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# Self Efficacy of High-Risk Women for Breast Self Examination Practice in Taxila, Pakistan: A Cross-Sectional Study

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**Abstract**
**Background:** Timely finding of cancer in breast especially through breast self examination practice in low-income countries such as Pakistan is crucial. Self efficacy is one of stronger predictor for doing regular practice of breast self examination among women.
**Objective:** The study aim is to determine the self efficacy of high-risk women in doing breast self examination.
**Methodology:** A descriptive cross-sectional study was done in a of tertiary care hospital, Pakistan. The sample was selected simple random technique which was applied for selecting the 72 high-risk women for study. A modified version of BSE Self-Efficacy scale and self-structured demographics instruments were used for data collection. Version 23 of SPSS was used for statistical analysis of the descriptive statistics.
**Results:** Findings revealed that mean age of participants was 23.86 years with SD= 4.92. 86.1% participants were in the 20-30 years old, 68.05% of participants had metric level education and 83.3% women had regular menstrual cycle. BSE self-efficacy for high-risk women mean score was 574.8 (SD= 340.7), and range was between 0 to 1200. Among high-risk women 58.3% were not confident at all in doing BSE, some of them were moderately confident to BSE (30.6%), and only 11.1% high-risk women were fully confident in doing BSE.
**Conclusion:** The self efficacy for breast self examination practice was low in high-risk women, so there is a need to educate women and teach them about breast self examination techniques.
**Key Words:** High-risk women, Self efficacy, Breast self examination
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## Introduction

Breast cancer, a second utmost occurring disease in the world and has been found to be the major cause of death and other negative health effects in women.[1,2] Evidence highlighted that in 2020,

685,000 women died, while 2.3 million females had a breast cancer (BC) diagnosis. [2,3] According to reports, Pakistan has the greatest incidence of BC in Asia and ranks eighth internationally in terms of BC related mortality. Owing to its high prevalence, breast cancer affects roughly one in nine (1 in 9) women. [4,5] A history of breast cancer in family put 23.8% of Pakistani women at high risk. Moreover, about 95.2% of these had at least one impacted family member.[6]

Breast self examination (BSE) is acknowledged as a cost-efficient technique among low-income nations,[7-10] as well as an effective screening tool for BC,[10-12] Self efficacy behaviour (SEB) is a person's self-judgment of someone's personal abilities, to begin and accomplish some specific tasks successfully, at the chosen stages, spend more struggle, as well as endure when confronted with hardship.[13] Women's self efficacy behaviour (SEB), or their capacity to confidently execute BSE, which is considered as an important factors that predict the BSE practice behaviour.[14-16] BSE practice and women's self-efficacy in doing BSE are directly correlated ($p<.001$),[17-19] evidence supported with OR: 1.119, at 95% CI: 1.056- 1.185.[14] High self efficacy correlates with BSE practice and proficiency positively.[19] Self efficacy plays a major role in promoting confidence of participants as studies have shown higher levels of self efficacy in women who perform BSE competently.[20-22] This is incontestable as women who were confident in conduction of examinations performed BSE efficiently, as BSE is skilled orientated.[23]

**Objective**

In Pakistan, due to high incidence of BC, especially in high-risk women, it was important to measure the self efficacy of women to perform BSE. As no previous study was done so the major purpose of our study was accessing the self efficacy of high-risk women to perform BSE due to increased risk of BC in this population. So that future implication could be made for such high-risk women.

**Method**

**Study design**

The design was descriptive cross-sectional survey. Data for this study was extracted from as a part of ongoing trail in country with aimed to give breast health education for BSE practice among high-risk females in Pakistan. Prior to initiating the participant recruitment process, the investigator obtained approval and permission from the Institutional Review Board of the Pakistani institute that maintains a clinical practice affiliation with hospitals. Participants meeting the eligibility requirements, and willing to participate in study were given consent forms.

**Instruments for data collection**

Lewis and Sanitizer BSE self-efficacy scale,[24] and a self-structured demographic questionnaire were the study's instruments. Age, education, and menstrual cycle history were questions asked. The 12 item BSE self-efficacy measure developed by Lewis and Sainitzer,[24] modified version of scale was adopted [18], scale scored on a range of 0 (cannot do at all) to 50 (moderately can do), to 100 (definitely can do). The total score of 90% and above was considered satisfactory self-efficacy in performance BSE among women.[18] The instrument was translation into local urdu language by the experts with backward translation technique.[25] For validity, sematic equivalence was checked for language comparability and interpretability similarity by the expert.[26] The BSE self-efficacy measurement has 1.50 interpretive similarity score and 1.45 linguistic comparability score. After acquiring the translation into Pakistani version, reliability was assessed measuring cronbach alpha a on 30 high-risk adult women,[25] resulted indicated value 0.977, highlighted good value. [27]

**Sample** Sampling method was simple random for participants selection for study from the department of oncology in a Pakistani hospital of tertiary care. The study sample size was estimated on known

effect size from previous study (ES=0.51).[28] G. Power statistics was used for calculation of sample with significance level=0.01, with power of 0.90, and considering the attrition rate of 20%, the resulted sample of 72 respondents were required for the study. While completing the questionnaire and visiting the hospital's inpatient and outpatient departments, participants give written, informed consent.

