Journal of Coastal Life Medicine

Perception Of Secondary-School Female Students on Breast Cancer and Breast Self-Examination in Merowe, Sudan

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Abstract

Nowadays, breast cancer is one of the most frequently detected cancers and is the major cause of death among women worldwide. Awareness of women's breasts encourages them to become familiar with what is normal or helps to alert them to any abnormal changes in the breasts and provokes them to seek medical advice immediately. A descriptive community-based survey study was conducted in Merowe city in north Sudan. To assess cancer and breast self-examination perception Among Females students in Merowe secondary school, from 2021 to 2022. The data was collected using an interview questionnaire. The sample size consisted of 75 females aged 13 and above and from all nationalities. Data were analyzed using Statistical Package for Social Sciences (SPSS) programs. The study concluded that the females' knowledge was poor regarding breast self-examination Results of the survey revealed(29.3%0) of students see that lumps and masses in the breast as signs and symptoms of breast cancer, the most student saw the medical staff as the source of knowledge about breast self-examination, (41.3%) from student agreed that can perform breast self-examination in all stage of age. (20%) of them responded with correct answers regarding the best time for breast self-examination .only (12%) of them practice breast self-examination. The study recommended that community-based awareness programs are needed so that all females can know and practice breast self-examination, which in turn helps to alert them to any abnormal changes in the breasts and provoke them to seek medical advice immediately. Comprehensive Health education programs should be targeted especially in audiovisual (Television, and Radio) obtained because it is an available methodfor respondents.

1. Introduction

Breast cancer is the most frequent cancer among women, and the principal cause of cancer related death [1, 2] which istheconsideredas second leading cause of death from cancer in women [3.4]

According to World Health Organization (WHO), almost 58% of breast cancer related deaths occur in less developed countries [3].

In addition, breast cancer is responsible for 15 million disability adjusted life years (DALYs) worldwide [2].

Even if the incidence rate remains highest in more developed regions, the mortality is relatively much higher in less developed countries due to lack of early detection and access to treatment facilities [4]

Recommended preventive techniques to reduce breast cancer morbidity and mortality include breast selfexamination (BSE), clinical breast examination (CBE), and mammography , require a hospital visit and specialized equipment and expertise whereas BSE is an inexpensive tool that can be carried out by women themselves [5]

Journal of Coastal Life Medicine

Even though BSE is a simple, quick, and cost-free procedure, the practice of BSE is low and varies indifferent countries. Several reasons like lack of time, lack of self-confidence in their ability to perform the technique correctly, fear of possible discovery of lump, and embarrassment associated with manipulation of the breast have been cited as reasons for not practicing BSE [6]

This search, therefore, attemptsto assess the level of knowledge and attitude towards breast cancer and practice of self-breast examination among female students in Merowe secondary school

Worldwide breast cancer is the most common cancer among women in developed and developing countries Worldwide, over 1.15million cases of breast cancer are diagnosed every year .

In 2020 ,an estimated 276,480 news cases of invasive breast cancer will be diagnosed in women in the U.S as well as 48.530 new cases of non-invasive (in situ) breast cancer .64% of breast cancer cases are diagnosed at alocalized stage ,for which the 5year survival is 99% .

Increase the cases of breast cancer in North Sudan Merowe, there is high rate of mortality and morbidity and increase case in the Oncology Department in Aldaman Hospital Merowe

Breast- self examination is the recommended method in developing countries because it is easy, convenient, private, safe and requires no specific equipment not cost money, done by women herself at home and no need to visit physician In addition, it is generally applicable technique, which promotes self familiarity and responsibility for health in women.

2. Material and Method

Study design:

*D*escriptive study done among student in Merowe Secondary school ,Merowe ,north state ,sudan aimed at assessing knowledge about breast cancer and breast self examination during period from 2021-2022 .

Study Area :

This study will conduct at Merowe Secondary school For Girl . Is one of important high school which is collect student from different aria around Merowe in the northern state.

Merowe town in the north state , sudan ,near karima town ,about 330kilometers north of Khartoum .it borders the Nile and is the site of Merowe dam project and about 40km,or approximately 45minuts from Merowe dam.it is borders on the north by the locality of al dibba ,on the south by the Omdurman, on the east by the locality of Abu hamad , and on the west by the Bayouda desert

Study population :

The targeted population for this study is females in age of 13 years and above in the school Merowe secondry school , Merowe.

