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Research Article

A Study to Assess the Effectiveness of Planned Teaching Program on Self-breast Examination to Women of a Selected Rural Area of Tumkur

Heena Kadar Shaikh, Rijvana Javed Shaikh

Department of Community Health Nursing, Aruna College of Nursing, Tumakuru, Karnataka, India

Abstract

Aim: This study was done to assess the effectiveness of a planned teaching program on self-breast examination for women of a selected rural area of Tumkur.

Materials and Methods: In this study, an evaluative survey approach is employed. For the study, a pre-experimental one-group pre-test and post-test design is used. The community of Gulur was chosen by the researcher to serve as the study's setting. The sample for this study comprises fifty women who range in age from 30 to 60. There are 50 women in the sample for this study. The sample is chosen through the use of a purposeful sampling approach.

Result: Post-test scores show higher "*t*" values in all areas. The Chi-square value for pre-test knowledge scores and age at df (1) was significant ($\chi^2 = 12.82$, $P < 0.05$). This showed that 30–40-year-old women knew more about breast-self-examination than 40–60-year-olds. For pre-test knowledge scores and educational status, a Chi-square value of 1 df ($\chi^2 = 11.613$, $P < 0.05$) was significant at the 0.05 level. Thus, educated women knew more about breast-self-examination. A significant Chi-square value ($\chi^2 = 83$; $P < 0.05$) was found for occupation and pre-test knowledge score at the 0.05 level. Thus, working women knew more about breast self-examination.

Conclusion: Most responders knew little about self-breast inspection. Studies showed that designed teaching programs improve women's knowledge. The pre- and post-test area-wise mean percentages demonstrated an increase in knowledge across all domains. Post-test knowledge scores were considerably higher than pre-test findings in every category, according to an area-wise paired "*t*" test. Pre-test scores were significantly correlated with age and education.

Keywords: Effectiveness, planned teaching program, rural area, self-breast examination

Introduction

Breast milk from our mother is the first point of contact with the outside world. Since the breasts are emblematic of motherhood and femininity, they are extremely significant organs for every woman. Therefore, disorders affecting the breasts are crucial, especially breast cancer. Because of its prevalence and psychological effects, breast cancer is most likely the cancer that women fear the most. More than any other malignancy, it has an impact on how people view their sexuality and how they see themselves.

About 80% of cases of breast cancer are discovered beyond the age of 50. Thirty of the 100,000 individuals affected by cancer in India are victims of breast cancer. In India, women are affected by cancer at a higher rate than males (women 53 against men 42). The primary cause of this is the rising incidence of breast cancer in females.[1]

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Address for Correspondence:
Heena Kadar Shaikh, Aruna College of Nursing, Tumakuru, Karanataka, India. E-mail: heenashaikh20192019@gmail.com

Among Indian women, it is the second most frequent malignancy in terms of mortality and morbidity. Women are more susceptible to breast cancer than males are, with 99% of cases occurring in women. Women between the ages of 40 and 44 are affected. The incidence rises beyond the age of 50.[2]

Despite the lack of definite known causes, a number of risk factors have been found by researchers for breast cancer. These include: (1) Genetic mutation; (2) aging; (3) personal or family history of breast cancer; (4) early menarche; (5) null parity and later maternal age at first birth; (6) late menopause; (7) history of benign proliferative breast disease; (8) exposure to ionizing radiation; (9) obesity; (10) hormone replacement therapy; and (9) alcohol consumption.[3]

In a recent study, "Mamma Care Society" found that women may not feel the need to self-examine because they think they would never develop breast cancer or because they are too lazy, particularly if their mammography came out negative.[4]

Since the 1950s, the American Cancer Society and other medical professionals have advised self-breast examination as a secure, non-invasive method for the early diagnosis of breast cancer. While most women claim to be aware of breast self-examination (BSE), only a small percentage are proficient in the proper method.[4-7]

Objectives

The objectives of the study are as follows:

- To assess the learning needs of women of a selected community on self-breast examination
- To prepare, validate, and implement a planned teaching program (PTP)
- To evaluate the effectiveness of PTP.

Assumptions

- Women will have some knowledge regarding the self-breast examination
- The knowledge level of women regarding self-breast examination can be assessed through a structured interview schedule
- PTP is an accepted teaching strategy to improve knowledge level.

Materials and Methods

Research approach

In this study, an evaluative survey approach was employed.

Research design

For the study, a pre-experimental one-group pre-test and post-test design is used.

Setting of study

The investigator selected the community, Gulur as the setting of the study.

