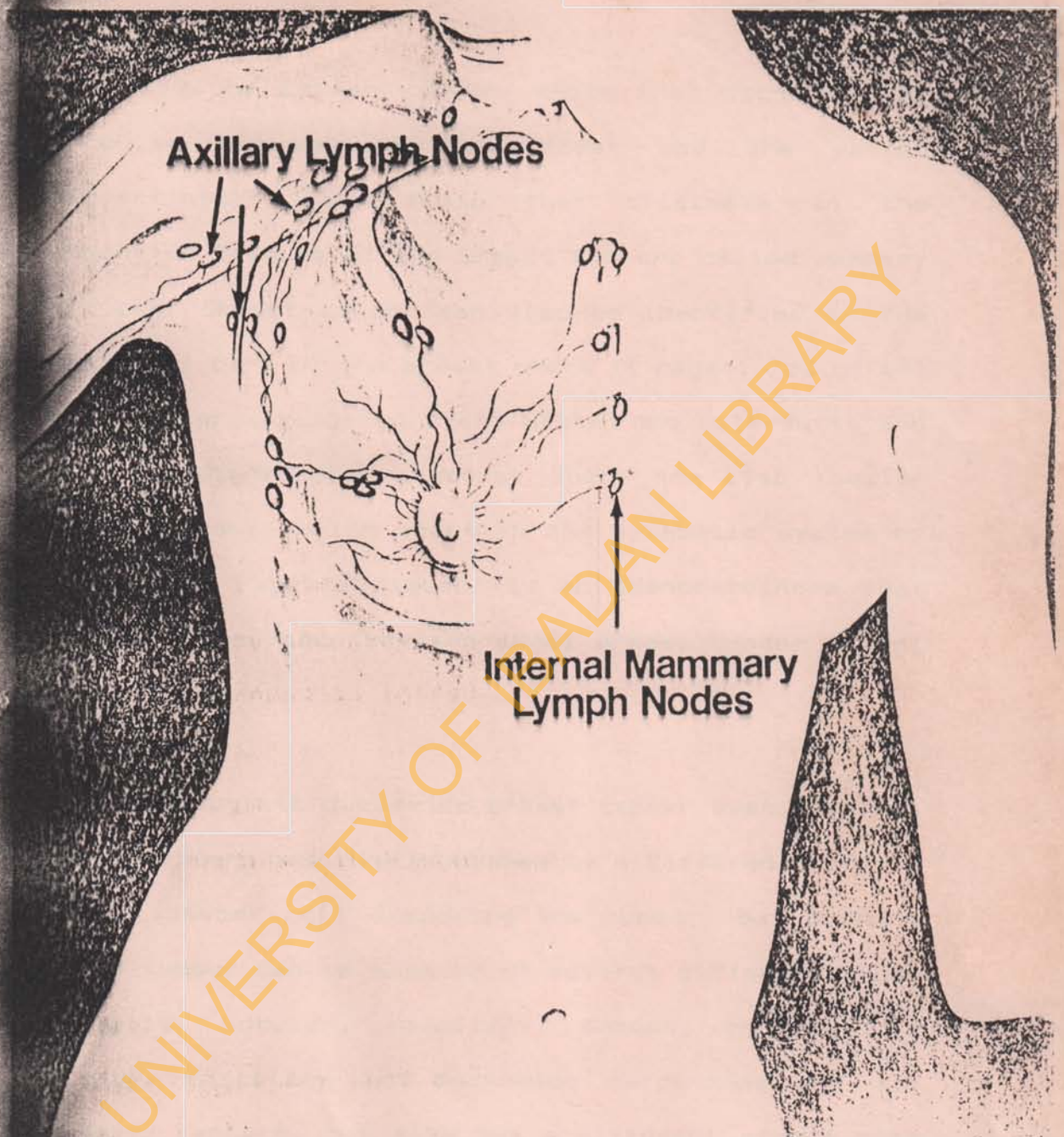
muscles, the pectoralis major and the pectoralis minor, lie underneath the breast tissue, cover the , and aid arm movement. The Cooper's ligaments, which hold the breasts in position, are attached he breast tissue and skin.

Fig 3



Approximately 20 lobes are arranged within each breast; the lobes are subdivided into lobules and e in milk-producing bulbs called acini. A complex network of ducts connects the lobes, lobules, and a to the nipple.

Fig 4



mphatic system removes wastes excreted from all body tissues and carries the fluid of the immune throughout the body. Each breast contains a network of lymphatic vessels that drains either e lymph nodes of the armpit or into the internal mammary lymph nodes.

main types of breast cancer, those that occur in the glandular tissues of the breast and are called adnocarcinomas, and those that originate in the connective tissues of the breast and are called mammary sarcomas. Breast cancer can also be identified by the anatomical part of the breast where it began. 75% of all mammary adenocarcinomas start within the milk ducts and known as intraductal cancers. There are also lobular adenocarcinomas which start in the lymphatic system of the breast. Paget's disease is an adenocarcinoma that affects the nipple (Davison 1958; Breast Cancer Digest 1979).

Pathologists subdivide breast cancer even further. Breast cancers are distinguished by a difference in the type of cancer cell composing the tumour, but often a single tumour can be made up of several different types of cells. Tubular, Medullary, Comedo, Mucinous or Colloid, Papillary and Scirrhous carcinomas are all invasive cancers, but each has a different growth rate and metastatic potential (Ackerman & Regato 1979).

As soon as a girl attains puberty and begins to menstruate, her breasts regularly prepare themselves each

month for a possible pregnancy. These cyclic changes are accompanied by cellular changes and make female breasts susceptible to problems (Breast Cancer Digest 1979).

A breast lump is palpable by a trained person at about one cm diameter, or about the size of a pea. It has been estimated that a woman who examines her breasts each month can detect a 1.6 cm tumour (Kirch & Klein 1978), they also estimated that the average doubling time of breast cancer is four months, and that once a tumour can be felt, it may have been in the breast for at least two years. During this time cancer cells may have circulated throughout the body. Thus, even before any symptoms of breast cancer can be noticeable, clusters of breast cancer cells already may have colonised in the regional lymph nodes or in other distant organs. Thus a palpable mass in the armpit or elsewhere could mean a tumour in the breast even though it cannot be felt.

Epidemiology of Breast Cancer in Nigeria

Breast cancer is the 5th most common malignant lesion of all malignant diseases encountered in Nigeria.

Aghadiuno (1979) stated that when all the malignant diseases affecting the female reproductive organs are considered breast cancer is second to Carcinoma of the cervix. It is therefore one of the major clinical problems in the Nigerian female population. Further more the author reported that both benign and malignant breast lesions do not appear to afflict the female breast from the moment of birth up to eleven years of age.

Starting from menarche (12 years) up to the age of 15 years, female breasts are mostly afflicted by benign lesions, mainly Fibroadenoma and Fibrocystic disease of the breast. Primary Burkitt's lymphoma of the breast is the only malignant lesion that appears to afflict the breasts of either females or males within this age group. From 16 years onwards other types of malignant neoplasia may begin to afflict the female breasts, carcinomas starting earlier than sarcomas.

Incidence

The relative ratio frequency of breast cancer of all malignant lesions encountered in Nigeria is 6%. Mammary cancer begins to afflict females from the 2nd decade of

life onwards (Aghadiuno 1979). Its incidence rate rises steadily thereafter and reaches its maximum between the fourth and fifth decades and then starts to decline gradually from the sixth decade. In males, carcinoma begins to afflict the breast at a much later age than females. It is first detected in male breasts early in the fourth decade of life and reaches its peak between the fifth and sixth decades then falls slightly from the seventh decade (Aghadiuno 1979). The annual incidence of breast cancer per 100,000 of Ibadan female population is 5.8 and that of the male population is 0.04 (UCH Cancer Registry).

From the above it can be seen that breast cancer is basically a female disease, which only occurs occasionally in males and the incidence rate is on the increase.

Pathology of Breast Cancer in Nigeria

According to Aghadiuno (1979) malignant lesions in Nigeria present pictures of growth as variegated and rampant as the vegetation of our tropical rain forest. Inaccessibility to medical care, the far distance of the

few available hospitals, fear of reality to breast cancer as possible cause of death, and social taboo associated with loss of breast by mastectomy, are the main factors that contribute to delay in many patients seeking medical aid.

The nipple in malignancy may be normal and erect, levelled, depressed or destroyed by the growth. Nipple retraction is often encountered with some tumours depending on the nature and site of the primary malignant lesion. Nipple discharge can be bloody, sero-sanguineour or purulent. In pregnant women, milk admixed with blood may also be expressed. The duration of symptoms range from 2 months to 3 years. 55% of malignant tumours affect the right breast and 45% affect the left breast in females. The reverse is true in males, where 65% of the lesions are located in the left breast and 35% in the right breast.

Lymphatic Spread of Tumours

Spread to axillary lymph nodes can be unilateral or bilateral (Aghadiuno 1979). Supraclavicular lymph nodes are invariably involved. This is in most cases associated

with lymphoedema of the arm on the side of the affected breasts, widespread metastases to most internal organs are observed in such cases.

Gross Appearance of Tumours

Most malignant tumours are usually large and well circumscribed with a progressive extention of the growth to the axillary lymph nodes. In some cases the tumours can massively and diffusely involve the breast tissue almost completely replacing its parenchyma and showing cystic changes in places.

Nodulary of tumours with areas of hemorrhage necrosis and ulceration through the skin are common findings in the breast tumours seen locally.

Tethering of the skin, Peaud'orange, cancer en cuirasse are commonly encountered in most breast carcinomas. Fixation to pectoral muscles and chest wall as well as their invasion by the neoplasia are common, particularly in male breast tumours.It is apparent that the diameters of breast tumours are variable and may range from 3 to 20 cm or more.

Histology

The female and male histologic types of breast carcinoma seen here in Nigeria fall into 2 groups (Aghadiuno 1979):

Group I-- Neoplasms of mammary tissue proper

Group II-- Neoplasms of anatomically related structures to the breast

The most common histological types in females are

a) Medullary carcinoma

b) Carcinoma with difuse fibrosis

c) Circumscribed carcinoma

d) Intraductal carcinoma

e) Papillary carcinoma invasive

f) Lobular carcinoma invasive

g) Colloid carcinoma

h) Paget's disease of the nipple

The most common histological types in Nigerian males are

a) Papillary carcinoma invasive

b) Circumscribed carcinoma

c) Carcinoma with diffuse fibrosis

d) Intraductal carcinoma

e) Lobular carcinoma invasive

f) Colloid carcinoma

g) Paget's disease of nipple

h) Reticulum cell sarcoma, Burkitt's type

i) Reticulum cell sarcoma, non Burkitt's type

g) Lymphosarcoma

Detection

The Breast Cancer Digest (1979) reports that until breast cancer can be prevented, the greatest hope for its control is early detection, diagnosis and treatment. To further buttress the issue Strax (1989) reported that we do not know the cause of breast cancer, nor do we have any way of preventing the disease, and that no combination of therapies can cure the disease at a certain stage, e.g. such as after a cancer has metastasized, the only chance for increased survival is early detection.

