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Research Article

TO DETERMINE AWARENESS OF BREAST CANCER IN ENGINEERING STUDENTS OF BELAGAVI – A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: Breast cancer has been enlisted as one of the major global health problem in both the developed and developing countries whereas cancer in general is the second leading cause of morbidity and mortality. According to cancer registry, breast cancer is the second most common cancer among women. Presently cancer patients seek treatment in the advanced stages due to lack of awareness about breast cancer in its inception. **Objective:** To determine awareness of breast cancer and its risk factors in engineering students. **Methods:** The study was conducted among female students of selected engineering colleges in north of Belagavi, using convenience sampling method.Data was collected using Breast Cancer Awareness Measure-2 (domains 1, 2, 5, 7) **Results:** 69.78% of students had medium level of awareness about breast cancer. 68.13% of students had medium level of knowledge regarding the symptoms. The percentage of awareness about confidence, skills and behaviour was 62.64%. The knowledge of age related and lifetime risk factors was low but knowledge about risk factors was found to be adequate. **Conclusion:** Medium level of awareness was noted in engineering students. More awareness programmes are needed by targeting younger generation through educational programs and mass media as they may help further educate their families as well as peers which in turn will increase the awareness about breast cancer.

INTRODUCTION

Breast cancer has been enlisted as one of the major global health problem in both the developed and developing countries whereas cancer in general is the second leading cause of morbidity and mortality. According to cancer registry, breast cancer is the second most common cancer among women. The incidence of breast cancer has substantially increased and is found competing with cancer of cervix.[1]

The prevalence of cancer is estimated around 2.5 million, with over 0.8 million new cases and 0.5 million deaths occurring each year.[2] By studying the trends of prevalent cancers through the year 1982 to 2002 during various population based cancer registries it was found that breast cancer incidence was steadily increased among Indian women and continues to rise.[3] The most prevalent cancer in the world is breast cancer being responsible for 10.4 % of the global burden Breast cancer according to American Cancer Society starts when cells in the breast begin to grow out of control. These cells usually form a tumour that can often be seen on an X-ray or felt as a lump. Breast cancer has multiple risk factors like gender, age, family history, genetic background, hormonal exposure such as early age at menarche, late age at menopause, null parity, late age at first birth, little or no breast feeding and long term use of hormone replacement therapy, use of oral contraceptive pills, history of alcohol consumption, smoking.[4] Signs of breast cancer may include a palpable breast lump, nipple discharge, a change in the way nipple looks, pain in breast or armpits, an eczema type rash on the nipple, puckering or dimpling of skin.

There is a need for large scale work on breast cancer awareness also awareness programs will help to identify the different practices related to breast cancer, risk factors and prevention.[5] Early detection of breast cancer plays leading role in reducing mortality rates and improving the patients prognosis.[6] The recommended screening methods for early detection of this disease are mammography, Clinical Breast Examination and Breast Self-Examination. Unlike others cancer, breast cancer is eminently treated if detected early stages, however there is a need for culturally appropriate breast cancer education and intervention strategies.

Presently cancer patients seek treatment in the advanced stages due to lack of awareness about breast cancer in its inception. This lack of awareness combined with non-affordability and non- availability of facilities for early detection and treatment are major factors for the increase in the incidence of breast cancer. The awareness at community level in young age group is out of focus. Hence the present study is aimed to determine

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the awareness of breast cancer and its related variables so as to aid in the future intervention.

MATERIALS AND METHODS

Study design and population

A cross –sectional study was conducted among female students of selected engineering colleges of north Belagavi using convenience sampling method. All female engineering students between the age group of 18-25years were included in the study. The students who refused to participate were excluded. The total study population consisted of 200 students of which 3 refused to participate and 15 were excluded because of incomplete data. Ethical clearance was obtained from the Institutional Ethical Committee.

Data collection instrument

Data was collected using Breast CAM (Cancer Awareness Measure) version 2 which was developed by Cancer Research UK, King's college London and University College London in 2009. Domain 1, 2, 5, 7 was used in the present study.

