

Knowledge, Attitude and Preventive Practices for Breast Cancer among Health Professionals at Shalimar Medical and Dental College/ Hospital Lahore

MAHAM JAVED, RAZIA CHAUDHRY, MUSHAL NOOR, KHALID JAVED ABID

ABSTRACT

Objective: To assess knowledge attitude and preventive practices regarding risk factors, symptoms, screening for breast cancer technique and practice of Breast self Examination, among medical and nursing students and other health care professionals.

Material and methods: A Cross sectional study was carried out at Shalimar Medical and Dental College and Hospital Lahore from July 2013 to September 2013. A total of 144 health care professionals including Medical students in fourth year (53), House officers, Medical officers, Post graduate residents (29), consultants (34), BSc and General nursing students of 3rd and 4th year (14) and staff nurses (14) were requested to fill a questionnaire designed to assess knowledge and practices about risk factors, signs and symptoms, screening tools, Breast Self Examination (BSE) and treatment modalities. Data was entered and analyzed on SPSS version 16. Descriptive analysis of all variables and Cross tabulation was done with variable of interest like academic qualification.

Results: Ninety four (94.4)% of respondent said yes for increasing age as a risk factor, 97.2% believe that positive family history is also a risk factor while 70 to 77% were in favor of early menarche, late menopause, nulliparity, contraceptive pills intake and obesity is also a risk factor for carcinoma breast. Some dissociation regarding smoking was observed. Majority (84%) were in favor of mammography as best screening test. 2/3rd of the respondents preferred to consult surgeon after breast lump detection. Hundred % think that BSE is helpful for early detection but only half of the medical and nursing students knew the correct time and technique of BSE.

Conclusion: Medical professional especially medical and nursing students have adequate knowledge about risk factors. Most of medical specialist had knowledge about screening test of choice. Female Consultants and medical graduates had high knowledge about Breast self examination (BSE) practice techniques but medical and nursing students were lag behind about BSE practice time and technique.

Key words: Breast cancer, knowledge, attitude, preventive practices, health care professionals.

INTRODUCTION

Breast cancer is the most common malignancy causing deaths and cancer related morbidity in women. It is a disease affecting both the developed and the developing nations.¹ Women in Pakistan are not an exception to this^{2,3} in fact the incidence of breast cancer in Pakistani women is higher than in women from neighbouring countries. One in every nine females is affected with this disease. Dietary or genetic factors may both be implicated. It has also been found that Pakistani women present with metastases at a younger age as compared to western women and the disease is more aggressive³.

Numerous risk factors are associated with breast cancer. One major risk factor is increasing age. Among the factors that increase the risk of

breast cancer the most important ones include both a personal or a family history of breast cancer and some specific genetic mutations and hyperplasia that have been confirmed on biopsy¹. Other factors that augment the risks of developing breast cancer are an early menarche and late menopause, obesity after menopause, use of iatrogenic hormones (both oral contraceptives and postmenopausal hormone therapy have been implicated), nulliparity or 'having the first child after the age of 30', certain ethnic features, radiation, or intake of alcohol on a daily basis^{1,4}.

Breast Cancer has been known to be the most common cancer and second principal cause of cancer death in women. However, the adherence to recommended breast cancer screening guidelines is low especially in Africa. But a study conducted among nurses, at Logos University Hospital at Nigeria showed the results that studied population had good knowledge of breast cancer, its symptoms and screening methods. However, they lack

Correspondence to Dr Khalid Javed Abid Professor of Surgery Shalimar Medical and Dental College Lahore. E-mail: profdrkhalid@gmail.com 0300-9434692.

adequate knowledge of the risk factors and only few practiced clinical breast examination⁵.

The best prognosis for long term survival is through early recognition followed by timely treatment⁵. Breast self examination (BSE), clinical breast examination (CBE) and mammogram are used as screening methods for detecting breast cancer earlier on in its course⁶. Among these, annual mammography is believed to be the most useful method in identifying breast cancer in its most initial possible stage, where it would still be a localized growth and therefore most responsive to the treatment. Regular use of mammography as a screening modality has led to a reduction in breast cancer mortalities. However, proper utilization of this and other screening tools needs awareness and education of the masses and access to health care system. Developing countries like ours lag behind in both^{1,7}.

Lack of awareness, amongst most women, regarding common presenting symptoms or breast cancer risk factors translate to poor breast cancer screening practices.¹⁻¹⁰ Several studies have shown that increasing women's awareness of breast cancer lessens the obstacles to diagnosis and treatment^{11,12}.

The ways to reduce breast and cervical cancer incidence are to provide knowledge, appropriated attitude and convince females for screening. One of the main sources of health knowledge is the health care providers such as doctors, PHNSs, PHMs, nurses as well as other health staff who can give the information to general public for the improvement of knowledge and attitude to motivate females in the community to comply with recommended breast and cervical cancer screening practices. Throughout the world, health care workers are identified as an important component in cancer prevention programmes while gaps were identified and recommended for improvement¹³.

