

Relation Between Female Workers' History and Their Knowledge About Breast Cancer, Breast-Self-Examination and Preventive: Effect of An Educational Program

Hanan Elzeblawy Hassan ^{1*}, Sahar Gamal Zaki ², Fatma Saber Nady ³

¹Professor of Maternal and Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt

²Demonstrator of Maternal & Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt

³Lecturer of Maternal & Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt

***Corresponding Author:** Hanan Elzeblawy Hassan, Professor of Maternal and Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt.

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Abstract

Background: One main factor that is significantly linked to an elevated risk of breast cancer is a family history of the disease. Thirteen to nineteen percent of those with breast cancer report having a first-degree relative with the disease.

Aim: evaluate the relation between female workers' history and their knowledge about breast cancer, breast-self-examination and preventive effect of an educational program.

Subjects and Methods: A purposive sample of 323 working women aged 18-60 at Beni-Suef University was selected based on their free from cancer, chemotherapy, radiotherapy, and diagnosed psychological disorders.

Tools: A structured interviewing sheet and women's knowledge about breast cancer, breast self-examination, and breast cancer preventive measures questionnaire.

Results: 40.0% of the female in the study had a family history of breast cancer and social media is the primary source of information for 44.9% of them regarding breast cancer. Also, 70.0% of females do not have breast problems, 33.0% have discharge issues. Before the program, 71.8% of the female employees had poor knowledge, and 4% had good knowledge. After a month, those numbers improved to 8% and 65.7%, respectively. Moreover, 0.6% of females who have a family history of breast cancer had good knowledge before the program, which increases to 14.9% after the educational program.

Conclusion: Based on the findings of the present study, it can be concluded that the health education program had a significant impact on the improvement of the female workers' overall knowledge level.

Recommendations: Design and implement an educational program for housewives regarding breast self-examination and breast cancer preventive measures.

Keywords: History, Knowledge, Breast Cancer, Breast-Self-Examination, Educational Program

Introduction

Each year, more than one million new cases of breast cancer have been diagnosed in the world, and for this reason. In more than six hundred thousand cases, death occurs [1]. Worldwide, breast cancer is a prevalent tumor in women. Breast cancer causes a burden in terms of prevention, diagnosis, and treatment, regardless of a nation's economic situation [2-7].

Regardless of age, all patients with a family history have a noticeably greater incidence of breast cancer. Epigenetic modifications and maybe trigger-producing environmental variables are the driving forces behind this connection [8-12].

Genetic Mutations:

It has been shown that many genetic variants are strongly linked to an elevated risk of breast cancer. Breast cancer genes A1 (found on chromosome 17) and BRCA2 (found on chromosome 13) are two important genes with a high penetrance. Their principal association is with an elevated risk of breast carcinogenesis [13].

The illness known as breast cancer is caused by aberrant breast cells that proliferate and develop into tumors. Tumors have the potential to grow throughout the body and become lethal if ignored. The milk ducts and/or the breast's milk-producing lobules are where breast cancer cells first proliferate. There is no risk to life from the early form (in situ). Cancer cells can invade neighboring breast tissue. Tumors produced by this result in thickening or lumps. Metastasis is

the process by which invasive tumors move to neighboring lymph nodes or other organs. One can die from metastasis [15-20].

Breast cancer is now the most frequently diagnosed cancer in the world. Breast cancer prevention has gained increasing attention due to increasing breast cancer incidence rates in the West and can be actualized through lifestyle modifications or targeted interventions [21-25].

Aim Of The Study

The current study was conducted to evaluate the relation between female workers' history and their knowledge about breast cancer, breast-self-examination and preventive effect of an educational program.

Subject and Method

Research design:

The study utilized an interventional, quasi-experimental research design, including pre-test and post-test, to achieve its objectives.

Subjects and Settings:

A purposive sample of 323 working women aged 18-60 at Beni-Suef University was selected based on their free from cancer, chemotherapy, radiotherapy, and diagnosed psychological disorders.

Tools of data collection:

Tool I: A Structured Interviewing Questionnaire Sheet

The researcher created it after reviewing pertinent literature. It was designed to collect data on women and included sections such as family history of breast cancer; if applicable, describe the relationship, mammography history, breast problems, and problem categories. In addition to asking them where they learned about breast cancer.

Tool II: women's knowledge about breast cancer, breast self-examination, and breast cancer preventive measures.

