

# Female Workers' Total Practices Regarding Breast Self-Examination at Beni-Suef University

Sahar Gamal Zaki <sup>1</sup>, Fatma Saber Nady <sup>2</sup>, Hanan Elzeblawy Hassan <sup>3\*</sup>

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

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

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

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

**Received Date:** January 20, 2025 | **Accepted Date:** February 10, 2025 | **Published Date:** February 17, 2025

**Citation:** Sahar G Zaki., Fatma S Nady., Hanan E Hassan., (2025). Liver Function Tests in Patients of Acute Leukemia Before and After Induction Chemotherapy., *Journal of Clinical and Laboratory Research* 8(2); **DOI:**[10.31579/2768-0487/165](https://doi.org/10.31579/2768-0487/165)

**Copyright:** © 2025, Hanan Elzeblawy Hassan. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## Abstract

**Background:** Women who self-examine their breasts get familiar with their appearance and feel, and they can identify any changes in their breasts as soon as feasible.

**Aim:** assess female workers' total practices regarding breast self-examination at Beni-Suef University. Subjects and Methods: A descriptive sample of 323 working women at Beni-Suef University was selected.

**Tools:** (I): A Structured Interviewing Questionnaire Sheet. (II): Breast Self-Examination Checklist.

**Results:** It revealed that 53.8% of the studied sample were married at ages 17-22 years, 82.8 had practiced breastfeeding, 65.4% stopped menstruation at age >45 years, 71.8% had used contraception, 73.1% didn't have family history of breast cancer, 93.5% didn't performed mammogram. Related to BSE, 50.5% knew that breast self-examination was the first method in the early diagnosis of breast cancer, 74.9% did not practice breast self-examination, 48.3% not knowing how it was practiced. Also, 90.1% of the female workers having inadequate total practices level regarding breast self-examination, 44.9% get information from social media.

**Conclusion:** Based on the findings of the present study, it can be concluded that there were statistically significant relation between the studied female workers total practices level regarding breast self-examination score with their educational level and place of residence, family history of breast cancer. A highly statistically significant relation with their total practice level of breast self-examination and source of information was observed. Recommendations: Implement an educational program to enhance women's practices regarding breast self-examination.

**Key words:** practices; breast self-examination; female workers

## Introduction

Physical breast examination, breast self-examination, and a clinical breast examination are all included in the physical breast examination. Breast self-examination involves utilizing a mirror and one's hands to check for changes in one's breasts and underarms. In contrast, a doctor performing a clinical breast examination looks for lumps and other abnormalities that could indicate breast cancer. Clinicians perform physical examinations, which involve examining the breasts, the region surrounding the neck and collarbone, and the armpits (axillae). Breast abnormalities, such as lumps or other signs of breast cancer, are observed. Lymph nodes are also examined as they are typically enlarged in breast cancer patients [1-4].

Women who self-examine their breasts get familiar with their appearance and feel, and they can identify any changes in their breasts as soon as feasible. Since many breast cancers are discovered by women themselves, breast self-examination is best done after menstruation (days 5 to 7, if one counts the first day of menses as day 1). Teaching all women how and when to inspect their breasts is a top goal. Women who self-examine their breasts significantly contribute to the early detection of breast cancer and the decrease in cancer-related deaths [5-8].

It has been discovered that nurses use three different methods to look for lumps during a breast self-examination: Tissue sections can be examined in three different ways: 1) the concentric circle method, which looks in increasing or decreasing concentric spheres; 2) the radial spoke, which looks at the edges and moves in a circular pattern toward the nipple; and 3) the vertical strip approach, which examines the breast in perpendicular pieces that intersect and move throughout the chest [9-11].

## Aim Of the Study

The current study was conducted to assess female workers' total practices regarding breast self-examination at Beni-Suef University.

## Subject And Method

A descriptive sample was used and selected from working women at Beni-Suef University were selected according to the following inclusion criteria: Females aged 18-60, Free from any type of cancer, did not receive any chemotherapy or radiotherapy, and free from any diagnosed psychological disorders

Sample Size:

The sample was calculated by the following equation using the Chandrasekharan equation to calculate the sample size from the next formula (Chandrasekharan et al., 2019):  $n = N / \{1 + N(e)^2\}$  Where n = sample size, N = population size is 1700, and e = 0.05. The total number of working women at Beni-Suef University at the time of conducting the study was 1700 women, so the target population of this study was 323 women. The sample size calculation was done using the following equation:  $n = 1700 / \{1 + 1700(0.0025)\} = 323$ . The study sample consists of 323 women who were working at Beni-Suef University and accepted to participate in the study at the time of the data collection.

**Tools of data collection:**

**Tool I: A Structured Interviewing Questionnaire Sheet**

It contains women's personal and socio-demographic data.

**Tool II: Breast Cancer Preventive Measures Checklist:**

Breast Self-Examination Observational Checklist was comprised of practical steps to evaluate and track women's breast self-examination performance.

**Scoring system:** Each step was scored a zero grade (if the step was not done) and a one grade (if the step was done) with a total score of 35 degrees. The total practical scores were calculated into two groups:

- A score of  $\geq 60\%$  denoted adequate or satisfactory practice. ( $\geq 21$  degrees)
- A score  $< 60\%$  denoted inadequate or unsatisfactory practice. ( $< 21$  degrees)

**Tools Validity:**

In order to ensure comprehensiveness, accuracy, and clarity, a jury panel at Beni-Suef University assessed the content validity of study tools and made the required adjustments.

