https://doi.org/ 10.48047/AFJBS.6.7.2024.1735-1745

Breast-Cancer Awareness and Breast Self-Examination (BSE) Evaluation among Young Adult Females in Dehradun, Uttarakhand

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Article History

Volume 6,Issue 7, 2024

Received: 29 Mar 2024

Accepted : 22 May 2024

doi: 10.48047/AF5BS.6.7. 2024.

1735-1745

Abstract

Purpose of the study: To assess the understanding and application of breast-cancer awareness and breast self-care among young adult females.

Methodology: The study employed a quantitative research approach, utilizing an exploratory research design. A sample size of 60 participants was chosen using a non-probability convenient sampling technique from Himalayan Hospital, Dehradun. Data collection involved the use of a structured knowledge questionnaire and a self-reported practice checklist. The sample underwent analysis utilizing both descriptive and inferential statistical methods.

Results: The results indicated that the average knowledge score among adult females was 13.93, with a standard deviation of 4.88. Notably, 63.3% of participants demonstrated a high level of understanding regarding breast-cancer and breast self-care, indicating a commendable understanding of the subject matter. Conversely, 13.3% exhibited average knowledge, while 23.3% displayed below-average knowledge in these areas, highlighting areas for improvement in awareness and education efforts. Regarding practice, the results showed that 61.7% of subjects had satisfactory practice in performing breast self-examination, while 38.3% exhibited unsatisfactory practice.

Conclusion: The study's findings indicated that 13.3% of the sampled individuals possessed an average level of understandings concerning breast-cancer management and breast self-care, while 23.3% demonstrated a below-average knowledge score in these areas. Regarding self-reported practice, 38.3% of the subjects exhibited unsatisfactory performance in conducting breast self-care.

Keywords: Breast cancer, Self-Examination, Adult Females, Carcinoma, Early detection.

INTRODUCTION

Breast cancer stands as a prominent cause of mortality among middle-aged women in numerous developing nations. It represents the most prevalent form of cancer in females globally, contributing significantly to mortality rates among women. Symptoms of breast cancer can vary, with the most common manifestation being a lump or thickening in the breast tissue, though it's essential to note that most breast lumps are benign. Early detection plays a pivotal role in treatment outcomes, as cancer detected at an initial stage can often be effectively treated before spreading to nearby tissues. Breast self-examination serves as a screening technique aimed at identifying potential signs of breast cancer early. This method involves women personally examining their

breasts for any abnormalities such as lumps, distortions, or swelling. While breast self-examination was previously heavily promoted as a means to detect cancer at a more treatable stage, its primary goal is to empower women to become familiar with the appearance and texture of their breasts, enabling them to promptly recognize any changes that may arise. The majority of fatalities stemming from this illness occur in developing regions. The diminished survival rates observed in less economically developed nations can be primarily attributed to the absence of early detection initiatives, insufficient diagnostic resources, and limited treatment facilities, leading to a significant portion of women being diagnosed at advanced disease stages. Furthermore, it ranks as the second leading cause of cancer-related deaths globally. Breast cancer ranks as the second most prevalent cause of cancer-related fatalities among women worldwide, a statistic mirrored in India. However, the true extent of the burden of breast-cancer in India remains elusive due to inadequate cancer data and statistics.

The aim of this study is to assess the comprehension of breast cancer and breast self-examination among young adult females. Additionally, it seeks to gauge the practical application of knowledge regarding these topics among this demographic. Furthermore, the study aims to explore the correlation between the level of knowledge and the actual practice of breast self-examination with selected demographic variables.

METHODOLOGY

For this study, a quantitative research approach was employed, utilizing an exploratory research design. A sample size of 60 individuals was chosen using a non-probability convenient sampling technique from Himalayan Hospital, Dehradun. Data collection involved the administration of a structured knowledge questionnaire and a self-reported practice checklist. Subsequently, the collected data underwent analysis utilizing both descriptive and inferential statistics.