There are a number of ways through which breast cancer can be detected.

a. Palpation

This could be done by the individual herself (called breast self-examination) or by a physician (called Physical examination). Palpation is a technique using the fingers to examine the breasts physically. It is one of the simpler and more effective methods of breast cancer detection

(Breast Cancer Digest 1979).

b. Mammography

This is a technique of x-raying the breast. It is the most reliable mechanical method for detecting breast cancer before it can be felt. It is also used in the diagnosis of breast cancer in women with symptoms (Breast Cancer Digest 1979).

c. Thermography

The body naturally emits radiant energy in the form of heat. The thermographic photograph is a pictoral representation of heat patterns on the surface of the breast. Rapidly growing tumours have an increased blood supply giving venous drainage a higher body temperature. In the thermographic photographs, abnormalities in the breast are represented by "hot" spots or areas of increased blood distribution (Leis 1977).

d. Ultrasound

Ultrasound is a painless, non-invasive method of

detecting breast abnormalities by projecting high frequency sound waves into the breast. The pattern of echos from these sound waves is converted by computer into an image of the interior of the breast. Clinical studies are being conducted to determine the safety and accuracy of ultrasound (Baum 1977; Wheat & Rosebaum 1983).

e. Other methods

Other methods of detecting breast cancer that are still under study are the Graphic Stress Telethermometry and Tumour-markers (Synder 1978).

Breast Self-Examination Procedure

Breast Self-Examination should be practiced monthly a few days after the end of the menstrual cycle, using the following steps (see Figs. 5 to 8).

Step 1

Undress down to the waist and stand in front of a mirror. Observe the breasts to see that they are

symmetrical, observe shape and size of breasts and position of the nipples (with regular practice a woman becomes familiar with what is normal for her). Also observe breasts and armpits for boils and sores that are not healing.

Fig. 5

Step 2

Raise both arms above head and observe breasts for alterations from its normal shape and size.

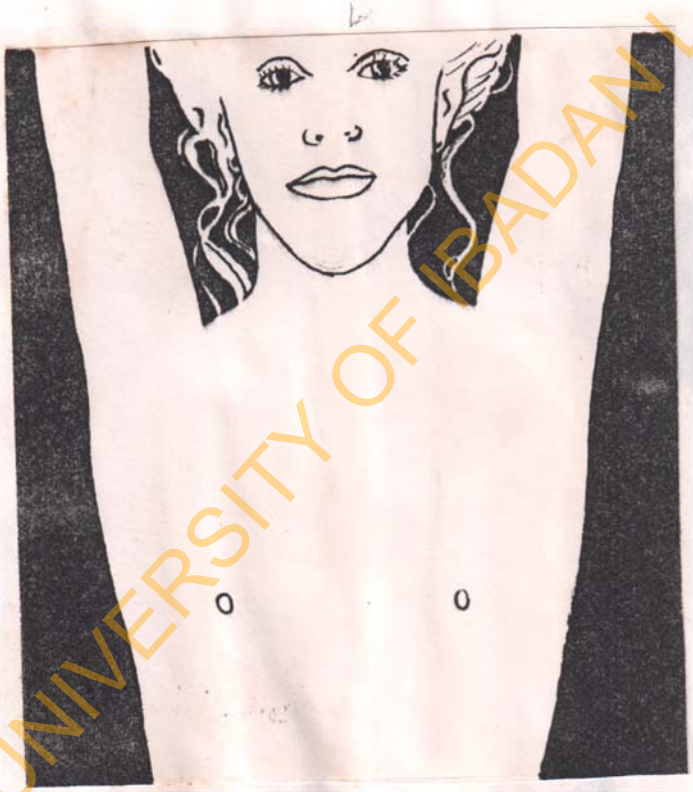


Fig. 6

Step 3

Bring arms down to chin level, put the palms of the hands together and press. Observe for any dimpling puckering of the skin or pulling of the nipple. Squeeze nipple and observe for discharge or bleeding.

Fig. 7

Step 4

Lie down on a flat surface with a pillow underneath the left shoulder. Put left hand under your head and with the right hand using the tips of the three middle fingers to examine the breast. Press down gently but firmly in circular clockwise motion round the breast from the edges to the nipple, feeling lumps (mobile or immobile), differences in skin texture (stony appearance), and pains/tenderness that are unusual.

Fig. 8

Step 5 .

Repeat Step 4 for right side.

Advantages of Breast Self-Examination

There is very little published data on the actual value of breast self-examination as indicated by the stage of the disease of the disease when breast cancer is diagnosed, the size of the tumour when found, and the effect of breast self examination on survival (Huguley Jr & Brown 1981). The potential effectiveness of breast self-examination in detecting small tumours relies on the effectiveness of manual palpation. The external location of the breast lends itself easily to the detection of tumours by palpation, and it is appropriate that women themselves learn the proper method of detecting small masses (Hall et al 1977).

Brown (1978) reported that breast cancer patients who practiced breast self-examination were diagnosed at a significantly earlier stages of the disease than women who did not practice breast self-examination. Forster et

al (1978) observed that breast self-examination has an impact on breast cancer patient survival. Patients who practiced breast self-examination monthly had a 15% increased survival rate compared to those who had never examined examined themselves (Huguley Jr. & Brown 1981).

According to Huguley et al (1981) breast self-examination on a periodic basis leads to earlier detection of breast cancer. It is safe and bears no financial cost to the women who practice it. It has the potential for helping more women to find their breast cancer than any other method now available and is feasible for widespread use.

Factors Affecting Breast Self-Examination

Howe (1981) in a study of social factors associated with breast self-examination among high risk women in the United States, reported that there is an association between frequency in practice and the variables age, education, detection, confidence, social influence, modesty, preventive health behaviours and memory.

In a critical review of practice and efficacy of

breast self-examination, Holtzman & Celentano (1983) reported that the most consistently related socio-demographic characteristics to breast self-examination practice are age and education. socio-economic status, utilization factors and knowledge about breast cancer were not related to breast self-examination competence.

Roberts et al (1984) reported that poor knowledge of breast self-examination among Scottish women waas related to age, social class, preventive health behaviour and previous experience of breast problems, and this therefore had an effect on practice.

In a study of breast cancer detection behaviour among urban women, Reeder et al (1980) reported that more black women reported monthly breast self-examination than Hispanic or white women. They also reported significant relationships between level of education, marital status, socio-economic status and having been taught the procedure by a professional and breast self-examination practice (McCusker & Marrow 1980; Celentano & Holtzman 1983).

Huguley Jr. & Brown (1981) and Senie et al (1981)

found that a history of breast cancer in the family was significantly related to breast self-examination practice and frequency.

Age

The findings of some studies seem to suggest that there is no association between age and breast self-examination. According to Huguley & Brown (1981), Celentano & Holtzman (1983), and Roberts et al (1984), breast self-examination practice is higher among younger age groups and the frequency fell progressively as age increased. Other studies suggest that breast self-examination practice is higher among older women (Shugg et al 1979; Miller et al 1980; Styrd 1980; Bennett et al 1983). However, Reeder et al (1980) did not find any difference in breast self-examination practice between the age groups.

Dean (1985) suggests that factors that may be responsible for the opposing results in relation to age and breast self-examination practice could be that young women who are concerned about breast cancer and percieve the benefits of breast self-examination may be more

likely to practice breast self-examination than those who are not concerned about breast cancer. Fear of the disease may be high, leading to avoidance of information and practice. On the other hand when older women recognize the seriousness of the problem, and become more aware of the benefits of breast self-examination, they tend to maintain a high level of breast self-examination praactice.

Education

Statistically significant association was found between higher levels of education and more frequent breast self-examination practice in studies carried out by Miller et al (1980), Huguley & Brown (1981), Sheley (1981) and Tamburini et al (1983).

Marital Status

Bennet et al (1983) reported that living with male partners was seen to be related with more frequent breast self-examination practice for both married and unmarried women, though they did not find an association between marital status and breast self-examination

practice.

Awareness of Breast Self-Examination

Dean (1985) reported that there is a high level of awareness of breast self-examination, and those thatare aware more likely to practice though the level of regular practice is much lower than the level of awareness.

It can be concluded from the available evidence that age, education, marital status, breast self-examinaation instruction, race, confidence, social influence, memory and family history of breast cancer influence breast self-examination practice.

CONCEPTUAL FRAMEWORK

Health Education

Health education is concerned with people's behaviours in relation to health matters. It focuses on people's voluntary and self-imposed health behaviour and helps, and motivates people to achieve health by their own efforts through influencing people's knowledge and

attitude (Ademuwagun 1985).

Following is a brief review of some health education theories and models.

According to Hochbaum (1958) there are 3 basic beliefs that the individual must have for action to occur.

i. That the individual is susceptible to the disease.

ii. That the symptoms can be relied upon.

iii. That early detection is possible and can save life.

Abraham Maslow (1954) reported that for an individual to be motivated to take action at any point in time, the action has to meet a need in the person's life and it also depends on whether the person sees the need as a priority or not when placed on his hierarchy of needs.

1. The Health Belief Model

The health belief model is a model based on the perceptions of the individual in any given health

situation.

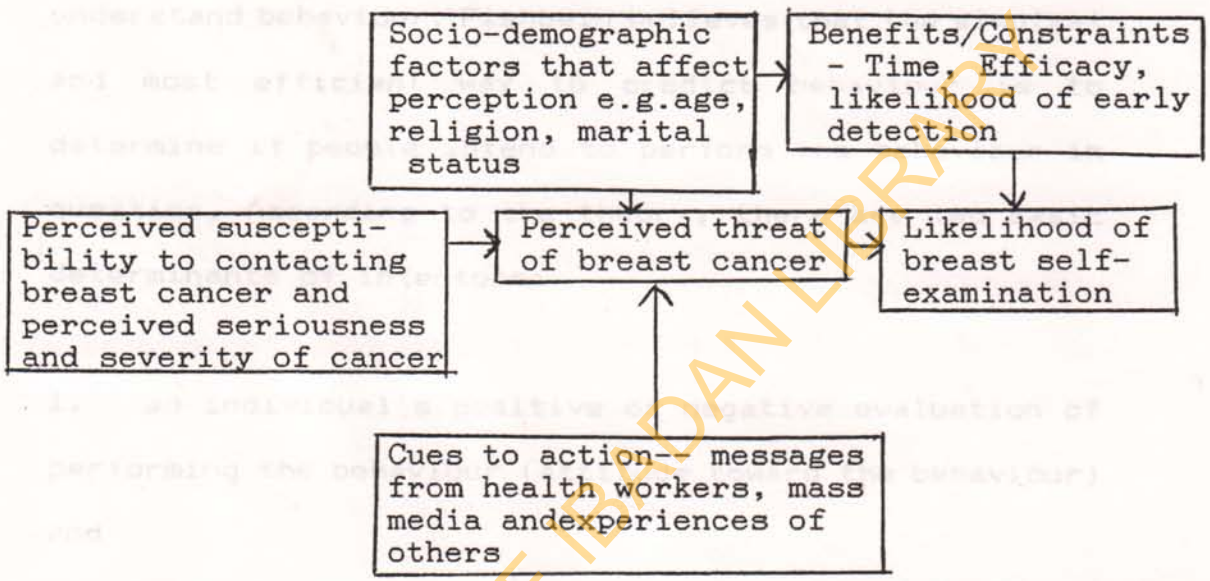
The model states that an individual will take action to avoid a disease or health problem if he/she feels threatened. Disease threat is composed of two conditions. First, the person mustperceive he is susceptiblei.e. he believes that he personally has a reasonable chance of acquiring the disease condition. Secondly, the individual perceives the severity of the disease i.e. in event of the disease occuring it would have a moderately severe impact on an aspect of his life.

The model consists of three major factors: readiness, efficacy and costs. Readiness includes the perception by an individual that he is susceptible to the disease and that the disease is serious enough and of such a consequence to jeopardize negatively his life. Moderate threat of seriousness plus a belief in vulnerability were hypothesized as essential elements in the adoption of a preventive behaviour. Given this state of readiness, the occurrence of preventive behaviour will depend on the individual's belief in the efficacy of a particular course of action to reduce the threat that he considered essential. Efficacy is expressed as "perceived

benefits" gained by the preventive action. The costs or barriers involved in taking an action are estimated and considered essential. These include all perceived impediments such as psychological, environmental or financial. The adoption of the behaviour is more likely where, in the presence of a threat, the action is seen as efficacious, possible and at a tolerable cost (Rosenstock 1979).

