

*Full Length Research*

# **Beliefs and Practice of Breast Cancer Detection and Prevention: The Health Implication**

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The purpose of the study was to investigate the Beliefs and Practice of breast cancer detection and prevention, among female secondary school teachers in Bayelsa State. The research design was a cross sectional survey. Nine hundred and seventy six (976), female teachers in Bayelsa State were sampled, using multistage sampling procedures. The research instrument was a self-structured and validated questionnaire with reliability coefficient of 0.78 using the person product moment correlation. The statistical tools used for the analysis of the data were descriptive statistics of percentage, mean and inferential statistics of chi-square and one-way ANOVA using the Statistical Package for Social Sciences (SPSS) batch system. Results showed that majority of the female teachers ( $\bar{x} = 3.15$ ) had right beliefs about breast cancer detection and prevention but the practice of breast cancer detective and preventive measures were below average (35.6%). Also the result showed that demographic variables such as religion, marital status and location had no significant influence on practice of breast cancer detection and prevention. Likewise location has significant influence on beliefs about breast cancer detection and prevention. It was recommended that; health education campaigns should be carried out to enlighten the public especially teachers on the importance of putting into practice the detective and preventive measures of breast cancer, because having right beliefs about something is important but putting it into practice will yield a better result. State government should sponsor and organize workshops/ seminars on the importance of putting in to practice the detective and preventive measures of breast cancer, among women in general. There is urgent need to design more interventions and also to implement and re-enforce existing cancer awareness and cancer screening programmes.

**Keywords:** Beliefs, Practice, Breast cancer, Detection and Prevention, Health Implication

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## **INTRODUCTION**

### **Background**

Breast cancer is now the leading cancer in Nigerian women with a rising prevalence of 33.6/100,000 to 116/100,000. Increased number of prominent Nigerian women had died from the disease. Breast cancer is usually diagnosed in late stages in countries with limited resources. Early detection of Breast Cancer is likely to

improve the outcome of the disease for women in these areas. (Heba, Mamdouh, Hazzem, & Omnia, 2014). Reduction in mortality from Breast Cancer depends to a large extent on interventions aimed at early detection and treatment, including breast self-examination, clinical breast examination, and mammography. (Sadler, Dhanjal, Shah, Ko & Anghel, 2001) Lack of early detection programs is the primary reason for the escalation of the

mortality rate from Breast Cancer in developing countries.( Pinotti , Barros , Hegg, Zeferino, 1995).

Over the years, people had the belief that breast cancer is an older women's disease, therefore, the primary focus has been on prevention, detection and treatment of breast cancer for women who are 50 years and above (Kinnon, 2003). But in the African- American community, the disease can strike well at a younger age and this prompted physicians and cancer advocates groups to recommend that women should get baseline mammograms at age 40 (American Cancer Society, 2012).

Breast cancer is usually diagnosed in late stages in countries with limited resources (Marchick, Henson, 2005). Efforts aimed at detecting it in the earlier stages are likely to improve the outcome of the disease for women in these areas.( Anderson ,Smith, Meischke, Bowen, &Urban,2003). Globally, efforts to increase screening have met with moderate success (Althuis, Dozier, Anderson, Devesa, Brinton, 2005). The Breast Health Global Initiative recommends that women aged 50-69 should have mammographic screening every 2 years even in countries with limited resources (Yip& Anderson, 2007)

One of the vital parts of the body affected by cancer is the breast, giving rise to breast cancer. Cancer is a non-communicable disease, increasingly becoming important worldwide. It is a disease characterized by an abnormal growth of cells with the ability to invade adjacent tissues and even metastasize to distant organs, resulting in morbidity and eventually leading to the death of the individual, if not detected and managed early (Park, 2007). Over the past two decades, breast cancer has become a matter of serious public health concern in developing countries and associated mortality, especially among women. It is established that early detection and early treatment lead to improved survival (World Health Organization, 2007).

Cancer occurs as a result of mutations, or abnormal changes, in the genes responsible for regulating the growth of cells and keeping them healthy. Breast cancer is a malignant tumor that starts in the breast tissue, which is made up of glands for milk production. A malignant tumor is a group of cancer cells that can grow in to surrounding tissues (invade) or spread (metastasize) to distant areas of the body. Most breast cancers begin in the cells that line the ducts, which are the passages that drain milk from the lobules to the nipple, (ductal cancers). Some begin in the cells that line the lobules, which are the milk producing glands (lobular cancers), while a small number start in other tissues. Thus most types of cancer are named after the part of the body where the tumor originates. The disease occurs almost entirely in women, but men can get it, too (Puangthong, 2006).Breast cancer presents most commonly as a painless breast lump and a smaller proportion with non- lump symptoms. In those

with spread of the disease, there may be bone pain, swollen lymph nodes, shortness of breast (Saunders, Jassal, 2009).

Every woman is at risk of developing breast cancer. There are diverse risk factors that may affect each woman's susceptibility to the disease which include: increasing age, hormone replacement therapy (HRT), high dietary fat, excessive alcohol consumption smoking, exposure to certain chemicals, physical agents such as radiation, obesity, having children at late age or not at all, and family history, onset of early menstrual period among others, (Globocan, 2000, & American Cancer Society, 2009).

Breast cancer is a disease of public health importance. Female malignancies such as breast cancer are an important aspect of the reproductive health problems of women worldwide. Breast cancer affects young, middle-aged, and elderly women who are care givers of the family and who contribute to the development of society. Breast cancer is unfortunately still characterized by late presentation and poor outcome in many developing countries that lack the facility for early detection. It results in high morbidity and mortality in women worldwide. The high morbidity and mortality from breast cancer can be decreased by measures targeted at early detection such as screening. Breast examination as screening tool for breast cancer in developing countries is advocated in view of its cost- effectiveness (Misauno, Anosike, Ojo& Ismaila, 2011). It is surprising, however, that cancer of the breast still results in high morbidity and mortality despite the fact that the breast is an "exposed" organ and is readily accessible to breast screening measures (Herman, Gill &Fajardo, 2002).

According to Adekemi, Adenike, and Abimbola (2012) breast screening refers to tests and examinations used to detect a disease such as cancer in people, who do not have any symptoms. Since the degree of success in treating breast cancer is influenced primarily by the stage at which intervention is introduced, secondary prevention (early detection) is the mainstay. Philip, Harris, Flaherty and Joslin (1986), outlined the three screening methods recommended for breast cancer which include breast self-examination (BSE), clinical breast examination (CBE) and mammography.

Mammography is the only screening tool proven to reduce Breast Cancer mortality, with evidence that adherence to yearly screening mammography can reduce Breast Cancer mortality by 22-35% for women aged 50 years or older ( Greif, 2010 ). Mammography is an x-ray of the breast that is complex and expensive, but may pick up tumours long before they can be detected in any other way, thus enhancing better prognosis than those whose cancer is detected in some other way, (Aldridge, 2005). While recognized as the most effective screening procedures for early detection, this technique is also the most expensive. Because of this, efforts have

been made, particularly in the United States, to make the procedure more affordable (Parker, Simpson & McCooley, 1995). The United States Preventive Services Task Force recommended that at 50 to 70 years old women should have a screening mammogram every two years, while at 40 to 49 years old, women should start thinking of getting a mammogram (Centre for Disease Control and Prevention, 2014).

