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KNOWLEDGE OF RISK FACTORS REGARDING BREAST CANCER AMONG NURSES OF MAYO HOSPITAL LAHORE PAKISTAN

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Abstract:

Background: *Breast cancer is the most common of all cancers related to the female gender worldwide. Pakistan reports an incidence of is about 70 cases per 100,000 patients in the urban populations with (≥ 50%) presenting in stages III and IV. The practical way for its early detection depends on women education. Nurses constitute a suitable group having characteristics for imparting breast cancer awareness to the women. We conducted a study to evaluate the level of knowledge of breast cancer risk factors among female nurses in Mayo Hospital Lahore. We also identified relevant factors among nurses which were associated with their knowledge of breast cancer risk factors, so that necessary measures can be initiated to improve their existing knowledge.*

Methods: *A cross-sectional survey was conducted in Mayo Hospital Lahore during January 2020 to June 2020 using stratified random sampling. A total of 100 female nurses were inducted using a self-structured questionnaire. Knowledge of breast cancer risk factors was categorized into good, fair and poor categories. Ordinal regression was used to identify factors associated with risk knowledge among nurses.*

Results: *Thirty percent of nurses had good knowledge of risk factors. This included the ones who were involved in breast cancer patient care, underwent breast self-exam and attended the clinical examination in ward rounds.*

Conclusion: *A relatively small proportion of the nurses possessed good level of knowledge of the breast cancer risk factors. This knowledge is associated with their graduating institute status, clinical breast cancer exposure and history of self-exams. Since only about one-third of the nurses had good knowledge about risk factors, there is a need to develop regular breast cancer educational programs in nursing schools across the country by maintaining the goals of continued medical education.*

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INTRODUCTION:

Breast cancer spans the most common occurrence among women worldwide [1]. Asian African have witnessed rapid rise in the annual incidence rates of breast cancer than rest of the world in the last two decades [2]. Karachi Cancer Registry reported breast cancer at the rate of 34.6% among females with an annual incidence rate being 69.1 per 100,000 during the years 1998–2002, which is the highest of its time in Asia [3]. Similar results were found in Lahore [4].

Pakistan faces a high burden of breast cancer disease mostly presenting during the advanced stages >50% cases in stages III and IV [5-12]. Regular clinical breast examination and mammography of women according to the internationally accepted guidelines can not only halt the progression and but also cure majority of the cases [3,13]. However, there are no national screening programs for breast cancer in Pakistan. Therefore, educating the women about the risk factors constitutes a first goal towards early detection of breast cancer, so that women would be able to assess their risk and take relevant measures.

The important source of imparting breast cancer knowledge to women are the health-care workers, educational institutions and media. Among the healthcare professionals, female nurses are considered fit for this purpose. In Pakistan a substantial number of nurses are women [14] and due to socio-cultural restraints, women patients are reluctant to go to male health care providers for problems such as breast diseases [5].

The nurses can play an important role in educating women through specially designed educational programs in the clinical setting, as well as, through community outreach strategies. In addition, they also comprise an important source of information within social circle [15]. Since the nurses can play an influential role on the behavior of our women, they need to be knowledgeable themselves about breast cancer risk factors and the significance of early detection through screening programs.

Developing countries showed diverse results ranging from poor to good knowledge about breast cancer. 16] [17] [18]. The aim of this study was to objectively assess the level of knowledge regarding risk factors of breast cancer and to evaluate factors associated with this knowledge among female nurses working in Mayo Hospital.

METHODS:

A cross-sectional survey was conducted in Mayo Hospital Lahore during January 2020 to June 2020. The target population comprised of female nurses working in different departments of the Mayo Hospital Lahore. Inclusion criteria comprised all female nurses possessing at least a diploma in general nursing. Anyone who was previously diagnosed and treated a case of breast lump was excluded to prevent bias.

Through stratified random sampling identified nurses belonging to different departments were inducted after informed consent. A self-structured questionnaire was drafted to record the responses. Audio Visual demonstration was given regarding the instructions. Confidentiality and privacy was maintained at every step.

The knowledge assessment tool included five questions from the Stager's Comprehensive Breast Cancer Knowledge.

Nurses who did not answer any key item correctly can get a maximum score of 7 and were labeled as having **"poor knowledge"**

A nurse who answered only one key question correctly cannot score greater than 10. Accordingly scores from 8 to 10 were classified as **"fair knowledge".**

The category **"good knowledge**" comprised of scores **11 to 15** and corresponds to nurses who answered at least two key items correctly.

Formal permission was taken from ethical review committee of the institution.
Data was analyzed by SPSS.