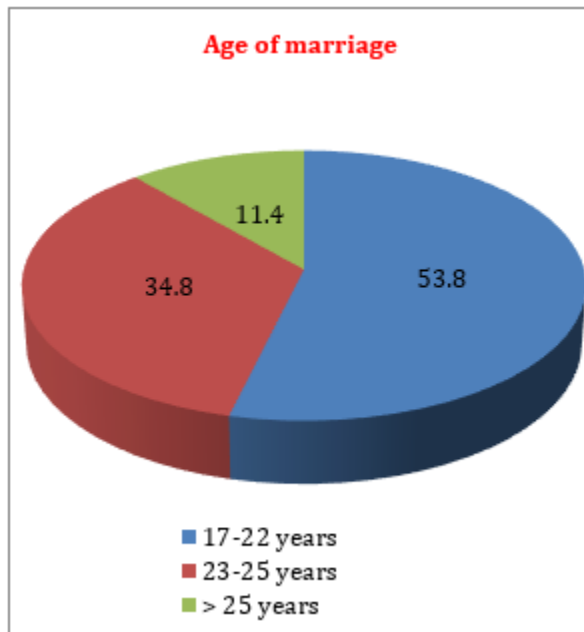
**Tools Reliability**

The study tools' reliability was assessed using Cronbach's Alpha test, Breast Self-Examination observational checklist= 0.976

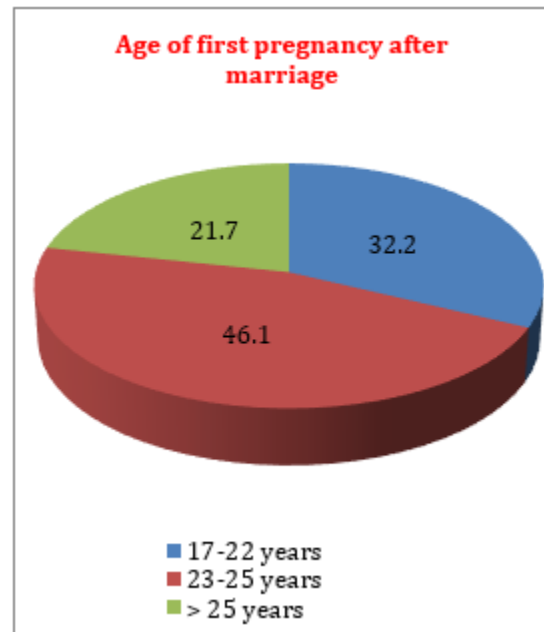
**Statistical Design:**

The data was analyzed using SPSS version 20 using mean, standard deviation, number, and percentage distribution.

## RESULTS



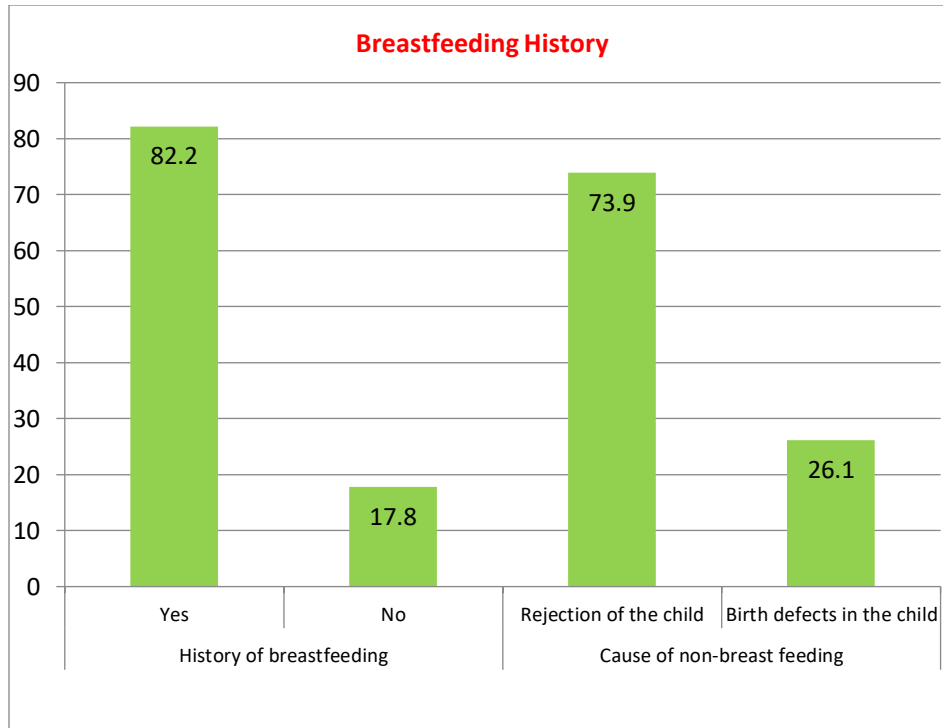
**Figure 1:** Age of marriage for the studied female workers



**Figure 2:** Age of the first pregnancy after marriage for the studied female workers

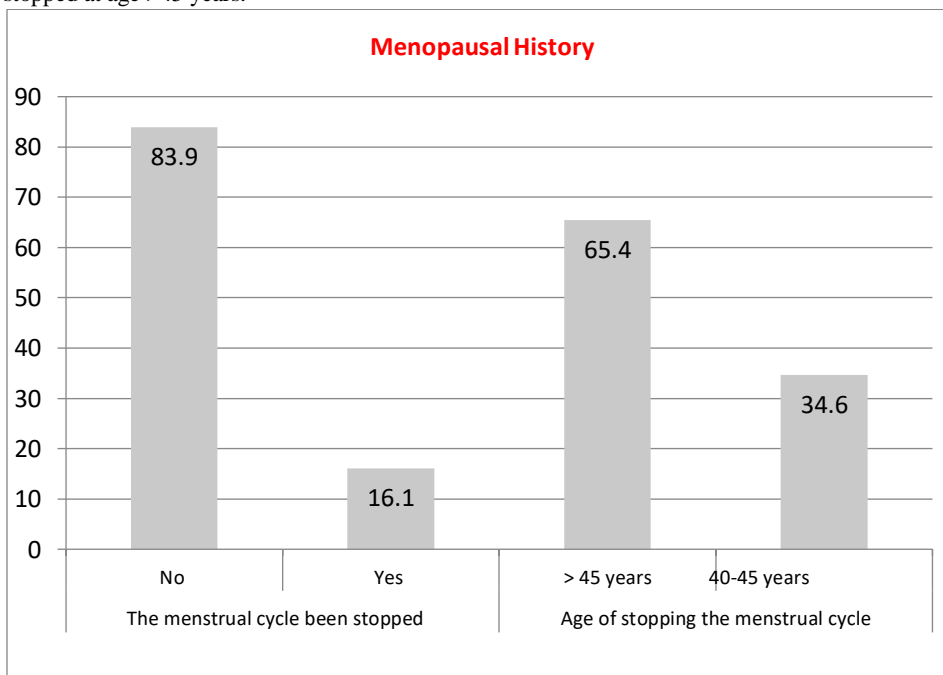
**Figure 1 & 2:** reveals that more than half (53.8%) of them were married at ages 17-22 years, and less than half (46.1%) of them had their first pregnancy at ages 23-25 years.