Inclusion criteria:

Girl age 13 and above in the school class three in study.

2Exclusion criteria:

Age below 13years old .

Sampling technique :

Systematic random sampling

Sample size:

Sample size was constisted 75 female student.

Datacollection tools:

The data will collected by using structural close-ended questionnaire.

Data analysis:

data will be analysis by using SPSS .

Ethical considerations ;

The study had obtained the ethical clearance from ethical committee at merowe University No (34-799) before data collection. No potential identifiers such as name, email or phone no. At the outset of the questionnaire, participants were questioned for their agreement.

Journal of Coastal Life Medicine

Explaining the major aim of the research was discussed at the beginning of the survey in order to give the participants clarifications about the research. By agreeing to answer the survey, that has considered as approval of the participants to involving in the study. Additionally, all of the collected data were kept with the researchers in order to protect persons' confidentiality who involved in this study.

Conflict of Interest: The authors declare that there are no conflicts of interests

3. Results

Presentation, analysis and discussion of the results

In this research, the researcher deals with the presentation of Presentation, analysis and discussion of the results In this research, the researcher deals with the presentation of the data that was generated through the field and analytical studies

Where the questionnaire and interview tool was used to collect information and measure the respondents' opinions by collecting, categorizing, entering and managing information, then analyzing and extracting the results and then discussing them. Any analysis process consists of several steps represented in:

1- Planning
2- Data Collection
3- Data entry and tabulation
4- Data management
5- Data analysis
6- The final report
7- Publishing

Statistical analysis software

The ready –made programSPSS (Statistical Packge was used , which is one of the most widely used statistical programs by a wide range of students and researchers in various medical,engineering and agricultural specialties,statistics has indispensable tool for data description and analysis preparing estimates and forecasts.

The researcher used descriptive approach as he adopted the following statistical tests:

1- Ferquencies distribution

2- Charts

3- Crosstabs

4- Chi square

Research hypotheses

1- Most students do not know how to do breast self-examination to prevent breast cancer.
2- Scientific students are more knowloedgeable than litrary about breast self-examination.
3- Students who has a positive family history are more knoweloedgeable about sign and symptoms of breast cancer and detection methods

Table (1)

Age		
	Frequency	**Percent**
15 Years	5	6.7
16Years	39	52.0

17Years	31	41.3
Total	75	100.0

The table below.we find that the ages of the samples members were distributed,where we find that the there are 5 individuals with a percentage of 6.7 aged 15 years,39individualswith a precentageof 52.7aged 16 years,and 31 individuals with a precentage of 41.3 aged 17 years ,which are closely similar ages because it is the target this study

Table (2)

Section		
	Frequency	**Percent**
Scientific	39	52.0
Literary	36	48.0
Total	75	100.0

The table below.we find that the questionnare was distributed on equal proportions to the students as we find that there are 39 individuals with a precentage of 52.0 whose section the scientific, while there are 36 indiviuals a precentage of 48 whose section the literary

Table (3)

Social Status		
	Frequency	**Percent**
Unmarried	75	100.0

From the table below, we find that that the social status sample members (unmarried), as the study was directed towards them because they are the least knowledgable about breast cancer prevention and detection method

Table (4)

| Family history of breast cancer		
	Frequency	**Percent**
Yes	2	2.7
No	73	97.3
Total	75	100.0

Journal of Coastal Life Medicine

from the table below, we find that that the social status sample members (unmarried), as the study was directed towards them because they are the least knowledgable about breast cancer prevention and detection methods

Figure(1)