Population

The population under investigation is made up of women in the 30–60 age range who live in a particular Tumkur community.

Sampling technique

The sample is chosen via the use of a purposeful sampling technique.

Sample size

Fifty women aged 30–60 from a specific Tumkur community comprised the sample.

Description of tool

The tool is consisted of Part I and Part II.

Part I–baseline pro forma

There were seven items in it. Age, education, occupation, monthly income, marital status, and rudimentary knowledge of self-examination of the breast were all included in the study.

Part II–structured interview schedule on BSE

There were 21 things total on the structured interview agenda, broken down into six categories. Thirty-nine is the highest possible score, and zero is the lowest. There are multiple answers to certain questions. A specialist in the language first translates Tool into Kannada, then back into English.

Statistics

Descriptive

Utilizing frequency and percentage distribution, the interview, and demographic data were examined.

Inferential

A paired "*t*" test and a Chi-square test would be used to determine whether there was a significant difference between the mean knowledge score before and after the test.

Results

Table 1 shows that 48% of women were 30–40 years old and 6% were 50–60. About 46% of women had primary education, 38% secondary, and 16% degree/professional certification. About 82% of women were unemployed, 10% were professionals, and 8% were semiskilled. Only 2% were widows and 98% were married. Of the women surveyed, 58% had monthly incomes between Rs. 5000 and 7000, 26% had Rs. 3000–5000, 12% had Rs. 1000–3000, and only 4% had incomes exceeding Rs. 7000. About 96% knew how to self-examine. Only 4% of women were unfamiliar with self-breast examination. About 89% of individuals with prior knowledge learned through magazines, 6% from family, and 2.3% from doctors and advertisements.

Table 2 shows that all PTP areas—meaning, purpose, practice, and process of self-breast examination, schedule, and follow-up—were 100% agreed on. Validating the PTP involved formulating objectives, selecting content, organizing content, language, feasibility, and audio-visual aids.

According to the data in Table 3, the highest number of respondents scored between 18 and 12 on the pre-test, and the highest number scored between 30 and 34 on the post-test. It was discovered that the post-test knowledge scores exceeded the pre-test scores after comparing the pre-test and post-test results.

Table 4 demonstrates that 98% of pre-test responders were ordinary 38% were poor, and 14% were good. Most post-test respondents (68%) were very good and 32% good. This shows that PTP improved scores well.

Table 5 depicts that respondents' post-test knowledge scores (27–38) were greater than their pre-test scores (6–26). It also shows that mean post-test knowledge scores (x = 32.6) were greater than pre-test scores (x = 16.7). It shows PTP-induced post-test score increases.

Table 6 shows a significant post-test rise in mean percentage scores in all teaching areas. The mean knowledge score increases most in schedule and least in follow-up. Hence, the PTP raised scores.

The tabular value in Table 7 shows, t (49) = 1.699 ($P < 0.05$) is less than the computed "t" value (49) = 8.87. Thus, PTP was successful in raising test results, and the research was noteworthy.

The calculated values in Table 8 demonstrate that all regions of the post-test scores are higher than the pre-test scores for "t." Thus, we can say that the study was significant and that PTP was successful in raising the knowledge scores across the board.

Table 9 shows that the age and pre-test knowledge scores Chi-square values at df (1) ($\chi^2 = 12.82$, $P < 0.05$) were significant at the 0.05 level. This demonstrated that women in their 30s–40s had greater knowledge of BSE than women in their 40s–60s. For pre-test knowledge scores and educational status, the Chi-square value at 1 df ($\chi^2 = 11.613$, $P < 0.05$) was significant at the 0.05 level. This proved that more educated women were aware of the practice of BSE. For pre-test knowledge scores and occupation, the Chi-square value at 1 df ($\chi^2 = 83$; $P < 0.05$) was significant at the 0.05 level. This proved that women in the workforce were better knowledgeable about BSE. At the 0.05 level of significance, a significant Chi-square value ($\chi^2 = 9.12$; $P < 0.05$) was discovered for monthly income and pre-test knowledge scores. Monthly income and pre-test knowledge were associated. The Chi-square value for married status and pre-test knowledge scores ($\chi^2 = 0.029$, $P > 0.05$) was not significant at the 0.05 level, according to the results. Therefore, knowledge of BSE was unaffected by marital status.