Figure (3) showed that the majority (82.8%) of them had practiced breastfeeding, while non-breastfeeding women due to rejection of the child were less than three quarters (73.9%).



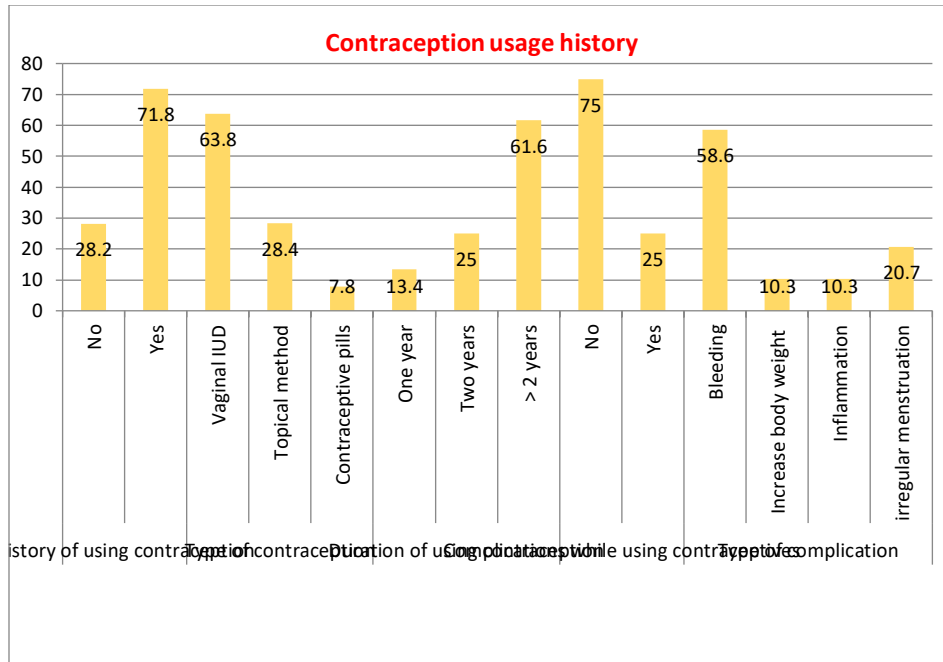
**Figure 3:** Breastfeeding History of the studied female workers.

Figure (4) revealed that most of the studied women (83.9%) had not had their menstrual cycle stopped, and less than two-thirds (65.4%) had it stopped at age >45 years.



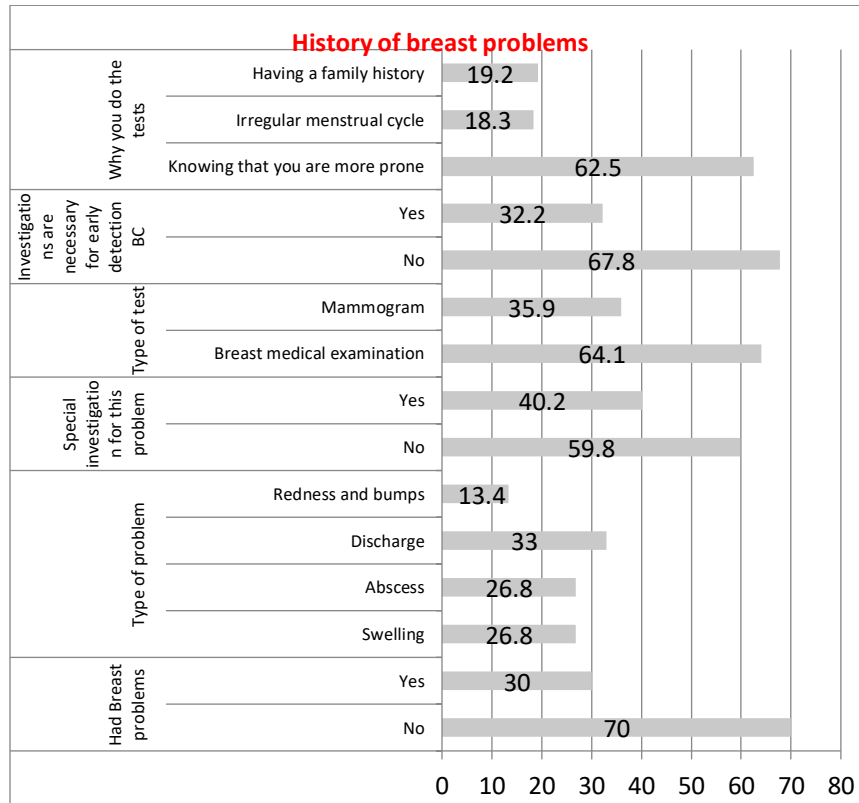
**Figure 4:** Menopausal History of the studied female workers.

Figure (5) revealed that less than three-quarters (71.8%) of them had used contraception from them; less than two-thirds (63.8%) had used vaginal IUDs, and less than two-thirds (61.6%) of them used contraception for more than 2 years. Regarding the complication of contraception, almost three-quarters (75.0%) of them had no complications, while women who had complications due to bleeding were more than half (58.6%).



