"Effectiveness Of Self Instructional Leaflet On Breast Self Examination Among Women In Selected Rural Community, Chennai."

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ABSTRACT
Breast cancer remains a major health concern for women globally, with early detection being crucial for survival. Breast self-examination (BSE) is a simple, cost-effective method for early detection; however, awareness and practice are often lacking, especially in rural areas. This study evaluated the effectiveness of a self-instructional leaflet in improving knowledge, attitudes, and practices regarding BSE in a rural community. A quasi-experimental, one-group pretest-posttest design was used, involving 100 women aged 35-50 from Thodukadu Rural Village, Chennai, selected via convenience sampling. Data were collected using a structured knowledge questionnaire, a 5-point Likert scale to assess attitudes, and a practice questionnaire. Pretest results showed that 92% of participants had inadequate knowledge, and 84% had poor BSE practice. Posttest results demonstrated significant improvement: 66% of participants gained adequate knowledge. Regarding attitudes, the pretest results showed that 31% of participants had an inadequate attitude, while 69% had a moderately adequate attitude. In the posttest, the majority (93%) had an adequate attitude, while 7% had a moderately adequate attitude. Additionally, 72% of participants practiced BSE effectively.The leaflet proved to be an effective educational tool, though no significant association was found between demographic factors and BSE outcomes. The study emphasizes the need for more educational interventions to enhance BSE awareness in underserved areas.

Keywords: Effectiveness, Self-instructional leaflet, Breast self-examination.

INTRODUCTION:
Breast cancer remains one of the most common cancers affecting women worldwide, with early detection playing a crucial role in improving survival rates. Breast self-examination (BSE) is a simple, cost-effective method that women can perform regularly to detect any unusual changes in their breasts, potentially leading to early diagnosis and treatment. BSE is the recommended method in developing countries because it is easy, convenient, private, safe and requires no specific equipment (Chaudhury [10] ,Arzu T [7], However, despite its importance, awareness and practice of BSE remain low, particularly in rural areas where access to healthcare resources and education is limited.The control of breast cancer in most developing countries by national control programmes promoted by the WHO [54,] and this involves educating and screening young women for signs of breast cancer.

Ethical approval
Ethical approval for this study was granted by the Institutional Human Ethics Committee of Panimalar Medical College Hospital & research Institute PMCHRI/IHEC/MS/2023/96. Before the commencement of the study, all participants were thoroughly briefed about the research objectives, procedures, and potential risks involved. Written consent was obtained from each participant before their participation.

Objectives of the study
1. To assess the knowledge, attitude and practice on Breast self examination among women in selected rural community.
2. To assess the effectiveness of self instructional leaflet on Breast self examination among women in selected rural community .

3. To find the association between selected demographic variables with pretest and posttest levels knowledge, attitude and practice.

HYPOTHESIS
H₁: There is significant difference in the pre and post test level of knowledge, attitude and practice on Breast Self Examination among women at p<0.05 level.
H₂: There is significant association of selected demographic variables with the mean differed knowledge, attitude and practice scores at p<0.05 level.

Materials and methods:A quasi-experimental one-group pretest-posttest design was adopted for the study. The participants were women aged 35-50 years, residing in Thodukadu Rural Village, Chennai. The purpose of the study was explained to the participants, and informed consent was obtained. A total of 100 women were selected using a convenience sampling technique. Data was collected using a structured knowledge questionnaire. A 5-point Likert scale was used to assess the participants' attitudes toward breast cancer, and a separate questionnaire was used to evaluate their practice of breast self-examination.

Results & Discussion
The present study was aimed to assess the effectiveness of self instructional leaflet on knowledge, attitude and practice on Breast Self Examination among women in selected rural community . The findings of the study have proved that there was a significant improvement in the level of knowledge , attitude and practice among women after the administration of self instructional leaflet . The findings of the present study have been discussed based on the objectives and presented below.

