

## The Role of Health Education on Breast Cancer awareness among University of Calabar Female Undergraduates

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### Abstract

The study sought to determine the role of health education on breast cancer awareness among University of Calabar female undergraduates. To achieve the purpose of the study, three hypotheses were formulated to guide the study. Related literature was reviewed, while a survey research design was adopted for the study. Appropriately develop and validated instrument: Awareness and Breast Cancer Disease reduction Questionnaire was validated with acceptable reliability indices. The research instrument was administered to 152 University of Calabar female undergraduates. The resulting data was analyzed using chi-squared ( $X^2$ ) statistical technique. The results showed that breast cancer awareness significantly affect individual's knowledge of the symptoms and risk factors of breast cancer, as well as their practice of breast self-examination. Most importantly the result showed that Health Education has a positive significant role in the reduction of breast cancer. In conclusion, it was recommended among others that more of this kind of study should be carried out regularly to educate student about their health, and health education as a subject be adopted as a core subject in our schools curriculum. Also Government and Non-governmental organizations should organize seminars, health awareness talk shows and campaign on other health related issues.

**Keywords:** Health Education, Breast cancer awareness, Breast-self examination, Symptoms and risk factors.

### 1. Introduction

Health education is one important activity that is commonly undertaken to promote health. It is the communication of information that enables people to make informed decisions about their health. Health education is a profession that educates people about their health (mckenzie and others 2009). Donatella (2009) also defined health education as the principle by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance or restoration of their health. The joint committee of Health Education and Promotion Terminology of 2001 defined health education as any combination of planned learning experiences based on sound theories that provide individuals, groups, families and communities with the opportunity to acquire information and the skills needed to make quality health decision.

Furthermore, the World Health Organization, (WHO) defines health education as "comprising of consciously constructed opportunities for learning involving some form of communication designed to improve health literacy including previous knowledge, and developing life skills which are conducive to individual and community health(WHO 1998).

Health education programmes include; health campaign awareness, mass media, seminars, workshops, school health education programme, among others.

Breast cancer awareness is an effort to create awareness and reduce the stigma of breast cancer through education on the risk factors, symptoms and treatment, hoping that greater knowledge will lead to earlier detection of the disease. Breast cancer has been known and feared with no reliable treatment due to the surgical outcomes which is often fatal. But following the dramatic improvement in survival rates at the end of the 19<sup>th</sup> century, William Stewart Halsted promotion of radical mastectomy raised a long term survival rate by educating women about the importance of self breast examination for early detection and prompt action (Belal, 2006). It is on this backdrop that this study seeks to find the extent to which one's level of awareness can help reduce the spread of breast cancer disease.

Breasts are the most prominent superficial structures of the anterior chest wall in man. They are modified sweat glands. Both men and women have breast, while that of the male are rudimentary and functionless, that of the female are well developed and adopted for lactation. During puberty (age 9-15years) the female breast normally enlarges due to glandular development and increased fat deposition.

The size and shape of one's breast can be determined by genetic, ethnic and dietary factors (Moore and Arthur, 2006). Some diseases affect the breast they could either be malignant or benign, congenital or acquired. Breast cancer is one of the most common cancers in women worldwide. It is a major cause of death among women aged 30 and above. Aside of Cervical cancer, breast cancer is one of the most common form of cancer among women in both high and low resource setting countries (WHO, 2004).

Breast cancer is said to be a major public health problem globally with over one million new cases diagnosed annually, resulting in over 400,000 annual death and about 4.4 million women living with the disease, in actual fact, one out of eight women will be affected during their lifetime (Okobia and Bunker, 2006). The focus of this

study is to create and determine the level of breast cancer awareness among female undergraduates in University of Calabar and the Role of Health Education in creating the awareness.

## 2.1 THEORETICAL FRAMEWORK

Rimal,(2000) affirmed that awareness leads to knowledge and knowledge leads to behavior modification. While Albert North Whitehead (2000) in Rimal (2000) opine that the goal of education is to provide life and wisdom from information learnt. It is on this premise that the Information Theory and The Health Belief Model are applied.