The women's knowledge of breast cancer, breast self-examination, and breast cancer prevention techniques were assessed using closed-

ended questions. Each question carried a total score of 55 degrees, with one point given for a right answer and zero for a wrong one. The distribution of the total knowledge score is divided into the following categories: Average: for results ranging from 50% to 74%, Excellent: for scores of at least 75% and at least 40 degrees. Poor: for scores below 50% and for degrees between 27 and 40.

Tools Validity and Reliability:

To ensure consistent results over time, the Cronbach's Alpha test was employed to measure the reliability of the study instruments and a panel of five experts from Beni-Suef University evaluated their content validity.

Ethical Consideration:

The study received ethical approval from Beni-Suef University's Faculty of Medicine's Research Ethics Committee.

Pilot study:

32 women, or 10% of the total study population, participated in a pilot study to evaluate the tools' efficacy, usability, and comprehensibility.

Statistical Design:

The Statistical Package for Social Science (SPSS) version 20 was used to statistically evaluate the computer-entered, coded, and updated data. Statistically significant p-values are less than 0.05, extremely significant p-values are less than 0.001, and insignificant p-values are greater than 0.05. Numbers, percentage distributions, and squares were used to display the data in tables.

Results

Table (1) shows that 40.0% of the female in the study had a family history of breast cancer with a first-degree relative (mother), whereas 3.1% of the female in the study had no family history of breast cancer. Furthermore, 93.5% of them did not undergo a mammogram. In the meantime, social media is the primary source of information for 44.9% of them regarding breast cancer.

Table 1: Percentage distribution of the studied female workers regarding their history of breast cancer (n=323).

Items	No.	%
Family history of BC		
No	236	73.1
Yes	87	26.9
If yes mention the relationship		
Mother	35	40.0
Sister	20	23.0
Grandmother	7	8.0
Aunt	7	8.0
Other	18	20.7
Had a mammogram		
No	302	93.5
Yes	21	6.5

Source of information about breast cancer		
Relatives and Friends	40	12.4
Awareness lectures	59	18.3
Health care providers	79	24.5
Social media	145	44.9

Figure (1) shows that 70.0% of females do not have breast problems, 33.0% have discharge issues, and 59.8% have not undergone special investigation or medical breast examination.

