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A STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE ON BREAST CANCER AMONG WOMEN

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ABSTRACT

Introduction: Breast cancer is a significant public health concern worldwide, particularly affecting women, with early detection pivotal for successful treatment outcomes. The purpose of the study to assess the knowledge and attitude on the breast cancer among women who were attending outpatient and inpatient departments in a Tertiary Care Center.

Aim: The study aims to assess the knowledge and attitude on breast cancer among women.

Objectives: To assess the knowledge and attitude regarding breast cancer among women, correlate the knowledge and attitude on breast cancer and associate the knowledge and attitude on breast cancer with selected demographic variables

Methodology: Descriptive cross-sectional research design was used after getting approval from the Ethical Committee.

Result: The result shows that the mean knowledge score among women is 6.71, with a standard deviation of 1.898. Majority (52%) of the participants had moderate knowledge, and only 16% had inadequate knowledge. The mean attitude score is 38.56, with a standard deviation of 4.547. Majority (81%) of participants have favorable attitude towards breast cancer, 19% had moderate favorable attitude, and none had an unfavorable attitude. The coefficient correlation between knowledge and attitude on breast cancer among women is a significant correlation of .000 ($p < 0.001$). The association between knowledge and attitude on breast cancer among women with selected demographic variables shows that occupation ($p = .115$), family monthly income (.007), source of information (.036) had a significant association between knowledge with demographic variables and there is a no association between attitude with demographic variables.

Keywords: Breast cancer, Knowledge, Attitude, Women.

INTRODUCTION:

Cancer is a complex disease characterized by the uncontrolled growth and spread of abnormal cells. These abnormal cells can form tumors, interfere with normal bodily functions, and potentially invade other tissues. Cancer can affect virtually any body part and has numerous different forms, each with its unique characteristics and behaviors.[1] Breast cancer imposes a significant economic burden on countries and presents substantial public health challenges.[2,3] At the same time, preventive measures such as early detection strategies can mitigate its

impact.[4,5] Routine breast screening by women is essential for the early detection of breast cancer.[6]

Early detection through screening mammograms and self-exams can greatly improve the chances of successful treatment. Treatment options for breast cancer may include surgery, radiation therapy, chemotherapy, hormone therapy, targeted therapy, or a combination of these approaches, depending on the type and stage of the cancer.[7]

NEED FOR STUDY:

In 2020, according to estimates from the Global Cancer Observatory (GLOBOCAN) by Ferlay et al. (2020), there were 19.3 million new cases of cancer worldwide.[8] In 2017 cancer was estimated to have caused 9.6million deaths worldwide.[9] According to the Global Cancer Observatory (GLOBOCAN), India was projected to experience 1.3 million new cancer cases and about 850,000 cancer-related deaths by 2020. In India, breast cancer emerged as the leading cause of both cancer incidence and mortality, accounting for 13.5% of new cancer cases and 10.6% of all cancer deaths.[10] Breast cancer accounted for approximately 2.3 million new cases, constituting 11.7% of all cancer diagnoses.[12] Epidemiological studies indicate that the global burden of breast cancer is projected to approach nearly 2 million cases by the year 2030.[13] According to the sole population-based cancer registry in Tamil Nadu, the estimated incidence of breast cancer in Chennai city was 26.07 per 100,000 population.[14]

STATEMENT OF THE PROBLEM

A descriptive study to assess the knowledge and attitude on breast cancer among women in a selected Tertiary Care Centre, Tamil Nadu.

AIM & OBJECTIVES:

Aim: To assess the knowledge and attitude on breast cancer among women.

Objectives:

1. To assess the knowledge and attitude regarding breast cancer among women in a selected demographic area.
2. To correlate the knowledge and attitude on breast cancer among women.
3. To associate the knowledge and attitude on breast cancer among women with selected demographic variables.

METHODOLOGY:

Study design: A descriptive cross-sectional research design was used in the study.

Sample:

The study was conducted at a Tertiary Care Center. The sample was selected using a convenience sampling technique and 100 women participants aged 20-50 years were selected. Samples who are willing to participate are included in this study. Informed consent was obtained before starting the data collection.