With respect to breast self-examination the individual has to perceive that she is susceptible to breast cancer, and appreciate the seriousness and severity of breast cancer. This could be influenced by certain socio-demographic factors like age, level of education, course of study, religion and socio-economic status of family to make the individual perceive breast cancer as threatening to her person. This could also be reinforced by information reaching her from health workers, the mass media and by the experiences of other people. In this situation it is expected that the individual will likely take positive action by performing breast self-examination.

Fig. 19. Application of the Health Belief Model to Breast Self-Examination



Modified and applied version of Rosenstock, J. M.(1979: Historical origins of the Health Belief Model. Health Education Monograph 2(4): 328-352.

2. Fishbein's Theory of Reasoned Action

The ultimate goal of this theory is to predict and understand behaviour. Fishbein believes that the simplest and most efficient way to predict behaviour is to determine if people intend to perform the behaviour in question. According to the theory, there are two basic determinants of intentons:

i. an individual's positive or negative evaluation of performing the behaviour (attitude toward the behaviour) and

ii. the person's perceptions of whether significant others think the person should or should not perform the specific behaviour (subject norm).

It is further theorized that a person's attitude toward the behaviour is determined by:

i. the belief that the performance of this behaviour will result in certain outcomes or consequences (behavioural beliefs) and

ii. the person's evaluation of these outcomes.

The subjective norm component is determined by:

i. the belief that certain specified individuals or reference groups think the person should or should not perform the behaviour (normative beliefs) and

ii. one's motivation to comply with the wishes of these individuals or reference groups.

Lastly, although Fishbein recognizes the potential importance of such factors as personality traits and demographic variables, he considers them external variables.

With respect to breast self-examination one of the basic determinants of intention is the individual's attitude towards breast self-examination. Does the individualconsider the performance of breast self-examination as important to her? Does she believe that the practice of breast self-examination will result in the early detection of breast cancer or its signs and symptoms? and are these outcomes significant to her?

The second determinant is the appraisal by the individual of the perception of significant others around her towards her performing breast self-examination, this

together with her motivation to comply with their wishes can determine whether or not she will practice breast self-examination.

3. The Precede Model

According to Green et al (1980), three classes of factors have potential for affecting health behaviour: predisposing factors, enabling factors and reinforcing factors. The model helps in the identification of the type of behaviour that precedes each health benefit, and highlights causes of such health behaviour, all of which are of importance in health education planning. Green's Precede Framework (1980) identified seven phases of health education planning:

1. Quality of life
2. Specific health problems and non-health problems
3. Identifying special health related behaviour
4. Predisposing, enabling and reinforcing factors
5. Health education intervention
6. Implementation
7. Evaluation

For the purpose of this study only phases 1 - 4 will be applied.

With respect to this study, Breast cancer is the disease condition of interest as it affects the life of

women who have it. Breast self-examination practice is the behaviour being assessed in the study as a means of detecting breast cancer while it is still in its early stages and has greater chances of being arrested.

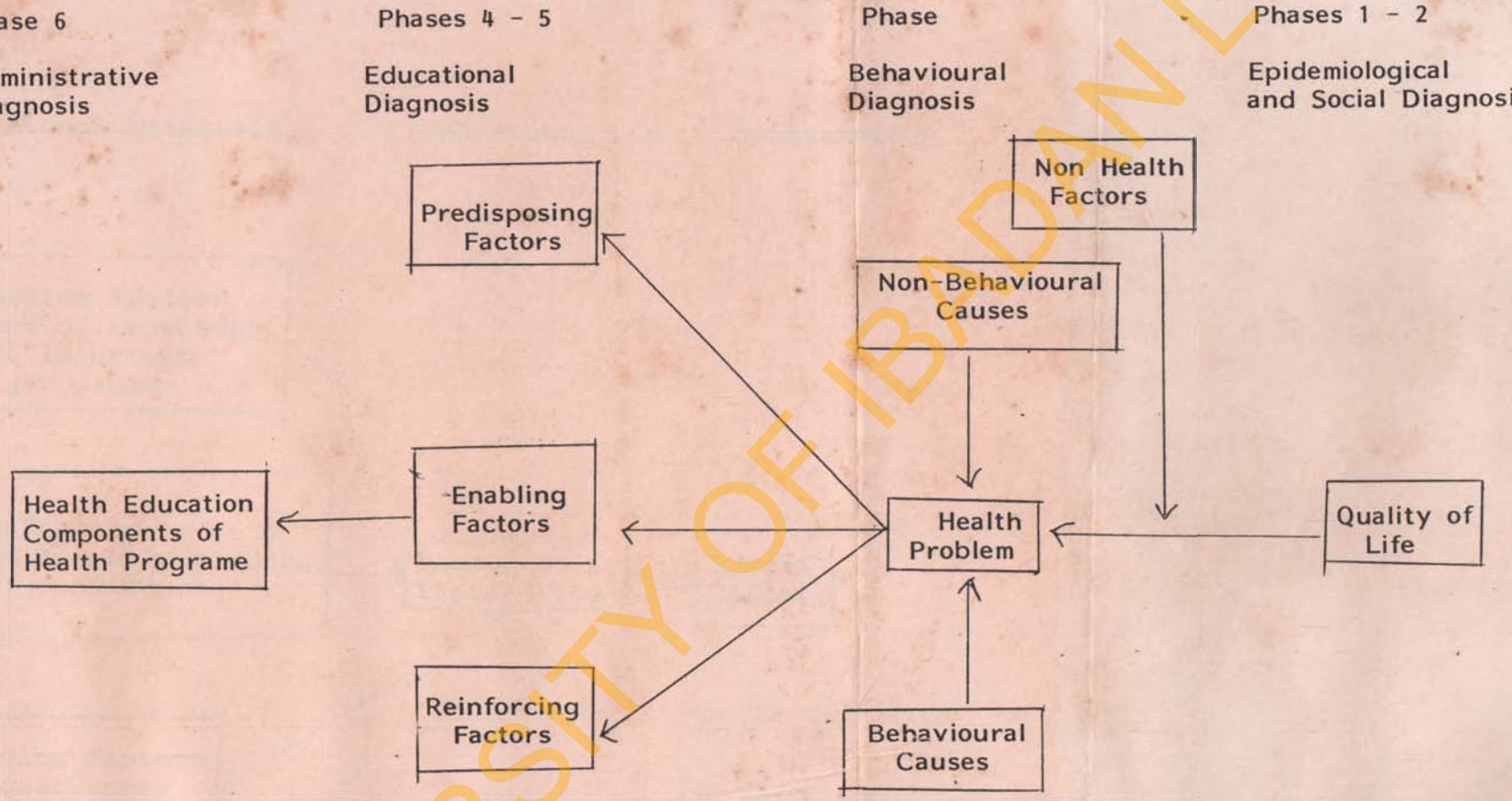
The predisposing factors in this case could be the individual's lack of knowledge about breast self-examination and/or the procedure for carrying it out, or her beliefs about breast self-examination or the values and attitudes attached to the behaviour, could be that the procedure is too difficult to follow properly or it is of no importance.

Enabling factors could be, that she has not been taught the procedure and therefore lacks the skills and confidence to practice it. In addition she might not have time to practice Breast Self-Examination.

Reinforcing factors could be, other people's influence on her. Such may include a family member having breast cancer or the death of a family member resulting from breast cancer. It may also be as a result of peer influence.

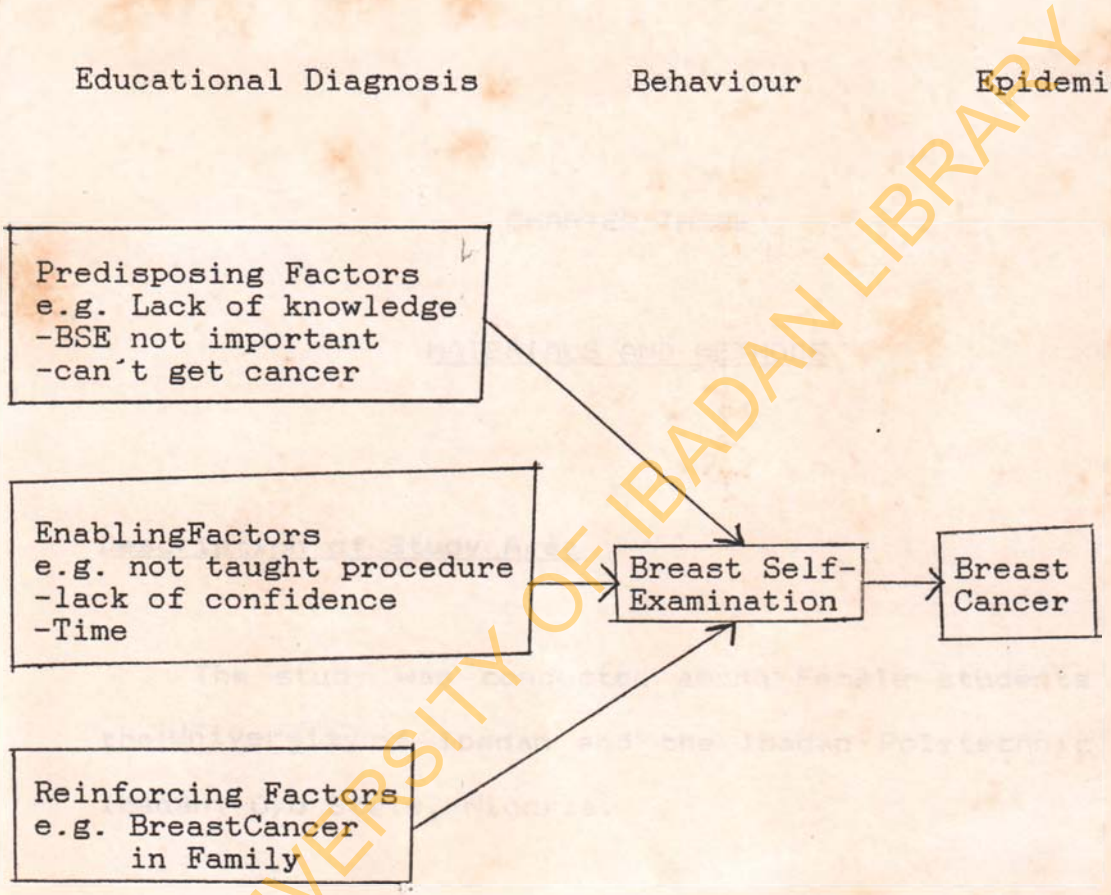
Fig. 10

THE PRECEDE FRAMEWORK



Source: Adapted from Green et al, Health Education Planning: A diagnostic Approach (Palo Atto, Calif; Mayfield Publishing Coy, 1980) P. 3

Fig. 11. APPLICATION OF THE PRECEDE MODEL TO BREAST SELF-EXAMINATION



Source: Modified version of Green et al (1980): Health Education Planning: A Diagnostic Approach

CHAPTER THREE

MATERIALS AND METHODS

Description of Study Area

The study was conducted among Female students of the University of Ibadan and the Ibadan Polytechnic in Ibadan, Oyo State, Nigeria.