Table 1: Frequency and percentage distribution of demographic variables of the participants
n=100

S.No.	Demographic variables	Experimental group	
		Frequency	Percentage
1.	**Age**		
	a. 35-40 Years	36	36%
	b. 41-45 Years	31	31%
	c. 46-50 Years	33	33%
2.	**Marital Status**		
	a. Single	25	25%
	b. Married	70	70%
	c. Divorced	5	5%
3.	**Religion**		
	a. Hindu	71	71%
	b. Christian	23	23%
	c. Muslim	3	3%
	d. Others	3	3%
4.	**Education**		
	a. None	10	10%
	b. Primary education	17	17%
	c. SSLC	17	17%
	d. HSE	17	17%
	e. UG	28	28%
	f. PG	9	9%
	g. Ph.D	2	2%
5.	**Occupation**		
	a. Employed	43	43%
	b. Unemployed	31	31%
	c. Self Employed	26	26%
6.	**Monthly Income**		
	a. Less than Rs.5000	37	37%
	b. Rs.5001-Rs.10,000	15	15%
	c. Rs.10,001-Rs.15,000	24	24%
	d. More than Rs.15,000	24	24%
7.	**Family history about breast cancer**		

S.No.	Demographic variables	Experimental group	
		Frequency	Percentage
	a. Yes	17	17%
	b. No	83	83%
8.	**Personal history of breast cancer**		
	a. Yes	16	16%
	b. No	84	84%
9.	**Do you have any pain in the breast?**		
	a. Yes	14	14%
	b. No	86	86%
10.	**Did you take any oral contraceptive pills**?		
	a. Yes	1	1%
	b. No	99	99%

The above table 1 shows the distribution of demographic variable. Regarding the age group majority 36(36%) were under the age group of above 35-40 years, 33(33%) were in the age group of 45-50 yrs, 31(31%) were in the age group of 40-45yrs, With the regarded to marital status 70(70%) were married, 25(25%)were single and 5(5%) were divorced women. Regarding religion 71% were Hindu, 23%were Christian, 3% are Muslim and other 3%. With regard to the, 25% are undergraduate 17% are higher school certificate , SSLC and primary education, 10% are illiterate.post graduate 9% and Ph.D 2%,   Relating to the occupation 43% were employed, 31% were homemaker, 26% were self employed.

Related to the monthly income 37% earns Rs <5000, 24% earns Rs10001-15000, 24% earns more than 15000 per month. Regarding family history og breast cancer 99% has no family history of breast cancer. None of them have personal history of breast cancer. Regarding pain in the breast 86% did not have pain. Regarding use of oral contraceptive pills 99% did not use oral contraceptive pills.

1. Assess the knowledge, attitude and practice on Breast self examination among women in selected rural community.

Table 2: Frequency and percentage distribution of pretest and post test level of knowledge.
n=100

Level of knowledge	Pretest			Post test	
	No.	%	No.	%	
Inadequate knowledge	92	92%	0	0%	
Moderately adequate knowledge	8	8%	34	34%	
Adequate knowledge	0	0%	66	66%	

Table 2 shows the levels of knowledge before and after the intervention. In the pretest, 92% of the participants had inadequate knowledge, 8% had moderate knowledge, and none had adequate knowledge. After the intervention, the posttest results revealed that 66% of participants had adequate knowledge, 34% had moderate knowledge, and none had inadequate knowledge.

The findings of the present study are consistent with several previous studies. For instance, Sadler et al. found that the majority of women had inadequate knowledge about breast self-examination. Similarly, Dundar et al. [16] reported that 44% of women in a rural area had insufficient knowledge, with information primarily obtained from health professionals. Choudhury and Srivastava's [10] study of 57 South Asian women indicated an overall awareness of 52% about breast disease and self-examination. In contrast, Evangeline Mary et al[17] found that 78% of women were aware of breast cancer, largely due to information from mass media, friends, and neighbors. Veena's[51] study in Puducherry revealed that 75.5% of rural women had inadequate knowledge about breast disease and screening.
Similarly, Bala Hemant and Gameti's study [58] of 250 women in Ahmedabad found that pretest knowledge levels ranged from 21% to 49%, with a significant improvement to 36.8% to 68.4% after three months. Rao et al.'s ,[44]study on breast health awareness in rural India also showed a significant increase in overall awareness, with a z-value of -15.807 and p<0.001.

Table 3: Frequency and percentage distribution of pretest and post test level of attitude.
n=100

Level of attitude	Pre test		Post test	
	No.	%	No.	%
Inadequate attitude	31	31%	0	0%
Moderately adequate attitude	69	69%	7	7%
Adequate attitude	0	0%	93	93%

Table 3 shows the pretest attitude levels, where 31% of women had an inadequate attitude, 69% had a moderately favorable attitude, and none had an adequate attitude. In the posttest, 93% demonstrated an adequate attitude, 7% had a moderately favorable attitude, and 0% had an inadequate attitude.