Clinical breast examination is an examination of your breast by a health professional such as a doctor or nurse, who use his or her hand to feel for lumps or other changes in the breast that may mean a serious problem is present, such as breast cancer (American Cancer Society, 2015). Clinical breast examination is also relatively simple and inexpensive, but its effectiveness in reducing mortality from breast cancer has not been directly tested in a randomized trial, (Aldridge, 2005).

Breast self – examination (BSE) is the examination performed by individuals to help detect any abnormality within the breasts. It involves visually and manually inspecting the breast for lumps and changes in the skin and nipples of the breasts. It should be performed monthly after the age of 20 years; preferably a few days after an individual's menstrual period when the breasts are least swollen. BSE entails a process whereby women examine their breasts regularly to detect any abnormal swelling or lumps in the breast in order to seek prompt medical attention. BSE is a useful tool for the early detection of breast cancer. This is very important because prognosis is directly associated with the stage at which the tumour is detected and how localized the lesion is. Early diagnosis usually results in treatment before metastasis of the cancerous cells and signifies a better outcome of management. It has been estimated that an effective screening programme may reduce mortality in the screening age group by up to 25% (Blamey, Wilson & Patrick, 2000).

According to Talbert (2008), there is cancer fatalism which is the belief that all things in the world are under the control of some invisible forces, and we are powerless to do anything about it. Hence the belief that situations such as illnesses or catastrophic events, happen because of a higher power (such as God), or they are just meant to happen, and cannot be avoided. Thus the belief that death is inevitable when cancer is present has also been identified as a barrier to participation in cancer screening, detection and prevention (Powe, 1997). In the view of Knight (2003), holds that all events in the history of the world, and in particular, the actions and incidents which make up the story of each individual life are determined by fate. Though Ali, Mehregan and Soghra (2003) study findings suggests that most Muslim women do not perceive breast self- examination as being against their Islamic beliefs and that they believe clinical breast examination by a male physician does not interfere with their religious

beliefs. Opoku, Benwell and Yarney (2012) also examined the influence of contextual factors such as cultural beliefs and health system characteristics on intention to screen for breast cancer among Ghanaian women. It was found that women's perception of the benefits of breast screening was related to their intentions to perform BSE or have CBE or mammography. Women who knew that early detection through screening could reduce their chances of dying from breast cancer reported positive intention towards screening.

The current guidelines from the American Cancer Society, (1996), states that women 20 years and older should practice monthly breast self-examination (BSE). Women 20-39 years old should have a clinical breast examination, (CBE) every three years, while women 40 years and older should have a yearly CBE. Women 40-49 years old should also have a mammogram every 1-2 years, and women 50 years and older should have one yearly. This is not only a state of physical wellbeing, but is an expression of the many roles she performs as a mother, caregiver, wage earner and her interaction with the social and economic, as well as cultural circumstances which influence her duty life (Aswathy, Sumithra, Valsala, Sandheed, Lohidas, Shobha, George, Francis, Rajeev, & Johnson, 2006). The American Cancer Society (2002), posits that if we can effectively promote healthy behaviours, much of the suffering and death from cancer can be prevented or reduced. However, poor practice of breast cancer screening methods has been reported in many studies in Nigeria, (Akhigbe & Omuemu, 2009).

## AREA OF STUDY

Bayelsa State is one of the 36 political sub-divisions of Nigeria. It occupies the extreme south of the country and is approximately mid-way between the eastern and western boundaries of the country with the Republic of Cameroon and Benin respectively. The state is bounded in the north by Delta State, east by Rivers State and the west and south by the Gulf of Guinea. Bayelsa State is a picturesque tropical rain forest, with an area of about 21,110 square kilometres. More than three quarters of this area is covered by water, with a moderately low land stretching from Ekeremor to Nembe (Yanga, 2006). It has a population of around 2 million people, (National Population Commission, 2006).

## STATEMENT OF THE PROBLEM

Cancer had claimed the lives of so many notable female Nigerians, Bayelsa State inclusive. Could it be that the increasing cases of breast cancer in females, is due to

wrong beliefs about breast cancer, or not being able to practice measures for early detection and prevention? Teachers remain key persons that can play an effective role in communication and motivation of young students, and can help to disseminate the importance of screening for breast cancer as well serve as role models to other women in the society. Interestingly, there are current data suggesting that healthy behaviour towards breast cancer detection and prevention may be influenced by having the right beliefs about breast cancer.

### AIM AND OBJECTIVES OF THE STUDY

The aim of this study was to assess the beliefs and practice of breast cancer detection and prevention and the health implication among female teachers of government-owned secondary schools in Bayelsa State. In specific terms, the study intends to determine the:

1. Beliefs about breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State.
2. Practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State.
3. Influence of religion on the practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State.
4. Influence of marital status, on the beliefs and practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State.
5. Influence of location on the practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State.

### RESEARCH QUESTIONS

The following research questions guided the study

1. What are the beliefs about breast cancer detection and prevention among female teachers in government-owned secondary schools in Bayelsa State?
2. What is the practice of breast cancer detection and prevention among female teachers in government-owned secondary schools in Bayelsa State?
3. What is influence of religion on the practice of breast cancer detection and prevention among female teachers in government-owned secondary schools in Bayelsa State?

4. Does marital status, have influence on the Beliefs and Practice of breast cancer detection and prevention among female teachers in government-owned secondary schools in Bayelsa state?
5. Does location have influence on the Practice of breast Cancer detection and prevention among female teachers in government- owned secondary schools in Bayelsa State?

### Hypotheses

The following hypotheses were postulated and tested at .05 alpha level.

1. Religion has no significant influence on the practice of breast cancer detection and prevention among female teachers in government-owned secondary schools in Bayelsa State.
2. Marital status has no significant influence on the beliefs about breast cancer detection and prevention among female teachers in government- owned secondary schools in Bayelsa State.
3. Marital status has no significant influence on the practice of breast cancer detection and prevention among female teachers in government- owned secondary schools in Bayelsa State.
4. Location has no significant influence on the practice of breast cancer detection and prevention among female teachers in government-owned secondary schools in Bayelsa State.

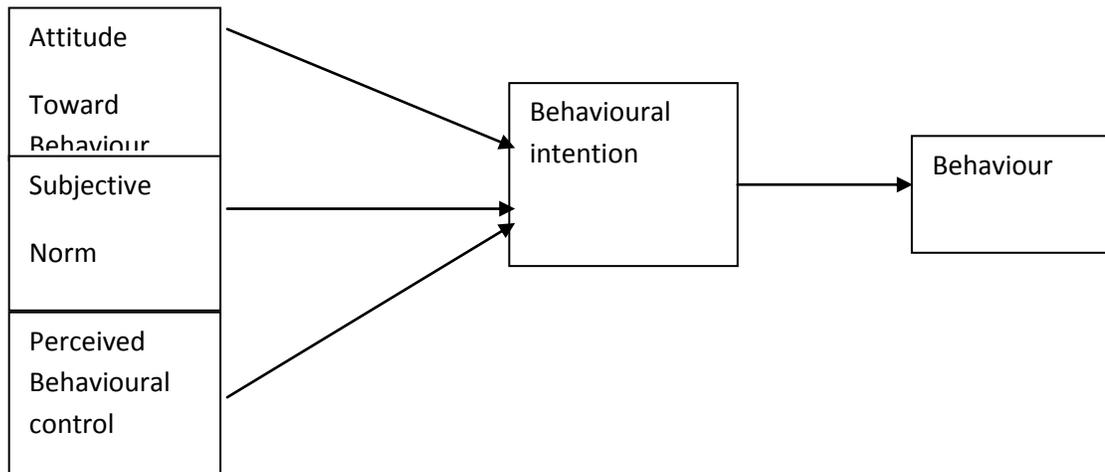
### THEORETICAL FRAMEWORK

- i Health Belief Model (Hockbaum, Leventhal, Kegeles & Rose Stock, 1966)
- ii Theory of Planned Behaviour (Ajzen, 1991)
- iii Theory of Reason Action (Fishbein & Ajzen, 1975)

