RESEARCH ARTICLE

ASSESSMENT OF KNOWLEDGE ON BREAST SELF- EXAMINATION (BSE) AMONG WOMEN.

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Manuscript Info	Abstract

Abstract

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Background: Feminine appearance is said to be enormously important to the self - image of every woman. Breast self-examination is the important self-screening for early detection of breast cancer. So it is essential for every woman to have a basic knowledge on importance and techniques of breast self-examination and to practice regularly.
Objective: To assess the existing level of knowledge on breast self-examination and to identify the factors associated with the knowledge.
Methodology: Research Design: A cross-sectional survey design. Setting: Outpatient department, Southern railway hospital, India. Sample: 60 women attending OPD at southern railway Hospital, India. Data collection: Pre tested self-administered questionnaire was used to assess the knowledge. Descriptive statistics and inferential statistics were used to describe the variables and to find factors associated with it.
Research Variables: knowledge of women on Breast self – examination.
Results: Majority 70% of women had inadequate knowledge on breast self- examination with the mean percentage of 45.75%, standard deviation +/- 3.2. Education, family history of breast cancer and marital status had significant association with the level of knowledge on breast self- examination.
Conclusions: Almost 70% of women had insufficient knowledge on breast self-examination which in turn reflects that most of women do not engage in regular practice of BSE.
Implications for Nursing: Health education for women from the late adolescent age should include the need, and techniques of breast self-examination with demonstration.

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Introduction:-
Breast cancer is one among the most common cancer in women both in the well developed and developing countries in the world. It is estimated that worldwide over 508,000 women died in 2011 due to breast cancer [1]. Although breast cancer is thought to be a disease of the developed world, almost 50% of breast cancer cases and 58% of deaths occur in less developed countries [2].

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Breast cancer is the most frequent cancer among women, impacting over 1.5 million women each year, and also causes the greatest number of cancer-related deaths among women. In 2015, 570,000 women died from breast cancer – that is approximately 15% of all cancer deaths among women. While breast cancer rates are higher among women in more developed regions, rates are increasing in nearly every region globally.

Globally, cancer is one of the top ten leading causes of death. It is estimated that 3.2 million people died of cancer in 2014 and, Among which, breast cancer is the most common cause of cancer mortality, accounting for 21.5% of cancer deaths in adult women[3].

According to American Cancer Society in 2006, 31% of breast cancer was detected among newly diagnosed cancer patients. 15% of death in 2006 occurred due to breast cancer. Data from the cancer registry from the Cancer Institute, Tamilnadu, India, Out of 3918 newly diagnosed cancer patients, 908(23%) were diagnosed for breast cancer [4].

Cancer of breast arouses both public fear and concern globally. Cancer of breast is the leading cause of death among women in the age group of 40 – 44years. Cancer of the breast takes second position to cancer of the cervix as the leading cause of death among women. Risk of breast cancer increases by age. Majority of breast cancer found in post- menopausal women. After age 60, there is a great increase in incidence. 1.5 to 3 times risk increases a women's risk for breast cancer with history of first degree of relative of breast cancer and those with a history of breast cancer are at increased risk for developing a second breast cancer [5].Women who attained early menarche or late menopause have a slightly higher risk of breast cancer [6,7]. It was found that obesity increases the risk of postmenopausal breast cancer [8]. Recent use of Hormonal Replacement Therapy (HRT) with combined estrogen and progesterone increases the risk of developing breast cancer with higher risk associated with longer use [9,10].

World Health Organization (WHO) report 2010 indicates that the number of deaths due to cancer in the population may rise more than 50% annually. Breast cancer survival rates vary greatly worldwide, ranging from 80% or over in North America, Sweden and Japan to around 60% in middle-income countries and below 40% in low-income countries [11]. The survival rates are at the lower rate in less developed countries which could be resulted due to lack of early detection programs, resulting in a high proportion of women presenting with late-stage disease, as well as by the lack of adequate diagnosis and treatment facilities.

The cancer patient is the first and foremost person who is said to have a disease that is described as catastrophic in its effects. To many women, loss of breast or any danger to it evokes a feeling of loss of feminity, fertility and carries with it an emotional impact on her self – image, while she is coping with the personal problems that cancer brings, along with those of related psychological problems, due to bodily disfigurements additionally. Above this the women frequently encounters social problems as well.

The incidence of breast cancer increases dramatically after menopause, high incidence in and mortality among women in the age group of 40 – 45. Breast self-examination (BSE) is an option for women starting at age of 20 and epidemiological studies have suggested that BSE to be performed by all women over the age of 20 years [12]. It helps women to report any changes in the breast, promptly to their health care provider at the earliest. 90% of breast cancer are discovered by self - breast examination, it becomes nurses responsibility to assess their knowledge on breast self – examination and stress the importance of BSE, the need of urgency to seek medical advice if anything noted abnormal. Report from the review articles on BSE states that only 19% to 40% of women practice BSE on a monthly basis, and there is no strong evidence that women who practice monthly BSE perform the procedure correctly [13].