Breast cancer is disease attake
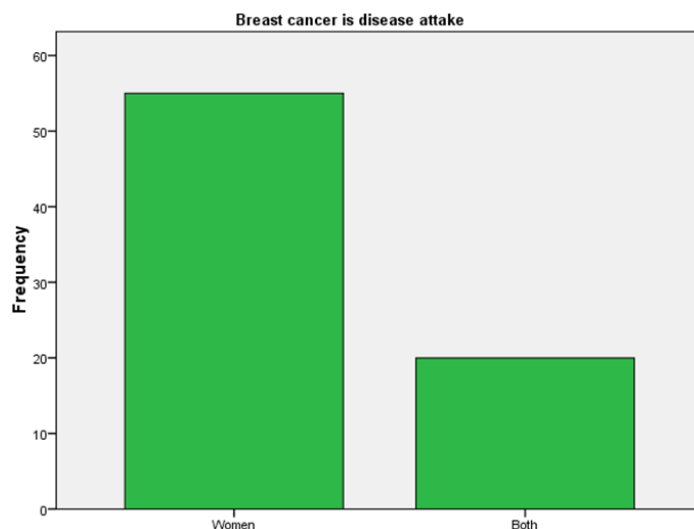
From The figure above , we found that there are 55 individuals with a precentage of 73.3 who see that breast cancer is a disease that affects women only, while there are 20 individuals with a precentage of 26.7 who see that affects both women and men. We conclude from this that most of the sample members believe that breast cancer affects women only, and this contradictsthe scientific aspect is that it can affect both men and women
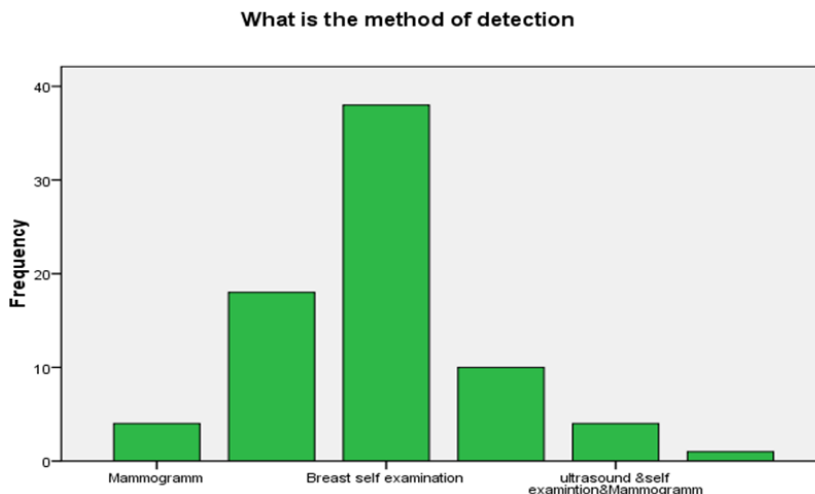
Table (5)

What is risk factor for breast cancer		
	Frequency	**Percent**
Oral contraceptive	16	21.3
Early menarche	5	6.7
Alcohol intake	1	1.3
family history	3	4.0
I dont know	49	65.3
family history & Oral contraceptive	1	1.3
Total	75	100.0

From the table below,it is clear that most of the sample,which numbered 75 individuals of whom 49 individuals,with a precentage of 65.3,said that they do not know the risk factors for breast cancer ,and this confirms the validity of the hypothesis that **most students do not know the methods of conducting self-examinaton**,because they ariginally not aware of the factors of breast canser.

Journal of Coastal Life Medicine

Figure (2)

What is the method of detection

From The Figure above , we found that the majority of the study sample sees that theways in which breast cancer is detected are breast self- examination, with 38 individuals with a precentage of 50.7 of whom18 individuals with apercentage of 42.0 see that it is done by ultrasound.And 10 individuals with a percentage of 13.3 see the detection is done by self-examination and altrasound.

Figure (3)