Table 1: Distribution of subjects according to their sample characteristics

S. No.	Variables	Frequency	Percentage
1	Age in years		
	30–40	24	48
	40–50	23	46
	50–60	3	6
2	Education		
	Illiterate	0	0
	Primary	23	46
	Secondary	19	38
	Degree/professional	8	16
3	Occupation		
	Unemployed	41	82
	Semiskilled	4	8
	Skilled	0	0
	Professional	5	10
4	Marital status		
	Single	0	0
	Married	49	98
	Widow	1	2
	Divorcee	0	0
5	Monthly income (Rs.)		
	1000–3000	6	12
	3000–5000	13	26
	5000–7000	29	58
	7000 and above	2	4
6	Heard about self-breast examination		
	Yes	48	96
	No	2	4
7	If yes, source of knowledge		
	Friends	0	0
	Relatives	3	6
	Magazines	43	89.4
	Doctors/health workers	1	2.3
	Advertisements	1	2.3
	other media	0	0

Discussion

Sunitha conducted a study that is comparable to this one and demonstrates that the mean post-test knowledge score ($\bar{x}\,2 = 22.6$) was higher than the pre-test knowledge score ($\bar{x}\,1 = 13.2$). In addition, the post-test mean score for each area was greater than the pre-test mean in every category, including meaning and goal of BSE, breast changes and warning signs, risk factors and early identification, instructions and schedule,

Table 2: Agreement by experts on the areas of the planned teaching program

S. No	Areas	Agree		Disagree		Suggestions	Action taken
		f	%	f	%		
1	Objective	7	100	0	0	Change the action verb of I specific objective	Action verb changed
2	Meaning	7	100	0	0	Change the word doing to performing	Changed to performing
3	Purpose	7	100	0	0	None	
4	Practice	7	100	0	0	None	
5	Procedure	7	100	0	0	None	
6	Schedule	7	100	0	0	None	
7	Follow-up	7	100	0	0	None	
8	A. V. Aids	7	100	0	0	Modify the pictures	Pictures modified

Table 3: Distribution of pre- and post-test knowledge scores

Knowledge scores	Pre-test			Post-test		
	f	%	Cumulative frequency	f	%	Cumulative frequency
6–10	8	6	8			
10–14	4		12			
14–18	13	26	25			
18–22	14	28	39			
22–26	10	20	49			
26–30	1	2	50	7	14	7
30–34				23	46	30
34–38				19	38	49
38–40				1	2	50

Maximum score – 39

Table 4: Grading of knowledge scores

Grading	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Very good	-		34	68
Good	7	14	16	32
Average	24	48		
Poor	19	38		

Table 5: Comparison of range, mean, median, and standard deviation of pre- and post-test scores

Knowledge	Range	Mean	Median	Standard deviation
Pre-test	6–26	16.7	18	5.514
Post-test	27–38	32.6	33	2.689

Maximum score=39

Table 6: Area-wise mean percentage and mean gain of pre- and post-test knowledge scores

S. No.	Areas	Mean percentage		Mean gain O_2–O_1
		Pre-test O_1	Post-test O_2	
1	Meaning	59	89	30
2	Purpose	58	80	22
3	Practice	34	68	34
4	Procedure	32	81	49
5	schedule	25	83	58
6	Follow-up	88	95	7

processes and methods, and general information. At the 0.05 level of significance, the mean difference between the post-test and pre-test knowledge scores was extremely significant (t_{39} = 23.79) (table value: t_{39} = 2.02, $P \leq 0.05$). About 9.4 was the mean difference between the pre- and post-test. The results are very substantial, and it can be concluded that a planned education program about BSE was very successful in raising women's awareness of the practice. At the 0.05 level of significance, there was no significant correlation found between the pre-test level knowledge score and several demographic characteristics including age ($\chi^2 = 2.19$), married status (χ^2 = 0.5), employment (χ^2 = 0.327), and education (χ^2 = 2.597). The study's conclusions demonstrated that before the PTP's administration, the self-help group women's understanding of BSE was lacking. The post-test knowledge scores clearly showed that the PTP helped them learn more about BSE.[8]

Table 7: Mean, mean difference, standard deviation, and "*t*" value between pre- and post-test scores

Group	Mean		Mean difference	Standard deviation of the difference	"*t*" value
	Pre-test	Post-test			
Women	16.2	32	16	5.865	18.87