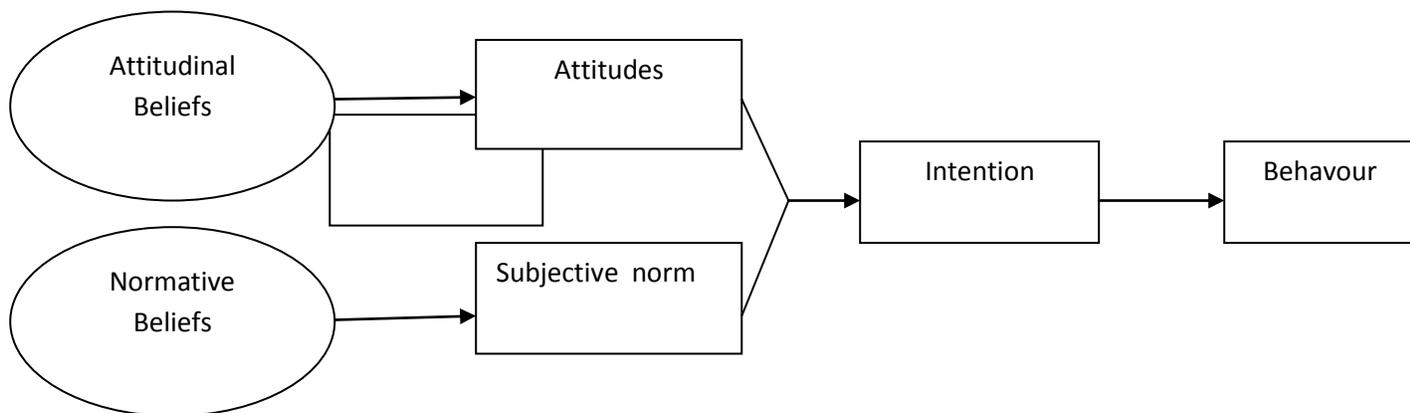
A possible framework utilized to help understand why and under what conditions people take action to prevent, detect or comply with treatment is the Health Belief Model. The HBM includes the following four concepts:

1. Perceived personal exposure to a health condition (susceptibility).
2. Perceived personal harm from the condition (seriousness).
3. Perceived positive attributes of an action (benefits) and
4. Perceived negative aspects related to an action (barriers).

According to Abdulaziz and Parinnaz (2012), the Health Belief Model (HBM), is a Psychological model that



**Figure 1:** Theory of Planned Behaviour. Source: Ajzen, (1991).



**Figure 2:** Theory of Reasoned Action . Source: Ajen&Fisfbein, (1999).

attempts to explain and predict preventive health behaviours.

Theory of Reasoned Action: This construct reflects an individual's desire to have the cancer detected early and beliefs that a screening behavior will lead to early detection of cancer. Subjective norms reflect the social pressure an individual feels to be screened for cancer. This pressure arises from the perceived expectations from others such a family, friends, and colleagues who may encourage or discourage cancer screening, and an individual's desire to comply with these expectations. Perceived behavioural control; similar to self-efficacy, reflects the individual's belief in his or her ability to perform the cancer screening behaviour in the presence of constructive or obstructive factors,(Glanz, Rimer, & Lewis, 2002). See Figure 1

**The Theory of Reasoned Action (TRA)**

The Theory of Reasoned Action (TRA) by Ajzen and

Fishbein (1999), postulates of behaviour. Intentions are formulated via a reasoned process whereby the individual considers the consequences of their actions, either implicitly or explicitly. The behaviour reasoned to be the most likely to achieve the most positive outcome for the individual is the enacted. The TRA hypothesizes two determinants of interventions: attitudes and subjective norms which are underpinned by attitudinal and normative beliefs about the consequences of the behaviour. The strength of a person's attitude (i.e, their positive or negative evaluation of performing the behaviour) combined with the weight of social pressure they perceived, they are under to perform the behaviour (subjective norm), will influence the strength of their intention to perform the behaviour and the subjective action. The diagram is shown in Figure 2.

**METHOD AND MATERIALS**

A cross sectional survey design was adopted for the

**Table 1:** Frequency and percentage distribution of respondents by Age

Age	f	%
20- 24 years	178	21.1
25-29 years	203	24.0
30-34 years	180	21.3
35-39 years	137	16.2
40 years and above	147	17.4
Total	845	100

**Table 2:** Frequency and percentage distribution of respondents by Educational Status

S/N	Educational Status	f	%
1.	NCE	219	25.9
2.	B.Ed/ B.Sc	560	66.3
3.	M.Ed/M.Sc	62	7.3
4.	Ph.D	4	0.5
	<b>Total</b>	<b>845</b>	<b>100</b>

**Table 3:** Frequency and percentage distribution of respondents by Marital Status

Marital Status	f	%
Unmarried	420	49.7
Married	401	47.5
Divorce	14	1.7
Separated	7	0.8
Widowed	3	0.4
<b>Total</b>	<b>845</b>	<b>100</b>

study. The population of the study consists of 1,952 female teachers of government –owned secondary schools in Bayelsa State, with a sample size of 976 female teachers. All the eight local government areas within the three senatorial districts were used for the study. Multi-stage sampling procedures were used to draw the sample. The research instrument for data collection was a 29 item self- structured and validated questionnaire with reliability coefficient of 0.78, using the person product moment correlation. The statistical tools used for the analysis of the data include descriptive statistics of percentage, mean and inferential statistics of chi-square, and one-way ANOVA using the statistical package for social sciences (SPSS) batch system. A total of 976 copies of questionnaire were administered directly to the respondents with the help of 10 research assistants. Eight hundred and forty five (845) copies were properly filled and returned, giving a return rate of 87 percent and was used for the analysis.

## RESULTS

Table1shows that 178 (21.1%) of the female teachers were between the ages of 20-24 years, while 203 (24%)

of them were between the ages of 25-29 years. Also 180 (21.3%), were between the ages of 30-34 years, 137 (16.2%) of the teachers were between the ages of 35-39 years and, 147 (17.4%) of them were 40 years and above. This indicated that teachers within the age bracket of 25–29 years constituted the highest number 203 (24%).

Table 2shows that 219 (25.9%) of teachers were NCE holder, while B,Ed/ B.Sc holders were 560 (66.3%). Also teachers that were holders of M.Ed/M.Sc were 62 (7.3%) and Ph.D, 4 (0.5%) which indicated that the highest number of teachers, 560 (66.3%) were B.Ed/B.Sc holders.

Table 3shows that 420 (49.7%) of the female teachers were unmarried, 401 (47.5%) of them were married, while 14 (1.7%) were divorced teachers, while 7 (0.8%) were separated. Also 3 (0.4%) of teachers were widowed, which indicated that the highest number of teachers were those that were unmarried 420 (49.7%).

Table 4:shows that 819 (96.9%) of teachers were Christians, 17 (2.0%), of them were Islam, while teacher that belong to Traditional religion were 5 (0.6%) and others,(Eckankar and Grail Message) 4 (0.5%), which indicated that the highest number of teachers 819 (96.9%) were Christians.