In order to improve breast cancer outcomes and survival, early detection is critical. There are two early detection strategies for breast cancer: early diagnosis and screening. Limited resource settings with weak health systems where the majority of women are diagnosed in late stages should prioritize early diagnosis programs based on awareness of early signs and symptoms and prompt referral to diagnosis and treatment [14, 15]. The best defense against breast cancer is early detection. Early diagnosis remains an important strategy, particularly in developing countries where the diseases are diagnosed in late stages and scarcity of resources present. There is some evidence that this strategy can produce "down staging" (increasing in proportion of breast cancers detected at an early stage) of the disease to stages that are more amenable to curative treatment [16]. To ensure the widest range of treatment options, it is important to detect breast cancer as early as possible. With prompt treatment the prognosis is favorable.

The five year survival for women whose tumor has not spread beyond the breast is 99% and 10 year survival rate is 83% (Cancer Net. 2010).

Breast self - examination is the most suitable method in general for Indian women. Though there is no evidence on the effect of screening through breast self-examination (BSE). However, the practice of BSE has been seen to empower women, taking responsibility for their own health. Hence BSE is to be recommended for creating awareness among women who are at risk rather than as a screening procedure [17]. Women should be advised to continue the practice of BSE on monthly basis since mammography has not been effective in detecting of tumors in younger women. Various study stated that from 1 in 6 women to every 8 – 10 who are diagnosed of breast cancer are found through breast self – examination rather than by clinicians during clinical breast examination.

Education about the importance of early detection in decreasing mortality rates might be of value in raising awareness of the various methods of early detection of breast cancer.
Considering the higher rate of breast cancer globally at present and future, great emphasis must be given to the issue of breast cancer and its screening to reduce the mortality. According to the result obtained from this proposed study, if women's knowledge towards the breast self - examination is remarkable, it lets health policy makers strengthen the trend being taken, but if the reverse occurs the finding will serve as a source for health policy planners to design strategy that can reshape and fill the gap.

In addition, the result of this study will have direct implication to the community towards early detection and prevention of complication. Furthermore to appreciate the women's stand to this world warning issue and to equip them based on the identified gaps as to that they can be able to manage problems of the family and community they live.

Purpose / Objectives:-
1. To assess the existing level of knowledge on breast self-examination
2. To identify the socio demographic factors associated with the knowledge on breast self – examination

Material And Methods:-
Research approach:-
Quantitative research approach

Research Design:-
A cross – sectional descriptive survey design.

Setting:-
An out - patient department of Gynecology, medicine and surgery at southern railway Hospital, Tamilnadu, India which is a multi- specialty hospital under the ministry of Railways.
Population: population of the study comprised of all women attending OPD at southern railway hospital.

Sample:-
Women belonging to the age group of 20 – 75, who given consent to participate in the study were selected by non - probability convenience sampling.
Sample size: 60

Development and description of the Tool:-
1. Data collection Tool: Socio demographic characteristics consisted of age, domicile, education, occupation, age at menarche, marital status, age at marriage, menopause status, history of Hormone replacement therapy, Family history of cancer, source of previous information.
2. Pre tested structured questionnaire which had 20 items regarding the Breast self - examination was used to assess knowledge.
Reliability of the tool was checked by test retest method and the reliability score obtained by Karl Pearson correlation was .91.

Scoring key: All correct responses awarded the score of 1 and 0 for wrong responses. Interpretation was made considering <50% as inadequate knowledge, 50 – 75% moderate, and >75% as adequate.

Ethical consideration:-
Ethical clearance obtained from the Institute Review Board.

Data collection Procedure:- After obtaining clearance from the institute review board, informed consent was obtained participants after explaining the purpose of the study and assuring confidentiality. Data were collected through interview with the participants.,

Data Analysis: Data collected from the subjects were transformed into excel master sheet and analyzed using statistical package for social sciences (SPSS). Descriptive (frequency and percentage) and inferential statistics (chi-square test) were used in the study. All statistical analysis was carried out at a 5% level of significance.

Results:-
Table 1:- Distribution of Sample based on socio demographic variable.

