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A study to assess the effectiveness of planned health teaching regarding breast cancer among women in selected community area of Gaya district, Bihar

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Abstract

Breast cancer is crucial because it's the most common cancer in women population worldwide with increasing incidence and mortality rates, necessitating studies to improve prevention, early detection, and treatment strategies, ultimately aiming to reduce disparities and improve patient outcomes, there is lack of knowledge among the women population regarding breast cancer in the country.

Methods: An evaluative approach with pre-experimental (one group pre-test post-test) design was used for the study. The sample consisted of 60 women selected by purposive sampling technique. Pré-test was conducted by administering a structured knowledge questionnaire. After the pre-test, health teaching programme were administered and on the eighth day post-test was conducted. The collected data was analysed by using descriptive and inferential statistics ('t' test).

Results: The mean post -test knowledge score (17.57) was higher than the mean pre-test knowledge score (5.275) and mean post-test attitude score (49.88) was higher than the mean pre-test attitude score (42.75). The computer's' value (5.509) was higher than the table value (t59=0.252) at 0.05 level of significance, suggesting that the awareness programme was effective in increasing the knowledge of women on breast cancer.

Keywords: Health teaching, breast cancer, women, community

Introduction

Breast cancer cells begin inside the milk ducts and the milk-producing lobules of the breast. The earliest form is not life-threatening and can be detected in early stages. Cancer cells can spread into nearby breast tissue. This creates tumours that cause lumps or thickening. In 2022, there were 2.3 million women diagnosed with breast cancer and 670 000 deaths globally. Breast cancer occurs in every country of the world in women at any age after puberty but with increasing rates in later life is common. Maintaining a healthy body weight, increasing physical activity, and minimizing alcohol intake are the best available strategies to reduce the risk of developing breast cancer. Early detection through mammography has been shown to increase treatment options and save lives, although this approach is cost prohibitive and not feasible in most economically developing countries. Recommended early detection strategies in these countries include the promotion of awareness of early signs and symptoms and screening by clinical breast examination.

This is because Rural women are not aware of breast cancer, early detection measures like breast self-examination, mammography. However, there should be some sort of awareness programmed on breast cancer to educate rural women regarding cause, signs and symptoms, early detection and breast self-examination, treatment. So that women health seeking behaviour can be improved.

Research Design

The comprehensive strategy that a researcher develops to find answers to their research questions or to evaluate the research hypotheses is known as the research design. This study utilized a pre-experimental design, specifically a one group pre-test post-test design (01X 02). Below, the research design is illustrated schematically.

Group test	Pre-test	Treatment	Post
Women	01	x	02

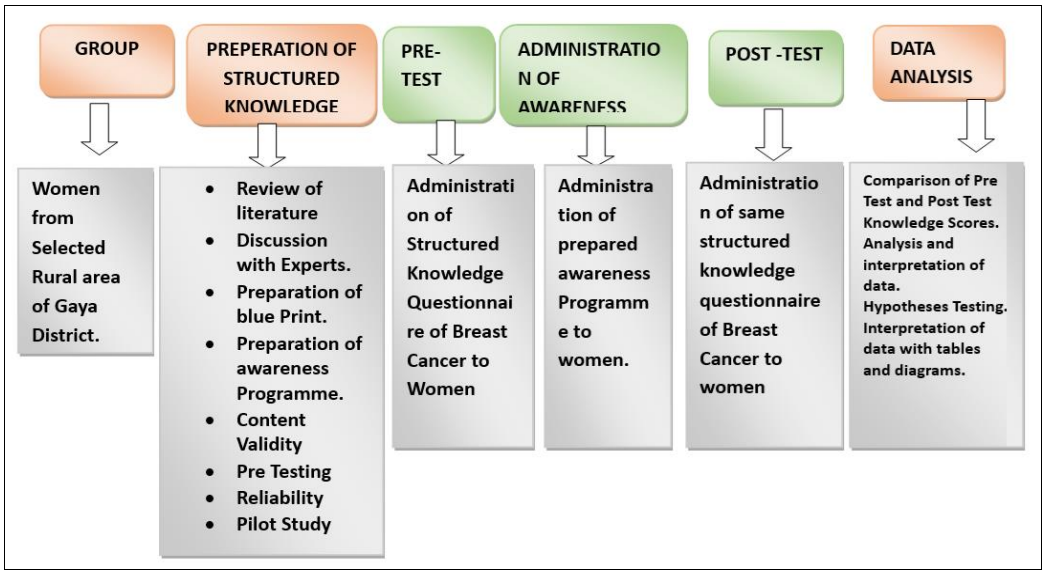
Sample Size:

A sample is a subset or portion of the population that has been selected to represent the population of interest. The sample size for this study comprised of 60 women from the selected Community areas of Gaya District, Bihar

Sampling Technique

Sampling is the process of choosing a group of people. Purposive sampling was used in this study to choose the sample. Purposive sampling is a technique where the researcher chooses participants based on their subjective assessment of which will provide the most information.