Ethical considerations:

All the study materials and procedures were reviewed & approved by The Institution Human Ethics Committee (CARE IHEC-I) ethical approval code (Ref No: IHEC-I/2279/23).

Main instruments

Section A: Demographic variables. It includes age, marital status, age at marriage, parity, and education.

Section B: Self-structured questionnaires were developed to assess breast cancer knowledge. The questionnaire contains 10 questions. The score was given as each correct answer was scored 1 and the wrong answer was marked as 0. The total score is 10.

Section C: A five-point Likert scale was used to gauge women's attitudes towards breast cancer, consisting of 20 items: 10 positive and 10 negative items. The items were scored as: For positive statements: 3- agree, 2- neutral, 1- disagree, for negative statements: 1- agree, 2- neutral, 3- disagree.

INTERPRETATION:

1. **Knowledge score interpretation**

Table 1: Knowledge score interpretation.

KNOWLEDGE	SCORING	PERCENTAGE
Inadequate knowledge	1-4	<50%
Moderate knowledge	5-7	50-70%
Adequate knowledge	8-10	>71%

2. **Attitude score interpretation**

Table 2: Attitude score interpretation.

ATTITUDE	SCORING	PERCENTAGE
Unfavorable attitude	0-23	<50%
Moderately favorable attitude	24-34	50-70%
Favorable attitude	35-48	>71%

FINDINGS OF STUDY:

Objective 1. Knowledge and attitude on breast cancer among women

a) Knowledge regarding breast cancer among women

The majority (52%) of the participants had moderate knowledge, 32% had adequate knowledge and only 16% had inadequate knowledge on breast cancer.

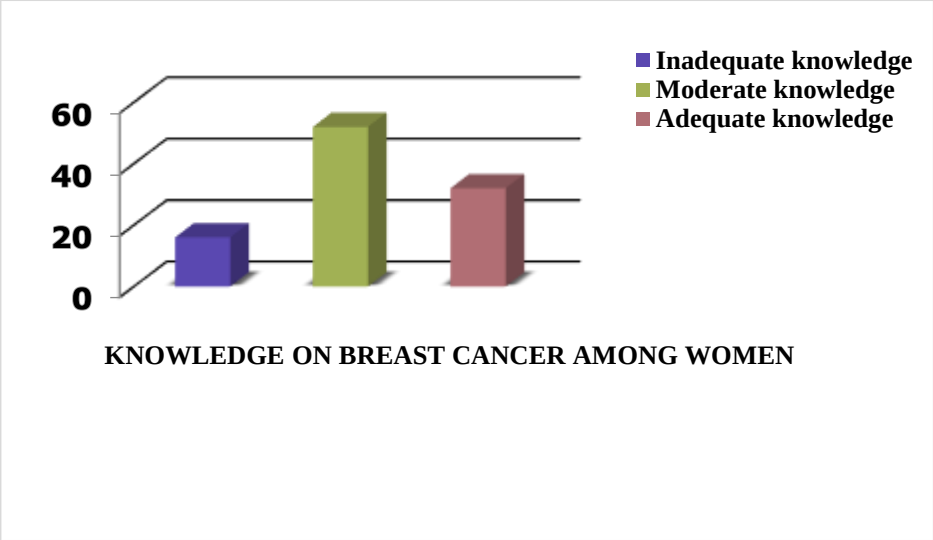

Figure 1: Knowledge on breast cancer among women.

b) Attitude toward breast cancer among women

The majority (81%) of participants have a favorable attitude toward breast cancer and 19% had moderately favorable attitude. None of the participants had unfavorable attitude.