What is the breast cancer Sign and symptoms
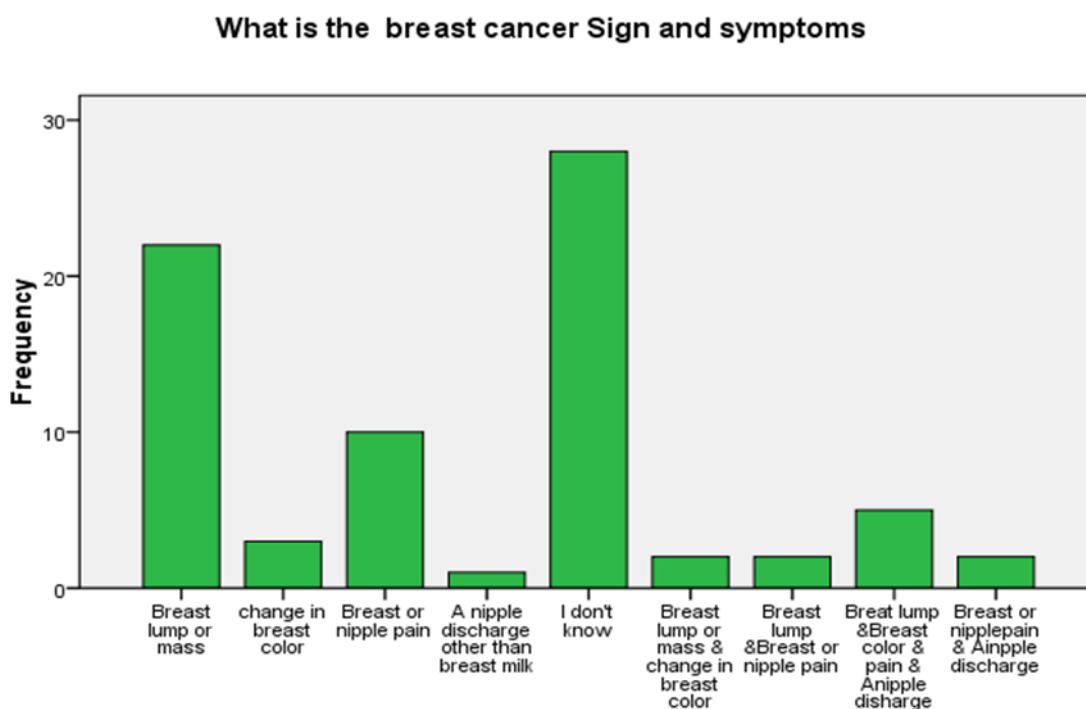
From the table below, we find that there are 28 individuals with a percentage of 37.3 which is the highest, who do not know the syptoms and signs of breast cancer,while there are 22 individuals with a percentege of 29.3 who see that one of the syptoms of breast cancer is a lump in the breast,while there are10 invividuals who see that is pain in the breast or nipple ,As for the rest ,they are divided between a change in the color of the breast.or a nipple discharge other than breast milk, or combination of a number of the previous options.Since the majority do not know the signs and symptoms of breast

Journal of Coastal Life Medicine

cancer, this makes us conclude te validity of the hypothesis that says (**most students do self-examination to detect breast cancer).**

Table (6)

Source of information about breast self examination		
	Frequency	**Percent**
Audiovisuals	17	22.7
Medical staff	28	37.3
Friend	4	5.3
Internet	10	13.3
Other	16	21.3
Total	75	100.0

From the table below , we find that there are 17 individuals, with a percentage of 22.7 whose source of information about breast cancer self-examination came from audio and visual decices,while there are 28 with a percentage of inforamtion is from the medical staff, which is the highest,may be due to the impact of lectures and awareness to detection and prevention of breast cancer.While there are 4 individuals whose in formation is sourced from friends, 10 from the tnternet,and 16 individuals from other sources.

Figure (4)

What is Age you should start self examination

We find from the table below that there are 22 individuals from the study sample who see that the exmination starts from the years of puberty, while there is one individuals who believes that it is in menopause, while there are 31 individuals with a percentage of 41.3 who see that it takes place in all stage of life, while those who do not know at what age it begins

Journal of Coastal Life Medicine

operation.their number was 21 individuals with a percentage 28.0

Table (7)

Are you performance breast self examination		
	Frequency	**Percent**
Always	1	1.3
Some times	8	10.7
Never	66	88.0
Total	75	100.0

From table below,we find that those who always perform breast self-examination only one student,with a percentage of 1.3 ,while those who sometimes perform the examination were 8 individuals with a percentage 10.7 and those who do not do it at all are 66 individualsnwith apercentageof 88.0 and this fully corresponds to the validity of the examination hypothesis (**Most stydents do not do a breast cancer self-examination**)

Table (8)

The best time for breast self examination		
	Frequency	**Percent**
After cycle	15	20.0
Before cycle	6	8.0
During cycle	5	6.7
Idont know	49	65.3
Total	75	100.0

From the table below,we find that there are 15 individuals with a percentage of 20.0 who see the approriate time to do the self-examination after the cycle,while there are 6 individuals who see that before cycle,5 individuals said during cycle,while those who do not know the appropriate time to do the self-examination are 49 individuals with a percentage 65.3.Thisis in complete agreement with the results of theprevious tables,and supports the validity of the hypothesis(**Most stydents do not do a breast cancer self-examination**)

Journal of Coastal Life Medicine

Table (9)

What is the barriers to practices breast self examination		
	Frequency	Percent
Idon't have time	13	17.3
Fear of finding cancer	20	26.7
Do not know how to perform	36	48.0
I think it is shame	5	6.7
fear& Do not know& shame	1	1.3
Total	75	100.0