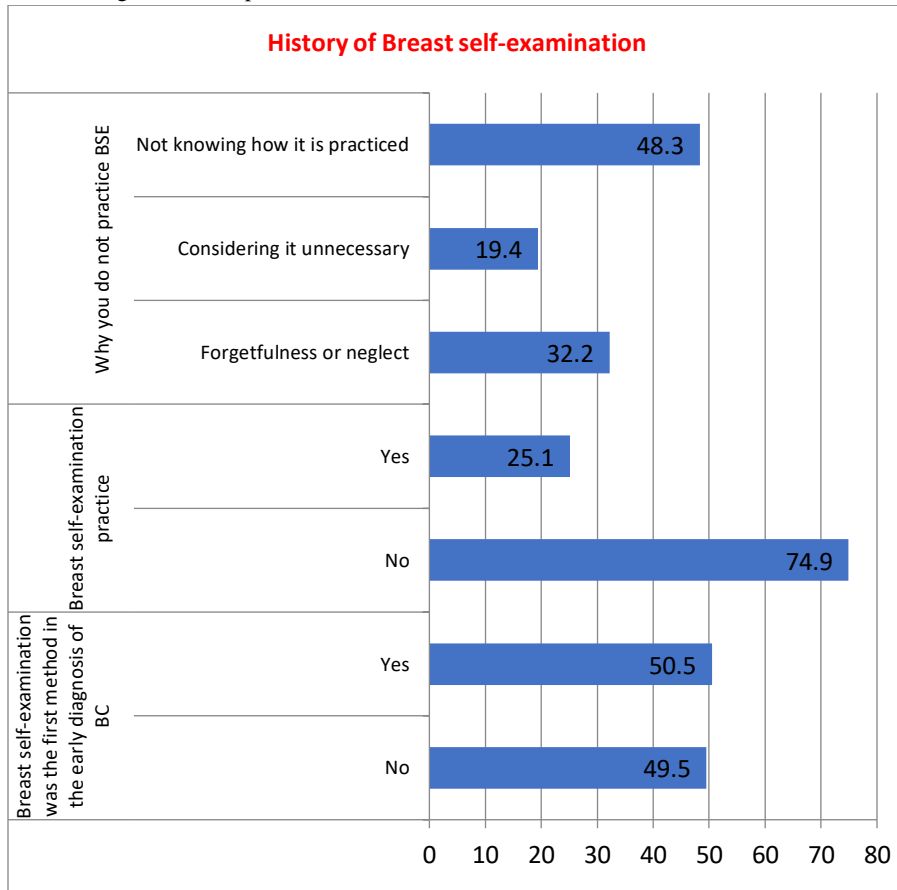
**Figure 5:** Contraception usage History of the studied female workers.

Figure (6) presents that, less than three quarter (73.1%) of the studied female workers didn't have family history of breast cancer while female who had family history of breast cancer with first degree relatives (mother) were less than half (40.0%). Additionally, majority (93.5%) of them didn't performed mammogram. Meanwhile, less than three quarter (70.0%) of them didn't have breast problems while less than one third (33.0%) of them had problem due to discharge. Despite that, more than half (59.8%) of female who had breast problem hadn't done any special investigation for this problem and less than two thirds (64.1%) of female who perform investigations had done medical breast examination.



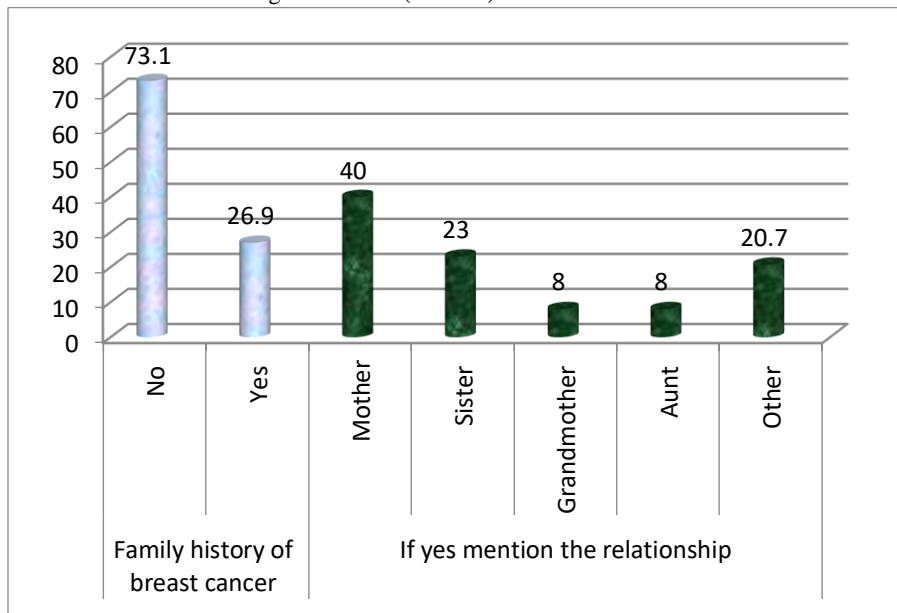
**Figure 6:** History of breast problems of the studied female workers.

Table (7) Related to BSE, more than half (50.5%) of them knew that breast self-examination was the first method in the early diagnosis of breast cancer. In addition, nearly three-quarters (74.9%) of them did not practice breast self-examination, with less than half (48.3%) not knowing how it was practiced.



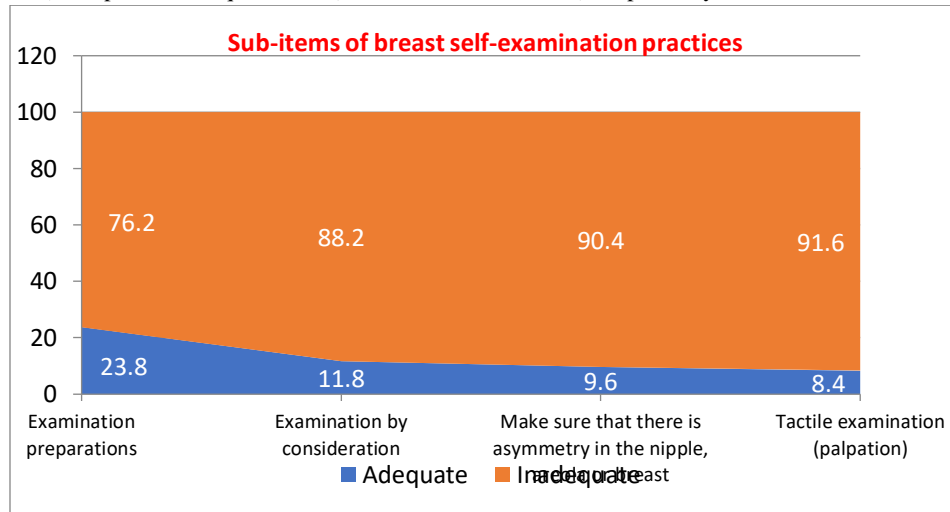
**Figure 7:** History of Breast self-examination of the studied female workers.

Figure (8) presents that 73.1% of the studied female workers didn't have a family history of breast cancer, while females who had a family history of breast cancer with first-degree relatives (mothers) were 40.0%.