Research Design



Population

The population is the total number of cases that satisfy a given set of requirements. The researcher anticipates that the study's findings can be applied to the entire group. The study population comprises all women in the age range of 20 to 60 years.

Sample

A subset or section of the population chosen to represent the population of interest is called a sample. Sixty women from the chosen neighbourhoods of Gaya District made up the study's sample size.

Data collection instrument

Data collection tools are the methods or equipment that the researcher uses to measure or observe the important variable in the research problem. The study's goals guided the preparation of the tools. The data collection tools were used in this investigation.

Tool I: Structured knowledge questionnaire on breast cancer

- **Part I:** Demographic Variables
- **Part II**: Structured knowledge questionnaire on breast cancer.

Women are distributed based on their knowledge scores from the pre- and post-tests. Effectiveness of the awareness campaign in raising women's attitude scores about breast cancer.

- **H_2:** At the 0.05 level of significance, the mean pre-test and post-test scores of women will not differ significantly.
- Relationship between the mean pre-test knowledge score and mean pre-test attitude scores of women regarding breast cancer.
- **H_3:** The mean pre-test knowledge score and the pre-test attitude score of women with regard to breast cancer will be significantly correlated.

Table 1: Relationship between mean pre-test knowledge score and pre-test attitude score of women regarding breast cancer, N=60+60

Variable	Mean	SD	'r' Value	'P' Value
Knowledge	9.082	5.275	0.818	0.05
Attitude	42.75	24.786		

r_{58} =0.252, p<0.05

Table data shows that the calculated R-Value exceeded the table value. There is a correlation between rural women's knowledge (r=0.818, p<0.05). Thus, the researcher's hypothesis is accepted and the null hypothesis is rejected.

Table 2: Frequency, percentage and cumulative frequency distribution of pre-test and post-test knowledge score, N=60

Knowledge	Pre-test			Post-test		
Score	F	%	CF%	F	%	CF%
3-6	13	21.66	21.66	0	0	0
7-9	21	35	56.66	0	0	0
10-12	14	23.34	80	2	3.33	3.33
13-15	11	18.34	98.34	17	28.33	31.66
16-18	1	1.66	100	16	26.68	58.34
19-21	0	0	0	17	28.33	86.67
22-24	0	0	0	6	10	96.67
25-27	0	0	0	2	3.33	100

The women's knowledge score on breast cancer is shown in Table 2. In the pre-test, 21 percent of women scored between 3-6, 35 percent scored between 7-9, 23 percent scored between 10-12, and 13-15 percent scored between 18 and 34 percent. The pre-test had a maximum score of 17. In contrast, 28 percent scored between 13-15 and 19-21 on the post-test, while 26 percent scored between, 16-18. None of them received a score lower than 10, and the highest possible score on the post-test was 26.

Table 3: Range, mean, median and standard deviation of pre-test and post-test knowledge score of women regarding breast cancer.

Knowledge	Range	Mean	Median	Standard deviation	DF Value	'T'
Pre-test	3- 17	9.082	9	5.275	59	17
Post-test	11- 26	17.57	17	3.327		

The post-test knowledge mean (17.57), median (17), and range (11-26) were higher than the pre-test knowledge mean (9.08), median (9) and range (3-17), according to the data in Table 5. The paired "t" test was used to examine the significant difference between the mean pre-test and post-test knowledge scores about breast cancer. At the 0.05 level of significance, the calculated "t" value (t59=17) was greater than the table value (t=1.67). Therefore, it was concluded that women's mean post-test knowledge scores on breast cancer are significantly higher than their mean pre-test knowledge scores, rejecting the null hypothesis and accepting the research hypothesis. This suggests that the awareness program was successful in raising the women's level of knowledge.