Table 1: Sociodemographic Data of Nurses (n = 100)

Variables	Numbers (%)	Mean (SD)
Age (years)		29 (8)
Qualification		
General nursing diploma	36 (36)	
Diploma & midwifery/Diploma & lady health visitor	41 (41)	
Post-graduation degree/course	13 (13)	
Bachelors in Nursing Sciences	10 (10)	
School of Nursing?		
Private Sector	32 (32)	
Public Sector	68 (68)	
Duration of work as a nurse (years)		12 (6)
Ever attended a breast cancer patient	78 (78)	
Ever performed clinical breast exam on a patient	65 (65)	
Ever observed a clinical breast examination	71 (71)	
Family history of breast cancer	5 (5)	
Friends and colleagues history of breast cancer	12 (12)	
Self-perceived knowledge of breast cancer	93 (93)	
Interested in breast cancer education	96 (96)	

Table 2: Scores assessing knowledge of breast cancer risk factors with percentage of correct responses against each item

Items	True	Score	Correct response %
1. Breast cancer can spread from one person to another	No	1	96
2. Compression from a tight bra can over time cause breast cancer	No	1	64
3. Obesity can increases the risk of developing breast cancer	Yes	1	32
4. *Late marriage and late child bearing >age of 30 years is more likely to cause breast cancer	Yes	3	50.
5. Oral contraception increase a woman's risk of breast cancer	Yes	1	66
6. Physical pressure on the breast may cause breast cancer later in life	No	1	28
7. Most breast lumps are cancerous	No	1	78
8. *****A woman, who has a first blood relative with breast cancer, is at higher risk of developing breast cancer	Yes	3	76
9. Breast feeding decreases the chance of breast cancer	Yes	1	93
10**. ***Breast cancer can be a result of a curse/evil eye/magic spell	No	*2*	91
Total		15	

100 nurses were contacted with a 100 percent response rate.

The knowledge assessment tool included five questions from the Stager's Comprehensive Breast Cancer Knowledge Test (general knowledge sub-scale) [20]. Five additional questions were formulated by the principal investigator based on international and national literature sources considering the local dynamics. The knowledge assessment tool is reported

in Table 2. Content validity [21] was established by the expert opinion of surgical team of the institution.
In the assessment tool, three items were identified as key items on the basis of their relative importance. The three key items comprised of knowledge regarding family history of breast cancer [22], late age at first pregnancy [23] and myths about curse/evil eye/magic spell being a contributory factor towards breast cancer. The first two are documented risk factors for breast cancer and were awarded a score of 3, the last is common prevailing myths regarding disease development are in the Pakistani society [24] and was given a score of 2. The remaining seven items were given a score of 1. The total score ranged from 0 to 15, which was categorized into good, fair and poor categories on the basis of the three keys items as follows:

- Nurses who did not answer any key item correctly can get a maximum score of 7 and were labeled as having **"poor knowledge"**.
- A nurse who answered only one key question correctly cannot score greater than 10. Accordingly scores from **8 to 10** were classified as **"fair knowledge"**.
- The category "**good knowledge**" comprised of scores **11 to 15** and corresponds to nurses who answered at least two key items correctly.

RESULTS:

The mean age (standard deviation) of female registered nurses in our sample was 29± 5 years. Seventy-seven percent of the nurses had received basic level nursing education only including general nursing diploma alone or general nursing diploma with lady health visitor or with mid-wivery certification. Thirty-two percent of the nurses in our sample had attended a private school of nursing. (Table1).

Forty-five percent of the nurses in our sample had good knowledge, 30% had fair knowledge while 25% nurses had poor knowledge of breast cancer risk factors. 96% of the nurses in our sample correctly identified breast cancer as a non-communicable disease, 93% knew that breast feeding is not causative of breast cancer and 91% answered that evil eye has nothing to do with breast cancer. However, only about 32% of the nurses knew that in some women being overweight increases the risk of developing breast cancer.

DISCUSSION:

Our study estimated that 45% of female nurses working in Mayo Hospital Lahore had possessed knowledge of breast cancer risk factors. Nurses who graduated from a private nursing school or who have had a first-hand breast cancer experience performed better in the evaluation process.

The knowledge of breast cancer risk factors among the nurses of Mayo Hospital Lahore is on the lower side and reflects the scenario of other developing countries [16,17]. Our study sample comprised of a sample of tertiary care hospital. It is conceivable that risk factor knowledge is mostly acquired during classroom teaching compared to exposure at the workplace. The health care professionals work with patients so they are merely exposed to symptoms and signs of disease, complications and treatment outcomes rather than the pathophysiology for non-communicable diseases such as cancer. The low level of risk factor knowledge among nurses in the developing countries is suggestive of lack of stress on the importance of primary prevention and public awareness in the nursing curricula. In spite of rigorous efforts towards improving medical education in the developed countries, it has been realized that healthcare professionals including nurses are not adequately educated about cancer risk factors, risk assessment and cancer prevention [27].

Breast cancer risk factor awareness among nurses is imperative so that they can recommend and refer the suspected patients for appropriate screening with a high risk stratification, especially in the Pakistani setting where screening is not a routine practice.

A nurse who had attended for a breast cancer patient or had performed clinical breast examination (CBE) on a patient during her nursing practice was found to be well versed of breast cancer risk factors. Similarly, a nurse who had ever received a breast examination by a healthcare professional was more knowledgeable about risk factors. In our study, the breast examination was only done as part of the general examination at the start of employment or of antenatal checkup. There is a need to assess the breast cancer counseling practices of health care providers.

CONCLUSION:

The level of good knowledge of breast cancer risk factors among female nurses working in Mayo Hospital Lahore is low (45%).

There is a need to update breast cancer risk factor stratification content in the nursing syllabus. Since the implementation of the revised curriculum may take some time, clinical training courses for the nurses can be introduced relatively earlier. It is also important to encourage the nurses to impart this knowledge promptly and efficiently to the masses.

Similar studies among health professionals in other parts of Pakistan could provide extra evidence that will facilitate a better comprehension and evaluation of awareness of breast cancer within the health community of Pakistan.

Conflict of interests:
The authors declare no conflict of interests.

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