**Information Theory** (Shannon and Warren, 1949) adapted from Rimal (2000), this theory attempts or seeks to discover the process structures and mechanism that determine what happens to information from the time it is sent to the time it is received and acted upon. It also shows that information cannot be transmitted without mediums such as the mass media which include the print and electronic media, health education seminars, talk shows, and community health programmes.

The Health Belief Model (HBM) (Rosenstock, 1950): This is a psychological model that attempts to explain and predict health behavior based on the attitude and beliefs of an individual. The health belief model stipulates that health related behavior is influenced by a person's perception of the threat posed by a health problem and the value associated with his or her actions to reduce that threat.

According to Champion (1987) health belief model consists of six concepts;

- Perceived susceptibility of an illness
- Perceived seriousness of the illness
- Perceived benefits of the presumed action
- Perceived barrier for the presumed action
- Confidence in one's ability
- Health motivation

A woman who perceives that she is susceptible to breast cancer would be more likely to perform regular breast self-examination. This is based on the understanding that she will take a health related action if she;

- Feels that a negative health condition can be avoided that is breast cancer can be reduced by secondary means.
- Has a positive expectation that by taking a recommended action, the negative health condition can be avoided.
- Also believes that the preventive measures taken will be successful, if she consciously performs a monthly examination on her breast, do away with those predisposing factors associated with breast cancer and report to her doctor if she feels any lump or abnormality on her breast during examination.

## 2.2 STATEMENT OF PROBLEM

The level at which patients present their cases of breast cancer at an advanced stage when little or no benefit can be derived from any therapy is the hallmark of this disease amongst Nigerian women. Recent global cancer statistics indicate rising global incidence of breast cancer and the increase is occurring at a faster rate in populations of developing countries that hitherto enjoyed low incidence of the disease.

Being worried by the prevailing situation on women as decision makers and health care givers in their families across the globe, makes the need to create awareness and screening programme necessary for early detection of the disease among young female (the female undergraduates of University of Calabar), and here lies the role of health education in creating awareness that brings about behavior modification.

### PURPOSE OF STUDY

The purpose of this study is to determine the role of health education in creating and investigating the level of breast cancer awareness among female undergraduates in University of Calabar, Nigeria.

### STATEMENT OF HYPOTHESES

The following hypotheses were proposed to guide the study;

- There is no significant relationship between breast cancer awareness and knowledge of symptoms, risk factors of breast cancer disease.
- There is no significant relationship between breast cancer awareness and the practice of breast self-examination.
- Health education has no significant role in reducing breast cancer.

### SIGNIFICANCE OF THE STUDY

The result of the study will help female students in recognizing the early signs and symptoms of breast cancer, which may include lumps, change in color of the breast, retraction of the nipple, and abnormal discharge from

the nipples.

This study will go a long way to educate people about symptoms and the risk factor of breast cancer since more than 30% of the case of breast cancer can be reduced by modifying our life styles.

The result of the findings intends to spur students to carry out examination on their breast, and this will act as secondary prevention by making early diagnosis and prompt intervention possible to save lives.

### 2.3 LITERATURE REVIEW

Moore and Arthur (2006) described breast cancer as a malignant tumor in the glandular tissues of the breast. Such tumors are called Carcinomas. They form when the processes that control normal cell growth breakdown, enabling a single abnormal cell to multiply at a rapid rate. Carcinomas which tend to destroy an increasing proportion of normal breast tissue over time may spread or metastasize to other part of the body.

Breast cancer can strike men and women, although women are about 100 times more likely to develop the disease than men. Most cancer in female breast forms shortly before or after menopause with three quarter of all cases being diagnosed at age fifty (50), American cancer Society (2010).

According to Encyclopedia Britannica (2012) Breast cancer is the most common cancer among women worldwide, in North America and Western Europe where lifespan are longer, the incidence is highest. In addition breast cancer is the leading cause of death among women age 20 to 59 in high income countries.