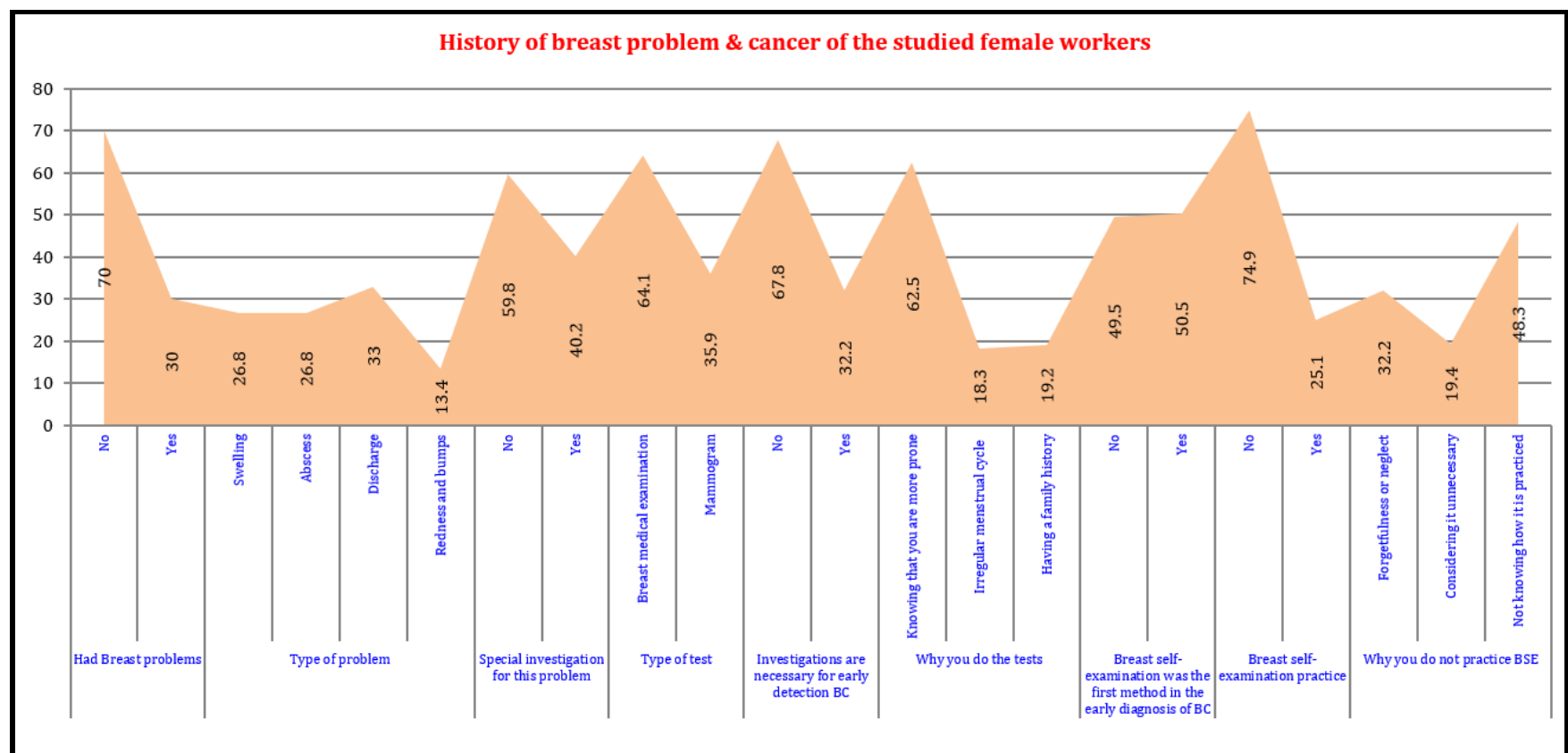


Figure 1: History of breast problems and cancer of the studied female workers

Figure (2) displays the percentage distribution of the female employees' general breast cancer knowledge. Before the program, 71.8% of the female employees had poor knowledge, and 4% had good knowledge. After a month, those numbers improved to 8% and

65.7%, respectively, indicating that the health education program had a significant impact on the improvement of the employees' overall knowledge level.