RESULTS

The investigation outcomes indicated that the average knowledge score among adult females was 13.93 with a standard deviation of 4.88. Impressively, 63.3% of participants demonstrated a commendable level of understanding concerning breast cancer and breast self-examination, reflecting a strong grasp of pertinent information. However, a notable proportion, 13.3%, displayed average knowledge in these areas, suggesting room for improvement in understanding key concepts related to breast health. Alarmingly, 23.3% of respondents exhibited below-average understanding regarding breast cancer and breast self-examination, highlighting a concerning gap

in awareness that warrants targeted educational interventions. These findings underscore the importance of implementing comprehensive awareness campaigns and educational programs to enhance knowledge and promote proactive breast health practices among the population. Despite this, there was a positive correlation between awareness and educational attainment, indicating the potential effectiveness of targeted educational interventions. Alarmingly, the study found that a large proportion of respondents had never performed BSE or were unaware of its significance in early detection. These findings underscore the urgent need for comprehensive public health campaigns and educational initiatives tailored to young females in Dehradun to enhance awareness and encourage regular BSE practices, thereby improving early detection rates and reducing the burden of breast cancer in the region. Table 1 describes the socio-demographic profile of the adult females regarding the breast self-examination. Figure 1 describes the area-wise percentage distribution of domains of understanding score regarding breast cancer and breast self-care among young adult females Figure No 2 Shows the percentage of practice scores regarding breast self-care among young adult females (37) 61.7% have satisfactory practice and (23) 38.3% have unsatisfactory practice.

Table 1. Analysis of the Socio-demographic Characteristics of Adult Females about Breast Cancer Awareness and Breast Self-Examination (Sample Size: 60)

S.no	Demographic data	Frequency(f)	Percentage (%)
1	**Age (in years)**		
1.1	20- 25	31	51.7%
1.2	26- 30	29	48.3%
2	**Age of menarche (in years)**		
2.1	10-12	22	36.7%
2.2	13-15	28	63.3%
3	**Education qualification**		
3.1	literate	55	92%
3.2	Illiterate	5	8.0%
4	**Occupation**		
4.1	Working	16	26.6%
4.2	Non-working	44	73.4%
5	**Religion**		
5.1	Hindu	54	90%
5.2	Muslim	6	10%
6	**Area of residence**		
6.1	Urban	28	46.7%
6.2	Rural	32	53.3%
7	**Type of Family**		
7.1	Nuclear	19	31.7%
7.2	Joint	41	68.3%
8	**Family history of breast cancer**		
8.1	Yes	5	8.3%
8.2	No	55	91.7%
9	**Previous knowledge on breast cancer & breast self- examination**		
9.1	Yes	15	25%
9.2	No	45	75%
	Source of information		
	Health workers	7	47%
	Media	8	53%

Table 2. Mean, SD, Range, Median and Mean percentage of knowledge score of young adult females regarding breast-cancer and breast self-care.

	Maximum score	**Range of obtained score**	**Median**	**Mean ± SD**	**Mean%**
Knowledge score	31	4 - 28	13	13.93 ± 4.88	44.93%

(n=60)