The mean score increased from 17.85 in the pretest to 40.1 in the posttest, with scores ranging from 1 to 50. Attitudes were categorized as favorable (34-50), moderately favorable (17-33), and unfavorable (1-16).

Supporting these findings, a study conducted among female health workers in Iran revealed that 79.8% had knowledge of breast cancer and performing BSE, with 72.45% exhibiting positive attitudes. However, only 39.5% performed BSE regularly each month. A significant correlation was found between attitudes, education level, age, and frequency of participation in education sessions (Philip J, et al., 1986)[42].

Similarly, a study among female undergraduate students at the University of Buea showed that while nearly three-quarters of respondents had heard of BSE, only 9% knew how to perform it. Despite 88% considering BSE important, only 3% practiced it regularly, with the main barrier being a lack of knowledge (Nair, S., Thulaseedharan, J. V., & Sankaranarayanan, K., 2017 [37])

Table 4: Frequency and percentage distribution of pretest and posttest level of practice.
n=100

Level of Practice	Pre test		Post test	
	No.	%	No.	%
Poor practice	84	84%	0	0%
Fair Practice	16	16%	28	28%
Good practice	0	0%	72	72%

Table 4 Shows that the pretest level of practice majority of 84% had inadequate practice, 16% moderate practice, and 0% had adequate practice. In the posttest level of practice majority of 72% had adequate practice, 28% had moderately practice , and 0% had inadequate practice.

In pre test and post test level of practice among women in selected rural community, 84% of women practice level were found to be poor. Due to poor information about the risk factors causing breast disease in turn lead to the low prevalence of BSE practice. Most of the studies reported that BSE aids in early detection of breast disease and is highly effective in increasing the sense of ownership about their health. Eventhough BSE has more benefits but the practice remains low in countries like England (54%), Nigeria (43.2%) and India (52%) (Okobia).[41] Study conducted by Veena et al[51] reported that only 12% women practiced BSE regularly. This was similar to the result found by Choudhary. The reason for poor practice was most of them felt that the procedure was not important since they don't have any symptoms. A study among Buea University students, the reason for not practicing BSE was due to lack of knowledge about the procedure. This highlights the need to create awareness on Breast self examination from their early adolescence by conducting educational programs.Veena[51]

The post test level of practice among women was assessed which revealed that 72% respectively had good practice. Comparison of pre and post test level of practice among women. In the baseline 16% was the practice score whereas after intervention it was 72%.

Study conducted in Ain Shams University, Egypt on knowledge and practice of BSE among working women yielded a similar result as only 5.2% were practicing BSE before the training program whereas the post program practice score was 86%. Also study among Saudi nurses after workshop showed a significant improvement in the practice score. Six months follow up was carried out and the researcher identified that 60% started practicing BSE out of which 41% started doing it on a regular basisReisi M..[44]

Table 5: Mean and standard deviation of knowledge N=100

Level of knowledge	Pre test		Post test		"t" value
	Mean	S.D	Mean	S.D	
Knowledge	1.69	1.77	8.96	1.42	31.79

Table 5 Shows that the mean and standard deviation of pre test and post test level of knowledge The findings revealed that in the obtained values are statistically significant at the level of (p<0.05).

Table 6: Mean and standard deviation of Level of Attitude on breast examination among women
N=100

Level of Attitude	Pre test		Post test		"t" value
	Mean	S.D	Mean	S.D	
Attitude	17.85	2.34	40.01	4.12	**45.6016**

Table 6 Shows that the mean and standard deviation of pre test and post test level of attitude among women in selected rural community. The findings revealed that in the obtained values are statistically significant at the level of (p<0.05)

Table 7: Mean and standard deviation of Practice on breast examination among women
N=100

Level of Practice	Pretest		Post test		"t" value
	Mean	S.D	Mean	S.D	
Practice	1.76	1.64	6.99	0.87	**28.65**

Table 7 shows the mean and standard deviation of the pretest and posttest practice levels among women in the selected rural community. The findings reveal that the obtained values are statistically significant at the p<0.05 level. Hence, the hypothesis H1, which stated that there is a significant difference in the pretest and posttest levels of knowledge, attitude, and practice regarding breast self-examination among women at the p<0.05 level, was accepted.