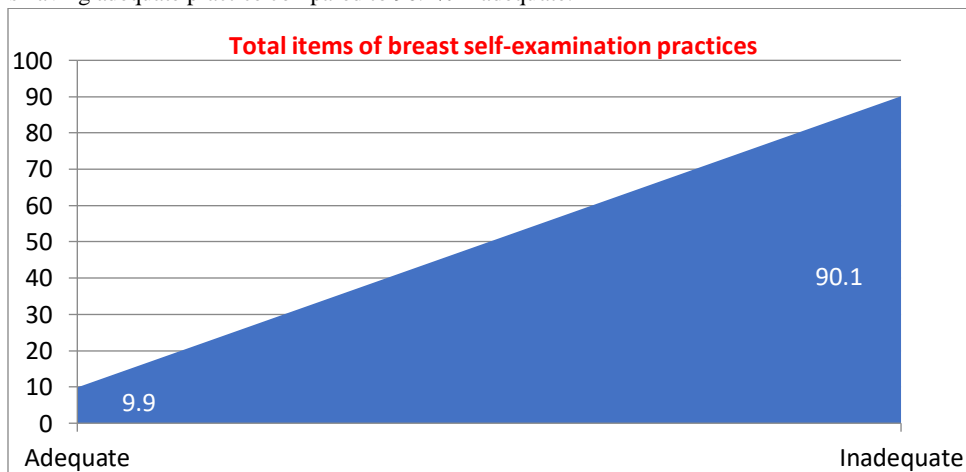
**Figure 8:** Percentage distribution of the studied female workers regarding their family history of breast cancer (n=323).

Figure (9) shows most of the studied sample have inadequate level regarding their Sub-items of breast self-examination practices (examination preparation 76.2%, examination by consideration 88.2%, asymmetry in the nipple, areola, or breast 90.4%, and tactile examination 91.6%) compared to adequate level (23.8%, 11.8%, 9.6%, 8.4), respectively.



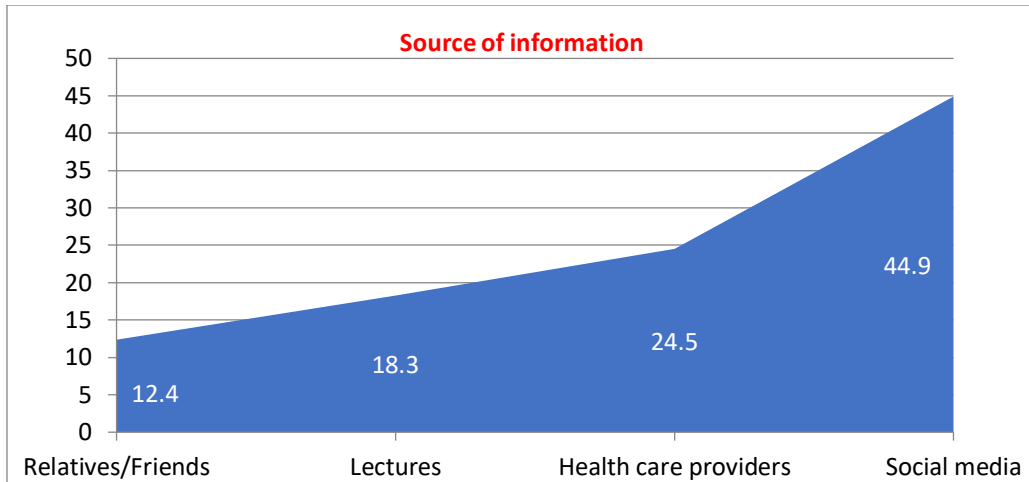
**Figure 9:** Percentage distribution of the studied female workers regarding their Sub-items of breast self-examination practices (n=323).

Figure (10) illustrates that female workers' total practice level regarding breast self-examination, less than one-tenth (9.9%) of the female workers having adequate practice compared to 90.1% inadequate.



**Figure 10:** Percentage distribution of the studied female workers regarding their Total-items of breast self-examination practices (n=323).

Figure (11) presents the source of information about breast cancer, less than half (44.9%) of them get information from social media.



**Figure 11:** studied female workers regarding their source of information about breast cancer.

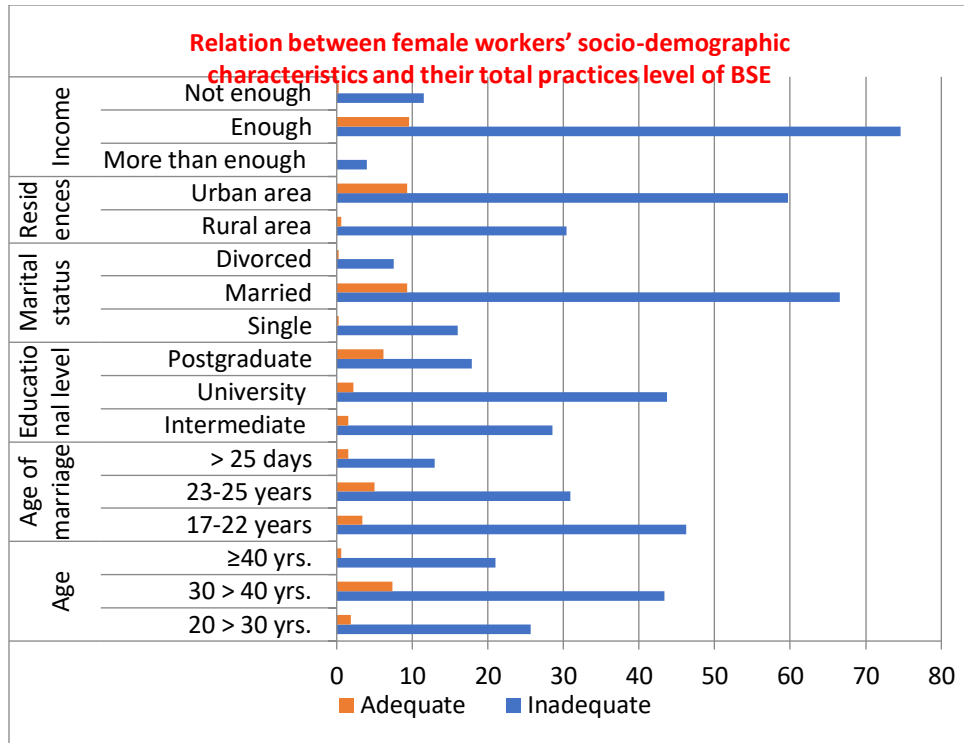
Table (1) and Figure (12) reveals that there was a highly statistically significant relation between the studied female workers total practices level regarding breast self-examination score with their educational level and place of residence, as P-value = 0.000 & 0.001, respectively.