Ibadan is a large indigenous African City, and is the capital of Oyo State, Nigeria. It lies between Latitudes 7 and 9 30' north of the equator and longitudes 2 30' and 5 30' east of the prime meridian (Fajehinsan 1988). The population of Ibadan wasestimated as 100,000 in 1851. The last official census conducted in 1963 gave the city an estimated population of

627,739. The population in 1968 was estimated to be at 1.5 million people (Mabogunje 1968). However, using the 2.5% annual growth rate the projected population as at 1990 is expected to be about 3.1 million. However, the 1991 census figures released by the National Population Commission put the population of Ibadan at an estimated 1.8 million.

As a thriving centre for education at all levels, Ibadan leads Nigeria and even West Africa (Callaway 1967). Today (i.e. 1990), under the Ibadan Municipal Government, there are 291 public primary schools and 93 public secondary schools (Source: Oyo State Ministry of Education, Research and Planning Office). This number does not take into account the numerous private schools in the city. Private "colleges" and various types of unofficial education have increased in the city and apprenticeship and professional training is also on the increase.

Presently the city can boast of two institutions of higher learning, namely, the University of Ibadan and the Ibadan Polytechnic.

The Ibadan Polytechnic is located in Sango along the Eleiyele road while the University of Ibadan is along the Oyo road.

The University of Ibadan has an estimated female population of three thousand, three hundred and eight for the 1989/90 session (Source: University of Ibadan, Planning and Development Office). One thousand, two hundred and sixty-seven are resident in five halls and the breakdown is as follows:

Queen Elizabeth Hall	–	473
Idia Hall	–	456
Balewa Hall	–	81
Obafemi Awolowo Hall	–	100
Alexander Brown Hall	–	157
Total	–	1267

The Ibadan Polytechnic has a total of One thousand, one hundred and forty nine female students for the 1989/90 session on the Ibadan campus (Source: Ibadan Polytechnic Student Affairs Office). Five hundred and fifty are resident in one hostel (the Olori Hall).

There are 6 hostel blocks, D, F, G, H, I and K. Each block has 3 floors and each floor has 14 rooms and 2 students are allocated to each room.

This brings the study population to One thousand, eight hundred and seventeen.

In the University of Ibadan, Queen's hall has eight blocks currently in use. Block A has a total of 21 rooms on 2 floors with 2 students in each room. Block B has 32 rooms on 3 floors with 2 students per room. BlockC has 30 rooms on 2 floors with 2 students per room. Block D has 50 rooms on 3 floors with 2 students in each room. Block E has 21 rooms on 2 floors with 2 students in each room. Block F has 7 rooms on one floor with 3 students per room. Block G has 27 rooms on 3 floors with 3 students in each room. Block H has 27 rooms on 3 floors with 3 students per room.

In Idia Hall, there is only one block currently in use. It has four floors. The basement has 9 rooms, the ground floor has 33 rooms and the first second floors have 37 rooms each. Four students are allocated to each

room.

In Awolowo hall, female students are accommodated in one block with 5 floors. All the floors have 11 rooms with 2 students per room with the exception of the third floor which has 12 rooms with 2 students per room, with one student in each room.

In Balewa hall, female students are accommodated in 2 blocks, A and E. Block A has 2 floors of 12 rooms each and one student is allocated to each room.

Block E has 3 floors with 12 rooms each. The first 5 rooms on each floor are single rooms and the remaining 7 are double rooms.

In Alexandra Brown hall, female students occupy blocks A, B and C. Blocks B and C have 7 rooms per floor, while Block A has 13 rooms per floor, except for the ground floor where only 8 rooms are being used. All the blocks have 4 floors with 2 students allocated to each room.

OBJECTIVES OF THE STUDY

Broad Objective

To examine the knowledge, attitude and practices of female students in higher institutions on breast self-examination.

Specific Objectives

1.To assess the knowledge and attitude of female students on breast self-examination.

2.To document the existing techniques of breast self-examination practices among female students.

3.To identify factors associated with practice of breast self-examination.

4.To highlight the cancer education implications based on 1 - 3 above.

HYPOTHESIS

1.Students previous knowledge of breast self-examination does not affect breast self- examination

practice.

2.Students course of study does not affect breast self-examination practice.

3.Socio-economic status of students family does not affect breast self-examination practice.

4.Age of students does not affect breast self-examination practice.

5.Previous students breast problems does not affect breast self-examination practice.

6.Exposure to breast cancer in family does not affect breast self-examination practice.

TARGET POPULATION

The subjects of this study are female students in higher institutions. This group of students belong to the age group in which women begin to present with lumps in their breasts.

This is also the age at which it is widely advocated that women should examine their breasts themselves on a regular (monthly) basis.

SAMPLING TECHNIQUE

All female students in the University of Ibadan andthe Ibadan Polytechnic form the population on which the study is based.

However, because the questionnaire is one that touches on an issue considered to be intimate and private by most people, it was administered in the halls of residence, as a result those resident off- campus were not included in the study.

For the purpose of this study, systematic sampling technique was used to ensure a proportionate and representative sample from all halls, blocks and floors.

a. Ibadan Polytechnic

In the Ibadan Polytechnic, systematic sampling was used to select every second room from each of the blocks. The entry point ineach block was determinedby a ballot between the first two rooms. Occupants of such selected rooms were included in the study and used as respondents. This brought the total number of

respondents selected from the Polytechnic to two hundred and fifty two.

b. University of Ibadan

There is an approximate 1:2 ratio between female students resident in the Polytechnic to those in the University of Ibadan. The proportionate sample size of fivehundred and four was selected for the University.

To ensure that the sample size was proportionately distributed among the female halls of the University the following formula was used:

$$\frac{\text{Population of Hall}}{\text{Total Population of Resident students}} \times \frac{\text{Estimated sample size}}{1}$$

This gave the following sample sizes for each hall:

1. Alexandra Brown Hall - 62
2. Awolowo Hall - 40
3. Balewa Hall - 33
4. Idia Hall - 181

5.	Queens Hall	-	188
	Total	-	504

In the selection of rooms in each block or floor in the University, the entry point was determined by a ballot between the first two rooms on each floor.

1.Alexander Brown Hall

In Alexandra Brown Hall, every fourth room was selected systematically from Blocks A and B, this led to the selection of 27 respondents from BlockA and 15 from Block B. However, in Block C, every third room was systematically selected. A total of 20 respondents were thus interviewed.

2.Awolowo Hall

In Awolowo Hall, the systematic sampling technique was used to select respondents fromevery third room on each floor. Thus 8 respondents were selected from each floor.

A total of 40 respondents were thus selected.

3.Balewa Hall

In Balewa Hall, every second room was systematically selected and all occupants of the selected rooms in both blocks were interviewed. Thus 10 respondents were selected from Block A and 23 from Block E.

4.Idia Hall

In Idia hall every third room on each floor was systematically selected. This gave a total of 14 respondents from the basement floor, 51 from the ground floor and 58 each from the first and second floors.

5.Queens Hall

In Queens Hall, every second room was selected in Blocks B and F,and every third room was selected in the other blocks systematically. The number of selected respondents from each block was as follows:

Block A - 18

Block B	-	25
Block C	-	14
Block D	-	40
Block E	-	18
Block F	-	9
Block G	-	32
Block H	-	32

METHOD OF DATA COLLECTION

The instrument used for collecting data was a self-reporting questionnaire. Questions on the instrument covered demographic status, knowledge, attitude and practice of the students on breast self-examination and other factors that might be associated with breast self-examination.

Five female students were employed as research assistants and trained to administer the questionnaire. Their sex and status made it easy for them to interact positively with the students.

Prior to the administration of the questionnaire, letters were sent to the chairmen of the halls to

Table 1
Table Showing Institutional Distribution of Questionnaire

Institution	No. Of Questionnaire distributed	No. of questionnaire retrieved and analysed	% of total
University of Ibadan	504	480	95.2
Ibadan Poly	252	210	83.3
Total	756	690	

Table 2

Table Showing Residential Distribution of Questionnaire

Hall	No. of questionn-aire distributed	No. of questionn-aire retrieved and analysed	% of Total	% Retrieved
Alexander Brown	62	44	6.38	70.97
Awolowo	40	40	5.80	100.00
Balewa	33	33	4.78	100.00
Idia	181	175	25.36	76.69
Queens	188	188	27.25	100.00
Olori	252	210	30.45	83.33
Total	756	690	--	100.00

solicit their help to ask for cooperation from residents in their halls with the interviewers.

The questionnaire were administered in the evenings, from 4.00 p.m when most of the students would have returned from lectures. Some rooms however had to be visited later at night after 10.00 p.m to reach those students who stay in the Library till it closes. Questionnaire was given to the students for completion and were collected immediately upon completion. Some rooms had to be revisited and appointments booked to meet with students not present in the hall at time of questionnaire administration.

PILOT STUDY

a. Initial Survey

Both institutions were initially surveyed before the method for data collection was designed. Relevant information on the number of female students in the institutions, the number resident on campus, number of female halls, rooms and number of students allocated to

each room were collected.

b. Pretesting

The questionnaire designed for collecting data was first pretested among few female students of the University of Ibadan to detect mistakes and to ensure that all the questions were relevant to the study, and would solicit the desired responses from the respondents. Some problems detected during the pretest included the question 8 item (Qualification in view), in which the options on first degree only included, B.Sc.; B.A.; and B.Ed. After pretesting other first degrees such as B.LS.; BDS; LL.B; M.B.BS; and DVM were included.

In addition the word "Mothers" was added to the answer options for question 30 (Who do you think should teach women breast self-examination techniques?). This was because it was the major response under the "Others" option during the pretest phase.

VALIDITY AND RELIABILITY

Validity of an instrument or method is a measure of the extent to which it measures the characteristics it is intended to measure. Reliability is the ability of an instrument to reproduce the desired results at any given point in time under the same conditions.

The questionnaire was pretested to ensure that questions items were adequate for soliciting desired responses to the variables of interest and to remove ambiguity and misinterpretation.

DATA ANALYSIS

The collected data was initially sorted out and coded manually, then fed into the computer for analysis. Frequency distribution, cross tabulations and test statistics (X^2 Tests) were performed to test for associations between the variables of interest. The results were used to draw inferences.

Limitations of The Study

Two thousand and forty-one female students in the University of Ibadan live off-campus and fi hundred and

ninety-nine are off campus in the Ibadan Polytechnic. This represents 62% and 53% of the total number of female students in the University of Ibadan and Ibadan Polytechnic, respectively.

Due to the nature of the study, being on an issue that touches on human sexuality, the questionnaire was administered in the halls of residence to provide a relaxed atmosphere and privacy for the respondents. as a result, students resident off-campus were excluded from the study, and are therefore not inclusive in the study population.

Since students resident off-campus were excluded from the study it is noted that there might be some responses that would have been solicited from them that may not have been received from those resident on campus. It is however hoped that future research in this area will look into the issue as it relates to those resident off-campus.

Due to constraints arising from limited resources and time it was not possible to study the entire population of female students resident on campus in both

institutions.

16.7% and 4.8% of the respondents in the Ibadan Polytechnic and the University of Ibadan respectively did not respond to the questionnaire. It is noted that this might have affected the results slightly but is within statistically acceptable limits.

CHAPTER FOUR

RESULT OF ANALYSIS

A total of seven hundred and fifty - six questionnaires were administered, (five hundred and four in the University of Ibadan and two hundred and fifty two in Ibadan Polytechnic). Six hundred and ninety questionnaires were collected and considered adequate for analysis. This comprised four hundred and eighty from the University of Ibadan and two hundred and te from the Ibadan Polytechnic.

A. DEMOGRAPHIC CHARACTERISTICS OF THE STUDENTS

Age Distribution

As shown in Table 3, majority of the respondents 455 (65.9%) were between 20 and 24 years of age, followed by 109 (15.8%) between 25 and 29 years, and 102 (14.8%) between the ages of 15 and 19 years.