Harsh (2010) asserted that breast cancer is seen clinically as a solitary painless palpable lump that is detected quite often by breast self examination (BSE). The higher one's age, the more likely it is for breast lump to become cancerous, therefore all breast lumps no matter the age of the patient must be removed surgically.

Okobia and Bunker (2006) noted that cancer is a pan societal problem that affects two-third of the world population. Among them, breast cancer is the most common cancer diagnosed in women, both in developing and developed countries. It is the 2<sup>nd</sup> leading cause of death in women worldwide. Proximately one out of eight women develops breast cancer all over the world. The burden of the disease both in developed and developing countries is increasing and if no action is taken it will go beyond control. According to International Agency for Research on cancer 1.5 million new cases of breast cancer was diagnosed in 2002, and among them approximately 411,000 died. Based on current estimate of an average annual increase in incidence ranging from 0.5% to 3% per year, the projected incidence increase in 2011 was 1.4-1.5 million (Bray, MacCarron and Maxwell, 2013).

A risk factor is anything that increases an individual's chance of getting a disease. Example, smoking is a risk factor for cancers of the lung. Risk factors can be divided into risk determinants and risk modulations. Risk determinants cannot be changed or influenced, on the other hand risk modulants can be changed or influenced. Determinant risk factors include the following: gender, growing age, genetic predisposition, family history of breast cancer, personal history of breast cancer, race and early age at menarche and late menopause. Risk modulators (Lifestyle- related Breast Cancer Risk factors) they include: first birth at late age and low parity, hormone replacement therapy, alcohol consumption, obesity and high-fat diets ([www.cancer.gov](http://www.cancer.gov), 2008).

Early breast cancer is usually symptomless but there are some symptoms that develop as the cancer advances. Breast lump or breast mass is the main symptoms of breast cancer. Lump is usually painless, firm to hand and usually with irregular borders. Every lump is not cancerous sometimes some lumps or swelling in the breast tissue may be due to hormonal changes or benign (not harmful) in nature.

Besides these are some other symptoms which are important;

- Lump or mass in the armpit
- A change in the size or shape of the breast
- Abnormal nipple discharge: usually bloody or clear- to yellow or green fluid.
  - May look like pus (purulent).
- Change in the color or feel of the skin of the breast, nipple or areola.
  - Dimpled, puckered or scaly. Retraction, orange peel appearance. Redness. Accentuated veins on breast surface.
- Change in appearance or sensation of the nipple
  - Pulled in (retraction), enlargement or itching.
- Breast pain, enlargement or discomfort on one side only.
- Any breast lump, pain, tenderness or other change.
- Symptoms of advanced disease are bone pain weight loss, swelling of one arm and skin ulceration.

Source: Medline plus Medical Encyclopedia: Breast cancer, 2012.

Early diagnosis is important is for effective treatment and long term survival in breast cancer. Research suggests that women medical help seeking behavior depends on factors related to their knowledge, believes and breast cancer management (Haji-Mahmoodi *et al*, 2002). Prevention behavior is an essential element for reducing cancer mortality. Knowledge is a necessary predisposing factor for behavioral change. Therefore, to educate

women about the warning sign, symptoms and strive for improvement of health seeking behavior by making them aware is an important step to drag down high incidence and mortality rate for breast cancer. It is important that different professions like medical professionals, media, academic teachers and leaders can play a vital role to educate people.