Table 8: Area-wise paired "*t*" value of pre- and post-test knowledge scores

S. No.	Areas	"*t*" value
1	Meaning	6.603
2	Purpose	6.978
3	Practice	12.4
4	Procedure	19
5	Schedule	13.6
6	Follow-up	3.6

Tabled value of '$t_{(49)}$=1.699

According to a different study by Abera *et al*., 77% of study participants were single, and the participants' mean age was 20.13 (±2.27). Only eight (13.1%) of the respondents regularly did BSE on a monthly basis before the intervention, despite the fact that 14 (23%) of the respondents were aware of the practice. Pre-post intervention, there were 23 (37.7%) and 35 (57.4%) knowledgeable responders, respectively. For the pre- and post-intervention, the mean knowledge difference is 0.18 ± 0.695 ($P < 0.05$). The respondents' pre- and post-intervention scores for satisfactory practical ability were, respectively, 10 (16.4%) and 43 (70.5%). The pre- and post-BSE intervention resulted in a mean net gain of 0.51 ± 0.62 ($P < 0.001$). Following the intervention, there was a highly significant increase in both the knowledge and practical competency scores, indicating the acceptance of the research hypothesis. Students' knowledge and BSE practices have increased as a result of a planned educational intervention that focused on knowledge and BSE. It is crucial to conduct large-scale studies on diverse populations and to teach BSE with demonstration to all at-risk groups as a secondary preventive measure against breast cancer.[9]

According to a study by Bamalakshmi, after the structured instruction program, there was a significant difference ($P < 0.01$) in the knowledge and attitude of teenage females regarding BSE. Adolescent girls' knowledge and attitudes

Table 9: Chi-square value between the level of knowledge and selected variables, *n*=50

Selected variables	Level of knowledge		χ^2 value	Significance
	<mean	>mean		
Age				
30–40 years	7	18	12.82	Significant
40–60 years	17	8		
Education				
Illiterate and primary	15	6	11.613	Significant
Secondary and degree/professional	8	21		
Occupation				
Unemployed and semiskilled	29	17	83	Significant
Skilled and professional workers	3	1		
Monthly Income (Rs.)				
1000–5000	7	8	9.12	Significant
5000 and above	20	15		
Marital status				
Married	26	23	0.029	Not significant
Single, Widow, and divorcee	1	0		

about BSE did not significantly correlate with certain demographic factors.[10]

Dessai *et al*. carried out a pre-experimental study to evaluate the efficacy of a planned education program on the knowledge and abilities of BSE. Following participation in a teaching program on BSE, female high school teachers showed a significant difference in their pre- and post-test knowledge scores ($P < 0.05$) of 10.07 and skill scores ($P < 0.05$). Increasing awareness through health education can assist a person in learning about and honing their BSE techniques.[11]

According to results from a different study conducted by Shalini *et al*., the majority of them (52%) were between the ages of 18 and 19, and 72% of them scored average on the pretest for BSE knowledge. Just one student, out of the 40 participants, occasionally performed BSE. The most significant practical method for early diagnosis, BSE is something that younger generations should be aware of and practice.[12]

According to a study by Lalia, in the pre-test, the majority of female students knew enough about BSE; 21 knew it to a moderate extent, and none knew it inadequately. However, in the post-test, the majority knew enough, 14 knew it to a moderate extent, and none knew it inadequately. At the 0.05 level, the "*t*" value of 0.25, which was obtained by comparing the mean values of knowledge of BSE between the pre-test (12.88) and post-test (24.18), was significant. This was achieved using a methodical teaching strategy that was effective in increasing knowledge of BSE.[13]

A subsequent study by Abd–Elaziz *et al*. demonstrated that women's knowledge and attitude practices increased following a program for BSE, and that their educational attainment positively influenced both their pre- and post-program knowledge as well as their attitude and practices solely during the pre-program phase. A comprehensive program involving BSE can aid in the detection of breast cancer by improving women's understanding, mindset, and application habits.[14]

According to a different study by Jenita *et al*., there is a substantial correlation between knowledge and demographic factors including age and religion. The pretest mean was 8.2, and the post-test mean jumped to 15. According to the study's findings, adolescent girls' understanding of BSE increased dramatically as a result of STP.[15]

Conclusion

Pre-test results indicated that women's knowledge of self-breast examination was lacking. The majority of respondents lacked sufficient understanding regarding the technique and practice of self-breast examination. It was discovered that the study's intended instructional approach was successful in raising the women's level of understanding. It was discovered that there was a substantial difference between the mean post-test and pre-test knowledge scores. Area-wise mean percentages were calculated for both the pre- and post-test, and the results showed that there had been real knowledge gains across the board. A paired "*t*" test was computed based on areas, and in every area, post-test knowledge levels were considerably greater than pre-test values. The pre-test results were significantly correlated with age and educational attainment.

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Conflicts of Interest

No.

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