From the table below, there are 36individuals with a percentage of 48.0 do not do self-examination because they do not know how to examine, while there are 20 individuals who do not have a difference of their disases, and there are13 individuals who have no timeto cary out the examinationm, there are 5 individuals who consider the examination of the shame,we conclude that most of students do not do self-examination because do not know how to examine

Table (10)

What is the position to perform breast self examination		
	Frequency	Percent
standing up	16	21.3
sit down	8	10.7
in front of mirror	17	22.7
I don't know	34	45.3
Total	75	100.0

From table below, we find that there 16 individuals who belive that the situation for self examination for the woman to be standing,while there 8 individuals who see it should sit down,while 17 said they should be standing in front of the mirror,while there 43 individuals with a percentge 45.0 who do not know how to do position breast self-examination, we conclude from this that most students do not know the status of examination for cancer,which supports the validity of the hypothesis (**Most students do not know how to do breast self-examination to prevent breast cancer**).

Table(11)

What is Age you should start self examination		
	Frequency	Percent
At puberty	22	29.3
At menopause	1	1.3
at all phase of age	31	41.3
I dont know	21	28.0
Total	75	100.0

From the table below,there are individuals with a perentage of 13.3 who believe that the apalme of hand should be used in conducting self-examination for breast cancer,while there are 29 individuals with a percentage of 38.7 who believe that the finger should be used when conducting the examination,while there are 36 individuals who do not know to use any part of the hand because they basically,they don't know to check.

Table(12)

In self examination we examine		
	Frequency	Percent
Breast	34	45.3
nipple	9	12.0
axillary lymph node	5	6.7
I don't know	27	36.0
Total	75	100.0

From table below,we find that there are 34 individuals who consider that self-examinatiom for breast cancer is breast examination itself,while there are9 individuals who consider to be a nipple examination,5 individuals consider it to be anexamination of thelymoh nodes in the armpit ,while there are27 individuals who do not know what is beignexamined when conducting breast cancer self-examintion

Table (13)

	Frequency	Percent
Discharge from the nipple	6	8.0
Rednees and swelling of the breast	24	32.0
Axillaries lymph node enlargement	5	6.7
I don't know	35	46.7
Discharge from the nipple &rednees of the brest	5	6.7
Total	75	100.0

From the table below, we find that there are 6 individuals who said that during examination they noticed that there is f dicharge from the nipple ,24 individuals said redness and swelling of the breast,and 5 individuals who saw that it was enlarged lymph nodes in the armpit, and 35 individuals who did not know any observations because in fact they do not know How to conduct the examination or not,and this is consistent with the previous results and proves the validity of the hypothesis (**Most students do not know how to do breast self-examination to prevent breast cancer).**

Table (14)

Section * Are you performance breast self examination Crosstabulation						P.vlue
Count						
		Are you performance breast self examination				
		Always	Some times	Never	Total	
Section	Scientific	0	4	35	39	
	Literary	1	4	31	36	
Total		1	8	66	75	0.570

From the table below, a relationship was made between the section those who performed self-examintion for breast cancer by crosstabulation.

Where we find that there are 39 individuals with a scientific section , of whom 35 idividuals do not conduct a self-examination. While there are 31 individuals whose section is literature, of whom 31 individuals do not conduct self-examintion, we conclude from this that there is no effect from the section on conducting the examination than not performing it.This makes us reject the hypothesis **Scientific students are more knowloedgeable than litrary about breast self-examination.**

Journal of Coastal Life Medicine

Table (15)

Family history of breast cancer * What is the breast cancer Sign and symptoms Crosstabulation											Total
		What is the breast cancer Sign and symptoms									
		Breast lump or mass	change in breast color	Breast or nipple pain	A nipple discharge other than breast milk	I don't know	Breast lump or mass & change in breast color	Breast lump &Breast or nipple pain	Breat lump &Breast color & pain & Anipple disharge	Breast or nipplepain & Ainpple discharge	
Family history of breast cancer	Yes	0	0	1	0	1	0	0	0	0	2
	No	22	3	9	1	27	2	2	5	2	73
Total		22	3	10	1	28	2	2	5	2	75
P.vlue										0.923	

The table shows Chi Square test to find the realationship between tow variables, where the following assumtion have been made :

H0: The section does not affect self-examination for breast cancer at a level of significance of 5%

