



Assessment of Knowledge of Risk Factors of Breast Cancer among Nurses in Services Hospital Lahore

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ABSTRACT

Background: Breast cancer is one of the most prevalent cancers worldwide and a leading cause of cancer-related mortality among women. Nurses play a critical role in educating patients about breast cancer, its risk factors, and the importance of early screening.

Objective: The aim of this study is to assess the knowledge of nurses of Service Hospital Lahore about the Risk Factors of Breast Cancer. **Methodology:** This cross-sectional study was conducted among 133 nurses at Services Hospital Lahore from November 2024 to December 2024. A structured questionnaire was used to collect data on demographics and knowledge of risk factors. **Results:** showed a diverse demographic profile, with a majority of female nurses aged 20-35 years. Nurses' knowledge varied significantly. While 60.1% correctly identified painless breast lumps as a sign of cancer, and over 50% recognized stress and late menopause as risk factors, knowledge was lower for lifestyle factors like smoking (47.3%), alcohol (42.1%), and obesity (41.3%). Notably, only 14.2% of the nurses demonstrated good knowledge, 57.1% had average knowledge, and 28.5% exhibited poor knowledge. This highlights significant knowledge gaps, particularly regarding hormonal and lifestyle-related risk factors. **Conclusion:** The study concludes that targeted educational interventions are crucial to enhance nurses' understanding of breast cancer risk factors, thereby improving patient education and early detection efforts. Further research is recommended to explore factors influencing nurses' knowledge and to develop effective, tailored interventions.

INTRODUCTION

Breast cancer is one of the most prevalent cancers worldwide and a leading cause of cancer-related mortality among women (1, 2). Early detection and timely intervention significantly improve prognosis and survival rates (3). Nurses play a critical role in educating patients about breast cancer, its risk factors, and the importance of early screening. Their knowledge and awareness can directly influence patient outcomes by promoting preventive behaviors, timely diagnosis, and appropriate referrals (4, 5). However, gaps in nurses' knowledge may hinder effective patient education and early detection efforts.

Understanding the risk factors associated with breast cancer is essential for both nurses and patients (6). Common risk factors include genetic predisposition, age, hormonal influences, obesity, sedentary lifestyle, and exposure to carcinogens (7, 8). Nurses, as frontline healthcare providers, must be well-versed in these risk factors to guide patients in adopting healthier lifestyles and participating in regular screenings such as

mammography and self-breast examinations (9). Studies have shown that inadequate knowledge among nurses can lead to missed opportunities for early detection and delayed diagnoses, which negatively impact patient outcomes (10, 11, 12).

Service Hospital Lahore, being a major public healthcare facility, serves a diverse patient population, including those at risk for breast cancer. The knowledge of nurses working in such a setting is crucial in ensuring effective patient education and care. Assessing their awareness and understanding of breast cancer and its risk factors will help identify potential knowledge gaps and training needs, ultimately enhancing patient care and outcomes. The study aims to evaluate the knowledge of nurses regarding breast cancer and its risk factors at Service Hospital Lahore.

METHODOLOGY

A descriptive cross-sectional study was conducted among nurses of Services Hospital Lahore. The charge nurses working in emergency, paediatric, surgery,



medicine, and Intensive care units were included in the study. Data was collected between November 2024 and December 2024. A total of 133 nurses included in study. The on-duty male and female nurses and willing to participate were included in the study. Written consent was obtained from all participants. A structured pre-tested questionnaire was used to collect data from nurses. It consists of close ended questions. It consists of following sections, demographic information and knowledge of risk factors of breast cancer (1). Each correct answer was given score 1 and wrong answer and no answer was given score 0. Data was analyzed using SPSS version 25. Quantitative variables were presented as frequencies and percentages.

RESULTS

Table 1 presents the socio-demographic characteristics of the nurses included in the study. The majority of participants (41.3%) were aged between 20-35 years, followed by 30.07% in the 36-45 years age group. A smaller proportion (17.3%) were between 46-55 years, while only 11.2% were above 55 years of age. Regarding gender distribution, the majority of the participants were female (84.97%), while males constituted 15.03% of the sample. In terms of marital status, 55.6% of nurses were married, whereas 44.3% were unmarried. The religious affiliation of the participants showed that 54.1% were Muslim, while 45.8% were Christian. The nurses worked in different units within the hospital, with the highest proportion in the Surgery unit (30.1%), followed by Medicine (26.3%), Pediatric (24.8%), Intensive Care Units (11.3%), and Emergency (7.5%).