**Table 4:** Frequency and percentage distribution of respondents by Religion

S/N	Religious Status	f	%
1.	Christianity	819	96.9
2.	Islam	17	2.0
3.	Traditional religion	5	0.6
4.	Others (ECKists & Grail-Message)	4	0.5
	<b>Total</b>	<b>845</b>	<b>100</b>

**Table 5:** Frequency and percentage distribution of respondents by Location

S/N	Location	f	%
1.	Urban	503	59.5
2.	Rural	342	40.5
	<b>Total</b>	<b>845</b>	<b>100</b>

Table 5 shows that 503 (59.5%) of female teachers from government-owned secondary school resided in the urban area, while 342 (40.5%) resided in the rural area of Bayelsa State.

**Research Question 1:** What is the belief about breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State?

Table 6 shows that the female teachers have right beliefs about breast cancer detection and prevention with regards to; breast cannot be detected by breast self-examination with ( $\bar{x} = 2.72$ ); Clinical breast examination by a male physician is embarrassing ( $\bar{x} = 2.82$ ). Likewise feeling or touching one's breast for lump by a physician is disgraceful ( $\bar{x} = 2.98$ ), and Clinical breast examination by a male physician is against my religious belief ( $\bar{x} = 3.10$ ). Also with regards to mammography is not a useful method for breast cancer detection ( $\bar{x} = 3.10$ ). Breast cancer cannot be prevented ( $\bar{x} = 3.14$ ), breast cancer is a disease that can be prevented once the person has faith ( $\bar{x} = 3.03$ ); breast cancer is punishment from God and so cannot be prevented ( $\bar{x} = 3.50$ ); breast cancer is due to bad luck and cannot be prevented ( $\bar{x} = 3.66$ ); breast cancer is a matter of destiny and there is no need to worry about its prevention ( $\bar{x} = 3.64$ ); breast cancer can be prevented by avoiding hand shake with someone having the disease ( $\bar{x} = 3.46$ ); breast cancer is not curable but preventable ( $\bar{x} = 2.81$ ); one's diet has relationship with breast cancer prevention ( $\bar{x} = 2.83$ ); breast cancer is caused by witches and wizards which can not be prevented ( $\bar{x} = 3.42$ ); breast cancer patients should be stigmatized as a way of preventing its occurrence and spread ( $\bar{x} = 3.19$ ) and that there is nothing like breast cancer talkless of its prevention ( $\bar{x} = 3.12$ ). It was found that the respondents had right beliefs about

breast cancer detection and prevention, with the overall grand mean of 3.15, which is also in line with medical practice.

**Research Question 2:** What is the practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State?

Table 7: reveals that 531 (62.8%) of the respondents did not perform breast self-examination, a week after menstrual cycle. Only 284 (33.6%) started breast self-examination at the age of 20 years, 407 (48.2) admitted that, they perform breast self-examination while standing in front of a mirror. Also 620 (73.4%) have not performed breast self-examination any time, and only 250 (29.6%) go for clinical breast examination during pregnancy and not for breast cancer examination, 414 (49.0%) also admitted that, they are satisfied in consulting a health professional in carrying out clinical breast examination. Likewise 192 (22.7%) started mammography at the age 40 years and only 143 (16.9%), go for mammography two times yearly as a routine for breast cancer detection. Meanwhile only 45 (5.33%) admitted that they abstain from smoking, 750 (88.8%) eat diet high in fat and 694 (82.1%) indulge in drinking alcohol beverages. Only 70 (8.30%) practice regular exercises to maintain healthy weight and 53 (6, 30%) did avoid radiation therapy. Based on the above findings, the practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State was poor with an overall percentage of 64.4%, against 35.6% of those that practice breast cancer detection and prevention.

**Research Question 3:** What is the influence of religion on the practice of breast cancer detection and prevention among female teachers of government-owned secondary

**Table 6:** Respondent's Beliefs about breast cancer detection and prevention: n=845

Statement	$\bar{x}$	Decision
<b>Breast cancer detection</b>		
1 Breast cancer cannot be detected by breast self-examination	2.72	Right belief
2 Clinical breast examination by a male physician is embarrassing	2.82	Right belief
3 Feeling or touching one's breast for lump by a physician is disgraceful	2.98	Right belief
4 Clinical breast examination by a male physician is against my religious belief	3.10	Right belief
5 Mammography is not a useful method for breast cancer detection	3.20	Right belief
Grand mean:	3.00	
<b>Breast Cancer Prevention</b>		
6 Breast cancer cannot be prevented	3.14	Right belief
7 Breast cancer is a disease that can be prevented once the person has faith	3.03	Right belief
8 Breast cancer is punishment from God and so cannot be prevented	3.50	Right belief
9 Breast cancer is due to bad luck and cannot be prevented	3.66	Right belief
10 Breast cancer is a matter of destiny and there is no need to worry about its prevention	3.64	Right belief
11 Breast cancer can be prevented by avoiding handshakes with someone having the disease	3.46	Right belief
12 Breast cancer is not curable but preventable	2.81	Right belief
13 One's diet has relationship with breast cancer prevention	2.83	Right belief
14 Breast cancer is caused by witches and wizards which cannot be prevented	3.42	Right belief
15 Breast cancer patients should be stigmatized as a way of preventing its occurrence and spread	3.19	Right belief
16 There is nothing like breast cancer, talk- less of its prevention	3.12	Right belief
<b>Grand mean</b>	<b>3.30</b>	<b>Right belief</b>
<b>Overall grand mean</b>	<b>3.15</b>	<b>Right belief</b>

schools in Bayelsa State?

Table 8: reveals that majority of the respondents in all the religious groups did not perform breast self-examination a week after menstrual cycle Christians; 514(62.1%), Islam; 10 (58.8%), Traditional religion; 4(80.0%) ECKists/ Grail Message; 3(75.0%). Also majority of the respondents in three religious groups did not start breast self-examination at the age of 20 years (Christians; 542 (66.2%), Islam=13 (76.5%), Traditional religion; 4(80.0%)), while 50% of

respondents in other religious groups (ECKists/ Grail Message) respectively, started breast self-examination at 20 years. With regards to performing breast self-examination, while standing in front of a mirror, Muslims 12(70.6%) responded positively, while the rest responded negatively, Christians; 425(51.9%), Traditional religion; 4(80.0%) and ECKists/Grail Message; 4(100%). Furthermore majority of the respondents who are Christians; 609 (74.4%), Traditionalist; 5(100%) and ECKists/ Grail Message; 4(100%) never performed breast self-

examination at any time, whereas 10(58.8%) of them who are Muslims did perform breast self-examination at any time. Likewise 11(64.7%) of respondents who are Muslims did go for clinical breast examination only during pregnancy and not for breast cancer detection while the rest responded negatively Christians; 582(71.1%), Traditionalists; 3(60.0%) and ECKists/ Grail Message; 4(100%). Majority of the respondents who are Christians; 423(51.6%), Traditionalists; 3(60.0%), and ECKists/Grail Message; 4(100%) admitted that they were not satisfied consulting a