Marital status

Most of the students 633 (91.7%) were single, and a few 56 (8.1%) were married (Table 4).

Further analysis was carried out to see if there is

Table 3

Age Distribution of Respondents

Ages (in years)	No.of respondents	%
15 - 19	102	14.8
20 - 24	455	65.9
25 - 29	109	15.8
30 - 34	11	1.6
35 - 39	7	1.0
40 - 44	3	0.4
45 +	1	0.1
No response	2	0.3
Total	690	100.0

Table 4
Marital Status of the Students

Marital status	No.of Respondents	Percentage
Married	56	8.1
Divorced	1	0.1
Separated	0	0.0
Single	633	91.8
Total	690	100.0

Table 5
Respondents' Marital Status and Breast Self-Examination Practice

BSE Practice / Marital Status	Yes	%	No	%	Total
Married	47	83.9	9	16.1	56
Divorced	0	0.0	1	100.0	1
* Separated	0	0.0	0	0.0	0
Single	409	64.6	224	35.4	633
Total	456	--	234	--	690

* Excluded from statistical analysis

$X^2 = 8.25$ df = 2 $P < 0.02$

an association between marital status and breast self-examination practice.

Four hundred and nine out of 633 single respondents practiced breast self-examination and 46 of 56 married respondents practiced (Table 5).

There is no statistically significant association between respondents marital status and breast self-examination practice.

Ethnic Background

Majority of the respondents 533 (77.3%) were Yoruba, followed by Igbo 63 (9.1%) (Table 6).

Further analysis showed that out of 533 Yoruba respondents, 338 practiced breast self-examination and 45 out of 63 Igbos practiced the same (Table 7).

There is no statistically significant association between respondents' ethnic background and breast self-examination.

Table 6
Ethnic Background of the stuents

Ethnic Background	No. of Respondents	%
Yoruba	533	77.3
Igbo	63	9.1
Hausa	0	0.0
* Others	94	13.6
Urhobo	21	3.0
Edo	18	2.6
Ishan	15	2.2
Itsekeri	12	1.7
Ibibio	7	1.0
Nupe	4	0.6
Tiv	3	0.4
Ijaw	2	0.3
Idoma	2	0.3
Efik	1	0.1
Zunu	1	0.1
Camerounian	5	0.7
American	1	0.1
German	1	0.1
Japanese	1	0.1
Total	690	100

Table 7
Respondents' Ethnic Background and Breast Self-Examination Practice

BSE Practice / Ethnic Background	Yes	%	No	%	Total
Yoruba	338	63.4	195	36.6	533
Igbo	45	71.4	18	28.6	63
*Hausa	0	0.0	0	0.0	0
Others	73	77.7	21	22.3	94
Total	456	--	234	--	690

* Excluded from statistical analysis

$X^2 = 8.25$ df = 2 $P < 0.02$

Table 8
Religious Affiliation of the Respondents

Religion	No. of Respondents	Percentage
Christianity	594	86.1
Islam	80	11.6
African Traditional Religions	7	1.0
Others	9	1.3
Total	690	100.0

Religious Affiliation

Most of the respondents were christians accounting for 594 (86.1%) of the total respondents. Eighty (11.6%) were moslems while 7 (1.0%) were the African traditional religion (Table 8).

Further analysis highlighted that out of the 594 respondents who were christians 395 practiced breast self- examination and 53 of 80 moslem practised. (Table 9)

There is no statistically significant association between respondents religious affiliation and breast self-examination practice.

Course of Study/Qualification in View

Most respondents 180 (26.1%) were from the sciences, followed by those in the medical sciences, 82 (11.9%), Arts 79 (11.5%) Education 59 (8.6%), and Secretarial Studies 58 (8.4%) (Table 10).

Most respondents, 390 (56.5%) were pursuing first degrees, followed by 121 (17.5%) ordinary level diplomas

Table 9
Respondents' Religious Affiliation and Breast Self-Examination Practice

BSE Practice / Religion	Yes	%	No	%	Total
Christianity	395	66.5	199	33.5	594
Islam	53	66.3	27	33.7	80
African Traditional Religion *	3	42.9	4	57.1	7
Others *	5	55.6	4	44.4	9
Total	456	--	234	--	690

* Excluded from analysis

$X^2 = 2.7$ df = 3 P >0.05

Table 10
Course of Study of the Respondents

Courses	No. of Respondents	Percentage
Accountancy	30	4.4
Administration	5	0.7
Agriculture	55	8.0
Arts	79	11.5
Education	59	8.6
Languages	21	3.0
Law	5	0.7
Medical Sciences	82	11.9
Planning and Survey	26	3.8
Secretarial Studies	58	8.4
Sciences	180	26.1
Social Sciences	47	6.8
Technology	28	4.1
No Response	15	2.1
Total	690	100.0

Table 11
Qualifications of Respondents at the End of Their Courses

Qualifications	No. of Respondents	Percentage
Certificate Courses	8	1.2
O.N.D.	121	17.5
H.N.D.	91	13.2
Others	9	1.3
Total	690	100.0

and 91 (13.2%) higher diplomas. Others were Masters 62 (9.2%), Ph.D 14 (2.0%) and Certificate courses 8 (1.2%) (Table 11).

Level of Education of the Parents

Fathers of 309 (44.8%) respondents had university education and 189 (27.4%) were professionally trained (Post secondary, non graduate e.g Nursing, Ican, NCE etc). Only 70 (10.1%) had secondary school education (Table 12a). Two hundred and twelve (30.7%) of the respondents' mothers had professional training, 158 (22.9%) had university education 144 (20.9%) had secondary school education and 80 (11.6%) had primary school education (Table 12b).

B. RESPONDENTS KNOWLEDGE OF BREAST SELF-EXAMINATION

The results on respondents' awareness ofbreast self-examination, source of information and knowledge of symptoms are highlighted in this section. Others include knowledge of sequential steps for breast self-examination, frequency and time of practice.

Table 12 A
Level of Education of Respondents' Fathers

Occupation	No. of Respondents	Percentage
Illiterate	18	2.6
Primary	32	4.6
Secondary	70	10.1
Apprenticeship Training	32	4.6
Professional Training	189	27.4
University	309	44.8
Others	15	2.2
No Response	25	3.6
Total	690	100.0

Table 12 B
Level of Education of Respondents' Mothers

Occupation	No. of Respondents	Percentage
Illiterate	48	6.4
Primary	80	11.6
Secondary	144	20.9
Apprenticeship Training	28	4.1
Professional Training	212	30.7
University	158	22.9
Others	13	1.9
No Response	11	1.6
Total	690	100.0

Awareness and Source of Information

Of the 690 students interviewed, 584 (84.6%) had heard of breast self-examination, while 106 (15.4%) had not (Table 13). Respondents awareness of breast self-examination was through various channels. Two hundred and sixty five respondents (45.7%) first heard of it through the television/radio and 139 (23.8%) through magazines or newspapers. Only 25 (4.3%) first heard of it through their mothers (Table 14).

Knowledge of Correct Symptoms to look for during Breast Self-Examination

In response to what symptoms to look for in breast self-examination, many respondents, 189 (27.4%) did not know. Of the 501 (72.6%) who knew, 168 (24.4%) correctly listed one symptom, 130 (18.8%) two symptoms, and 109 (13.8%) three symptoms. Furthermore, 41 (5.9%) listed correctly four symptoms, 34 (4.9%) five symptoms, 8 (1.2%) six symptoms. Only 4 (0.6%) listed all eight correct symptoms. (Table 15).

Further analysis showed that of the 168 respondents

Table 13
Whether Respondents had Ever Heard of Breast Self Examination

Ever heard of Breast Self-Examination	No. of Respondents	Percentage
Yes	584	84.6
No	106	15.4
Total	690	100.0

Table 14
Sources through which Respondents first heard of Breast Self-Examination

Source	No. of Respondents	Percentage
Television/Radio	265	45.7
Magazine/Newspaper	139	23.8
Friends	40	6.8
Mother	25	4.3
Hospital	42	7.2
Seminar/Lecture	57	9.8
No Response	16	2.7
Total	584	100.0

Table 15
Number of Correct Symptoms Known by Respondents

No. of correct Symptom	No. of Respondests	Percentage
8	4	0.6
7	7	1.0
6	8	1.2
5	34	4.9
4	41	5.9
3	109	15.8
2	130	18.4
1	168	24.4
Don't Know	189	27.4
Total	690	100.0

who knew one correct symptom,112 of them practiced breast self- examination. Of 130 respondents who knew 2 symptoms, 104 practiced, 90 of 109 who knew 3 correct symptoms, and 37 of 49 who knew 4 correct symptoms practiced breast self-examination. (Table 16).

There is a statistically significant association between knowledge of correct signs/symptoms to look for in breast self-examination and breast self-examination practice.

Knowledge of Correct Time to carry out Breast Self-Examination

In response to what time was best for carrying out breast self-examination 269 (39.0) respondents did not know. About a quarter 170 (24.6%) correctly reported that it should be done after menstruation.Two hundred and fifty one respondents gave incorrect responses. These included 170 (24.6%) who reported that it could be done at anytime, 62 (9.0%) before menstruation and 19 (2.8%) during menstruation (Table 17).

Table 16
Respondents' Knowledge of Correct Signs/Symptoms and Breast Self-Examination Practice

BSE No. of correct symptom	Yes	%	No	%	Total
8	3	75.0	1	25.0	4
7	6	85.7	1	14.3	7
6	7	87.5	1	12.5	8
5	32	94.1	2	5.9	34
4	37	90.2	4	9.8	41
3	90	82.6	19	17.4	109
2	104	80.0	26	20.0	130
1	112	66.7	56	33.3	168
*Don't know	65	34.4	124	65.6	189
Total	456	--	234	--	690

* Excluded from statistical analysis

$X^2 = 25.54$ df = 7 P < 0.001

Table 17
Best Time to do Breaast Self-Examination

Time	No. of Respondents	Percentage
Correct Response After Menses	170	24.6
Incorrect Response		
Before Menses	62	9.0
During Menses	19	2.8
At any time	170	24.6
Don't know	269	39.0
Total	690	100.0

Table 18
Respondents' Knowledge of Frequency of Breast Self-Examination Practice

Frequency of Practice	No. of Respondents	Percentage
Correct Response Monthly	221	32.0
Incorrect Responses		
Daily	98	14.2
Monthly	129	18.7
Once in 2 months	12	1.7
Once in 3 months	16	2.3
Once in 6 months	14	2.0
No Knowledge Don't know	200	29.0
Total	690	100.0

Knowledge of Frequency of Breast Self-Examination Practice

In response to how often breast self-examination should be carried out, 221 (32.0%) respondents correctly stated that it should be done monthly, and 200 (29.0%) did not know. Incorrect responses were given by 269 (39.0%) respondents (Table 18).

Knowledge of Correct Fingers to be Used in Breast Self-examination

In response to which fingers are appropriate to use fully in breast self-examination practice, 171 (24.8%) correctly identified the three middle fingers. Two hundred and eight three (41.0%) respondents did not know, while 236 (34.2%) indicated other combinations of fingers. (Table 19(a). With respect to the part of the fingers to use in breast self-examination, 390 (56.5%) of the respondents knew the correct answer by identifying the tips of the fingers, while 107 (15.5%) incorrectly identified the flat part of the fingers. 193 (28.0%) claimed they did not know (Table 19(b).