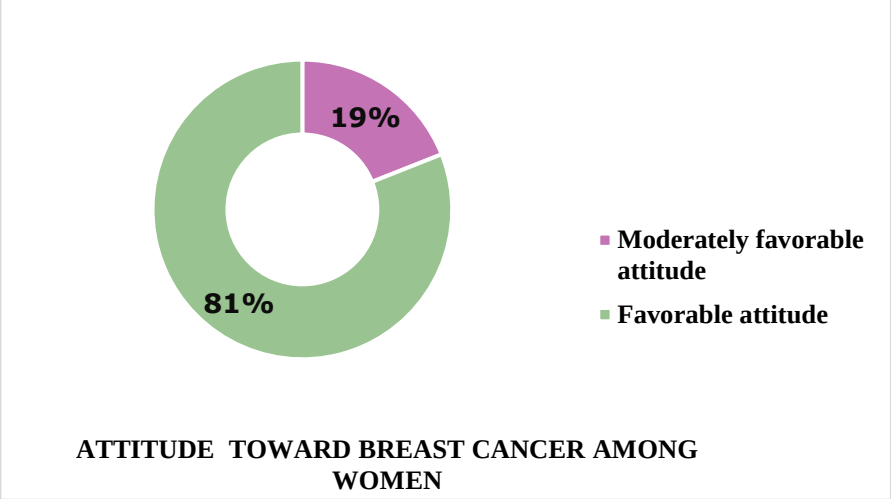

Figure 2: Attitude toward breast cancer among women.

Objective 2: Correlation between knowledge and attitude on breast cancer among women

The study found a moderately positive correlation (r=0.422) between knowledge and attitude which was statistically significant (p< 0.001).

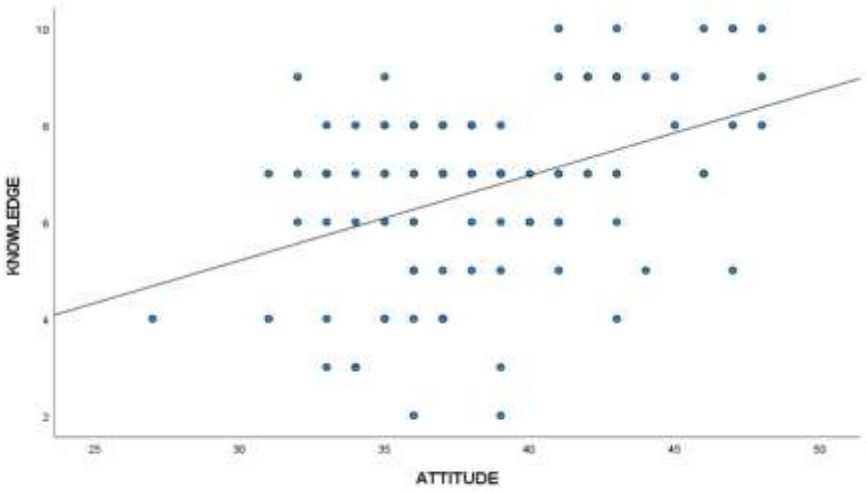

Figure 3: Correlation between knowledge and attitude on breast cancer among women.

Objective 3: Association between knowledge and attitude on breast cancer among women with selected demographic variables

Table 3: Association between knowledge on breast cancer among women with selected demographic variables

N=100

SL NO	Variables	Category	Knowledge			Chi-square	P value
			IK*	MK*	AK*		
Demographic variables							
1	Age	20-30	2	18	15	6.858	.144 (NS)
		31-40	9	17	8		
		41-50	5	17	9		
2	Marital status	Married	13	39	23	4.236	.375 (NS)
		Unmarried	1	11	8		
		Widow	2	2	1		
3	Age at marriage	>20yrs	7	14	9	7.461	.113 (NS)
		20-30	8	38	23		
		30-35	1	0	0		
4	Parity	Null parity	1	14	11	4.639	.326 (NS)
		Single parity	6	13	8		
		Multiple parity	9	25	13		
5	Education	No formal education	3	1	0	18.473	.001* (S)
		Primary school	5	6	2		
		>High school	8	45	30		
6	Occupation	Unemployment	7	28	11	7.424	.115* (S)
		Skill labor	6	11	6		
		Professional	3	13	15		
7	Family monthly income	<Rs.5000	0	9	3	14.102	.007* (S)
		Rs.5000-Rs.10000	12	19	8		
		>Rs.15000	4	24	21		

8	Source of information	School	11	48	29	10.285	.036* (S)
		Health professional	3	2	0		
		Others	2	2	3		

*S - significant, NS - not significant, IK - inadequate knowledge, MK - moderate knowledge, AK – adequate knowledge.

The above table shows that education (p=.001), occupation(p=.115), family monthly income (p=.007), and source of information(p=.036) are significantly associated with knowledge.