**Table 7: Practice of Breast Cancer Detection and Prevention ( n=845)**

S/N	Statement	Yes		No	
Breast Cancer Detection f%		f	%		
1	I do perform breast self- examination a week after my menstrual Cycle	314	37.2	531	62.8
2	I started breast self- examination at the age of 20 years	284	33.6	561	66.4
3	I perform breast self- examination while standing in front of a mirror	407	48.2	438	51.8
4	I have not performed breast self- examination any time	225	26.6	620	73.4
5	I go for clinical breast examination only during pregnancy and not for BC examination	250	29.6	595	70.4
6	I am satisfied consulting a health professional in carrying out clinical breast examination	414	49.0	431	51.0
7	I started mammography at the age of 40 years	192	22.7	653	77.3
8	I go for mammography two times yearly as a routine for breast cancer detection	143	16.9	702	83.1
<b>Cluster %</b>		<b>33.0</b>		<b>67.0</b>	
<b>Breast cancer Prevention</b>					
9	I abstain from smoking	45	5.33	800	94.7
10	I eat diet high in fat	750	88.8	95	11.2
11	I do regular exercise to maintain a healthy weight	70	8.30	775	91.7
12	I do drink alcohol beverages excessively	694	82.1	151	17.9
13	I do avoid radiation therapy	53	6.30	792	93.7
<b>Cluster %</b>		<b>38.2</b>		<b>61.8</b>	
<b>Overall %</b>		<b>35.6</b>		<b>64.4</b>	

**Table 8:** Practice of breast cancer detection and prevention, based on religion ( n=845)

S/N	Statement	Christianity (n=819)		Islam (n=17)		Trad-Rel (n=5)		ECK/GM (n=4)									
		Yes	%	No	%	Yes	%	No	%	Yes	%	No	%				
1.	I do perform self -examination a week after my menstrual cycle	305	(37.2)	514	(62.8)	7	(41.2)	10	(58.8)	1	(20.0)	4	(80.0)	1	(25.0)	3	(75.0)
2.	I started breast self -examination at the age of 20 years	277	(33.8)	542	(66.2)	4	(23.5)	13	(76.5)	1	(20.0)	4	(80.0)	2	(50.0)	2	(50.0)
3.	I perform breast self- examination while standing in front of a mirror	394	(48.1)	421	(51.9)	12	(70.6)	5	(29.4)	1	(20.0)	4	(80.0)	0	(0.00)	4	(100)
4.	I have not performed breast self- examination any time.	210	(25.6)	609	(74.4)	10	(58.8)	7	(41.2)	0	(0.00)	5	(100)	0	(00.0)	4	(100)
5.	I go for clinical breast examination only during pregnancy and not for BC examination	237	(28.9)	582	(71.1)	11	(64.7)	6	(35.3)	2	(40.0)	3	(60.0)	0	(0.00)	4	(100)
6.	I am satisfied consulting a health professional in carrying out clinical breast exam.	396	(48.4)	423	(51.6)	14	(82.4)	3	(17.6)	1	(20.0)	4	(80.0)	3	(75.0)	1	(25.0)
7.	I started mammography at the age 40 years.	188	(23.0)	631	(77.0)	3	(17.6)	14	(82.4)	1	(20.0)	4	(80.0)	0	(0.00)	4	(100)
8.	I go for mammography two times yearly as a routine for breast cancer detection	140	(17.1)	679	(82.9)	2	(11.8)	15	(88.2)	1	(20.0)	4	(80.0)	0	(0.00)	4	(100)
	<b>Cluster %</b>		<b>32.8</b>		<b>67.2</b>		<b>46.3</b>		<b>53.7</b>		<b>20.0</b>		<b>80.0</b>		<b>18.8</b>		<b>81.2</b>
	<b>Breast Cancer Prevention</b>																
9.	I abstain from smoking	39	(4.8)	780	(95.2)	5	(29.4)	12	(70.6)	1	(20.0)	4	(80.0)	0	(0.00)	4	(100)
10.	I eat diet high in fat	745	(91.0)	74	(9.0)	4	(23.5)	13	(76.5)	0	(0.00)	5	(100)	1	(25.0)	3	(75.0)
11.	I do regular exercise to maintain a healthy weight	66	(8.1)	753	(91.9)	2	(11.8)	15	(88.2)	2	(40.0)	3	(60.0)	0	(0.00)	4	(100)
12.	I do drink alcohol beverages excessively	689	(84.1)	130	(15.9)	3	(17.6)	14	(82.4)	1	(20.0)	4	(80.0)	1	(25.0)	3	(75.0)
13.	I do avoid radiation therapy	51	(6.2)	768	(93.8)	2	(11.8)	15	(88.2)	0	(0.00)	5	(100)	0	(0.00)	4	(100)
	<b>Cluster %</b>		<b>38.8</b>		<b>61.2</b>		<b>18.8</b>		<b>81.2</b>		<b>16</b>		<b>84</b>		<b>10</b>		<b>90</b>
	<b>Overall Cluster %</b>		<b>35.8</b>		<b>64.2</b>		<b>32.6</b>		<b>67.4</b>		<b>18.0</b>		<b>82.0</b>		<b>14.4</b>		<b>85.6</b>

health professional in carrying out clinical breast examination, while 11(64.7%) of respondents who are Muslims responded positively. Furthermore, the respondents in all the religious groups did not start mammography at the age of 40 years (Christianity; 631(77.0%), Islam; 14(82.4%), Traditionalists; 4(80.0%) and ECKists/Grail Message; 4(100%), likewise respondents in all the religious groups (Christians; 679(82.9%), Islam; 15(88.2) Traditionalists; 4(80.0%) and ECKists/ Grail Message; 4(100%), did not go for mammography two times yearly as a routine for breast cancer detection.

With regards to abstain from smoking, majority of the respondent in all the religious groups responded negatively, (Christianity; 679(69.5%), Islam; 12(70.6%), Traditionalists; 4(80.0%) and ECKists/ Grail Message; 4(100%). While majority of the respondents in all the religious groups did not eat diet high in fat, Islam ;13 (76.5%), Traditionalists; 5(100%) and ECKists/ Grail Message; 3(75.0%), except Christians; 745 (91.0%). Also majority of the respondents in all the religious groups did not carry out regular exercise to maintain a healthy weigh, Christians;753(91.9%).Islam;15(88.2%),Traditionalists;3( 60.0%)andEckists/GrailMessage;4(100%).Furthermore majority of the respondents in all the groups responded negatively to drinking alcohol beverages excessively, Islam ; 14 (82.4%), Traditionalists; 4 (80.0%), and ECKist/ Grail Message; 3 (75.0), except Christians; 689 (84.1%). While majority of respondents admitted that they did not avoid radiation therapy, (Christianity: 768 (93.8%), Islam; 15 (88.2%), Traditionalists; 5 (100%) and ECKists/ Grail Message; 4 (100%). From the analysis, it was revealed that the practice of breast cancer detection and prevention was poor amongst the various religious groups with the overall cluster percentages of negative responses (Christianity ; 64.2%, Islam ; 67.4%, Traditionalists ; 82.0% and ECKists / Grail Message;(85.6%).