Table 19 A
Respondents' Knowledge of Fingers to use in Breast Self-Examination

Fingers Indicated	No. of Respondents	Percentage
Correct Response 3 middle fingers	171	24.8
Incorrect Response Other fingers	236	34.2
No Knowledge Don't Know	283	41.0
Total	690	100.0

Table 19 B
Respondents' Knowledge of Part of Fingers to Use in Breast Self-Examination

Fingers indicated	No. of Respondents	Percentage
Correct Response Tips	390	56.5
Incorrect Response Flats	107	15.5
No Knowledge Don't Know	283	41.0
Total	690	100.0

Knowledge of Amount of Pressure to Apply in Breast Self-Examination Practice

Responding to the question on the amount of pressure to be applied on the breast during breast self-examination, 177 (25.6%) respondents correctly stated "firm pressure". Two hundred and ninety one (42.2%) incorrectly reported "slight pressure" and 222 (32.2%) did not know (Table 20).

Knowledge of Types of Breasts which may make Breast Self-Examination Difficult

In response to whether respondents knew any types of breasts which may make breast self-examination difficult, majority, 583 (84.5%) did not know.Eighty-Seven (12.6%) correctly identified large breasts and 20 (2.9%) lumpy breasts (Table 21)

Knowledge of Correct Steps of Breast Self-Examination Practice

Most of the respondents, 449 (65.1%) did not know the correct steps of carrying out breast

Table 20
Respondents' Knowledge of Amount of Pressure to Apply in Breast Self-Examination Practice

Pressure	No. of Respondents	Percentage
Correct Response Firm	177	25.6
Incorrect Response Slight	291	42.2
No Knowledge Don'tKnow	222	32.2
Total	690	100.0

Table 21
Respondents' Knowledge of Types of Breasts which may make Breast Self-Examination Difficult

Breast Type	No. of Respondents	Percentage
Large/Pendulus	87	12.6
Lumpy	20	2.9
Don't Know	583	84.5
Total	690	100.0

self-examination. Of the 241 (34.9%) who knew, 25 (3.6%) listed five steps, 13 (1.8%) four steps, 10 (1.5%) three steps, 166 (24.1%) two steps, and 27 (3.9%) one step (Table 22).

Knowledge of Correct Sequence of Breast Self-Examination Practice

Majority of the respondents, 449 (65.1%) had no knowledge of the sequence for carrying out breast self-examination. However, 208 (30.1%) respondents correctly described the sequence, while 33 (4.8%) respondents description of the sequence was incorrect (Table 23).

C. ATTITUDE OF RESPONDENTS TO BREAST SELF-EXAMINATION AND BREAST CANCER

Respondents opinions to suggestions on a Likert scale were used to highlight students attitudes towards breast cancer and breast self-examination.

Attitudinal statements relating to cure of breast cancer, detection through breast self-examination, perceived vulnerability of educated women to breast

Table 22
Respondents' Knowledge of Correct Breast Self-Examination Steps

No. of Correct Steps	No. of Respondents	Percentage
5	25	3.6
4	13	1.8
3	10	1.5
2	166	24.1
1	27	3.9
Don't Know	449	65.1
Total	690	100.0

Table 23
Respondents' Knowledge of Correct Sequence for Breast Self-Examination

Sequence	No. of Respondents	Percentage
Correct Response Correct sequence	208	30.1
Incorrect Response Incorrect sequence	33	4.8
No Knowledge Don't Know	449	65.1
Total	690	100.0

cancer and lesser vulnerability of women who consistently breastfeed for longer periods to breast cancer were made. Respondents were asked to "agree" or "disagree" with a number of statements which examined their perception on breast cancer, its detection and breast self-examination. Results of respondents opinions are shown in Table 24.

Majority of the respondents 428 (62,0% and 596 (86.4%) respectively agreed that it is possible to cure breast cancer and to detect breast cancer in its early stages through breast self-examination. Furthermore, majority of the respondents 634 (91.9%) and 656 (95.1%) believed respectively that early detection of breast cancer improves chances of cure and that women should be encouraged to examine their breasts.

In response to the statement that "it is preferable to have my breasts examined by a doctor than to do breast self- examination at home", many respondents 292 (42.3%) generally disagree but 241 (34.9%) agreed. However, most respondents, 492 (71.3%) disagreed with the statement that it is immoral for women to palpate their breasts.

Table 24
Distribution of Respondents About
Breast Cancer and 1reast Self-Examination

Opinion	AGREE NO (%)	Undecided No (%)	Disagree No (%)	No Response No (%)	Total No (%)
It is possible to cure breast cancer	428 (62.0)	162(23.5)	92(13.3)	8 (1.2)	690 (100)
Through breast self-examination, it is possible to detect breast cancer in some while it is still in its early stages	596(86.4)	73(10.6)	14 (2.0)	7 (1.0)	690 (100)
Early detection of breast cancer improves chances of cure	634 (91.9)	41 (5.9)	8 (1.2)	7 (1.0)	690 (100)
Women should be encouraged to examine their breasts	656 (95.1)	24 (3.5)	3 (0.4)	7 ((1.0)	690 (100)

Table continued...

Table 24 continued.....

It is preferable to have breast examination by a doctor than to do self-exam at home	241 (34.9)	149 (21.6)	292 (42.3)	8 (1.2)	690 (100)
It is immoral for women to palpate their breasts	63 (9.1)	125 (18.1)	492 (71.3)	10 (1.5)	690 (100)
Educated women are more at risk to breast cancer than uneducated women	50 (7.2)	178 (25.8)	453 (65.7)	9 (1.3)	690 (100)
Women who breastfeed their babies are at a lower risk of getting breast cancer	132 (19.1)	342 (49.6)	206 (29.8)	10 (1.5)	690 (100)

Performing breast self-examination is waste of time because the technique is difficult to follow properly	37 (5.3)	128 (18.6)	516 (74.8)	9 (1.3)	690 (100)
Breast self-examination is effective for breast cancer	554 (80.3)	99 (14.4)	28 (4.0)	9 (1.3)	690 (100)

When respondents perception on susceptibility to breast cancer were measured, only few respondents 50 (7.2%) and 132 (19.1%) were of the opinion that educated women are more at risk to breast cancer than uneducated women and that women who breastfeed their babies are at a lower risk of getting breast cancer respectively.

Majority of the respondents, 516 (74.8%) disagreed with the statement that, "performing breast self-examination is a waste of time because the technique is difficult to follow properly".

In response to the statement that "breast self-examination is effective for detecting breast cancer", majority of the respondents, 554 (80.3%) agreed generally.

D. Respondents' Practice of Breast Self-Examination

The respondents' practice, reasons for practice, technique of practice, and frequency of practice of breast self-examination in the last six months are highlighted in this section.

Respondents' Breast Self-Examination Practice

Four hundred and fifty-six (66.1%) respondents had ever examined their breasts and 234 (33.9%) had never (Table 25 a).

In response to how often they (respondents who had ever examined their breasts) had examined their breast in the last six months, 145 (31.8%) 3 - 4 times, 53 (11.6%) 5 - 6 times and 112 (24.6%) more than 6 times. Ninety nine (21.7%) respondents reported that they had not examined their breasts in the last six months (Table 25b).

Reasons for Practising Breast Self-Examination

Of the 456 respondents who had ever examined their breasts, 205 (45.0%) and 94 (20.6%) reported practising this behaviour to detect lumps and abnormalities respectively, and 84 (18.4%) just for curiosity". However, 11 (2.4%) respondents did not respond (Table 26).

Table 25 A
Respondents' Breast Self-Examination Practice

Ever Practice	No. of Respondents	Percentage
Yes	456	66.1
No	234	33.9
Total	690	100.0

Table 25 B
Frequency of Breast Self-Examination Practice
in the last Six Months

Frequency of Practice	No. of Respondents	Percentage
Not at all	99	21.6
Once or Twice	145	31.8
3 - 4 times	47	10.3
5 - 6 times	53	11.6
More than 6 times	112	24.6
Total	456	100.0

Table 26
Respondents' Reasons for Practising Breast Self-Examination

Reasons for Practice	No. of Respondents	Percentage
Lumps	205	45.0
Abnormalities	94	20.6
Curiosity	84	18.4
Others	62	13.6
No Response	11	2.4
Total	456	100.0

Table 27
Respondents' Reasons for Not Practising Breast Self-Examination

Reasons for Practice	No. of Respondents	Percentage
Not important	42	18.0
No time	24	10.3
Can't get cancer	15	6.4
Lack of Knowledge	56	23.9
Others	26	11.1
No Response	71	30.3
Total	234	100.0

Reasons for Not Practising Breast Self-Examination

Of the 234 respondents who had never practiced breast self-examination 156 (23.0%) said it was due to lack of knowledge while 42 (18.0%) reported that they did not feel it was important. Other reasons given include "no time" and "I cannot get cancer" seventy one (30.3%), however did not give any answer (Table 27).

Techniques of Breast Self-Examination

Of the 456 respondents who had ever examined their breasts, 135 (29.6%) always use the "Standing before mirror only" technique, 94 (20.6%) the "Mirror and lying down" technique, 127 (27.9%) "lying down alone" technique and 73 (18.4%) the "Standing under the shower" technique. However, 27 (5.9%) respondents did not indicate the technique they use (Table 28).

TEST OF HYPOTHESES

Statistical tests were carried out on variables of interest to draw inferences on the hypothesised statements.

Table 28
Breast Self-Examination Techniques Practiced by Respondents

Techniques Practised	No. of Respondents	Percentage
Standing before mirror	135	29.6
Standing before mirror and lying down	94	20.6
Lying down only	127	27.9
Standing under the shower	73	18.4
No Response	27	5.9
Total	456	100.0

Table 29
Previous Knowledge of Breast Self-Examination and Breast Self-Examination Practice

Previous knowledge	Breast Self-Examination Practice				Total
	Yes	%	No	%	
Yes	436	74.7	148	25.3	584
No	20	18.9	86	81.1	106
Total	456	--	234	--	690

$X^2 = 124.5$ df = 1 P < 0.001

HYPOTHESIS 1

The study sought to test the hypothesis that, students previous knowledge of breast self-examination does not affect breast self-examination practice.

As shown in Table 29, of the 584 respondents who had previous knowledge of breast self-examination, 436 practiced breast self-examination and 148 did not. This compared with 106 that had no previous knowledge in which 20 practiced breast self-examination and 86 did not.

As shown in the table these observed differences were statistically significant $P<0.001$, indicating that previous knowledge of breast self-examination affects breast self- examination practice.

HYPOTHESIS 2

The study tested the hypothesis that, student's course of study does not affect breast self-examination practice. One hundred and nineteen of the 180 science students practised breast self examination as well as 66

of 82 medical science students and 51 of 79 Arts students. In addition 29 of the 58 secretarial studies students also practiced this behaviour.

As shown in table 30 these observed differences were statistically significant $P<0.001$, indicating that course of study affects breast self-examination practice.

HYPOTHESIS 3

The study sought to test the hypothesis that the educational level of students' parents does not affect breast self-examination practice.