Breast cancer awareness: education and awareness alone may contribute in a favorable shift in the stage of breast cancer at presentation. WHO, 2007 stressed that education need to be culturally appropriated and targeted toward the individual population so that highest benefit can be gained it is also important to educate men as well as women because men can facilitate early detection in their partner and help to reduce the barrier to seek care. The important aspect of awareness is the dissemination of knowledge that breast cancer is curable, and if diagnosed early survival rate is good. Anderson (2008) asserted that with earlier stage at presentation and with good treatment facilities it is not a big problem. According to Yarbro (2003) it is also important to educate health care providers especially those who came in regular contact with women, because evidence suggest that nurse for example can play an important role in providing the information regarding breast cancer in countries with limited resources. Also breast self – examination (BSE) is a simple and cost effective method of breast cancer screening in limited resources countries. BSE is a formalized practice that a woman is taught to examine her own breast regularly (usually monthly after 20years). Anderson (2008) further explained that during the breast self – examination, a woman systematically inspect and palpate each of her breast using one of her hands to examine her breast and raise the other arm above her head. She performs her examination both in lying and standing position. Usually it is better to examine the breast in front of a mirror so that she can inspect any sort of asymmetry or dimpling.

The Breast Self Examination (BSE) is done in an attempt to find out breast cancer earlier and reduce mortality. Studies based on breast cancer patient's retrospective self reporting on their BSE have shown a positive relation with early detection of breast cancer, Stockton (2006). There are also evidences that most of the early breast cancer is self-discovered. On the other hand, evidence from recent studies has raised the question of the efficacy of teaching BSE. Two randomized control trial of BSE that was conducted in St. Petersburg, Russia (Semiglazov, et al 1999) and Shanghai, China (Thomas, et al 2002) showed no clear evidence to support the role of routine Breast Self Examination (BSE). Neither of these studies showed a reduction in the risk of dying from breast cancer in women who were taught BSE. Based on their result and other multiple observational studies, by a working group of International Agency for Research on Cancer (IARC) (2002) concluded that there is inadequate evidence that BSE can reduce mortality from breast cancer. However, other researchers do not agree on this issue. Their view is that "The absence of evidence of a benefit is not the same as evidence of no benefit. Anderson, et al (2008) reported that the global summit early detection panel did not positively recommend the BSE on the basis of current evidence but they also did not discourage to use it either. BSE may have great value in terms of awareness and motivating women to see a health care provider when they find a lump. And earlier response to symptoms may reduce the cancer stage at diagnosis. In addition, BSE may be an effective primary tool in breast health education.

For early detection of breast cancer mammography is the gold standard but there are 2 limitations which are; it's cost and another is its technical complexity. As a result mammography is not recommended for countries with limited resources.

The role of health education in creating breast Cancer Awareness cannot be overemphasized. Health education as a tool for health promotion is critical for improving the health of populations and promotes health capital. Health promotion is defined as the process of enabling people to increase control over and to improve their health. Health promotion is viewed as a combination of health education activities and the adoption of healthy public policies. Health education focuses on building individuals capacities through educational, motivational, skill-building and consciousness- raising techniques. Public health policies provide environmental support, encourage and enhance behavioral change.

According to the American cancer Society, quality health education programs delivered in schools can improve the well-being and health of students such as the female undergraduates of the University of Calabar. Therefore engaging in healthy behaviors such as participating in physical activity, healthy eating and avoiding the use of tobacco, has been linked to the reduction of chronic diseases like cancer.

The Joint Committee on National Health Standards (2007) indicated that health education programs can contribute directly to one's ability to successfully adopt and practice behaviors that protect and promote health and reduce health risk. Soni (2007) maintained that health and well-being of people is not a matter of luck, chance or random event, it must be a planned outcome. He further explained that, this calls for well-designed, well-resourced and sustained health education in schools. Because an improved health status is of economic value, preventive measures such as monthly self breast examination, not smoking, maintaining a healthy weight and regular exercise can reduce ones risk of having breast cancer.

Quality school health education provides the best opportunity to promote positive health behavior among

students.

The role of health education skills include identifying the influence of family, peers, culture, media and technology on health behaviors; knowing how to access and use valid health information and using communication, decision-making, goal-setting and advocacy skills to engage in health enhancing behaviors. In 2004, a report by the institute of Medicine on health literacy stated that most effective means to improve health literacy is to ensure that education about health is part of the curriculum at all levels of education. Therefore the need to create awareness on breast cancer disease through health education is of great importance in order to improve women health and save lives is also significant if there is going to be drastic reduction in the incidence of breast cancer in the future.