**Research Question 4:** Does marital status have influence on practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State

Table 9 reveals that majority of the respondents with different marital status did not perform BSE a week after menstrual cycle, (unmarried; 272 (64.8%), married; 243 (60.0%), divorced; 9 (64.3%), separated; 6 (85.7%), and widowed; 3(100%). Also majority of the respondents did not start BSE at the age of 20 year, (unmarried; 286 (68.1%), married; 261 (65.1%), and widowed; 3(100%), while the rest of the respondents, widowed; 3 (100%), while the rest of the respondents, did practice BSE at the age of 20 years (divorced; 9 (64.3%), and separated; 6 (85.7%). Furthermore only the married teachers 217 (54.1%) performed BSE while standing in front of a

mirror, while majority of them did not, (Unmarried; 237 (56.4%), divorced; 9 (64.3%), separated; 6 (85.7%) and widowed; 2 (66.7%)

With respect to not performed BSE anytime, all the respondents with different marital status responded negatively (unmarried; 314 (74.8%), married; 284 (70.8%), divorced; 13 (92.9%), separated; 7 (100%) and widowed; 2 (66.7%). Also majority of the respondents with different marital status, responded negatively, to have gone for CBE only during pregnancy and not for breast cancer detection, (unmarried; 324 (77.1%), married; 260 (64.8%), divorced 9 (64.3%) and widowed; 3 (100%), while only the teachers that have separated; 5 (71.4%), that responded positively. Likewise majority of the respondents indicated dissatisfaction, consulting a health professional, in carrying out CBE (unmarried; 225 (53.6%), separated; 6 (85.7%) and widowed; 3 (100%), while the married; 207 (51.6%) and divorced; 8 (57.1%), indicated satisfaction. Furthermore majority of the respondents did not start mammography at the age of 40 years, (unmarried; 347 (82.6%), married; 289 (82.0%), divorced; 9 (64.3%) and separated; 7(100%) while only the widowed; 2 (66.75) responded positively. Also none of the respondents had gone for mammography two yearly as a routine for breast cancer detection (unmarried; 353(84.0%), married; 329 (82.0%), divorced; 11 (78.6%), separated; 6 (85.7%) and widowed; 3 (100%) All the respondents also responded negatively to abstinence from smoking (unmarried; 330 (78.6%), married; 280 (69.8%), divorced; 10 (71.4%), separated; 5 (71.4%) and widowed; 2 (66.7%). Likewise majority of the respondents eat diet high in fat, (unmarried; 260 (61.9%), married; 320 (79.8%), divorced; 11 (78.6%). Separated; 6 (85.7%) and widowed; 3 (100%).

With regards to performing regular exercise to maintain a healthy weight, all the respondents admitted positively, (unmarried; 290 (69.0%), married; 350 (87.3%), divorced; 12 (85.7%), separated; 5 (71.4%), and widowed; 3 (100%). They also responded positively to drinking alcohol beverages excessively (unmarried; 290 (69.0%), married; 350 (87.3%), divorced; 12 (85.7%), separated; 5 (71.4%) and widowed; 3 (100%). While all the respondents with different marital status responded negatively to avoiding radiation therapy (unmarried; 350 (83.3%), married; 251 (62.6%), divorced; 8 (57.1%), separated; 4 (57.1%), and widowed; 2 (66.7%), It was found that marital status does not have influence on the practice of breast cancer detection and prevention with the overall cluster percentages of 39.0% for Unmarried teachers, married; 49.1%, divorced 48.3%, separated; 37.5% and widowed; 41.7%.

**Research Question 5:** Does marital status have influence on beliefs about breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State?

**Table 9: Practice of breast cancer detection and prevention; Based on Marital Status (n= 845)**

S/N	Statement	Unmarried (n= 420)		Married (n= 401)		Divorced (n= 14)		Separated(n= 7)		Widow(n= 3)											
		Yes		No		Yes		No		Yes		No									
		f	%	f	%	f	%	f	%	f	%	f	%								
<b>Breast Cancer Detection</b>																					
1.	I do perform BSE a week after my menstrual cycle	148	(33.6)	272	(64.8)	158	(39.4)	243	(60.0)	5	(35.7)	9	(64.3)	1	(14.3)	6	(85.7)	0	(0.00)	3	(100)
2.	I started BSE at the age of 20 Years	134	(32.0)	286	(68.1)	140	(43.9)	261	(65.1)	9	(64.3)	5	(35.7)	6	(85.7)	6	(85.7)	0	(0.00)	3	(100)
3.	I perform BSE while standing in front o of a mirror	183	(43.6)	237	(56.4)	217	(54.1)	184	(45.9)	5	(35.7)	9	(64.3)	1	(14.3)	6	(85.7)	1	(33.3)	2	(66.7)
4.	I have not performed BSE any time	106	(25.2)	314	(74.8)	117	(29.2)	284	(70.8)	1	(7.1)	13	(92.9)	0	(0.00)	7	(100)	1	(33.3)	2	(66.7)
5.	I go for CBE only during pregnancy and not for BC detection	96	(22.9)	324	(77.1)	141	(35.2)	260	(64.8)	5	(35.7)	9	(64.3)	5	(71.4)	2	(28.6)	0	(0.00)	3	(100)
6.	I am satisfied consulting a health professional, in carrying out CBE	195	(46.4)	225	(53.6)	207	(51.6)	194	(48.4)	8	(57.1)	6	(42.9)	1	(14.3)	6	(85.7)	0	(0.00)	3	(100)
7.	I started mammography at the age of 40 years	73	(17.4)	347	(82.6)	112	(27.9)	289	(82.0)	5	(35.7)	9	(64.3)	0	(0.00)	7	(100)	2	(66.7)	1	(33.3)
8.	I go for mammography two yearly as a routine for BC detection	67	(16.0)	353	(84.0)	72	(18.0)	329	(82.0)	3	(21.4)	11	(78.6)	1	(14.3)	6	(85.7)	0	(0.00)	3	(100)
<b>Cluster %</b>		<b>29.8</b>		<b>70.2</b>		<b>37.4</b>		<b>62.6</b>		<b>36.6</b>		<b>63.4</b>		<b>17.9</b>		<b>82.1</b>		<b>16.7</b>		<b>83.3</b>	
<b>Breast Cancer Prevention</b>																					
9.	I abstain from smoking	90	(21.4)	330	(78.6)	121	(30.2)	280	(69.8)	4	(28.6)	10	(71.4)	2	(28.6)	5	(71.4)	1	(33.3)	2	(66.7)
10.	I eat high diet in fat	260	(61.9)	160	(38.1)	320	(79.8)	81	(20.2)	11	(78.6)	3	(21.4)	6	(85.7)	1	(14.3)	3	(100)	0	(0.00)
11.	I do regular exercise to maintain a healthy weight	300	(71.4)	120	(28.6)	280	(69.8)	121	(30.2)	9	(64.3)	5	(35.7)	4	(57.1)	3	(42.9)	2	(66.7)	1	(33.3)
12.	I do drink alcohol beverages excessively	290	(69.0)	130	(31.0)	350	(87.3)	51	(12.7)	12	(85.7)	2	(14.3)	5	(71.4)	2	(28.6)	3	(100)	0	(0.00)
13.	I do avoid radiation	70	(16.7)	350	(83.3)	150	(37.4)	251	(62.6)	6	(42.9)	8	(57.1)	3	(42.9)	4	(57.1)	1	(33.3)	2	(66.7)
<b>Cluster %</b>		<b>48.1</b>		<b>51.9</b>		<b>60.9</b>		<b>39.1</b>		<b>60.0</b>		<b>40.0</b>		<b>57.1</b>		<b>42.9</b>		<b>66.7</b>		<b>33.4</b>	
<b>Overall Cluster %</b>		<b>39.0</b>		<b>61.0</b>		<b>49.2</b>		<b>50.8</b>		<b>48.3</b>		<b>51.7</b>		<b>37.5</b>		<b>62.5</b>		<b>41.7</b>		<b>58.3</b>	