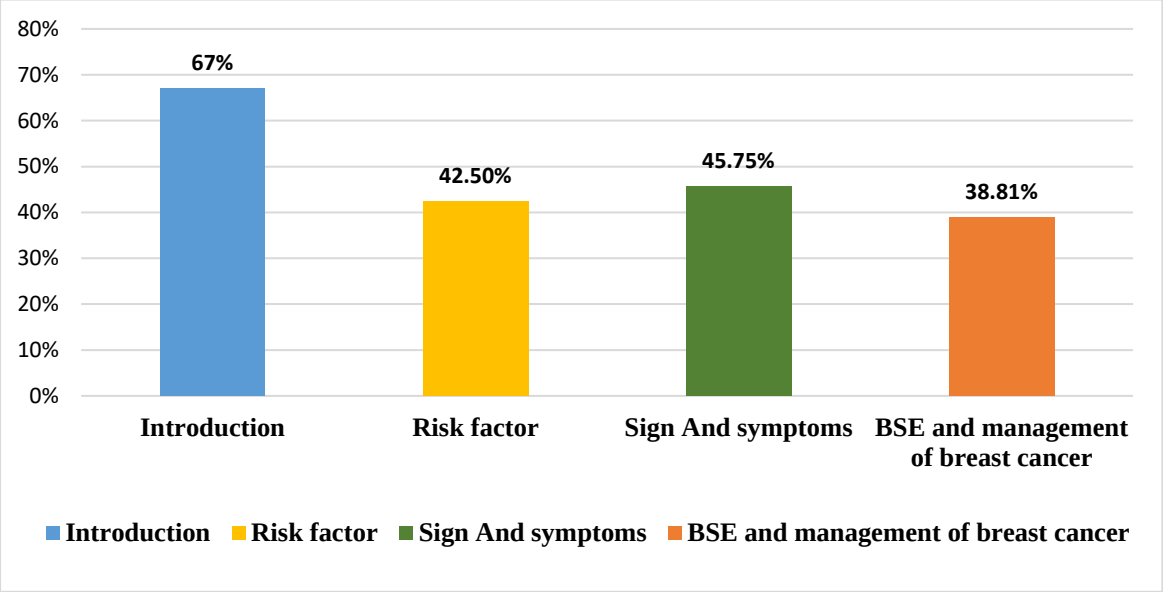

Figure 1. Area-wise percentage distribution of domains of understanding score regarding breast-cancer and breast self-care among young adult females.

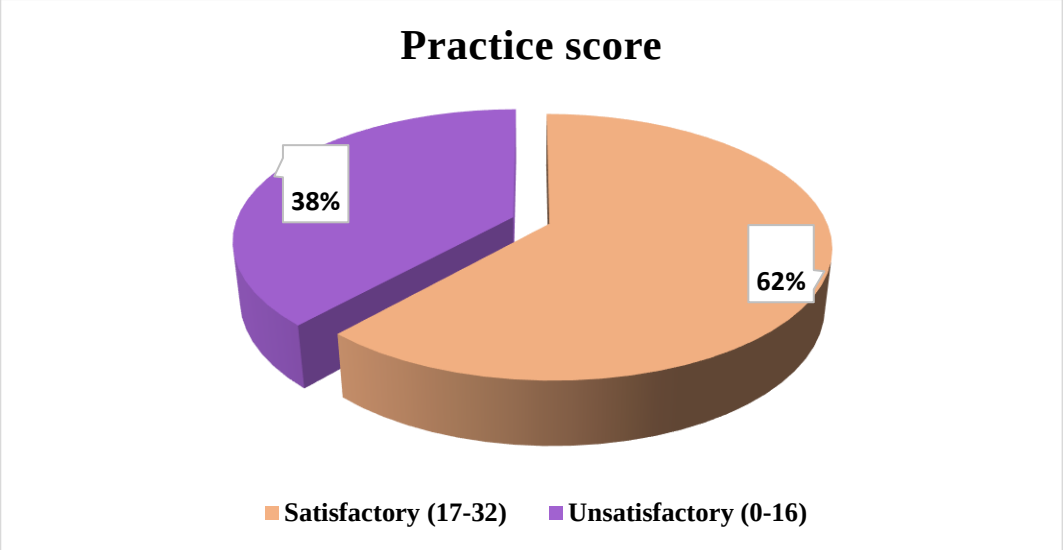

Figure 2. Percent distribution of practice score for Brest self-examination and breast cancer

Results revealed varying levels of engagement in BSE practices, reflecting a spectrum of proactive behaviors towards breast health. In Figure 2, Encouragingly, a substantial proportion of respondents demonstrated consistent and thorough practice, with a noteworthy percentage engaging in regular BSE routines indicative of proactive health management.