Data collection procedure

Permission to conduct the study was obtained from the Principal/Dean/Director of selected colleges. Written informed consent was obtained from the students prior to the commencement of the study. B-CAM was administered to them in the class-room and they were asked complete and return it.

Statistical Analysis and Results

In total 182 engineering students of Belagavi, constituted the study population. The data was analysed using SPSS software 20.The data was analysed and percentage values were calculated. The mean age was 20years. The minimum age of participants was 18years and maximum age was 25years.

Table no 1 Level of awareness of breast cancer among students

Levels of awareness	No. of students	% of students
Low level (<mean - SD)	30	16.48
Medium level (>=mean - SD) to <mean + SD)	127	69.78
High level (>=mean + SD)	25	13.74
Total	182	100.00

Table 2 Level of knowledge about symptoms of breast cancer among students

Levels of knowledge of symptoms	No. of students	% of students
Low level (<mean - SD)	38	20.88
Medium level (>=mean - SD) to <mean + SD)	124	68.13
High level (>=mean + SD)	20	10.99
Total	182	100.00

Table no 3 Level of knowledge about symptoms of breast cancer among students

Levels of age related risk	No. of students	% of students
Low level (<mean - SD)	101	55.49
Medium level (>=mean - SD) to <mean + SD)	30	16.48
High level (>=mean + SD)	51	28.02
Total	182	100.00

Level of awareness of students

Most of students 69.78% (127 out of 182) had medium level of awareness about breast cancer

Knowledge about symptoms of Breast Cancer

68.13% (124 out of 182) students had medium level of knowledge about the symptoms of breast cancer. The number of students who had low level of knowledge of symptoms was 20.88% (38 out of 182) whereas 10.99% (20 out of 182) had a high level of knowledge about the symptoms of breast cancer.

Confidence skills and behaviours in relation to breast cancer

The percentage of awareness about confidence, skills and behaviours in relation to breast cancer was 62.64% (114 out of 182)

Table no 4 Level of knowledge about risk factors of breast cancer among students

Levels of Risk factors	No. of students	% of students
Low level (<mean - SD)	31	17.03
Medium level (>=mean - SD) to <mean + SD)	138	75.82
High level (>=mean + SD)	13	7.14
Total	182	100.00

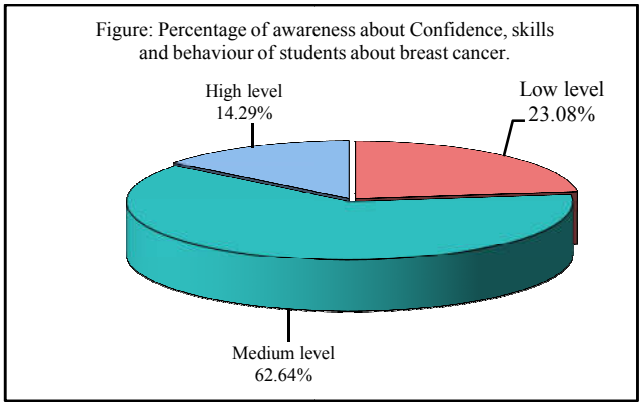
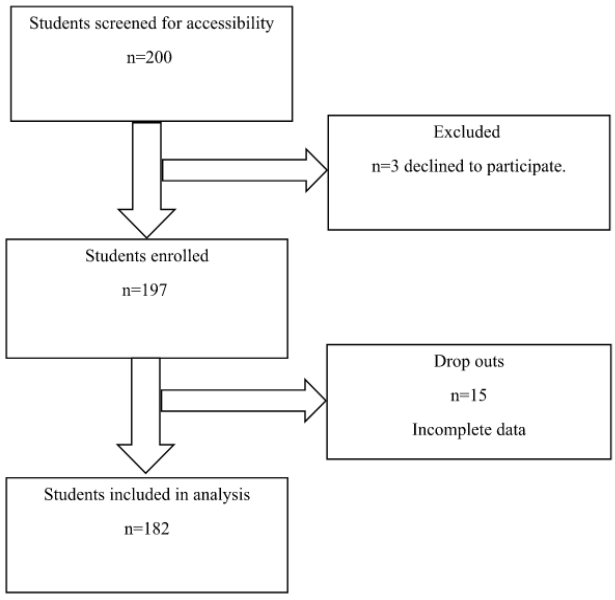