Items	No.	Inadequate (n=291)	Adequate (n=32)	X <sup>2</sup> p value
		%	%	
<b>Age</b>				
20 > 30 yrs.	89	25.7	1.9	9.003 (0.011*)
30 > 40 yrs.	164	43.4	7.4	
≥40 yrs.	70	21.0	0.6	
<b>Educational level</b>				
Intermediate education	97	28.5	1.5	28.533 (0.000**)
University education	148	43.7	2.2	
Above university	78	17.9	6.2	
<b>Marital status</b>				
Single	53	16.0	0.3	6.297 (0.043*)
Married	245	66.6	9.3	
Divorced	25	7.5	0.3	
<b>Place of residence</b>				
Rural area	100	30.4	0.6	10.146 (0.001**)
Urban area	223	59.7	9.3	
<b>Monthly income of family</b>				
Enough and increases	13	4.0	0.0	4.360 (0.113)
Enough	272	74.6	9.6	
Not enough	38	11.5	0.3	

**Table 1:** Relation between socio-demographic characteristics of the studied female workers and their total practices level regarding breast self-examination (n=323).

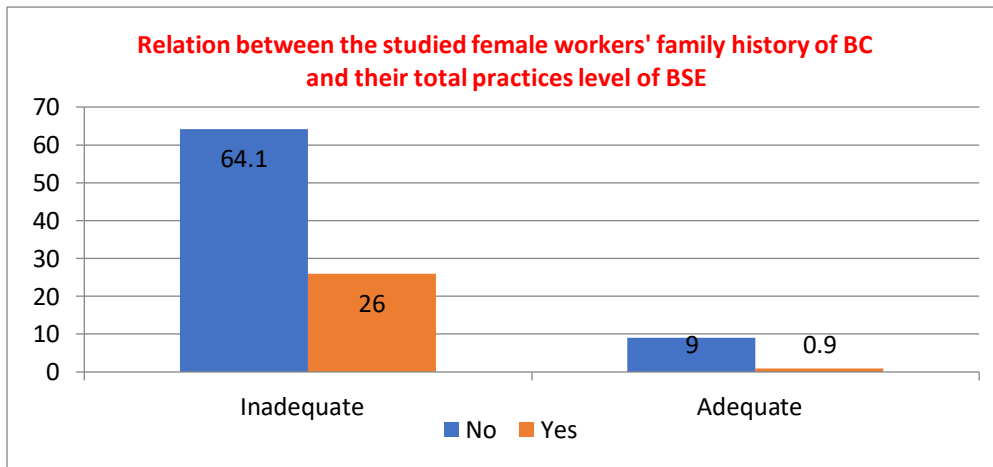
\* Statistically significant at  $p \leq 0.05$

\*\* Highly statistical significant at  $p \leq 0.01$



**Figure 12:** Relation between socio-demographic characteristics of the studied female workers and their total practices level of breast self-examination.

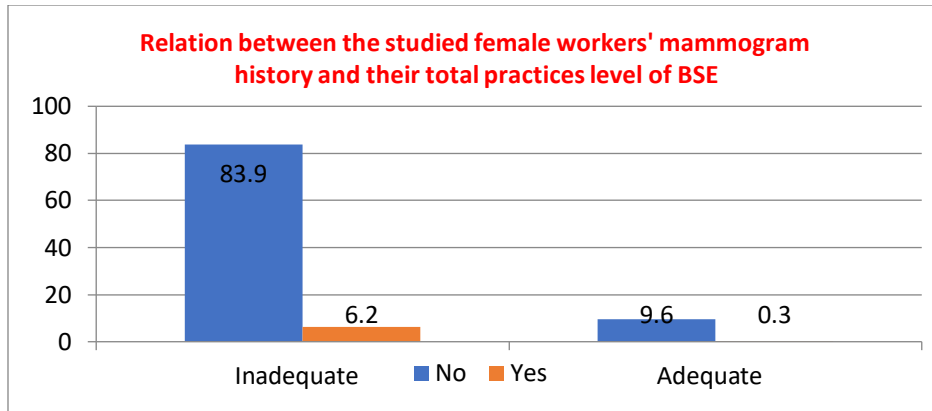
Figure (13) illustrates a statistically significant relation between family history of breast cancer and their total practices level of breast self-examination as P-value = 0.018



**Figure 13:** Relation between the studied female workers' family history of breast cancer and their total practices level of breast self-examination (p= 0.018\*).

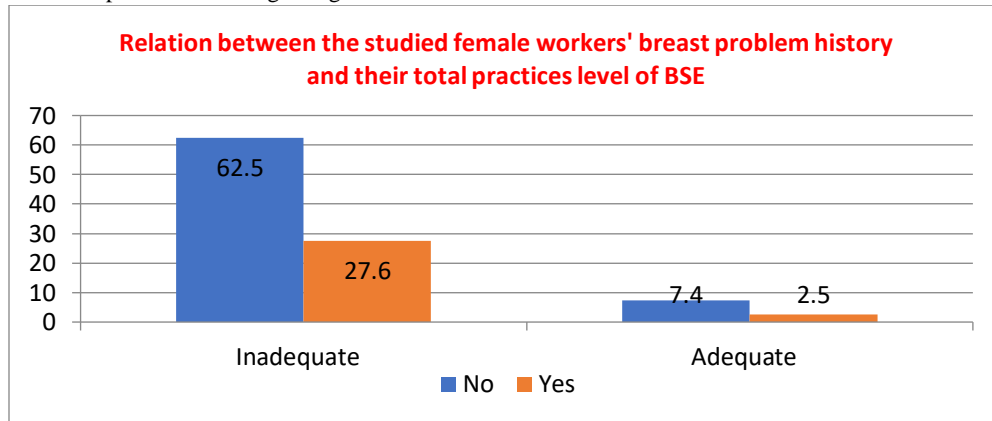
Figure (14) illustrates that there was no statistically significant relation between of the studied female workers and their total practices level regarding breast self-examination as p= 0.414.