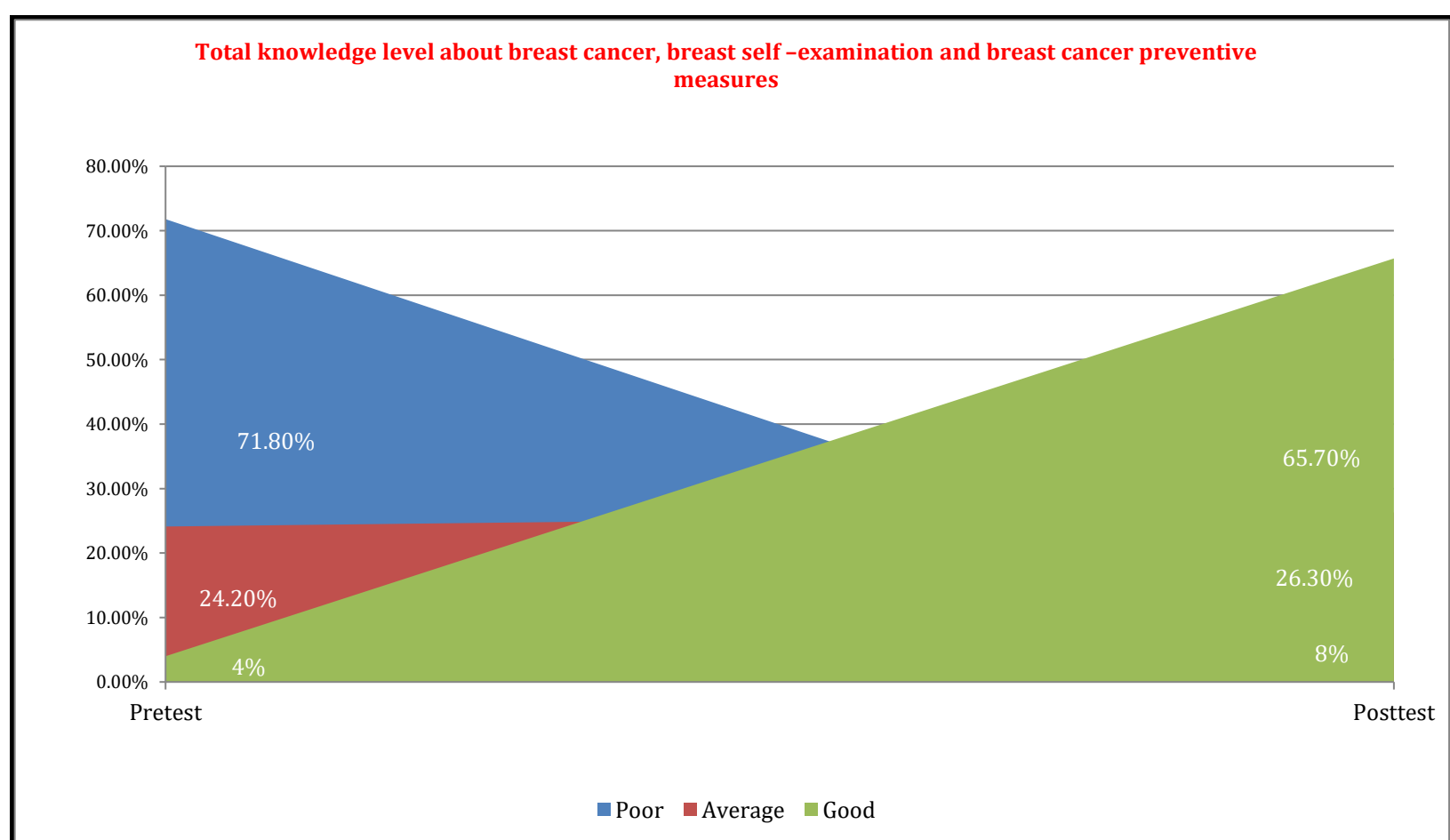


Figure 2: Percentage distribution of the studied female workers' regarding to their total knowledge level about breast cancer, breast self-examination and breast cancer preventive measures (n=323, $X^2 = 6.837$, p value = 0.009**))

Figure (3) presents the relation between the history of breast cancer of the studied female workers and their total knowledge about breast cancer, breast self-examination, and breast cancer preventive

measures; Of which 0.6% of females who have a family history of breast cancer had good knowledge before the program, which increases to 14.9% after the educational program.