Figure no. 1



Flow chart

Knowledge of Age- related and lifetime risks factors

More than 55% (101 out 182) students had low level of knowledge about Age-related and lifetime risk factors of breast cancer.

Knowledge about risk factors of breast cancer

75.82% (138 out of 182) student had adequate knowledge about risk factors of breast cancer.

DISCUSSION

Present study was conducted to determine the awareness of breast cancer in engineering students of Belagavi. 69.78% (127 out of 182) students had medium level of awareness about breast cancer. Similar findings were recorded in a study by Ahuja *et al* in a tertiary care hospital which on an average showed 52% level of awareness.[9] This is consistent with the findings of other study done among young women in United Arabs Emirates by Younis *et al* which estimated 77% of the respondents in the average score category.[10] The reason for medium level of awareness could be attributed to lack of proper public education and awareness programs about breast cancer.

In present study level of awareness about the symptoms of breast cancer was 68.13%. Montezari *et al* demonstrated that 44% of Iranian women were aware about some common symptoms such as painless lumps, the figures were even lower for other symptoms.[14] The possible cause might be unavailability of proper source to impart knowledge of symptoms of breast cancer.

The percentage of awareness about confidence, skills and behaviour about breast cancer was 62.64% in the present study. A study by Younis *et al* stated that 58% of the respondents had knowledge, while only 49% performed breast self-examination.[10] According to the findings of a study by Ahuja *et al*, found that 42% of women were aware about breast self-examination and 18.7% reported practicing it.[9] Akhtari-Zavare *et al* found that 36.7% of Malaysian students practicing breast self-examination.[17] Similar findings were demonstrated by Chee *et al*, wherein 24.4% Malaysian women practiced breast self-examination.[16] The main basis for non-performance of breast self-examination is lack of proper knowledge about breast self-examination.

In study on awareness and risk factors in college going young age group women demonstrated that there was wide gap in knowledge about breast cancer and its risk factors. Though all women in the study knew about breast cancer but only half of them were aware about cardinal symptoms of breast cancer. [11] In the present study 75.82% students had adequate knowledge about risk factors of breast cancer. A study by Akhtari- Zavare *et al*, depicted that most widely known risk factors by the Malaysian students were family history of breast cancer (82.7%) and age (64.6%).[17] More than 55% students in our study had low level of knowledge about age related and lifetime risk factors of breast cancer.

This suggests that younger generation should be imparted more knowledge regarding signs and symptoms of breast cancer, and risk factors etc. Early awareness regarding sign and symptoms of breast cancer will prevent late diagnosis and will help in early detection of breast cancer. Which may be beneficial for reducing mortality due this disease. Breast self-examination should recommended for all women both young and old. Primary health care providers including physiotherapists should play a major role for creating awareness about breast cancer and breast self-examination. Though this type of study was conducted for the first time in this part of India. However, in the present study the female students of same geographical area were included, suggesting that a similar study among female students of different professions, various geographical area, and age groups can be conducted.

Medium level of awareness (69.78%) was found in engineering students. This suggests that there is a need of large scale community level awareness programmes to be conducted regarding breast cancer, its symptoms, and risk and examination practice. Also, the study suggests that there is a role of physiotherapist to develop behaviours practices that will encourage use of measures such as breast self-examination for early detection of breast cancer. Awareness Programmes targeting younger generation through educational programmes and mass media they may further educate their families as well as peers which in turn will increase the awareness about breast cancer.

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