Table 3: Association between attitude toward breast cancer with selected demographic variables.

N=100

SL NO	**Variables**	**Category**	**Attitude**			**Chi-square**	**P value**
			Disagree	**Neutral**	**Agree**		
Demographic variables							
1	Age	20-30	0	5	30	1.479	.477 (NS)
		31-40	0	6	28		
		41-50	0	8	23		
2	Marital status	Married	0	17	58	3.206	.201 (NS)
		Unmarried	0	1	19		
		Widow	0	1	4		
3	Age at marriage	>20yrs	0	5	25	.415	.812 (NS)
		20-30yrs	0	14	55		
		30-35yrs	0	0	1		
4	Parity	Null parity	0	4	22	.404	.817 (NS)
		Single parity	0	6	21		
		Multi parity	0	9	38		

5	Education	No formal education	0	2	2	3.582	.167 (NS)
		Primary school	0	1	12		
		>High school	0	16	67		
6	Occupation	Unemployed	0	12	34	3.254	.197 (NS)
		Skill labor	0	2	21		
		Professional	0	5	26		
7	Family monthly income	< Rs.5000	0	3	9	.321	.852 (NS)
		Rs.5000-Rs.10000	0	7	32		
		>Rs.15000	0	9	40		
8	Source of information	School	0	16	72	1.572	.456 (NS)
		Health personnel	0	2	3		
		Others	0	1	6		

(NS) not significant

The above table shows no association between attitude towards breast cancer among women and demographic variables.

Frequency and percentage distribution of women based on demographic variables

Table 4: Frequency and percentage distribution of women based on demographic variables

N=100

CHARACTERISTICS	CATEGORY	FREQUENCY	PERCENTAGE (%)
Demographic variables			
Age in years	20-30	35	35
	31-40	34	34
	41-50	31	31
Marital status	Married	75	75
	Unmarried	20	20
	Widow	5	5

Age at marriage	<20yrs	30	30
	20-30yrs	69	69
	30-35yrs	1	1
Parity	Null	26	26
	Single parity	27	27
	Multiparity	47	47
Education	No formal education	4	4
	Primary school	13	13
	<High school	83	83
Occupation	Unemployment	46	46
	Skill labor	23	23
	Professional	31	31
Family monthly income	<Rs.5000	12	12
	Rs.5000-Rs.10000	39	39
	>Rs.15000	49	49
Source of information	School	88	88
	Health personnel	5	5
	Others	6	6

The majority (35%) of participants were between the age of 20-30 years. Most of them (75%) were married, and the majority (69%) were married at the age of 20-30 years. Most women (47%) were multiparous. Most of the women (83%) had educational qualifications above high school, and most (46%) were unemployed. Most participants (49%) had family monthly income above 15000, and the source of information for most (88%) was from educational institutions.

RESULT:

The result shows that the mean knowledge score among women is 6.71, with a standard deviation of 1.898. Majority (52%) of the participants had moderate knowledge, and only 16% had inadequate knowledge. The mean attitude score is 38.56, with a standard deviation of 4.547. Majority (81%) of participants had a favorable attitude toward breast cancer, 19% had a moderate favorable attitude, and none had an unfavorable attitude. There was moderately positive correlation (r=0.422) between knowledge and attitude toward breast cancer among

women was statistically significant (p< 0.001). The association between knowledge and attitude on breast cancer among women with selected demographic variables shows that occupation (p =.115), family monthly income (.007), and source of information (.036) had a significant association with knowledge and there was no association between attitude and demographic variables.

DISCUSSION:

Breast cancer remains a significant public health challenge worldwide, affecting millions of women each year. Early detection through screening programs has to improve outcomes and reduce mortality rates. However, the success of these efforts hinges not only on medical advancements but also on the knowledge and attitude of women towards breast cancer.

The study identified that 35% of participants were aged 20-30 years were mostly married (75%), 47% of women were multiparous, 83% had educational qualifications above high school, 46% were unemployed, most had a family monthly income above 15000 (49%), and academic institutions were the primary source of information for the majority (88%); these findings were comparable to a 2023 study by Nair, S., Kumar, V., & Rao, M., on breast cancer knowledge and attitudes among urban Chennai women, where 35% of participants were aged 31-40 years, 60% were married, 45% had higher educational qualifications, and 50% belonged to the middle-income bracket.