Table 1

Socio-demographic characteristics

Variable	Category	Frequency	Percentage
Age	20-35 years	55	41.3%
	36-45 years	40	30.07%
	46-55 years	23	17.3%
	More than 55 years	15	11.2%
Gender	Male	20	15.03%
	Female	113	84.97%
Marital	Married	74	55.6%
	Unmarried	59	44.3 %
Religion	Muslim	72	54.1%
	Christian	61	45.8%
	Emergency	10	7.5%
Unit of work	Pediatric	33	24.8%
	Surgery	40	30.1%
	Medicine	35	26.3%
	Intensive care units	15	11.3%

In Table 2, the findings indicate that nurses' knowledge of breast cancer risk factors varies, with some misconceptions and gaps in awareness. While a majority correctly identified a painless breast lump as a sign of breast cancer (60.1%) and recognized stress (54.1%) and late menopause (51.1%) as risk factors, awareness was lower for other factors. Less than half knew that smoking (47.3%), alcohol consumption (42.1%), obesity (41.3%),

and trauma to the breast (44.3%) increase the risk. Knowledge was particularly limited regarding the role of oral contraceptive pills (31.5%), larger breast size (30.1%), and physical activity (29.3%). These results highlight the need for targeted educational programs to improve nurses' understanding of breast cancer risk factors

Table 2

Nurses' knowledge of breast cancer risk factors

Questions	Correct Answer	
	Frequency	Percentage
Does the risk of breast cancer increase with advancing age?	66	49.6
Is breast cancer hereditary?	70	52.6
Is a high-fat diet a risk factor for breast cancer?	52	39.4
Is smoking a risk factor for breast cancer?	63	47.3
Is alcohol consumption a risk factor for breast cancer?	56	42.1
Is having the first child after the age of 30 a risk factor for breast cancer?	44	33.1
Is menarche before the age of 11 a risk factor for breast cancer?	50	37.5
Is late menopause a risk factor for breast cancer?	68	51.1
Is stress a risk factor for breast cancer?	72	54.1
Is having larger breasts a risk factor for breast cancer?	41	30.1
Does breastfeeding decrease the risk of breast cancer?	59	44.3
Is a painless breast lump a sign of breast cancer?	80	60.1
Is null parity (having no children) a risk factor for breast cancer?	46	34.5
Is obesity a risk factor for breast cancer?	55	41.3
Do oral contraceptive pills increase the risk of breast cancer?	42	31.5
Is trauma to the breast a risk factor for breast cancer?	59	44.3
Does endogenous estrogen hormone increase the risk of breast cancer?	43	32.3
Do you think having more than four births decreases the risk of breast cancer?	34	25.5
Does physical activity decrease the risk of breast cancer?	39	29.3

Table 3 shows the overall knowledge of nurses regarding breast cancer risk factors. Among the nurses surveyed, 28.5% were found to have poor knowledge, while 57.1% had average knowledge. Only 14.2% of nurses demonstrated good knowledge of the risk factors associated with breast cancer.

Table 3

Overall knowledge of nurses regarding breast cancer risk factors

Level of knowledge	Frequency	Percentage
Poor knowledge	38	28.5
Average knowledge	76	57.1
Good knowledge	19	14.2

DISCUSSION

The objective of study was to assess the knowledge of nurses regarding breast cancer risk factors in a tertiary care hospital Lahore. The current study revealed that majority of the nurses' knowledge level was average and few had high level of knowledge.

The aim of the present study was to assess the knowledge of nurses regarding breast cancer risk factors in a tertiary care hospital in Lahore. The results of the study indicated that the majority of nurses (57.1%) had average knowledge regarding breast cancer risk factors, while only a small proportion (14.2%) demonstrated good knowledge, and 28.5% had poor knowledge. These findings suggest a need for increased educational efforts to enhance the understanding of breast cancer risk factors among nurses, as they play a pivotal role in patient education and the early detection of the disease. In comparison with other studies, our findings are consistent with several national and international studies that show nurses often exhibit moderate to low knowledge regarding cancer risk factors. A study by Obeagu & Obeagu (2024) found that the majority of nurses had moderate knowledge about breast cancer risk factors, which aligns with the current study's findings of average knowledge (13). Similarly, a study conducted by Arslan et al. (2025) in a Pakistani hospital also revealed that nurses had average to poor knowledge on various cancer prevention strategies, including those for breast cancer (14). These results underscore the importance of further education and training programs aimed at improving knowledge levels among healthcare providers, particularly in the context of breast cancer awareness and prevention.

On the other hand, a study by Shehzadi et al. (2023) in Pakistan found that a significantly higher percentage of

nurses demonstrated good knowledge regarding breast cancer risk factors (15). This disparity might be attributed to differences in training programs, public health initiatives, and the level of awareness surrounding breast cancer in different countries. These findings are in line with those of a study by Farhat et al. (2022), which identified a need for more comprehensive training on cancer risk factors for healthcare workers (16).

CONCLUSION

This study revealed a diverse demographic profile among the participating nurses, with a predominantly female workforce, a range of age groups, and varied work units. Notably, the majority of nurses demonstrated average knowledge regarding breast cancer risk factors, with a significant proportion exhibiting poor knowledge and a small percentage demonstrating good knowledge. These findings underscore the critical need for targeted and comprehensive educational interventions to enhance nurses' knowledge of breast cancer risk factors. Such interventions should focus on addressing identified knowledge gaps and misconceptions, ultimately improving the quality of patient education and care related to breast cancer prevention and early detection.

Recommendations of study

There is a clear need for improved educational initiatives and training programs focused on breast cancer prevention and risk factor awareness. Such programs should aim to bridge the knowledge gap, ensuring that nurses are better equipped to educate patients and advocate for preventive care, ultimately contributing to early detection and better health outcomes for patients. Further research is also needed to explore the specific factors influencing the knowledge levels of nurses and to develop targeted interventions to address these gaps.

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