2.Evaluate the effectiveness of self instructional leaflet on knowledge, attitude and practice on Breast Self Examination among women in selected rural community.

The comparison of pre and post test mean knowledge, attitude and practice scores was depicted in table 5,6,7 The results showed that the pre test knowledge mean is 1.69, attitude mean is 17.85, practice mean score is 1.76 respectively with scores representing very low towards breast self examination. In the post test after intervention the mean scores was 8.96, for knowledge, 40.01 for attitude, 6.99 for practice. The intervention had significantly improved the knowledge, attitude and practice scores among women. The pre test mean practice score among women was 1.76 scores representing poor practice of BSE. In the post test after intervention the mean scores was 6.99 among women. The intervention had significantly improved the practice scores among women.

The findings were supported by the following studies. Hussein et al.,[25] Hussien in their study on knowledge, attitude and practice of BSE among women states that significant improvement was noted in their level of knowledge. There was a significant difference in practice between baseline and six months. 53.6% of women ever practiced BSE at baseline out of which 36.3% started practicing BSE after six months. Lewin et al.,[33] study to assess the effectiveness of awareness program by lay health workers yielded a contrary result that before intervention the knowledge (CI 95%, -0.77 to -0.15) and attitude 93.2% indexes were high which shows no significant difference after the intervention.

3.Association of demographic variable with level of knowledge, attitude and practice.

Table 8: Association of level of knowledge and demographic variables. N=100

S.No.	Demographic variables	Inadequate Knowledge		Moderately Adequate knowledge		Adequate knowledge		Chi square
		No.	%	No.	%	No.	%	
1.	**Age** a. 35-40 Years	0	0%	14	14%	22	22%	11.7084 d.f=2 S
	b. 41-45 Years	0	0%	16	16%	15	15%	
	c. 46-50 Years	0	0%	4	4%	29	29%	
2.	**Marital Status** a. Single	0	0%	10	10%	15	15%	6.0351 d.Df=2 S
	b. Married	0	0%	20	20%	50	50%	
	c. Divorced	0	0%	4	4%	1	1%	
3.	**Religion** a. Hindu	0	0%	18	18%	53	53%	8.9923 d.f=3 NS
	b. Christian	0	0%	13	13%	10	10%	
	c. Muslim	0	0%	2	2%	1	1%	

S.No.	Demographic variables	Inadequate Knowledge		Moderately Adequate knowledge		Adequate knowledge		Chi square
		No.	%	No.	%	No.	%	
	d. Others	0	0%	1	1%	2	2%	
4.	**Education**							25.84 d.f=6 S
	a. None	0	0%	3	3%	7	7%	
	b. Primary education	0	0%	7	7%	10	10%	
	c. SSLC	0	0%	13	13%	4	4%	
	d. HSE	0	0%	7	7%	10	10%	
	e. UG	0	0%	2	2%	26	26%	
	f. PG	0	0%	1	1%	8	8%	
	g. Ph.D	0	0%	1	1%	1	15%	
5.	**Occupation**							30.4036 d.f=2 S
	a. Employed	0	0%	2	2%	42	42%	
	b. Unemployed	0	0%	18	18%	14	14%	
	c. Self Employed	0	0%	14	14%	10	10%	
6.	**Monthly Income**							4.5713 d.f=3 NS
	a. Less than Rs.5000	0	0%	17	17%	20	20%	
	b. Rs.5001-Rs.10,000	0	0%	4	4%	11	11%	
	c. Rs.10,001-Rs.15,000	0	0%	8	8%	16	16%	
	d. More than Rs.15,000	0	0%	5	5%	19	19%	
7.	**Family history about breast cancer**							1.36 d.f=1 NS
	a. Yes	0	0%	0	0%	1	1%	
	b. No	0	0%	34	34%	65	65%	
8.	**Personal history of breast cancer**							0.586 d.f=1 NS
	a. Yes	0	0%	0	0%	0	0%	
	b. No	0	0%	34	34%	66	66%	
9.	**Do you have any pain in the breast?**							0.5691 d.f=1 NS
	a. Yes	0	0%	6	6%	8	8%	
	b. No	0	0%	28	28%	58	58%	
10.	**Did you take any oral contraceptive pills?**							1.36 d.f=1 NS
	a. Yes	0	0%	0	0	1	1%	
	b. No	0	0%	34	34	65	65%	

Table 8 shows that the calculated values indicate a significant relationship between the demographic variables of age, marital status, occupation, and education. This demonstrates a significant association between the effectiveness of the self-instructional leaflet and the knowledge levels among women in Thodukadu rural community.