**Table 10:** Beliefs about breast cancer detection and prevention, based on marital status (n=845)

S/N	Statement	Unmarried(n=420) $\bar{x}$ Decision	Married(n=401) $\bar{x}$ Decision	Divorced(n=14) $\bar{x}$ Decision	Separated (n=7) $\bar{x}$ Decision	Widowed(n=3) $\bar{x}$ Decision
1.	Breast cancer can not be detected by BSE	3.51 RB	3.62 RB	3.0 RB	3.0 RB	3.67 RB
2	CBE by a physician is embarrassing	3.24 RB	3.42 RB	3.14 RB	3.42 RB	3.33 RB
3.	Feeling or touching one's breast for lump, by a physician is disgraceful	3.12 RB	3.64 RB	3.64 RB	3.57 RB	2.14 WB
4	CBE by a male physician is against my religious belief	3.18 RB	3.32 RB	3.79 RB	3.00 RB	3.67 RB
5.	Mammography is not a useful tool for breast cancer detection	3.38 RB	3.67 RB	2.36 WB	3.57 RB	3.33 RB
	Grand Mean	3.29	3.53	3.19	3.31	3.23
	<b>Breast Cancer Prevention</b>					
6.	Breast cancer cannot be prevented	3.56 RB	3.45 RB	3.29 RB	3.29 RB	3.33 RB
7.	Breast cancer is a disease that can be prevented once the person has faith	3.45 RB	3.55 RB	3.21 RB	3.00 RB	3.00 RB
8.	Breast cancer is punishment from God and so cannot be prevented	3.77 RB	3.61 RB	3.50 RB	3.29 RB	3.67 RB
9.	Breast cancer is due to bad luck and can not be prevented	3.43 RB	3.82 RB	3.14 RB	3.43 RB	3.33 RB
10.	Breast cancer is a matter of destiny and there is no need for its prevention	3.51 RB	3.47 RB	3.36 RB	3.71 RB	3.66 RB
11.	Breast cancer can be prevented by avoiding hand shake with someone having the disease	3.47 RB	3.60 RB	3.42 RB	3.71 RB	2.67 RB
12.	Breast is not curable but Preventable	3.38 RB	3.67 RB	3.60 RB	3.71 RB	3.00 RB
13.	One's diet has relationship with breast cancer prevention	3.45 RB	3.50 RB	3.71 RB	3.29 RB	3.33 RB
14.	Breast cancer is caused by witches and wizards which cannot be prevented	3.52 RB	3.35 RB	3.60 RB	3.29 RB	3.33 RB
15.	Breast cancer pts should be stigmatized as a way of preventing its spread	3.67 RB	3.40 RB	3.57 RB	3.57 RB	3.00 RB
16.	There is nothing like breast cancer, talk less of its prevention	3.45 RB	3.69 RB	3.50 RB	3.00 RB	3.67 RB
	Grand Mean / Overall Grand Mean	3.83	3.60	3.44	3.10	3.27
	Overall Grand Mean	3.56	3.57	3.32	3.24	3.25

Table 10 reveals that the overall grand mean of female teachers who are unmarried ( $\bar{x}$  =3.56), married ( $\bar{x}$  =3.57) and divorced ( $\bar{x}$ =3.32) had right belief about breast cancer detection and prevention. Also, among the female teachers who are separated ( $\bar{x}$ = 3.24) and widowed ( $\bar{x}$  =3.27) had right belief about breast cancer detection and prevention. It was found that majority of the respondents with different marital status, had right

beliefs about breast cancer detection and prevention with an overall grand mean for unmarried teachers (3.56), married, (3.57), divorced, (3.32), separated, (3.24) and widowed, (3.25).

**Research Question 6:** Does location have influence on the practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in

Bayelsa State?

Table 11 reveals that majority of the respondents living in the urban and rural areas 313 (62.25) and 220 (64.3%) respectively, did not practice breast self-examination a week after menstrual cycle. Also majority of the respondents did not start breast self-examination at the age of 20 years (urban; 337 (67.0%) and rural; 224

**Table 11:** Practice of breast cancer detection and prevention. Based on location (n=845).

S/N	Statement	Urban (n =503)		Rural ( n=342)					
		Yes	No	Yes	No				
Breast Cancer Detection		f	%	f	%				
1	I do perform self - examination a week after my menstrual cycle	190	37.8	313	62.2	122	35.7	220	64.3
2	I started breast self- examination at the age of 20 years	166	33.3	37	67.0	118	34.5	224	65.5
3	I perform breast self- examination while standing in front of a mirror	238	47.4	265	52.7	169	49.4	173	50.6
4	I have not performed breast self- examination any time	121	24.1	382	75.9	104	30.4	236	69.6
5	I go for CBE only during pregnancy and not for BC examination	154	30.6	349	69.4	96	28.1	246	71.9
6	I am satisfied consulting a health professional in carrying out CBE	244	48.5	259	51.5	170	49.7	172	50.3
7	I started mammography at the age 40 years	105	20.9	398	79.1	87	25.4	255	74.6
8	I go for mammography two times yearly as a routine for breast cancer detection.	81	16.1	422	83.9	62	18.1	280	81.9
<b>Cluster %</b>		<b>32.3</b>	<b>67.7</b>	<b>33.9</b>	<b>66.1</b>				
<b>Breast Cancer Prevention</b>									
9.	I abstain from smoking	173	34.4	330	65.6	62	18.1	280	81.9
10.	I eat high diet in fat	420	83.5	83	16.5	291	85.1	51	14.9
11	I do regular exercise to maintain healthy weight	123	24.5	380	75.5	42	12.2	300	87.7
12	I do drink alcohol beverages excessively	385	76.5	118	23.5	285	83.3	57	16.7
13	I do avoid radiation therapy	144	28.6	359	71.4	27	7.9	315	92.1
<b>Cluster %</b>		<b>49.5</b>	<b>50.5</b>	<b>41.3</b>	<b>58.7</b>				
<b>Overall Cluster %</b>		<b>40.9</b>	<b>59.1</b>	<b>37.6</b>	<b>62.4</b>				

(65.5%). Likewise majority of the respondents did not perform BSE while standing in front of a mirror (urban; 265 (52.75) and rural; 173 (50.6%). Also majority of the teachers who lived in their various locations have not performed breast self-examination any time (urban; 382 (75.9%) and rural; 236 (69.6%). Likewise only few of the respondents did go for clinical breast examination only during pregnancy and not for breast cancer examination (urban; 154 (30.6%) and rural; 96 (28.1%).

Furthermore majority of the respondents admitted that they did not start mammography at the age of 40 years (urban; 259 (51.5%) and rural; 172 (50.3%). Also majority of the respondents did not go for mammography two times yearly as a routine as a routine for breast cancer

detection (urban; 422 (83.9%) and rural; 280 (81.9%). While 330 (65.6%) of female teachers from urban area and 280 (81.9%) from rural area admitted that they eat diet high in fat, and majority of the respondents from both locations did not perform regular exercise to maintain healthy weight (urban; 380 (75.5%) and rural; 300 (87.7%).

With regards to drinking alcohol beverages excessively, majority of the respondents (urban; 385 (76.5%) and rural; 285 (83.3%) responded positively. Also female teachers from urban area, 359 (71.4%) and rural area, 315 (92.1%) did not avoid radiation therapy. It was found that location does not influence practice of breast cancer detection and prevention, with the overall cluster

**Table 12:** Summary of chi-Square of no significant influence of religions on the practice of breast cancer detection and prevention.