H1: The section affects the self-examination of breast cancer

From the table above, we find that sig or P.vlue is 0.570 or 57% which is grater than the level of significance 5%. This makes us accept the null hypothesis (H0) and reject the alternative hypothesis ,the section does not affect wherther or not the examination for breast cancer is carried out, which is consistent with the results of the previous table and makes us reject the validity of the hypothesis (**Scientific students are more knowloedgeable than litrary about breast self-examination)**

The Chi Square test to find the realationship between tow variables, the hisory of breast cancer and the factors that lead to breast cancer.where the following assumtion have been made:

H0: There is no realationship between those who have a history of breast cancer and knowledge of the factors that lead to breast cancer at a level of significance of 5%

H1: There is realationship between those who have a history of breast cancer and knowledge of the factors that lead to breast cancer at a level of significance of 5%

From the above table, we find that the (sig) or (P.vlue) is qual to 0.923 or 92.3 which is greater than the level of significance 5%, which makes us accept the null hypothesis (H0) **There is no realationship between those who have a history of breast cancer and knowledge of the factors that lead to breast cancer**, and reject the alternative hypothesis

Journal of Coastal Life Medicine

From the table above ,we find was confucted to test realaship between two variables, the hisory of breast cancer and the factors that lead to breast cancer.Where we find that there are only two individuals who have invividuals with breast cancer, one of them does not know the factors that lead to breast cancer and the other sees it as pain in the nipple or breast.

We conclude from this that those who have individuals with breast cancer are not more familiar with the factors of breast cancer,therfore the validity of the hypothesis can be rejected **(Students who has a positive family history are more knoweloedgeable about sign and symptoms of breast cancer and detection methods).**

This may be due to the absence of a case in the study sample with a history of breast cancer.

4. Dissection

Breast cancer presents a very formidable health threat to all females. Informing young females about this serious disease is both a challenge and important investment in the

health of future generations of women . The role of BSE in the early detection of breast cancer

has been studied by several authors . This study showed that less than expected respondents had knowledge of BSE. This was not expected considering the fact that they were

Final year's medical students and should have acquired this Knowledge during their educational training. Literature Showed that formal education is more effective than nonformal

Education in health related issues . Regarding to Socio demographic data, the present study showed that the mean age of the sample was in ranged between [13-18] years old. This result disagreed (22) found that most of the participants where aged between [18-20] years old

Regarding to Socio demographic data, the present study showed that 100 % is un married disagreed (22)found that most of the participants the socio demographic 86.2 % un married.

Regarding to family history of breast cancer the majority of sample hadstudent. This result 2.7 percentage positive family history that dis agreed with(22) found majority of the sample 3.0 percentage.

Regarding torisk factor for breast cancerwas assessed it found 65.3percentage of the sample had poor knowledge,the result disagree (23)which found family history with un known 35percentage that have good knowledge .

Regard tothe method of detectionof breast cancer the majority of sample had student. This result show breast self-examination is 50.7.the result disagree (22) found majority of sample breast self-examinationthe result 57.5 percentage .

Regard to sings and symptom of breast cancer the majority of sample had student this result show breast lump and mass 29.3 percentage the result dis agree with (22)which found majority of sample breast lump and mass 71.8 percentage.

Regard to Source of information about breast self-examinationthe majority of sample had student this result show medical 37.3 percentage the result dis agree*Asian(24)*the majority of sample had medical 7.0percentage .

Regard to Age you should startself-examination the majority of sample had student this result show at theall stage of age41.3 percentage.The result dis agree (22) the result showall stage of age 6.6 percentage.

Regard to Are you performance breast self-examinationthis result show the sometime have 15.7 %. (Most students do not do breast cancer self-examination). The result dis agree *(24)the result show the performance of breast self-examination sometime have 64.5 %.*

Regard to The best time for breast self-examination this result show after cycle have 20.0%this result disagree withagree (22) the result showThe best time for breast self-examination after cycle have 14.4%.

Regard to theis the barriers to practices breast self-examination this result showI don't have time 17.3%

Journal of Coastal Life Medicine

this result disagree (24)*that* the barriers to practices breast self-examinationI don't have time 8.0%.

Regard to knowledge of student about the part of your hand use to examined the breast the majority of sample had student this result show the finger have 38.7 % this result disagree with *(24)the result show that*the majority of sample the finger have 36.5 %.