### 3. METHODOLOGY

The research design adopted for this study was survey design. Survey research is very useful for opinion and attitude studies. Survey research is very useful for opinion and attitude studies. The area of study is the University of Calabar, which was created in 1975. It was a campus of University of Nigeria Nsukka before being transformed into a university. It is situated between Calabar Municipality and Calabar South local government area of Cross River State. The University of Calabar has 10 faculties (faculty of Agriculture, Arts, Education, Law, Management Sciences, Social Sciences, Basic Medical Sciences, Allied Medical Sciences, Medicine and Dentistry and Science).

The female students of the university are known as malabresses, while the male students are known as malabites, because, the male hostel was named Malabor as the students were faced with challenges at a time when Nigerian deportees from Equatorial Guinea occupied the place. The capital of Equatorial Guinea is Malabor. The target population for the study is made up of all female undergraduate in the faculty of Education, department of Curriculum and Teaching. The sampling technique adopted for the study is the simple random sampling technique. The purpose for using simple random sampling technique is to compose a sample that will yield research data that can be generalized to larger population. In the same manner, fifty percent (50%) of the total population of the faculty were randomly drawn for the study.

The sample of the study was made up of (158) female undergraduate randomly selected from the faculty of Education – Department of Curriculum and Teaching, University of Calabar. The main instrument used for data collection is Awareness and Breast Cancer Disease Reduction Questionnaire (ABCRQ). The questionnaire was divided into 2 sections, section A was design to collect the personal respondents' data such as: age, year of study, marital status, religion and number of children. Section B consist of twenty-eight items two point scale (yes or no) questionnaire, designed to measure responses on information on level of awareness of breast cancer, self examination, symptoms and risk factors, preventive measures and the role of health education.

A split half procedure was used in establishing the reliability estimate of the instrument, using Pearson Product Moment Correlation which generated value of 0.88 – 0.94 as seen in Table I. The questionnaire was the main instrument used for data collection. The questionnaire was made up of thirty-two (32) items scanning through sections A – B. Section A sought to elicit information on personal data, Section B of the instrument focused on breast cancer awareness. Scores given to the response were categorized as follows:

Responses	Scores
Yes	2 points
No	1 point

The respondents were informed of the exercise and the essence of giving objective responses to the items. They were also told to be honest in their responses to the items as the information obtained would be treated with all amount of confidentiality and be used as data for the research only.

The questionnaires were administered personally by the researcher with the help of Co-Author. At the end of the exercise, hundred and fifty-two (152) copies of the questionnaires were successfully completed and retrieved.

The methods of data analysis depended on each hypothesis. Each hypothesis of the study was re-stated and the variables in it were identified and appropriate statistical analysis techniques for testing the hypothesis were given. All the hypotheses were tested at 0.05 level of significance. The ABCRQ was administered, out of 158 copies of questionnaire that were administered, 152 copies were properly filled and returned. The completed questionnaires were coded and the methods of data analysis applied on the hypothesis. All hypotheses were tested at 0.05 level of significance.

### 4. RESULTS AND INTERPRETATION

Hypothesis one was tested using contingency Chi – square ( $X^2$ ). The independent variable is breast cancer while the dependent variables are the knowledge of symptoms and risk factors of breast cancer. The result is shown in Table II. The result as shown in Table I reveals that the calculated  $X^2$  value of 14.5 is greater than the critical  $X^2$  value of 3.84 at 0.05 level of significance with 1 degree of freedom. The result of the statistical analysis is significant since the calculated value was greater than the critical value. With this result breast cancer awareness

has a significant effect on the knowledge of symptoms, risk factors of breast cancer disease.

Contingency Chi – square ( $X^2$ ) was also used in testing the second hypothesis. Breast cancer awareness has a significant influence on the practice of breast self examination. The result of this analysis is presented in Table II. The result in Table II indicates that the calculated  $X^2$  value of 7.85 is greater than the critical value of 3.84 at 0.05 significance level and 1 degree of freedom. This means that there is a statistical significant influence of breast cancer awareness on practice of self-examination; therefore the null hypothesis is rejected.