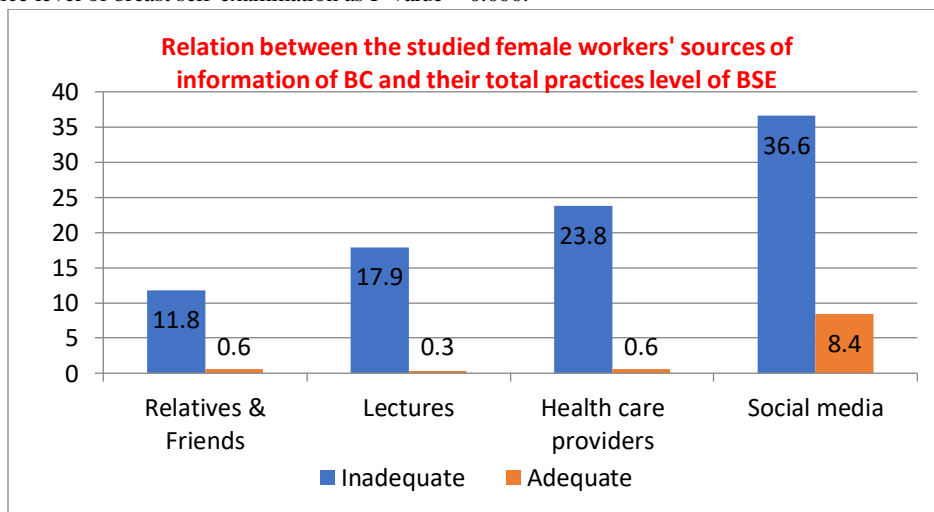
**Figure 14:** Relation between the studied female workers' mammogram history and their total practices level of breast self-examination (p= 0.269).

Figure (15) illustrates that there was no statistically significant relation between history of breast problems of the studied female workers and their total practices level regarding breast self-examination as P= 0.513



**Figure 15:** Relation between the studied female workers' breast problem history and their total practices level of breast self-examination (p= 0.339).

Figure (16) illustrates that there the source of information about breast cancer, there is a highly statistically significant relation with their total practice level of breast self-examination as P-value = 0.000.



**Figure 16:** Relation between the studied female workers' sources of information of breast cancer and their total practices level of breast self-examination (p=0.000\*\*).

## Discussion

Self-examination of breasts helps women identify changes and identify breast cancers early, especially after menstruation, as many breast cancers are discovered by women themselves [12-17]. The aim of the study was assess female workers' total practices regarding breast self-examination at Beni-Suef University. Regarding items for practice of breast self-examination (BSE) the current study announced that most of participated women had inadequate practices of breast self-examination regarding all sub-item (Examination preparations, Examination by consideration, Make sure that there is an asymmetry in the nipple, areola, or breast, and Tactile examination or palpation). The finding was in the same line with Akarsu & Andsoy (2022) [18]. Concerning total BSE practices, it noticed that majority of females had inadequate practice regarding BSE. This finding was in the same line with Alameer et al. (2018) [19]. Regarding the source of information about breast cancer, the current study illustrated that less than half of female workers get information from social media. This finding disagrees with Hajian and Auladi (2015), who studied "awareness, attitude, and practice of breast cancer screening women, and the associated socio-demographic characteristics, in northern Iran" and reported that the source of information was health care workers, and magazines, books, and brochures were the most common sources [20]. From the researcher's point of view, this finding might be due to a lack of breast cancer mass programs, and the majority of studied women did not have a family history of breast cancer. The study found a significant relationship between socio-demographic characteristics and breast self-examination practices among female workers, with age pretest showing a significant association, while no significant relationship was found for the minority aged 30-40 years, similar to Mahmoud et al.'s 2020 findings [21]. Moreover, the study found a significant relationship between female workers' breast self-examination practices and their educational level, with university-educated females having adequate practice. This supports Ahmed and Shrief's (2019) findings, suggesting that education improves understanding and application of BSE steps [22]. Additionally, the study found no significant relationship between female workers' breast self-examination practices and their family income. However, a minority of females with sufficient monthly income had adequate practice, contradicting previous research suggesting a link between income and BSE practice Dündar et al. (2006) and Marinho et al. (2008) [23-24]. Also, there was a statistically significant relationship between the studied female workers total practices level of breast self-examination score with their marital status level. In which less than one-tenth of married women had adequate practice regarding breast self-examination. This finding is also in the same line with Montazeri et al. (2008), who clarified that performing BSE was significantly related to age, marital status, and educational level. Regarding place of residence, there was a highly statistically significant relationship between the studied female workers total practices level of breast self-examination score and their place of residence [25]. In which the minority of females who lived in urban areas had adequate practice regarding breast self-examination. This finding is similar to Mahmoud et al. (2020), who showed that there is a statistically significant association between women's total practice scores and residence. From the researcher's point of view, females who live in urban areas have the ability to receive information and practice BSE, even if it causes embarrassment. Unlike women who live in rural areas [21]. For the relationship between the family history of breast cancer of the studied women and their total practice level of breast self-examination, the results revealed a statistically significant relationship. In which the minority of females who didn't have a family history of breast cancer had adequate practice regarding breast self-examination. Also, this finding is supported by Meilina et al. (2024), who investigated "the relationship of knowledge, attitudes, and family history of breast cancer to breast self-examination (BSE) behavior in women" and revealed that there was no relationship between family breast cancer history and BSE [26]. Concerning the relation between the studied female workers' mammogram history and breast problem history and their total practice level of breast self-examination, the results revealed that no statistically significant relationship was found for both. However, the majority of females who have neither breast problem nor mammogram history had inadequate practice regarding breast self-examination As regard the source of information about breast cancer, there was a highly statistically significant relationship with their total practice level of breast self-examination. In which the minority of females who get their information from social media have adequate practice regarding breast self-examination. This finding is similar to Parsa et al. (2008), who assessed "knowledge and behavior regarding breast cancer screening among female teachers in Selangor, Malaysia" and revealed that there was no significant association between the sources of information and breast cancer screening practices [27].

### **Conclusion**

Based on the findings of the present study, it can be concluded that there were statistically significant relation between the studied female workers total practices level regarding breast self-examination score with their educational level and place of residence, family history of breast cancer. A highly statistically significant relation with their total practice level of breast self-examination and source of information was observed.

### **Recommendations**

- Implement an educational program to enhance women's practices regarding breast self-examination.
- Work together with medical experts to lead screenings and informational sessions, stressing the value of early detection and consistent follow-up.