**Inclusion & Exclusion Criteria**

Female participants aged 20 to 50, with capability of verbal and written communication in urdu language. The participant's mother has a BC diagnosis and is under treatment. Women with pregnancy and engaged in a breast awareness program in the past and experiencing any kind of mental health issue were excluded.

**Data Collection**

For this study, data collecting took place from September 1st to September 10th, 2024. The study's goals, methods, tools, ethical issues, and data collection techniques were all covered in the training sessions for two research assistants—a hospital head nurse and a nursing teacher. The suitable individual was found by both research assistants. The primary investigator interpreted the objectives of the investigation, guaranteed privacy, and collected signed consent documents from the subjects who agreed to take part in this study.

**Data Analysis**

The statistical data analysis was done by using version 23 of SPSS. For the participant's demographic details and self- efficacy of BSE descriptive statistics were employed.

**Results**

**Sample characteristics**

Sample was composed of 72 high risk adult women; those mothers were suffering from breast cancer and were under treatment at tertiary care hospital. The high-risk women's average age was 23.86 years (SD= 4.92). Most participants (86.1%) were in the 20-30 years group. The level of education indicated that 68.05% of participants have metric level education. Results also indicated that 83.3% women with regular menstrual cycle (Table 1).

**Table 1 Demographics characteristics of High-risk Participants**

| Demographic Characteristics | Frequency | Percentage |
|---|---|---|
| **Age** | | |
| 20-30 | 62 | 86.1 |
| Above 30 | 10 | 13.9 |
| **Educational level** | | |
| Metric | 49 | 68.05 |
| Above Metric | 23 | 31.95 |
| **Menstrual cycle** | | |
| Regular | 60 | 83.33 |
| Irregular | 12 | 16.67 |

**BSE self-efficacy of High-risk Participants**

A modified version of BSE self-efficacy scale with 12 item was adapted,[18] with maximum score of 100 and minimum score of 0 at each item on visual analogue scale. The average (mean) score of 574.8, SD= 340.7, range 0 to 1200 was measured for BSE self efficacy of high-risk women Majority of high-risk women were not confident in BSE (58.3%), some of them were moderately confident to BSE (30.6%), and only few high-risk women were highly confident in doing BSE (11.1%) (Table 2).

**Table 2 BSE self-efficacy level of high-risk**

| BSE Self-efficacy | Frequency | Percentage |
|---|---|---|
| Cannot do at all | 43 | 58.3 |
| Moderately can do | 22 | 30.6 |
| Certainty can do | 08 | 11.1 |
| Total | 72 | 100 |

## Discussion

The objective was to analyze the self efficacy of women in executing BSE, which is correlated with breast self-examination practice as supported by the empirical evidence, [29,30] that higher self-efficacy related with three times more likely to do BSE.[31]

Self-efficacy level of high-risk women indicated that only 11.1% women were found to be confident in performing BSE and women that has no idea about how to do BSE was 58.3%. Similar findings were also found in Malysia where 70.5% women have low self-efficacy because of not having information on how to do BSE,[23] in China 37.7% had a low self-efficacy level as well,[32] and in Ghana self-efficacy level to perform BSE was also reported low.[29] The similarity of findings in different region was due to many factors but the major factors were the insufficient awareness about cancer in breast and BSE. Women having higher information and knowledge scores related to cancer in breast and BSE are more probable to practice BSE as compared to the women with lower information and knowledge scores.[33,34] The most significant indicator of behavioral change in women is their self-efficacy, which expresses their ability to accurately do and practice BSE and recognize doubtful lumps. As breast self-examination is a competent attitude that can contribute to the development of self-efficacy, the educational intervention informs and encourages them to accurately and confidently do breast self-examinations.[35]

## Strengths and Limitation

The study was first evidence to indicate the BSE self-efficacy among high-risk women for BC detection to measure confidence of women in performing BSE. The results indicated that women had low level of self-efficacy to perform BSE which effect their breast self-examination practice behaviour as well. The high-risk women were specifically involved due to increased danger of cancer of breast in this group. However, sample was also small so need to be evaluated for large sample in among reproductive age female in Pakistan with no personal and family background of cancer in breast to achieve more transparency in cultural context.

## Implications for Practice

Self efficacy behaviour for BSE was found to be low so educational interventional studies should be conducted to enhances knowledge of females on BC as well as BSE which ultimately

improved confidence of women in perform BSE. This study only targeted high-risk women but in future focus should be on women who were of reproductive age, with no particular emphasis on the presence of a family background of breast cancer, especially mother having breast cancer.

**Conclusions**

The study highlighted the low level of confidence of high-risk women for doing breast self-examination. Which highlighted the urgency for awareness among women on the BSE technique and enhancement of confidence in doing breast self-examination proficiently.

**Data availability**

The corresponding author can provide the required data on request.

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