Hypothesis three stated that health education has no significant influence on the role in reducing breast cancer. Contingency Chi – square ( $X^2$ ) was also considered the most appropriate statistical technique employed to test the hypothesis. The result of the analysis is presented in Table IV. As shown in Table IV the calculated  $X^2$  value of 11.27 is greater than the critical  $X^2$  of 3.84 at 0.05 significance level with 1 degree of freedom. Since the calculated value is greater than the critical value, this implies that Health Education has a significant influence on the role of reducing breast cancer.

Table 1.

Split – half reliability coefficient of the research instrument (N = 20)							
S/N	Variables	Testing	No. of items	$\bar{X}$	SD	$R_{xy}$	$r_{tt}$
1	Awareness of breast Cancer	Odd	3	8.06	1.64	0.80	0.90
		Even	3	9.53	1.48		
2	Self breast Examination	Odd	3	9.11	1.48	0.79	0.88
		Even	3	9.06	2.01		
3	Symptoms of breast cancer, risk factors	Odd	3	8.12	2.42	0.87	0.93
		Even	3	8.55	2.36		
4	Reduction of breast cancer disease	Odd	2	6.55	2.36	0.88	0.94
		Even	2	6.26	2.48		
5	Health education	Odd	3	9.13	2.13	0.88	0.94
		even	3	9.04	2.01		

TABLE II

Contingency Chi – square ( $X^2$ ) of the breast cancer awareness knowledge of symptoms, risk factors of breast cancer disease (N = 152)

Knowledge of symptoms, risk factors of breast cancer disease	Breast cancer awareness		Total	Cal $X^2$
	Yes	No		
<b>Yes</b>	75 (64.47)	25 (35.53)	100	
<b>No</b>	23 (33.53)	29 (18.47)	52	14.15*

  

<b>O</b>	<b>E</b>	<b>O – E</b>	<b>(O - E)<sup>2</sup></b>	<b><math>\frac{(O - E)^2}{E}</math></b>
<b>75</b>	64.47	10.53	110.88	1.72
<b>25</b>	35.53	- 10.53	110.88	3.12
<b>23</b>	33.53	- 10.53	110.88	3.31
<b>29</b>	18.47	10.53	110.88	6.00
<b>Total</b>		98	54	152

\*Significant at 0.05, critical  $X^2 = 3.84$ , df = 1  
 $X^2 = 14.15$

TABLE III

Contingency Chi – square ( $X^2$ ) of influence of breast cancer awareness on practice of breast self examination (N = 152)

Practice of breast self examination	Breast cancer awareness		Total	Cal $X^2$
	Yes	No		
<b>Yes</b>	63 (54.80)	22 (30.20)	100	
<b>No</b>	35 (43.20)	32 (23.80)	52	7.85*
<b>Total</b>	98	54	152	

\*significant at 0.05, critical  $X^2 = 3.84$ , df = 1

O	E	O - E	(O - E) <sup>2</sup>	$\frac{(O - E)^2}{E}$
63	54.80	82	67.24	1.23
22	30.20	- 82	67.24	2.23
35	43.20	- 82	67.24	1.56
32	23.80	82	67.24	2.83

$X^2 = 7.85$

TABLE IV  
 Contingency Chi – square ( $X^2$ ) of the role of health education in reducing breast cancer (N = 152)

Role in reducing breast cancer	Health Education Yes	No	Total	Cal $X^2$
Yes	69 (59.32)	23 (32.68)	92	
No	29 (38.64)	31 (21.32)	60	11.27*
<b>Total</b>	98	54	152	

\*significant at 0.05, critical  $X^2 = 3.84$ , df = 1

O	E	O – E	(O - E) <sup>2</sup>	$\frac{(O - E)^2}{E}$
69	59.32	9.68	93.70	1.58
23	32.68	- 9.68	93.70	2.87
29	38.68	- 9.68	93.70	2.42
31	21.32	9.68	93.70	4.40