Table 4: Area-wise mean, SD, mean percentage with 't' value of pre-test and post-test knowledge score of women regarding breast cancer

Area	Pre-test			Pre-test			
Mean	Mean	SD	Mean%	Mean	SD	Mean%	'T' Value
Anatomy	0.533	0.596	17.76	1.03	1.31	67.66	11.557*
Risk factor	1.650	0.989	41.25	1.68	7.75	42	11.066*
Signs and Symptoms	0.862	0.791	28.9	1.72	1.468	57.33	4.678*
Early detection measure	4.216	1.658	35.13	8.24	5.089	68.66	27.149*
Prevention of	1.816	1.241	22.7	4.35	3.968	54.37	18.675*
Treatment	9.077	5.275	35.14	18.02	19.56	58.04	73.125*

Section V: Effectiveness of awareness programme in terms of increase in attitude score of women regarding breast cancer.

H_2: There will be no significant difference between the mean pre-test and post- test score of women at 0.05 level of significance.

Table 5: Relationship between mean pre-test knowledge score and pre-test attitude score of women regarding breast cancer, N=60+60

Variable	Mean	SD	'r' Value	'P' Value
Knowledge	9.082	5.275	0.818	0.05
Attitude	42.75	24.786		

r_{58} =0.252, p<0.05

Data in table 5 reveals that the computed r value was higher than the table value. There is a relationship between knowledge (r=0.818, p<0.05) of women in rural community. Hence null hypothesis is rejected and researcher hypothesis is accepted.

Major Findings

Area-wise analysis of pre-test and post-test knowledge scores of women regarding breast cancer

Area-wise, women's pre-test knowledge scores were 35-13 percent for early breast cancer detection, 17-76 percent for breast anatomy, 28-9 percent for signs and symptoms, and 41 percent for breast cancer risk factors. Women's post-test knowledge scores were highest (68-66 percent) for early breast cancer detection, 67-66 percent for anatomy, 57-33 percent for signs and symptoms, and lowest (42 percent) for risk factors. These results unequivocally show that the awareness campaign was successful in raising awareness across the board. According to the study's findings, which were in line with those of another study carried out in a chosen area, school teachers' knowledge scores on early breast cancer detection were average overall (41), broken down by area. 61%). The average knowledge in the area of early detection was 45-83 percent, while the knowledge of breast cancer anatomy, meaning, and site of occurrence was 35 percent. The knowledge of risk factors, signs, and symptoms was 38-57 percent. 5.

Section VI: Relationship between mean pre-test knowledge score and pre-test attitude score.

According to the current study's correlation coefficient, women's knowledge and attitude were significantly correlated at the 0.05 level of significance (r=0.818). As knowledge grows, this suggests that there was a positive relationship between the two. The average age of the women was 37 points 7 +/- 13 points 7, which was in line with the results of another study. Of the women, 67.6% were married, and 49.2% had completed elementary school. Even though 76.6% of the women in this study said they had heard or read about breast cancer, our research showed that only 56.1% of them knew enough about the disease, with half of them having learned about it from medical professionals. The only factor that was substantially correlated with BSE and mammography practice was knowledge of breast cancer (P=0.011, P=0.007). Women in the study group who performed BSE were more likely to be more confident, believe that practicing BSE will benefit them more, perceive fewer obstacles to performing BSE, and have knowledge of breast cancer. 60The results were in line with those of another study that was done with dental students. The fourth-year students had the highest mean score (19.98±3.68), with the overall mean knowledge score

being 14.22±8.04. The average score for attitude was 26 points 45±5 points 97. The practice score had the highest mean score and SD (13.94±5), with an overall mean score and SD of 12.6±5.92.

Summary and Conclusion

Ten to four percent of all cancers in women worldwide are caused by breast cancer, with half of those cases occurring in developing nations. Cancer control: Early detection of breast cancer would lead to significant progress. Even if mortality is unaffected, any down staging brought on by early detection will significantly lower treatment costs and morbidity because a significant percentage of patients in India arrive with advanced disease. Numerous studies have demonstrated the effectiveness of awareness campaigns in raising women's awareness of breast cancer and their likelihood of doing so in the future. The current study was conducted to assess the efficacy of an awareness campaign regarding breast cancer knowledge among women in the Gaya District's rural communities.

Conflict of Interest

Not available

Financial Support

Not available

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