Table 9: Association of level of Attitude and selected demographic variables.
N=100

S.No.	Demographic Variables	Unfavourable Attitude		Moderately favourable Attitude		Favourable Attitude		Chi square
		No.	%	No.	%	No.	%	
1.	**Age**							1.747 d.f=2 S
	a.35-40 Years	0	0%	4	10%	32	26%	
	b.41-45 Years	0	0%	2	11%	29	20%	
	c.46-50 Years	0	0%	1	12%	32	21%	
2.	**Education**							6.655 d.f=6
	a.None	0	0%	1	2%	9	8%	

	b.Primary education	0	0%	1	5%	16	12%	S
	c.SSLC	0	0%	1	7%	16	10%	
	d.HSE	0	0%	1	8%	16	9%	
	e.UG	0	0%	1	10%	27	18%	
	f. PG	0	0%	1	3%	8	6%	
	g.PhD	0	0%	1	0%	1	2%	
3.	**Family history about breast cancer** a. Yes	0%	0%	0	0%	1	1%	0.076 d.f=1 S
	b. no	0	0%	7	45%	92	54%	
4.	**Did you take any oral contraceptive pills?** a. Yes	0	0%	1	1%	0	1%	13.419 d.f=1 NS
	b. No	0	0%	6	45%	93	54%	

Table 9 shows that the calculated values indicate a significant association between the demographic variables of age, education, and family history of breast cancer with the attitude toward breast self-examination.

Table 10: Association of level of practice and selected demographic variables
N=100

S.No.	Demographic variables	Poor Practice		Fair Practice		Good Practice		Chi square
		No.	%	No.	%	No.	%	
1.	**Age** a.35-40 Years	0	0%	2	13%	34	23%	14.43 d.f=2 NS
	b.41-45 Years	0	0%	11	15%	25	16%	
	c.46-50 Years	0	0%	15	10%	18	23%	
2.	**Education** a.None	0	0%	4	3%	6	7%	6.0301 d.f=6 S
	b.Primary education	0	0%	7	8%	10	9%	
	c.SSLC	0	0%	4	5%	15	12%	
	d.HSE	0	0%	5	4%	15	13%	
	e.UG	0	0%	4	8%	24	20%	
	f. PG	0	0%	3	2%	6	7%	
	g.PhD	0	0%	1	1%	1	1%	
3.	**Family history about breast cancer** a. Yes	0%	0%	1	0%	0	1%	2.597 d.f=1 S
	b. no	0	0%	27	30%	72	69%	
4.	**Did you take any oral contraceptive pills?** a. Yes	0	0%	0	0%	1	1%	0.3928 d.f=1 S
	b. No	0	0%	28	38%	71	61%	

Table 10 shows that the calculated values indicate a significant relationship between education and family history of breast cancer with the practice of breast self-examination at the p<0.05 level.

Regarding the association between selected demographic variables and knowledge, attitude, and practice, factors such as age, education status, family history of breast cancer, and use of oral contraceptive pills showed a significant association with the effectiveness of the self-instructional leaflet among women aged 35-50 years in Thodukadu rural community. Hence, the hypothesis H2, which stated that there is a significant association between the selected demographic variables and the mean difference in knowledge, attitude, and practice scores at p<0.05 level, was accepted.

This study underscores the importance of implementing educational programs to raise awareness about breast cancer, its risk factors, screening methods such as BSE, symptoms, and the need for early medical intervention, diagnosis, and treatment.

Efforts to improve breast cancer awareness must address existing barriers, including a focus on involving spouses, families, and communities to encourage regular BSE practice. Women should be empowered to take responsibility for their health by routinely examining their breasts and identifying any abnormalities early. The path forward involves the collective sharing of information about the significance and technique of BSE, encouraging women to support one another as healthcare advocates, community members, and individuals.

Conclusion
Educational interventions, such as self-instructional leaflets, have been identified as effective methods to enhance knowledge and encourage the practice of BSE. These leaflets can be particularly beneficial in rural settings, where they provide accessible, straightforward information that women can use independently.

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