The current study found a mean knowledge score of 6.71 (SD = 1.898), with 52% demonstrating moderate knowledge, 32% adequate knowledge, and 16% inadequate knowledge. Regarding attitudes, the mean attitude score was 3.56 (SD = 0.547), with 81% of participants holding a favorable attitude towards breast cancer, 19% had a moderately favorable attitude, and none had an unfavorable attitude. However, a cross-sectional study on knowledge and attitude toward breast cancer among women in Chennai, South India, reported a mean knowledge score of 18.5 (SD = 4.2) and 45% of participants had good knowledge about breast cancer symptoms and screening methods, 35% had moderate knowledge, and 20% had poor knowledge. Regarding attitude, a mean attitude score of 3.8 (SD = 0.9) were identified. 60% of the women had a positive attitude towards breast cancer screening, 25% had a neutral attitude and 15% had a negative attitude.

The Karl Pearson correlation coefficient between knowledge and attitude was computed as r = 0.422, indicating a moderate positive correlation that was statistically significant (p < 0.001).

This contradicts with a study by Srinivasan, M., Raj, K., & Devi, P., in 2022, where the correlation between knowledge (mean score 65.4 ± 12.3) and attitude (mean score 67.8 ± 14.5) showed a weaker positive correlation ($r = 0.12$) and was not statistically significant ($p < 0.08$). These findings suggest that as knowledge levels decrease, attitudes also tend to decline. The study's results differ from those of Katz et al., who examined attitudes and knowledge about breast cancer among women with different cultural beliefs, where despite good knowledge, attitudes were negatively influenced.

The chi-square analysis indicated significant associations between demographic variables and breast cancer knowledge levels among women in this study: education ($X2=18.473$, $p=.001$), family monthly income ($X2=14.102$, $p=.007$), and source of information ($X2=10.285$, $p=.036$). These findings were consistent with research conducted by Kumar, S., Nair, R., & Gupta, M., in 2023, which also found significant associations between age ($X2=24.5$, $p<0.001$), education ($X2=36.8$, $p<0.001$), income ($X2=18.7$, $p<0.01$), and occupation ($X2=14.3$, $p<0.05$). In contrast, a study by Subramanian, S., Rajesh, V., & Meena, K., in 2021 showed no statistically significant association between knowledge levels and demographic factors.

The chi-square analysis found no significant associations between demographic variables and attitude levels on breast cancer among women. This contrasts with findings showing significant associations between age ($p<0.01$), education ($p<0.001$), and income ($p<0.05$) with attitudes toward breast cancer screening in a study by Subramanian, R., Krishnan, S., & Devi, L., in 2022.. However, the study titled "Association of Demographic Factors with Attitudes Towards Breast Cancer Screening Among Women in Chennai, South India" found significant associations between attitudes towards breast cancer screening and demographic variables including age ($p < 0.01$), education ($p < 0.001$), and income ($p < 0.05$) among urban women aged 18 and above.

RESULT:

The result shows that the mean knowledge score among women is 6.71, with a standard deviation of 1.898. Majority (52%) of the participants had moderate knowledge, and only 16% had inadequate knowledge. The mean attitude score is 38.56, with a standard deviation of 4.547. Majority (81%) of participants had a favorable attitude toward breast cancer, 19% had a moderate favorable attitude, and none had an unfavorable attitude. There was moderately positive correlation ($r=0.422$) between knowledge and attitude toward breast cancer among women was statistically significant ($p< 0.001$). The association between knowledge and

attitude on breast cancer among women with selected demographic variables shows that occupation (p =.115), family monthly income (.007), and source of information (.036) had a significant association with knowledge and there was no association between attitude and demographic variables.

CONCLUSION:

Breast cancer represents a significant global health challenge, impacting millions of women each year. The findings of the study reveal that a total of 100 women participated in this study, the majority (52%) of the participants had moderate knowledge, 32% had adequate knowledge only 16% had inadequate knowledge and the majority (81%) of participants had a favorable attitude toward breast cancer and moderately (19%) favorable attitude.

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