### **Reference**

1. Albeshan, S. M., Hossain, S. Z., Mackey, M. G., & Brennan, P. C. (2020). Can breast self-examination and clinical breast examination along with increasing breast awareness facilitate earlier detection of breast cancer in populations with advanced stages at diagnosis?. *Clinical breast cancer*; 20(3): 194-200.
2. Nady F., Said M., Youness E., Hassan H. (2017). Impact of Tailored Educational Program of Quality of Life Improvement on Women Undergoing Breast Cancer Treatment at El-Minia Region, Egypt. *American Research Journal of Gynaecology*.; 1(1): 1-17.
3. Mohamed A., Hassan H., Gamel W., Arafa A. (2019). Awareness about breast and cervical cancers among nursing students in Beni-Suef University. *Journal of Nursing Education and Practice*, 9(5): 44-51.
4. Hassan, H., Bayoumi, M., & Atwa, A. (2016). Emotional Distress Associated with Gynecologic and Breast Cancer in Beni-Suef City. *International Journal of Science and Research*. 5(2): 1118-1129.
5. Mohapatro, P., & Sahu, I. (2020). Effect of Structured Teaching Programme On Knowledge Regarding Breast Self-Examination Among B. Sc Nursing Students. *European Journal of Molecular & Clinical Medicine*.; 7(11):1126-1131.
6. Nady F., Said M., Youness E., Hassan H. (2018). Effect of Nursing Intervention Program on Quality of Life Improvement for Women Undergoing Gynecological and Breast Cancer Treatment. *Assuit Scientific Nursing Journal*.; 6(15): 62-77.
7. Mohammed F., Shahin M., Youness E., Hassan H. (2018). Survivorship in Women Undergoing Gynecological and Breast Cancer Treatment in Upper Egypt: The Impact of Quality of Life Improvement Educational Program". *American Research Journal of Gynaecology*.; 2(1): 1-28.
8. Atwa A., Hassan H., Ahmed S. (2019). The impact of a hospital-based awareness program on the knowledge of patients about breast cancer and cancer cervix. *International Journal of Studies in Nursing*.; 4(1): 20-29.
9. Guthigar, M., & Naik, P. R. (2023). Assessment of knowledge, attitude, and practice regarding breast cancer among the women in rural Karnataka, South India. *Biomedicine*, 43(4): 1320-1324.
10. Qalawa, Sh., Eldeeb, A., & Hassan, H. (2015). Young Adult Women's intention regarding breast and cervical cancer screening in Beni-Suef. *Scientific Research Journal*.; 3(3): 11-24.
11. Nady F., El-Sherbiny M., Youness E., Hassan H. (2018). Effectiveness of Quality-of-Life Planned Teaching Program on Women Undergoing Gynecologic Cancer Treatment. *American Research Journal of Oncology*.; 1(1): 1-17.
12. Zaki S., Hassan H., Nady F. (2025). Female Workers' Knowledge about Breast Cancer at Beni-Suef University: Effect Socio-demographic characteristics. 2025, *American Journal of Public Health Research*, 13(1)
13. Mohamed S., Fatma Saber Nady F., Hassan H. (2025). Breast Cancer Preventive Measures among Female Workers at Beni-Suef University: Educational Program Based on Health Belief Model. *Egyptian Journal of Health Care*; 16 (1): 117-142.
14. Hassan H., Zaki S., Nady F. (2025). Effect of an Educational Program on Female Workers' Knowledge about Breast Cancer Preventive Measures at Beni-Suef University. *American Journal of Nursing Research*.; 13(1):1-10.
15. Hassan H., Zaki S., Nady F. (2025). Female Workers' Socio-demographic characteristics and Their Total Knowledge about Breast Cancer: Effect of an Educational program at Beni-Suef University, *International Journal of Nursing Science*, 15(1):1-8.
16. Nady F, Zaki S, Hassan H. (2025). Female workers' knowledge about breast cancer preventive measures at Beni-Suef University. *Nursing & Care Open Access Journal*.; 11(1): 16–20.
17. Hassan H., Nady F., Zaki S. (2025). Northern Upper Egyptian Female Workers' Beliefs Regarding Breast Cancer according to Health Belief Model: Effect of an Educational Program. *Public Health Open Access*, 9(1): 1-12.
18. Akarsu, N. K., & Andsoy, I. I. (2022). Evaluation of breast self-examination training in Turkish women living in Northwestern Turkey. *Journal of Preventive Medicine and Hygiene*, 63(1): E76-E82,
19. Alameer, Mahfouz, Alamir, Ali, & Darraj. (2018). Effect of Health Education on Female Teachers' Knowledge and Practices Regarding Early Breast Cancer Detection and Screening in the Jazan Area: a Quasi-Experimental Study. *Journal of Cancer Education*, 34(5): 865-870.
20. Hajjian Tilaki, K., & Auladi, S. (2015). Awareness, attitude, and practice of breast cancer screening women, and the associated socio-demographic characteristics, in northern Iran. *Iranian Journal of Cancer Prevention*, 8(4): 112
21. [Mahmoud, A., Abosree, T., & Abd El Aliem, R. (2020). Effect of the Health Belief Model-Based Education on Preventive Behaviors of Breast Cancer. *Evidence-Based Nursing Research*, 2(4), 11.
22. Ahmed, S. A. E. M., & Shrief, S. E. (2019). The effect of health promotion program on female breast self-examination knowledge and practice. *Egyptian Nursing Journal*, 16(1): 25-35.
23. Dündar, P. E., Özmen, D., Öztürk, B., Haspolat, G., Akyıldız, F., et al. (2006). The knowledge and attitudes of breast self-examination and mammography in a group of women in a rural area in western Turkey. *BMC cancer*; 18 (6): 1-9.
24. Marinho, L. A. B., Cecatti, J. G., Osis, M. J. D., & Gurgel, M. S. C. (2008). Knowledge, attitude and practice of mammography among women users of public health services. *Revista de Saúde Pública*.; 42: 200-207.

25. Montazeri, A., Vahdaninia, M., Harirchi, I., Harirchi, A. M., Sajadian, A., et al. (2008). Breast cancer in Iran: need for greater women awareness of warning signs and effective screening methods. *Asia Pacific family medicine*, 7(5): 1-7.
26. Meilina, A. Y., & Masluroh, M. (2024). The Relationship of Knowledge, Attitudes, and Family History of Breast Cancer to Breast Self Examination (BSE) Behavior on Women. *Indonesian Journal of Global Health Research*, 6(2): 539-546.
27. Parsa, P., Kandiah, M., Zulkefli, N. M., & Rahman, H. A. (2008). Knowledge and behavior regarding breast cancer screening among female teachers in Selangor, Malaysia. *Asian Pacific journal of cancer prevention*, 9(2): 221-228.