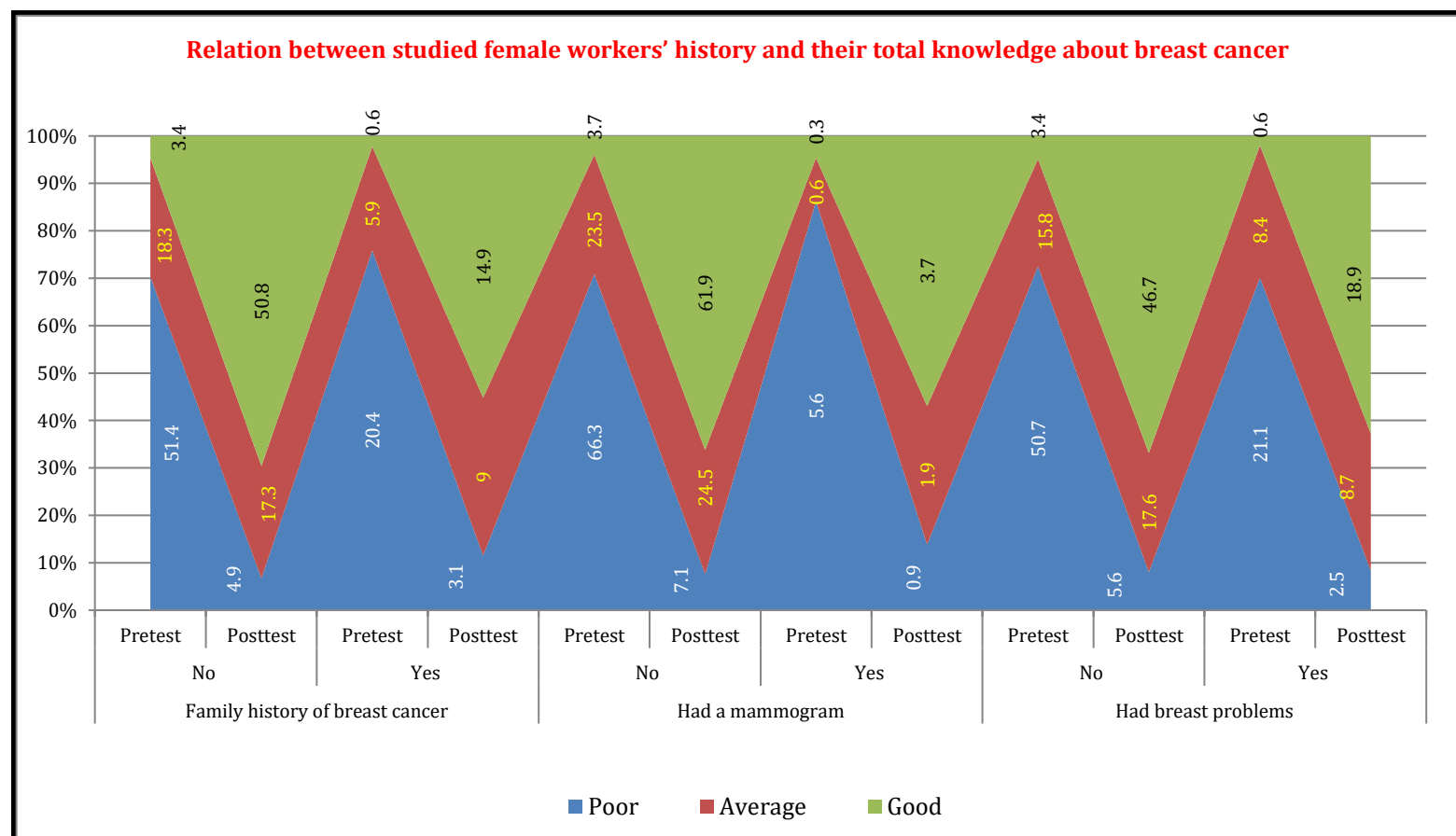


Figure 3: Relation between studied female workers' history and their total knowledge about breast cancer, breast self –examination and breast cancer preventive measures

Figure (5) illustrates the relation between the sources of information of the studied female workers and their total knowledge about breast cancer, breast self-examination, and breast cancer preventive measures. It shows that 3.1% of the studied female workers who got

their information about breast cancer from social media had good knowledge before the program, which improved to 27.9% after the educational program.