In respect to parent's educational level, 210 of the 309 respondents whose fathers had university education practiced breast self-examination as well as 123 of 189 whose fathers were professionally trained. Furthermore, 152 of the 212 respondents whose mothers were professionally trained, and 110 of 158 whose mothers had university education as well as 91 of 144 whose mothers had secondary school education practiced breast self-examination. These differences were not statistically significant $P>0.05$, indicating that

Table 30

Course of Study and Breast Self-Examination Practice

Course	Breast Self-Exam. Practice				Total
	Yes	%	No	%	
Accountancy	14	46.7	16	53.3	30
Administration	5	100.0	0	0.0	5
Agriculture	40	72.7	15	27.3	55
Arts	51	64.6	28	35.4	79
Education	46	78.0	13	22.0	59
Languages	17	81.0	4	19.0	21
Law	2	40.0	3	60.0	5
Medical Sciences	66	80.5	16	19.5	82
Planning & Survey	12	46.2	14	53.8	26
Secretarial Studies	29	50.0	29	50.0	58
Sciences	119	66.1	61	33.9	180
Social Sciences	32	68.1	16	31.9	47
Technology	15	53.6	13	46.4	28
No Response	8	53.3	7	46.7	15
Total	456	--	234	--	690

* Excluded from statistical analysis

$X^2 = 37.10$ df = 12 P < 0.001

Table 31
Level of Education of Respondents' Parents (Mothers and Fathers) and Breast Self-Examination Practice

Level of Education of Respondents (Parents)	Breast Self-Exam. Practice				Total
	Yes	%	No	%	
Illiterate	35	56.5	27	43.5	62
Primary	67	59.8	45	40.2	112
Secondary	142	66.4	72	33.6	214
Apprenticeship Trg.	37	61.7	23	38.3	60
Professional Trg.	275	68.6	126	31.4	401
University	320	68.5	147	31.5	467
Others	14	50.0	14	50.0	28
No Response	22	61.1	14	38.9	36
* Total	912	--	468	--	1380

* excluded from statistical analysis
+ Grand total for both parents
$X^2 = 11.18$ df = 6 P > 0.05

parents level of education does not affect breast examination practice (Table 31).

HYPOTHESIS 4

The study tested the hypothesis that, student's age does not affect breast self-examination practice.

Of the 455 respondents between ages 20 - 24 years, 295 practiced breast self-examination. In addition, 85 of 109 respondents between 25 and 29 years of age, as well as 60 of 102 between 15 and 19 years practiced breast self- examination. Others are as shown in Table 32. However the observed differences within the differente age groups were not statistically significant, $P>0.05$, indicating that age does not affect breast self-examination practice.

HYPOTHESIS 5

The study sought to test the hypothesis that students' level of education does not affect breast self-examination practice.

Table 32
Respondents' Age and Breast Self-Examination Practice

Age (in Years)	Breast Self-Exam Practice				Total
	Yes	%	No	%	
15 - 19	60	58.8	42	41.2	102
20 - 24	295	64.8	160	35.2	455
25 - 29	85	78.0	24	22.0	109
30 - 34	8	72.7	3	27.3	11
* 35 - 39	3	42.9	4	57.1	7
* 40 - 44	3	100.0	0	0.0	3
* 44+	1	100.0	0	0.0	1
No Response	1	50.0	1	50.0	2
Total	456	--	234	--	690

* Excluded from statistical analysis
$X^2 = 9.80$ df = 4 P > 0.05

Two hundred and seventy-two respondents of 390 pursuing first degrees, 63 of 121 pursuing O.N.D., 51 of 91 pursuing HND, and 49 of 62 Masters students practiced breast self- examination. The observed differences were statistically significant, $P<0.05$, indicating that respondents level of education may affect breast self-examination practice (Table 33). The higher the level of education the high the level of practice.

HYPOTHESIS 6

The study tested the hypothesis that, previous students breast problems does not affect breast self-examination practice.

Fifty of the 58 respondents who had previous breast problems practiced breast self-examination, and so were 406 of 632 who had never had previous breast problems. The observed differences were found to be statistically significant, $P<0.001$, indicating that previous breast problems affects breast self-examination practice (Table 34).

Table 33
Qualification in View and Breast Self-Examination Practice

Qualification in view	Breast Self-Exam Practice				Total
	Yes	%	No	%	
*Certificate Course	4	50.0	4	50.0	8
O.N.D.	63	52.1	58	47.9	121
H.N.D.	51	56.0	40	44.0	91
First Degree	272	69.7	118	30.3	390
Masters	49	79.0	13	21.0	62
Ph.D.	14	100.0	0	0.0	14
* Others	3	75.0	1	25.0	4
Total	456	--	234	--	690

* Excluded from statistical analysis

$X^2 = 29.72$ df = 4 $P > 0.05$

Table 34
Previous Breast Problems and Breast Self-Examination Practice

Previous Breast Problems	Breast Self-Exam. Practice Yes	%	No	%	Total
Yes	50	86.2	8	13.8	58
No	406	64.2	226	35.8	632
Total	456	--	234	--	690

$X^2 = 12.28$ df = 1 P < 0.001

Table 35
Occurrence of Breast Cancer in Family and Breast Self-Examination Practice

Breast Cancer in Family	Breast Self-Exam Practice Yes	%	No	%	Tota;
Yes	50	86.2	8	13.8	58
No	406	64.2	226	35.8	632
Total	456	--	234	--	690

$X^2 = 0.30$ df = 1 P < 0.001

HYPOTHESIS 7

The hypothesis that, exposure to breast cancer in the family does not affect breast self-examination practice was tested.

Of the 23 respondents who had family members who had had breast cancer, 16 practiced breast self-examination and 7 did not, while 440 of 667 whose family members had not had breast cancer practiced. Table 35 shows that this difference is not statistically significant, P>0.05, indicating that exposure to breast cancer in family dies not affect breast self-examination practice.

CHAPTER FIVE

DISCUSSION OF RESULTS

DISCUSSION

This section is discussed under the following headings:

a. Demographic characteristics of respondents
b. Respondents knowledge of breast self-examination
c. Attitude of respondents to breast self-examination
d. Practice of breast self examination
e. Factors affecting breast self-examination and
f. Implications for cancer education.

a. Demographic Charcteristic of Respondents

Results showed that most respondents were Yorubas (77.3%). This may be due to the fact that the study was carried out in Ibadan, which is predominantly Yoruba. Most of the respondents (66.0%) were between 20 and 24

years of age, which corresponds with the age at which it is advocated that women should begin to practice breast self examination. Most respondents were single, highlighting that most female students in higher institutions are single.

With regards to religion, majority of the respondents were found to be christians. This could be attributed to the study being conducted in the southern part of the country where it is believed that there is a large christian population.

b. Respondents' Knowledge of Breast Self-Examination

Level of awareness of breast self-examination was found to be high (84.6%). According to Ajao (1979), malignant breast neoplasms have received a lot of attention, and this is rightly so because of the nature and the prognosis of the disease and most respondents source of information was through the mass media - TV/Radio (45.4%) followed by magazine/newspaper (23.8%). Lewison et al (1954) and Bryd (1974) indicated that the mass media is one of the traditional means of teaching self-examination. This is because the mass media has

the potential of reaching out to a large populace at the same time which most likely accounts for the high level of awareness. Chiedozi (1985) suggests that Nigerians are beginning to be sensitized to the significance of breast masses through public education programmes.

The level of knowledge of correct symptoms to look for in breast self-examination practice was low. Many respondents did not know of any symptoms (27.4%), 24.4% knew only one symptom (lumps), while only 0.6% knew all the eight symptoms. The result of this study confirms the report of Roberts et al (1984) in which it was reported that very few women knew of the signs to look for in breast self-examination practice other than a lump. This could be attributed to the observation that the lump is the most talked about symptom and in most cases people assume that a lump in the breast is synonymous with breast cancer.

Only 24.6% of the respondents knew that the breast self-examination should be practiced after menstruation. This is slightly higher than the 17% reported by Roberts et al (1984) in a survey of what Scottish women know about breast cancer and breast self-examination, but

lower than the 60% reported by Olaseha and Otolorin (1987) in their study of knowledge, practice and attitude of women to breast self-examination among selected women attending family planning clinic at the University College Hospital (UCH), Ibadan. These differences could be due to the methodology of sample selection. In this study and that of Roberts et al (1984) the respondents were randomly selected from a non-clinic setting and also from a large population, compared with Olaseha and Otolorin's study in which respondents were selected from a clinic in a teaching hospital where they are most likely to have been exposed to greater information.

The breast cancer digest (1979), reports that the tips of the three middle fingers should be used in breast self-examination, only 24.8% of the respondents knew that the three middle fingers should be used. Furthermore, according to Bryd (1974), firm pressure should be applied to the breasts during breast self-examination only, 25.6% of the respondents had correct knowledge of this. This low level of knowledge could be due to scanty or not detailed information from the sources through which the respondents became aware

of breast self-examination.

Majority of the respondents (82.0%) did not know of any type of breasts which could make breast self-examinaion difficult. In this study only 12.6% indicated pendulus breasts, and 2.9% lumpy breasts. Liebermann and James (1979), Waters and Nicholas (1982) and Roberts, et al (1984) reported that pendulus and lumpy breasts could make breast examination difficult even for doctors but that this information is usually not included in information about breast self-examination.

With regards to the correct procedure for carrying out breast self-examination, results from this study showed that 65.1% of the respondents did not know the correct procedure. According to Holtzman and Celentano (1983) studies which address the question of proper method of breast self- examination find that most women do not know how to carry out the procedure correctly because they had not been taught.

Attitude of Respondents to Breast Self-Examination and Breast Cancer

Most respondents (62.0%) agree that it is possible to cure breast cancer. According to Culter (1974) and Family Health International (1989) breast cancer can be cured, but this is dependent on the stage of the disease when diagnosed. One is not sure whether respondents in this study knew about the issue of the stages of cancer. Hall, et al (1977), and Huguley and Brown (1981) reported that through breast self-examination it is possible to detect breast cancer in womenin its early stages and majority of the respondents (86.4%) agreed with this. This is further confirmed in other similar studies conducted by Shapiro, et al (1971) and Hartman (1980),they reported that early detection of breast cancer improves chances of cure.

Studies by Hall, et al (1977); Greenwald, et al (1978); Kirch and Klein (1978) and Shwartz (1978), reported that breast self-examination is effective for detecting breast cancer. This assertion is further highlighted in this study in which 91.9% and 80.3% of the respondents agreed withthis suggestion. This high

level of favourable opinions towards the detection of breast cancer through breast self-examination and the possibility of cure could be as a result of the information the respondents had received.

Majority of the respondents (95.1%) agreed that women should be encouraged to examine their breasts. Huguley and Brown (1981), Roach and O'Fallon (1982) suggest that if women are to be the primary detectors of breast cancer,then they should be encouraged and trained to examine their breasts. The present attitude towards encouraging women to examine their breast could be attributed to a possible feeling of vulnerability to breast cancer by the respondents.

Many respondents (42.3%) disagreed that it would be preferable to have their breasts examined by a doctor than do breast examinaion a home.This attitude might have resulted from body image perception of respondents and a reflection thatwomen generally feel a need for privacy on issues that relate to human sexuality. However, 34.9% of the respondents would prefer to have their breasts examined by a doctor. This according to Olaseha and Otolorin (1987) could suggest that the

respondents were either afraid to discover lumps in their breasts themselves or they did not believe that they had adequate skill and knowledge to perform breast self-examination.

Most of the respondents (71.3%) disagreed with the statement that educated women are more at risk to breast cancer than uneducated women. It appears that the respondents did not see education as a risk factor for developing breast cancer. However, Family Health International (1989) reports that educated women are more at risk to breast cancer because they tend to adopt western lifestyles especially in their diets and this had been identified as a risk factor.

Results from various studies conducted by MacMahon, et al (1970), Byers, et al (1985), McTierman and Thomas (1986) and Yuan, et al (1988) showed that women who breastfeed their babies are at lower risk to breast cancer. About half of the respondents were undecided on the issue. They probably do not associate breast feeding with breast cancer.

Respondents' Practice of Breast Self-Examination

Although 84.6% of the respondents were aware of breast self-examination, 66.1% had ever practiced it, and only 11.6% of these number were doing so on a monthly basis in the last six months. Acording to Ademuwagun (1985) "Health knowledge is basic to meaningful and long lasting health practice, but knowing is one thing and doing is another in health matters". This could be the possible reason for the difference in the number of respondents who were aware of breast self-examination with those who had ever practised and those who were practising monthly.