This study concluded that the level of knowledge among femalestudent regarding breast cancer and breast self-examinationto in Merowe scenery school in Merowe locality was poor according descriptiveapproach. only (20%) of participants responded with correct answers regarding the best time for breast self-examination. Only (41.3%) of study sample respond to correct answer regarding age for practicing BSE as at all stage of age .(88%) of participant was not perform breast self-examination justified that for lack of time and knowledge to perform were student , a medical staff is the main sources of their information. The result showed that the majority has good awareness about BSE although the scientific student more aware than literary student .One of the limitations of this study is that it took place in only one facility, which makes it difficult to generalize its results over the larger population of inmates in Sudan. In spiteof this limitation, our results revealed that more than half of the participants had poor knowledge about breast cancer and self-examination. The majority of the respondents think about breast self-examination as an important issue but they have poor practice.

According to study findings researcher recommend the following:

- community-based awareness programs are needed so that all women can know breast cancer and know and practice BSE, which in turn helps to alert to any abnormal changes in the breasts and provoke to seek medical advice immediately..

- Comprehensive Health education programs should be targeted specially in audiovisual (Television, and Radio) and awareness from medical staff obtained because it is available method for respondents

-furthermore, more research projects are encouraged to address this issue in other amenities and geographical locations throughout Sudan , also comprehensive breast cancer screening program is also recommended .

References

[1] Torre LA, Bray F, Siegel RL, Ferlay J, Lortet-Tieulent J, Jemal A. Global cancer statistics, 2012. CA: a cancer journal for clinicians. 2015; 65(2):87–108. https://doi.org/10.3322/caac.21262 PMID: 25651787rising in both developed and developing world [4–6].

[2] Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA: a cancer journal for clinicians. 2018; 68(6):394–424.

[3] Wild CP, Stewart BW, Wild C. World cancer report 2014: World Health Organization Geneva, Switzerland; 2014.

[4] Parkin et al. 2001; WHO 2014; Seif and Aziz 2000.

[5] Mandere, W (2009), Know More About Breast Cancer (1st Edition) Breast Cancer Alleviation.

[6] Max Watson, Caroline, Luc ,Andrew Hoy ,Jo Wells (2009).OXFORD HAND BOOK OF PALLIATIVE CARE oxford university ,p 182-18

[7] American Cancer Society (2015).Breast Cancer Prevention and Early Detection

[8] FarlexParter (2012). Medical Dictionary

[9] Breast cancer.org (2016). Breast self examinationSuite 201 breast, PA 19003 Ardmore © All rightsreserved.

[10] Ram Sharan Mehta.(2009).oncology nursing1st edition,, publisher JAPEEBROTHER, new Delhi ,p(90)

[11] .Luc Max, Jo Wells Watson, Caroline ,Andrew Hoy,.(2009).OXFORD HAND BOOK OF PALLIATIVE CAREoxford university ,p 182-18

[12] American cancer society (2016) Breast Cancer Screening Guidelines

[13] National Breast Cancer Foundation (2015). /breast-self-exam .

[14] Susan Komen (2013). Steps of breast self examination.

[15] Brian karans (2016) Breast Self-Exam, health line.

[16] Akhtari-Zavare et al .Springer Plus (2015),Barriers to breast self examination practice among Malaysian female students4:692sitedon25/2/2016

[17] FonPNde, Jules Clement NguediaAssob, and TaddiRaissa, (2015).Knowledge, attitude and practice of breast self-examination among female undergraduate students in the University of Buea BMC Res Notes. 8: 43

[18] Maqsood, B, Zeeshan, M,etal (2009). Breast cancer screening practices and awareness in women admitted to a tertiary care hospital of Lahore, Pakistan PubMed U. S. National Library of Medicine 59 (6) : 418 – 21. Marinho

[19] Saadeldin A. Idris, Aamir A (2013) .Knowledge, attitude and practice of breast self examination among final years female medical students in Sudan International Journal of Public Health Research 1(1): 6-10

[20] Hortobagyi GN, de la Garza Salazar J, Pritchard K,Amadori D, Haidinger R, Hudis CA, Khaled H, LiuMC, Martin M, Namer M, O'Shaughnessy JA. Theglobal breast cancer burden: variations inepidemiology and survival. Clinical breast cancer.2005 Dec 1;6(5):391-401.

[21] Rosmawati NH. Knowledge, attitudes and practice of breast self-examination among women in a suburban area in Terengganu, Malaysia. Asian Pac J Cancer Prev 2010;11(6):1503-8