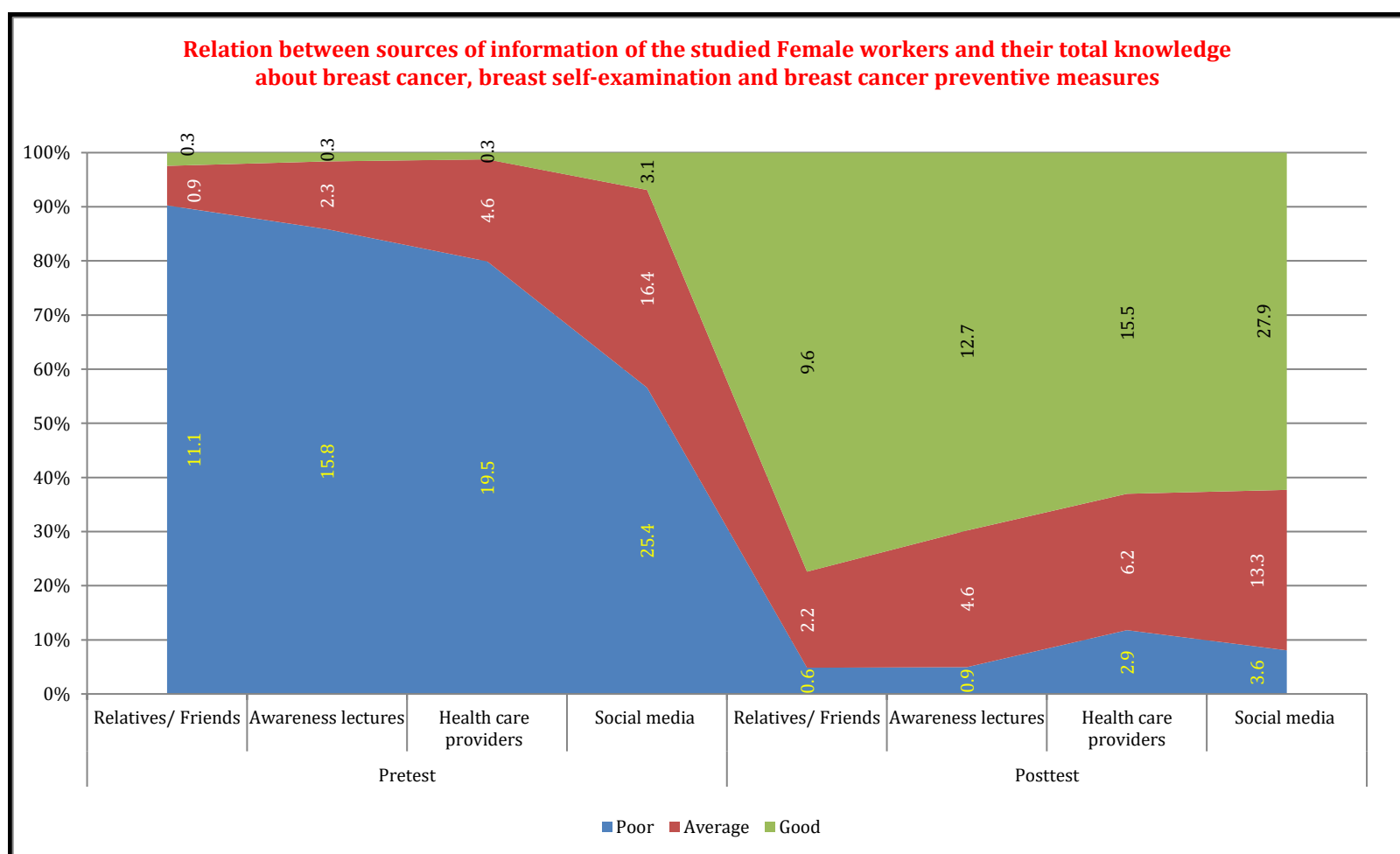


Figure 5: Relation between sources of information of the studied Female workers and their total knowledge about breast cancer, breast self-examination and breast cancer preventive measures

Discussion

One main factor that is significantly linked to an elevated risk of breast cancer is a family history of the disease. Thirteen to nineteen percent of those with breast cancer report having a first-degree relative with the disease [26-31]. The aim of the study was to evaluate the relation between female workers' history and their knowledge about breast cancer, breast-self-examination and preventive effect of an educational program. In relation to family history of breast cancer, the current study proved that around three-quarters of the studied female workers didn't have a family history of breast cancer. This finding was accepted with **Mohamed et al. (2023)**, who investigated "knowledge of high school female students about breast self-examination' in Saudi Arabia" and found that the minority of the participants had a family history of breast cancer [32]. Moreover, the study shows that less than half of female workers receive breast cancer information from social media, contrasting with **Mahmoud et al.'s (2020)** findings that found most information comes from healthcare providers [33].

Regarding of the studied female workers' regarding to their total knowledge level about breast cancer, breast self-examination and breast cancer preventive measures, results revealed a highly statically significant improvement of total knowledge after program implementation. This finding was in accordance with **Elbasuony et al. (2020)** who found a significant improvement in knowledge about breast cancer among healthy women with family history following the implementation of a preventive breast cancer guideline [34].

Concerning the relation between family history of breast cancer of the studied female workers and their total knowledge about breast cancer, breast self-examination, and breast cancer preventive measures, results indicated that there was no statistically significant relationship between family history of breast cancer and the studied female workers total knowledge about breast cancer, breast self-examination, and breast cancer preventive measures (pre & posttest). However, there are improvements in women's knowledge regarding all previously mentioned items. In which the minority of females who didn't have a family history of breast cancer had good knowledge before the program, which increased to more than one-half after the educational program.

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This finding agreed with **Al-Mousa et al. (2020)**, who investigated "knowledge, attitude, and practice around breast cancer and mammography screening among Jordanian women" and indicated that family history of breast cancer didn't show any effect on the level of knowledge about breast cancer [35]. Conversely, this finding is different from **Subramanian et al. (2013)**, who discussed "breast cancer knowledge and screening behavior among women with a positive family history" and revealed that there was a significant association between family history of breast cancer and knowledge of women about breast cancer [36]. This finding may be due to previous experience of breast cancer screening increasing awareness and desire to know more about the disease, whatever the source of information. Pertaining to the relation between sources of information of the studied female workers and their total knowledge about breast cancer, breast self-examination, and breast cancer preventive measures, it shows that there was a highly relationship between sources of information and their total knowledge in the both pretest, posttest. In which less than one-tenth of the studied female workers who got their information about breast cancer from social media had good knowledge before the program, which improved to more than one-quarter after the educational program.

This finding is in the same line with many studies that studied "knowledge and behavior regarding breast cancer" and revealed that there was no significant association between the sources of information and knowledge of breast cancer [37-40]. From the researcher's point of view, social media became extended and reached all age groups and distant areas, which indicates the impact of social media on all women, as it is the most common source of information.

Conclusion

Based on the findings of the present study, it can be concluded that the health education program had a significant impact on the improvement of the female workers' overall knowledge level. Social media has significantly impacted women, reaching all age groups and distant areas, as it is the most common source of information.

Recommendation

- Design and implement educational program for housewives regarding breast self-examination and breast cancer preventive measures.

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