The reasons given by most respondents for examining their breasts were to look for lumps and abnormalities, while others did it out of mere curiousity. Those who reported not examining their breasts also gave reasons, including not having time, not feeling the behaviour was important, feeling they could not get cancer, to lack of knowledge of the behaviour or technique. Rosenstock, et al (1974) stated that, an individual will take action to avoid disease or a health problem if he/she feels threatened. From the reasons given by the respondents who were not practising breast self-examination, it is obvious that they did not feel vulnerable to breast

cancer.

Various techniques were used by respondents who examined their breasts. These include standing before a mirror only,standing before a mirror and lying down, lying down only and standing under the shower. This shows that they had come in contact with various resource materials and were carrying out the procedure as might have been described in those materials. This also suggests that the materials are possibly non-standarized and allow for variation in techniques. It is obvious therefore that given the exposure to various possible techniques individuals will most likely choose the most convenient for themselves.

Factors affecting Breast Self-Examination Practice

In this study, four factors (previous knowledge of breast self-examination, course of study, students level of education and previous breast problems) significantly affected breast self-examination practice (Tables 30, 31, 34 and 35). Thefindings are similar to those reported by several authors including Brown (1978), Foster, et al (1978), Howe (1981), Holtzman and Celentano (1983) and

Roberts, et al (1984), in which they found previous breast problems to be associated with breast self-examination practice.

Implications for Cancer Education

Health education is a process of influencing, changing or reinforcing positive health behaviour (knowledge, attitudes and practices). According to Ademuwagun (1985), the goal of health education is positive health practice. Positive health behaviour is therefore of great importance in issues of health promotion such as breast self- examination.

The results from this study have highlighted some useful information about the knowledge, attitudes, and practices of female students in higher institutions in relation to breast self-examination and factors that affect its practice among them. How cancer education can address these issues are discussed below.

Results showed that there was a high level ofawareness of breast self-examination (Table 14) among the respondents, but this did not apply to their

knowledge of correct symptoms to look for during the procedure. In addition only 7.2% of the respondents had hospital-based information on breast self-examination and the mass media was the major source of information.

This brings to light the fact that, it is not sufficient to be aware of a health behaviour. It is also important that one should know what the behaviour entails. This difference could however be corrected if the right information and communication strategies are applied. It will be necessary for the health education units in the Federal and State Ministries of Health and the Nigerian Cancer Society to check resource materials being released to the public to ensure that all the symptoms of breast cancer are mentioned.

Though the mass media which is the major source of information has done notable well in creating a high level of awareness, other forms of information dissemination strategies such as seminars, symposia and public lectures where details of the behaviour can be properly spelt out will need to be employed. For University students, the use of videos and leaflets may be important. Key messages should focus on the correct

procedures to performing breast self-examination. It will also make an impact on the students if opinion leaders, like female professors and female medical practioners are used during these seminars.

The low percentage (11.6%) of respondents who examined their breasts regularly is an indication that there is lack of motivation among them to perform the behaviour. According to Turner et al (1957), motivation bridges the gap between knowledge and action. The students therefore need a constant source of motivation to encourage them to consistently practice the behaviour. This can be achieved by producing radio and television jingles in which the desired messages are built around a personality which most students will like as a role-model. Specially designed training programmes may also give them sufficient skills to motivate them to practive behaviour. Encouraging students to visit a cancer unit in a teaching hospital may also motivate some to adopt the practice.

To encourage a positive attitude towards breast self-examination practice among female students, resource materials need to highlight the benefits of the

behaviour, explain the severity of the cancer problem, and the susceptibility of individuals to the disease. Hochbaum (1958), reports that unless an individual believes that he/she is susceptible to a disease condition, he/she is not likely to take any action. Rosenstock et al (1984) stated that an individual will act if he/she perceives a level of susceptibility, perceives the severity of the disease, and sees the disease as a threat. According to Ajzen and Fishbein (1980) an individual's attitude toward a behaviour determines whether the individual will act or not.Secondly, the person's perception of the opinions of people who he/she thinks are important also affects practice of a specific behaviour.

Important public figures and renowned authorities in the area of cancer should be brought into the campuses using the forum of guest lectures and rallies to promote breast self-examination practice. Also, the female students during their annual Hall week, can devote a whole day to activities that would publicise breast self-examination.

Individual counselling, role plays, demonstration

sessions and group discussions could be used (Brieger and Adeniyi 1982), through existing campus activity groups such as the Alpha club, Christian Union, Muslim students Society, etc. This approach would most likely stimulate the interest of the students and improve their attitude towards the behaviour and thereby step up and maintain a high level of regular practice.

RECOMMENDATIONS

The ever rising number of women presenting with breast cancer in the country gives cause for concern. According to Solanke (1981), it is important that developing countries pay attention to their present cancer problems and prepare to meet the challenges of the future.

In the light of the findings of this study, the following recommendations are suggested.

1. Breast self-examination information packages and programmes (information leaflets, demonstration booklets, drama sketches, posters etc) should be designed by health educators for students.

2. Breast self-examination information materials should be checked by the health education units of the Federal and State Ministries of Health to ensure that the information contained is complete, accurate and appropriate before they are released into circulation.

3. Posters and handbills should be strategically placed within and around the female hostels on campuses regularly, to act as sources of information and constant motivation for regular breast self-examination practice.

4. Training programmes should be organized regularly on campuses by the health service providers to teach the students the correct techniques of breast self-examination.

5. The Nigerian Cancer Society should liase with the health services and the students union to organize programmes such as public lectures, seminars and symposia on campuses to create awareness and to provide information that is not deficient.

6. The Federal and State Ministries of Health incollaboration with the health services should provide student activity groups with resource materials (posters, handbills, drama sketches etc.), to aid them in the organization of programmes to promote breast self-examination practice.

SUMMARY AND CONCLUSION

The results of this study showed that although there was a high level of awareness of breast self-examination among the students, and about two-thirds of the respondents had ever practiced breast self-examination (at one time or the other), the level of regular practice was very low (11.6%).

The findings also indicated that knowledge of time for practice, signs/symptoms, steps of the technique and sequence were low and this shows that the sources of information are likely to be content deficient.

Attitude towards breast self-examination is

generally favourable but could be further improved with adequate information.

In the light of these findings, recommendations are suggested, which could be considered and utilized by appropriate agencies. It is hoped that if these recommendations are implemented there will be marked improvement in regular breast self-examination practices among female students in higher institutions, not just in Ibadan but in Nigeria as a whole.

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APPENDIX A

QUESTIONNAIRE

INSTRUCTIONS: Fillin the number that is appropriate in each box provided and write in front of space provided.

All information given will be treated with strict confidentiality.

1. Name of institution_____

2. Hall of Residence and Room No._____

3. Marital Status

1. Married
2. Divorced
3. Separated
4. Never Married / /

4. Ethnic Background

1. Yoruba
2. Igbo
3. Hausa
4. Other (Specify) _____ / /

5. Age

1. 13 - 19 years
2. 20 - 24 "
3. 25 - 29 "
4. 30 - 34 " / /
5. 35 - 39 "
6. 40 - 44 "
7. 45 years

6. Religious Affiliation

1. Christianity
2. Islam / /

3. African Traditional Religion
4. Other (Specify)

7. Course of Study _____

8. Qualification in view
1. Certificate course
2. O.N.D.
3. H.N.D.
4. B.A./B.Sc./B.ed/LLB/MBBS/BDS
5. Masters
6. Ph.D
7. Other (Specify) / /

9. Number of years already spent in institution
1. 1 Year
2. 2 Years
3. 3 " / /
4. 4 "
5. 5 "
6. Others (Specify)

10. Occupation of Father
1. Farmer
2. Trader
3. Civil Servant / /
4. Professional Worker (Specify)_____
5. Other (Specify)_____

11. Education level of father
1. Illiterate
2. Primary
3. Secondary / /
4. Aprenticeship Training (Specify)_____
5. Professional training (Specify)_____
6. Univeristy Education
7. Other (Specify)

12. Occupation of Mother
1. Trader
2. Housewife / /
3. Civil Servant
4. Professional Worker (Specify)_____
5. Other (Specify)_____

13. Educational level of Mother

1. Illiterate
2. Primary
3. Secondary / /
4. Apprenticeship Training (Specify)_____
5. Professional Training (Specify)_____
6. University Education
7. Other (Specify)_____

14. a. Have you ever heard of Breast Self-Examination?

1. Yes / /
2. No

b. If yes, where did you first hear of it and when?

_____

_____

15. Why is Breast Self-Examination done?_____

_____

_____

16. What signs/symptom(s) do you look for in Breast Self-Examination?

1. _____ 5. _____
2. _____ 6. _____
3. _____ 7. _____
4. _____ 8. _____

17. What is the best time for carrying out Breast self-examination?

1. Before menstruation
2. During menstruation
3. After menstruation
4. At any time / /
5. Don't know

18. How often should a woman examine her breasts?

1. Daily
2. Weekly
3. Monthly

4. Once in 2 onths
5. Once in 3 months
6. Once in 6 months
7. Don't know / /

19. What position is best for a woman when she is about to perform breast self-examination?_____

20. Which fingers should a woman use to examine her breasts?_____

21. Which part of the fingers should a woman use to do breast self-examination?

1. Tips
2. Flats
3. Don't know / /

22. How much pressure should a woman use in breast self-examination?
1. Slight
2. Firm
3. Don't know / /

23a. Do you know if there are breasts which may make breast self-examination difficult?

1. Yes
2. No / /

b.If yes, state type(s) of breast_____

24a. Have you ever tied to examine your breasts yourself?

1. Yes / /
2. No

b. If Yes, why?_____

c. If No, why not?_____

25a. Have you ever been taught how to perform breast self-
examination?

1. Yes
2. No / /

b. If yes, state source of information_____

26. About how often have you examined your breasts in the last 6 months?

1. Not at all
2. Once or twice
3. 3 - 4 times
4. 5 - 6 times
5. More than 6 times

27a. Do you have a particular day that you examine your beasts?

1. Yes
2. No / /

b.If yes, when?_____

28. How confident are you that you are doing it properly?

1. Very / /
2. Quite
3. No at all

29.Describe how breast self-examination should be carried out in order of sequence:

_____
_____

30. What do you think should teach women breast self-examination techniques?

1. Doctors
2. Nurses
3. Health ducators
4. Mothers / /
5. Other (Specify)_____

31. What constraints are responsible for your inability to practice breast self-examination?

1. Culture

2. Religion
3. Time
4. Fear/Anxiety / /
5. Other (Specify)_____

32. Have you ever had problems of any type with your breasts before?

1. Yes / /
2. No

b. If yes, state type of problem_____

33a. Has anyone in your family ever had breast cancer?

1. Yes / /
2. No

b. If Yes, state your relationship with that person _____

_____

_____

FOR QUESTION 34 - 43 TICK THE APPROPRIATE COLUMN

	Agree	Undecided	Disagree
34. It is possible to cure breast cancer			
35. Through Breast Self-Exam it is possible to detect breast cancer in women while it is still in its early stages.			
36. Early detection of Breast			

cancer improves chances of cure.			
37. Women should be encouraged to examine their breast			
38. It is preferable to have my breasts examined by a doctor than to do self-examination at home.			
39. It is immoral for women to palpate their breasts.			
40. Educated women are more at risk to breast cancer than uneducated women.			
41. Women who breastfeed their babies are at a lower risk of getting breast cancer.			
42. Performing breast self-examination is a waste of time because the technique is difficult to follow properly.			
43. Breast self-examination is effecive for detecting breast cancer.			