$X^2 = 11.27$

## 5. DISCUSSION

The result of the study reveals that breast cancer awareness has a significant effect on the knowledge of symptoms and risk factors associated with breast cancer disease. This result is in line with Medline plus Medical Encyclopedia: Breast Cancer, 2012 documented that breast cancer is usually symptomless, but there are some symptoms that develop as the cancer advances. Breast lump or breast mass is the main symptom of breast cancer. Every lump is not cancerous, sometimes some lumps or swelling in the breast tissue may be due to hormonal changes or benign (not harmful) in nature. In the same document some other symptoms worthy of note were: lump or mass in the armpit; a change in size or shape of the breast; abnormal nipple discharge (clear to yellow or greenish fluid, bloody); change in the color or feel of the skin of the breast; change in appearance or sensation of the nipple; breast pain, enlargement or discomfort on one side only; any breast lump, pain, tenderness or other change; symptoms of advanced diseases are bone pain, weight loss, swelling of one arm and skin ulceration.

On breast cancer awareness and practice of breast self – examination, the result of the study showed a significant influence of breast cancer awareness on the practice of breast self – examination. The findings is in line with the views of Anderson (2008), Bray, MacCarron and Maxwell (2013); Thomas, Gao and Ray (2002), they observed that breast self – examination (BSE) is a simple and cost effective method of breast cancer screening in limited resources countries, like ours (Nigeria). During the breast-self-examination the woman systematically inspect, and palpate each of her breast using one of her hand to examine her breast while raising the other arm above her head. This examination could be done both in lying and standing position. Also in line with the findings Haji – Mahmoodi, Montazeri, Jarvandi and Ebrahimi (2006) pointed out in their paper that the BSE is done in an attempt to find out breast cancer earlier thus reducing mortality. Similarly Champion (2001) reported in his studies based on breast cancer patient’s retrospective self reporting on their BSE shown a positive relation with early detection of breast cancer.

The role of health education in reduction of breast cancer, from the result of the third hypothesis, reveals that health education has a significant role in reducing breast cancer. This finding is in line with the view of the 2007

Joint Committee on National health Standards. The committee noted that health education programmes can contribute directly to one's ability to successfully adopt and practice behaviors that protect and promote health, prevent and reduce health risk. The health and well being of people is not a matter of luck, chance or random event. It must be a planned outcome. This calls for well – designed well – resourced and sustained health education in schools.

An impress health status is of economic value, preventive measures such as monthly self breast examination, not smoking, maintaining a healthy weight and regular exercise can reduce ones risk of having breast cancer. With the increasing number of voluntary organizations, governmental agencies and private co – operations, Muhammad (2009) in his study pointed out that breast cancer awareness movement has expanded by educating the public through fund raising walks, lecture for women groups that features stories of survivors and dissemination of educational materials in the present study, health education has a significant role in reducing breast cancer.

## 6. CONCLUSION

Breast cancer awareness significantly affect the knowledge of symptoms, risk factors of breast cancer disease and practice of breast self examination. The role of health education skills include the influence of family, peers, culture, media and technology on health behaviours; knowing how to access and use valid health information and using communication, decision-making, goal-setting and advocacy skills to engage in health enhancing behaviours. The need to create awareness on breast cancer disease through health education is of great importance in order to improve women health and save lives is also significant if there is going to be drastic reduction in the incidence of breast cancer in the future. Similarly health education has a significant role in reducing breast cancer. Therefore students should be regularly educated about their health, the inclusion of health education as a core course or subject in the school's curriculum is of importance.

## 7. RECOMMENDATIONS

Awareness enlightenment programmes should be carried out regularly to educate both men and women to be breast aware. All women should be breast aware by familiarizing themselves with the normal look and feel of their breast through monthly breast self examination. Health education programme should be organized to educate women about their breast health. Government and non – governmental organizations should make significant contributions on breast awareness by sponsoring health talks and workshops targeted at relevant segments of the population

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