N= 60

Demographic Variable	Frequency	Percentage (%)
Age in Years		
20 – 30	21	35
30 – 45	12	20
45 – 60	21	35
60 - 75	6	10
Educational Status		
Illiterate	6	10
Primary education	15	25
Secondary level education	18	30
Higher secondary level	9	15
Degree and above	12	20
Occupation		
House wife	42	70
Working women	18	30
Religion		
Hindu	30	50
Christian	24	40
Muslim	6	10
Age at menarche		
9 – 12 years	18	30
12 – 15 years	33	55
>15 years	9	15
Marital Status		
Married	45	75
Unmarried	15	25
Menopause attained		
Yes	21	35
No	39	65
History of hormone replacement therapy		
Yes	6	10
No	54	90
Family history of Cancer		
Yes	6	10
No	54	90
Associated illness		
Any chronic illness	6	10
Past history of cancer	0	0
Any surgery of breast	3	5
Nil	51	85

Previous Source of information		
Friends& relatives	12	20
Mass media	24	40
Health care team	9	15
None	15	25

Table 1 indicates that the majority 21(35%) were in the age group of 20-30 and 45 – 60 years, 18(30%) had secondary level education, 42(70%) were housewife, 30(50%) were belonging to Hindu religion, 33(55%) attained menarche between 12 – 15 years, 45(75%) were married, 39(65%) attained menopause, 54(90%) had no history of hormone replacement therapy and family history of cancer, 51(85%) had no associated illness and 24(40%) were known about BSE from mass media.
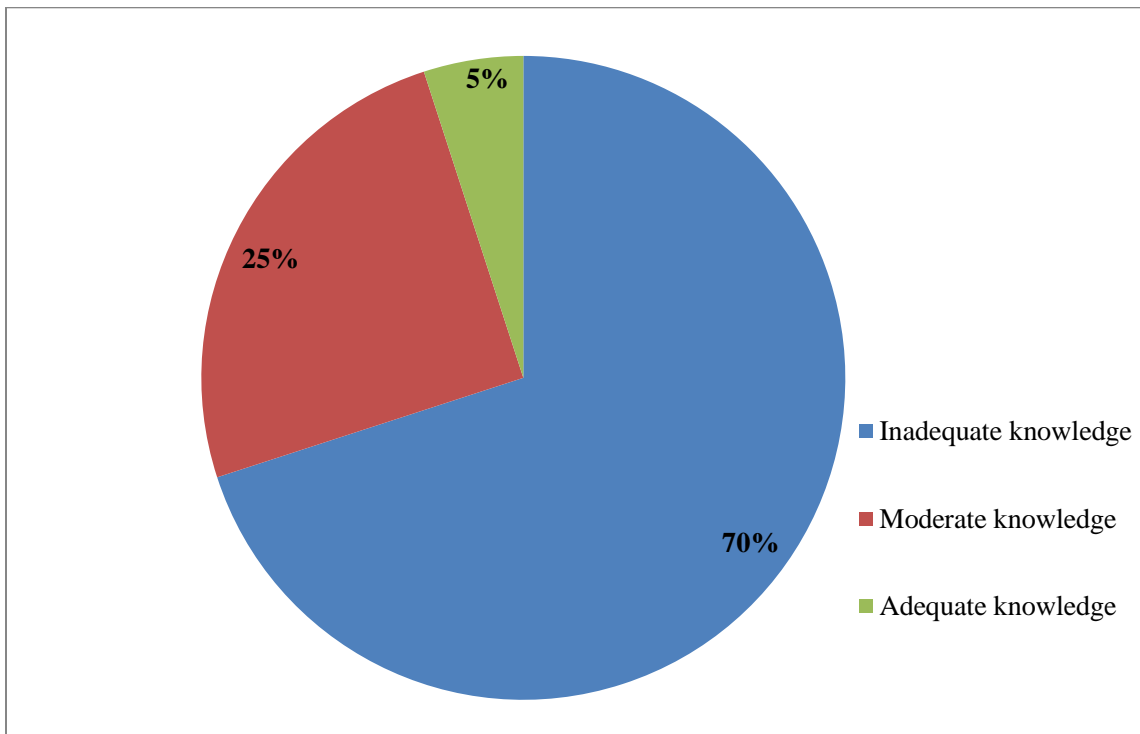

Figure 1:- Distribution of sample based on Knowledge

The above stated figure 1 indicates that the majority of the participants 42(70%) had inadequate knowledge, 15 (25%) had moderate level of knowledge and only 3(5%) had adequate knowledge on breast self – examination and its technique.

Table 2:- Mean and Standard Deviation of Knowledge on BSE   N= 60

Level of knowledge	Mean Score and Percentage	Standard Deviation
	9.15(45.75%)	3.20

The overall level of knowledge on BSE is 9.15(45.75%) with the standard deviation of 3.20.