$\chi^2$ calculated	$\chi^2$ critical	df	Alpha level	Decision
1.036	7.82	3	.05	Ho <sub>2</sub> , Retained

**Table 13:** Summary of one-way ANOVA of no significant influence of marital status on beliefs about breast cancer detection and prevention

	Sum of Squares	df	Mean square	F	F-crit.	Decision
Btw Group	301.890	4	60.378	1.314	2.37	Ho <sub>4</sub>
Within Group	retained					
Total	38566.434	840	45.967			
	38868.324	844				

**Table 14:** Summary of chi-Square of no significant influence of marital status on the practice of breast cancer detection and prevention

$\chi^2$ calculated	$\chi^2$ critical	df	Alpha Level	Decision
5.910	9.49	4	.05	Ho <sub>5</sub> retained

percentages of negative responses for urban (59.1%) and rural (62.4%).

**Hypothesis 1:** Religion has no significant influence on practice of breast cancer detection and prevention among female secondary school teachers in Bayelsa State.

Table 12 reveals that the  $\chi^2$  calculated value (1.036) is less than the  $\chi^2$  critical value (7.82) at the degree of freedom (3) at .05 alpha level, hence the null hypothesis was accepted. Therefore, religions had no significant influence on practice of breast cancer detection and prevention among female secondary school teachers in Bayelsa State.

**Hypothesis 2:** Marital status has no significant influence on the beliefs about breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State.

Table 13: reveals that the F- calculated value (1.314,) is less than the F- critical value (2.37) at the degree of freedom (4) at 0.05 alpha level hence the null hypothesis was accepted. Therefore, marital status had no significant influence on beliefs about breast cancer detection and prevention among female secondary

school teachers in Bayelsa State.

**Hypothesis 3:** Marital status has no significant influence on the practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State.

Table 14; reveals that the  $\chi^2$  calculated value (5.910) is less than the  $\chi^2$  critical value (9.49) at the degree of freedom(4) at 0.05 alpha level and since P- value (.315) is greater than 0.05, the null hypothesis was accepted. Hence, marital status had no significant influence on practice of breast cancer detection and prevention among female secondary school teachers in Bayelsa State.

**Hypothesis 4:** Location has no significant influence on the practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State.

Table 15reveals that the  $\chi^2$  calculated value (.563) is less than the  $\chi^2$  critical value (5.99) at degree of freedom (2) at 0.05 alpha level, hence the null hypothesis was retained. Hence, Location has no significant influence on practice of breast cancer detection and prevention among female secondary school teachers in Bayelsa State.

**Table 15:** Summary of chi-Square tests of influence of location on practice of breast cancer detection and prevention (Urban=503, Rural=342)

$\chi^2$ calculated	$\chi^2$ critical	df	Alpha Level	Decision
563	5.99	2	.05	Ho <sub>0</sub> retained

### SUMMARY OF MAJOR FINDINGS

1. The practice of breast cancer detection and prevention among urban and rural female secondary school teachers in Bayelsa State was poor, and there was no difference in their practice among the two groups.
2. Religion had no significant influence on practice of breast detection and prevention among female teachers of government-owned secondary schools in Bayelsa State.
3. Marital status had no significant influence on beliefs and practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State.
4. Location had no significant influence on the practice of breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State

### DISCUSSION OF FINDINGS

The findings of the study were discussed as follows:

With respect to beliefs about breast cancer detection and prevention, the analysis showed that respondents had right beliefs ( $\bar{x}$  = 3.66) about breast cancer detection and prevention, which is in line with the findings of Knight (2003) that all events in the history of the world, and in particular, the actions and incidents which make up the story of each individual life are determined by fate. Also according to Talbert (2008), there is cancer fatalism which is the belief that all things in the world are under the control of some invisible forces, and we are powerless to do anything about it. Hence the belief that situations such as illnesses or catastrophic events, happen because of a higher power (such as God), or they are just meant to happen, and cannot be avoided. Thus the belief that death is inevitable when cancer is present had also been identified as a barrier to participation in cancer screening, detection and prevention (Powe, 1997). This is not in any way a surprise because of the individual differences in the belief pattern.

The practice of breast cancer detection and prevention among female secondary school teachers in Bayelsa State was very poor (38.2). In the views of Rutledge (1987), several reasons have been reported for women not practicing breast cancer detection and prevention, besides initial ignorance of the procedure. The reasons include lack of time, lack of self-confidence in their own ability to perform the technique correctly, fear of the possible discovery of a lump and embarrassment associated with manipulation of the breast.

With respect to influence of religion on practice of breast cancer detection and prevention, table 8 reveals that among the different religious organizations, the practice of breast cancer detection and prevention, the highest were Muslims (46.3%), followed by Christianity (33%), Traditional religion (20%) and others (18.8%). Also table 12 reveals that religion has no significant influence on the practice of breast cancer detection and prevention, since the  $\chi^2$  calculated value (1.036) is less than the  $\chi^2$  critical value (7.82) at the degree of freedom (3) at 0.05 alpha level. The findings of Ali, Mehreggan and Soghran, (2003), which suggests that most Muslim women do not perceive breast self-examination as being against their Islamic beliefs and that they believe clinical breast examination by a male physician does not interfere with their religious beliefs. This is a surprise, considering their way of life, sharia law and their dressing code

With regards to influence of marital status on beliefs about breast cancer detection and prevention. Table 10 shows the beliefs about breast cancer detection and prevention among female secondary school teachers with an overall grand mean for unmarried ( $\bar{x}$  = 3.56), married ( $\bar{x}$  = 3.57), divorced ( $\bar{x}$  = 3.32), separated ( $\bar{x}$  = 3.24), and widowed ( $\bar{x}$  = 3.25). The means of the different marital status did not differ much from each other and also indicated that they had right beliefs about breast cancer detection and prevention. It could further be seen that marital status had no significant influence on beliefs about breast cancer detection and prevention among female teachers of government-owned secondary schools in Bayelsa State. Since F-calculated value (1.314) is less than F-critical value (2.21) at degree of

freedom ( 5 & 839) at .05 alpha level.

Table 11: shows the practice of breast cancer detection and prevention amongst female secondary school teachers from urban area (32.3%) and (33.9%), of their counterparts from rural area. It implies that majority of the teachers in both urban and rural areas, practice of breast cancer detection and prevention was very poor. It is also evident in table 15, that location had no influence on practice of breast cancer detection and prevention among female secondary school teachers in Bayelsa State. Since the  $\chi^2$  calculated value (.563) is less than  $\chi^2$  critical value (5.99) at degree of freedom (2) at .05 alpha level. This is in line with the findings of Opoku, Benwell and Yarney (2012). Where the overall, uptake was generally low. Only 2% of the women reported ever undergone mammography screening in their lifetime, and 12% reported having been examined by a health care professional once in their lifetime. However, none of the women reported adhering to recommended screening guidelines for any of the programmes.

## CONCLUSION

Finding from the study showed that majority of the female teachers had right beliefs ( $\bar{x} = 3.15$ ) about breast cancer detection and prevention but did not translate to their practice. The poor practice of breast cancer detection and prevention could be a good reason why there is no reduction on the morbidity and mortality rate of breast cancer cases in Bayelsa State.

## RECOMMENDATIONS

State government should sponsor and organize workshops/ seminars on the importance of putting into practice, the detective and preventive measures of breast cancer among women in general. There is also urgent need to design more interventions and also to implement and re-enforce existing cancer awareness and cancer screening programmes.

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