Table 3. Correlation of Knowledge Scores with Socio-demographic Factors among Young Adult Females in Relation to Breast Self-care and Breast Cancer Awareness

S. No	Demographic data	level of knowledge		$x2$	P value
		Below median (<13)	At or above median (≥13)		
1	**Age (in years)** 20-25 26-30	 13 12	 19 16	 0.384	.535
2	**Education** Literate Illiterate	 25 11	 15 9	 0.52	.470
3	**Religion** Hindu Muslim	 23 1	 31 5	**$** 0.63	.427
4	**Area of residence** Rural Urban	 16 9	 18 17	 0.94	.332
5	**Type of family** Joint Nuclear	 20 5	 23 12	**#** 1.46	.226
6	**Occupation** Working Non- working	 12 25	 8 15	 0.038	.845

Chi-square value = 3.972, df =1 at p<0.005 level of significant

= Yate's correction test

$ =Fissure exact

Table No. 3 presents a detailed analysis of the association between socio-demographic variables and the knowledge score of young adult females. Interestingly, the statistical analysis revealed no significant association between these variables at the specified level of significance (p<0)05.

Table 4. Association between practice score with socio-demographic variables of young adult females regarding Brest self-examination and breast cancer.

S. No	Demographic data	level of Practice		$x2$	P value
		Below median (<16)	At or above median (≥16)		
1	**Age (in years)** 20-25 26-30	 10 15	 22 13	3.04	.081
2	**Education** Literate Illiterate	 15 20	 8 17	0.78	.377
3	**Religion** Hindu Muslim	 20 4	 34 2	$ 0.005	.943
4	**Area of residence** Rural Urban	 16 9	 17 18	1.39	.238
5	**Type of family** Joint Nuclear	 21 3	 22 14	# 3.73	.056
6	**Occupation** Working Non- working	 13 22	 9 16	.0042	.948

Chi square value = 8. 94, df =1 at $p<0.005$ level of significant

= Yate's correction test

$ =Fissure exact test

Table No 4 show that there were statically no significant association between socio demographic variables with practice score of young adult females at the level of $p<0.05$.

DISCUSSION

- The present study findings were out of 60 samples 63.3% had good understanding regarding breast-cancer and breast self-care.13.3% had average understanding regarding breast cancer and breast self- care. And 23.3% had below average understanding regarding breast cancer and breast self-care.
- The outcomes supported by Suvarna Madhu Kumar, Utharaar Thambiran, Bhavya Basavaraju [2017] The study takes place at a well-known science college in Bengaluru. The study comprised college girls age between 18-23 years and the sample size was 1030

students. The investigation was carried out with the intension of assessing the level understanding and awareness of carcinoma of breast and breast self-care. The data collected through pre and post questionnaire and analyzed using SPSS. 58% had a understanding of at least one of the symptoms and 59% knew at least one of the risk factors for breast-cancer. Only 18% adolescent girls knew about breast self-care and 107 adolescent girls practice it.

- The research done by (Isara et, al. 2011) indicate a deficiency in breast cancer awareness among female secondary school students. While a notable portion acknowledged the potential of Breast Self-care as a screening tool for breast cancer, only a minority had performed it. This underscores the necessity for comprehensive health education initiatives focusing on breast cancer and BSE among adolescent females in Nigeria [6, 7, 8].
- The outcomes from the study performed by (Birhane et, al. 2017) underscore a prevalent lack of familiarity and practice with Breast Self-care among the majority of participants. Given the importance of self-breast inspection in the early detection of breast cancer, there is a pressing need for universities to implement comprehensive health education programs. These initiatives should aim to enhance public awareness of BSE techniques and raise knowledge about breast cancer among students and the broader community. By equipping individuals with the necessary information and skills, universities can play a vital role in promoting proactive health behaviors and reducing the burden of breast cancer through early detection and intervention [7, 9, 10].

CONCLUSION

Breast self-examination stands as an ideal, safe, effective, and cost-free method accessible to every woman, requiring only minimal training and easily conducted during leisure time. By empowering women to proactively monitor their breast health, breast self-care facilitates the timely identification of breast-cancer. However, despite improvements in literacy rates and awareness regarding breast cancer, several barriers hinder the consistent practice of breast self-examination. These obstacles include feelings of embarrassment, constraints on time, fear of uncovering a lump, and negative attitudes toward the practice of breast self-care. This emphasizes how important it is to have a training program in place that aims to raise awareness about breast-cancer (BC) and encourage breast self-care as part of national and international efforts to fight this deadly illness.

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