Table 3: Association of Knowledge with socio demographic variable   N = 60

Demographic Variable	Inadequate Knowledge <50%)		Moderate knowledge (50-75%)		Adequate Knowledge (<75%)		Chi Square (X^2)
	No	%	No	%	No	%	
Age in Years							
20 – 30	12	20	6	10	3	5	
30 – 45	6	10	6	10	-	-	X^2=4.22

45 – 60	15	25	6	10	-	-	df =6
60 - 75	6	10	-	-	-	-	
Educational Status						
Illiterate	6	10	-	-	-	-	X^2=9.55[*]
Primary education	9	15	6	10	-	-	df =8
Secondary level education	15	25	3	5	-	-	
Higher secondary level	9	15	-	-	-	-	
Degree and above	3	5	6	10	3	5	
Occupation						
House wife	30	50	9	15	3	5	X^2=1.3
Working women	12	20	6	10	-	-	df =2
Religion						
Hindu	24	40	6	10	-	-	X^2=3.27
Christian	12	20	9	15	3	5	df =4
Muslim	6	10	-	-	-	-	
Age at menarche						
9 – 12 years	15	25	-	-	3	5	X^2=5.491[*]
12 – 15 years	18	30	15	25	-	-	df =4
>15 years	6	10	-	-	-	-	
Marital Status						
Married	6	10	6	10	3	5	X^2=4.45[*]
Unmarried	36	60	9	15	-	-	df =2
Menopause attained						
Yes	15	25	6	10	-	-	X^2=0.61
No	27	45	9	15	3	5	df =2
History of Hormone replacement therapy							X^2=0.93 df =2
Yes	6	10	-	-	-	-	
No	36	60	15	25	3	5	
Family history of Cancer						
Yes	3	5	3	5	-	-	X^2=0.89
No	39	65	12	20	3	5	df =2
Associated illness						
Any chronic illness	6	10	-	-	-	-	X^2=3.27
Past history of cancer	-	-	-	-	-	-	df =4
Any surgery of breast	3	5	-	-	-	-	
Nil	33	55	15	25	3	5	
Previous Source of information							X^2=4.224 df =6
Friends& relatives	6	10	6	10	-	-	
Mass media	18	30	3	5	3	5	
Health care team	6	10	3	5	-	-	
None	12	20	3	5	-	-	

*- significant at p< 0.05; df – degrees of freedom

The chi square value calculated in the above table shows the significance of socio demographic variable with the level of knowledge. The level of education, age at menarche and marital status shown significant association with level of knowledge at p<0.05 level and rest of the socio demographic variable such as age, occupation, religion, menopause state, history of hormone replacement therapy, family history of cancer, associated illness and previous course of information does not show any association

Discussion:-
The above stated study aimed at assessing the knowledge level of on Breast self-examination among women. The study findings revealed that the majority of women 42(70%) had inadequate Knowledge, 15(25%) had moderate knowledge and 3(5%) had adequate Knowledge. The overall mean knowledge score was 9.15(45.74%) which was

low indicates that the women has less knowledge on breast self – examination which in turn will reflect on their absence or poor skill in practice of BSE.

On association of knowledge with demographic variable showed the significant association with education, age at menarche and marital status.

The above findings were consistent with the study conducted among 368 respondents to assess the knowledge, attitude and practice on BSE shown that only 8.7% of them had good knowledge and 59.2% had positive attitude towards BSE and about two fifth (39.4%) of the respondents had done breast self-examinations, from these only 9.7% of them practiced monthly, and also shown significant association with level of education of the participant, father's educational level and program of enrolment [18].

The study conducted among 254 final year nursing students to assess the knowledge, attitude and practice on BSE also states that the knowledge score was 14.08 ±3.42. 87.5% accepted that early detection of any changes can improve the rate of survival. 89.2% have heard of BSE and agreed that BSE as an important mode for early detection of breast cancer. 93.3% felt the need of performing BSE and 87.5% have done BSE before. 5% of nursing students felt that doing BSE was embarrassing. Only 33.3% preformed BSE regularly in a year [19]. While the nursing students in spite of being the partners of health care delivery system and knowing the importance and uses of doing monthly BSE felt embarrassing to perform BSE. So it obviously indicates that the need for assessing the knowledge of women in the general public and educate them on need, importance and techniques of performing BSE.

Conclusion:-

From the above stated study findings. It was found that majority 70% of women have inadequate knowledge on breast self – examination (BSE), hence health care professionals and the department of health should educate and conduct awareness programs on BSE and stress the importance and role of BSE in early detection of breast cancer which could be done on observation of days such as cancer awareness day. Improvement of knowledge through awareness programs may enhance their practice of doing BSE.

Conflict of Interest:-

I declare that there is no actual or potential conflict of interest present in this study.

Acknowledgement:-

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