Healthcare professionals are a direct source of information for the patients and for the general public at large and since they hold such a pivotal role it is imperative that the information they convey is accurate and helps in building additional awareness. Hence the healthcare work force of Shalamar Medical and Dental College / Hospital, a Tertiary care private teaching hospital situated in a densely populated area of Lahore City, was selected for this study. The aim of this study was to ascertain the level of knowledge of health care professionals including medical students (who have rotated through oncology) regarding risk factors, symptoms, screening methods and practice of BSE, role of surgery and chemotherapy and radiation therapy in the treatment of breast cancer.

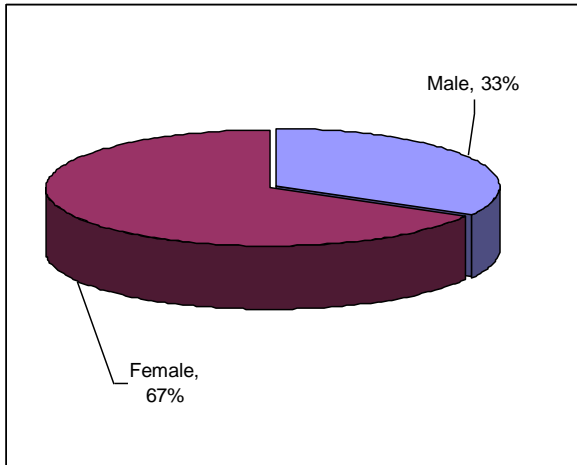
RESEARCH METHODOLOGY

This cross-sectional study was carried out at Shalamar Medical and Dental College / Hospital Lahore (SMDC) from July 2013 to September 2013. The target population was selected using convenient sampling according to inclusion criteria as consultants, P.G. residents, interns, General nursing, BSc nursing students and medical students (4th year only available). Sample size was calculated by estimating an Assumed proportion = 0.75 (assuming 75 % of health care professionals lack appropriate knowledge regarding breast cancer screening method and practices). At 95% Confidence level and Acceptable difference of 0.07, calculated sample size was 144. The target population was selected using non-probability convenient sampling according to inclusion criteria. The desired information was drawn from a self-structured questionnaire which was distributed to the consultants, P. G. residents, interns, General nursing and BSc nursing students and medical students (4th year only available) at SMDC Lahore. Since no prior international standardized questionnaire on breast cancer knowledge was available, the authors structured questions from variables analyzed in the results of different similar studies conducted in Pakistan and other countries. The first part was on the respondents' qualification and working experience. In the second part the questions which would reflect the respondents' knowledge about risk factors, symptomatology, screening tools and treatment modalities of breast cancer. The third part of the questionnaire was directed towards female respondents' own practices regarding screening, specifically Breast Self Examination. The questionnaire was distributed personally by researcher, informed consent was obtained, an immediate response was requested for and the questionnaires were collected back. Total of 144 subjects from 150 returned the questionnaire with different percentages of response to different questions. SPSS version 16 was used to then analyze the data..

RESULTS

Out of 144 subjects, 66.7% were females and 33.3 % were male (Figure 1), 39.6% were married and 60.4% were unmarried. Designation of health professionals was as, 36.8 % were medical undergraduate, 20.1 % were Medical graduate comprising of house officers, medical officers and postgraduate trainee, 23.6 % were medical specialist / consultants, 9.4 % were nursing undergraduates and nursing staff. (Table 1)

Figure: 1



Knowledge about risk factors was assessed in a structured questionnaire comprising of 8 risk factors with response of yes, no or not sure. Table II.

Knowledge about screening methods; With regards to the screening methods most of the subjects (84%) knew about Mammography and considered it best screening test for early detection, 64.6 % think that Breast self examination is the best test for early detection, 25.7% considered that Ultrasonography is best, 17.4% were in favor of MRI. 86.6 % believe that mammography should be mandatory after age of 40 years and 97.2 % agreed that breast cancer is curable on early detection and treatment. Regarding knowledge and attitude about treatment modalities and consultation preferences 84.7% respondents were in favor of double or triple modality t/m rather than a single modality approach and 79% of the sample believed that chemotherapy can belong survival rate in metastatic cancer.

About consultation; 84.7% were in favor that female should consult surgeon after breast lump detection, 11.1% think that oncologist should be consulted, 4.2% thin that a gynecologist or GP should be consulted.

Breast self examination (BSE)

There was a separate section for BSE for female 96 (66.7%) of females were asked about practices of BSE ,100.0 % of medical students, consultants, nursing students and nurses says BSE is helpful for early detection while 69.7 % of medical students,35.7 % medical graduates,86.0 % of consultants, 42.9 % nursing students,35.7 % of nurses said that it should

be done once a month, 42.4 % of medical students, 7.1 % medical graduates, 85.0 % % of consultants, 71.4 % nursing students, %42.9 of nurses says it should be done just after menstruation, 30.3 % of medical students,42.9 % medical graduates, 75.0 % of consultants, 28.6 % of nursing students, 35.7 % of nurses knows all the four steps of BSE.36.4 % of medical students ,42.9 % medical graduates, 70.0 % of consultants, 14.3 % of nursing students and 50.0 % of nurses knew the use of right hand for BSE. (Table IV)

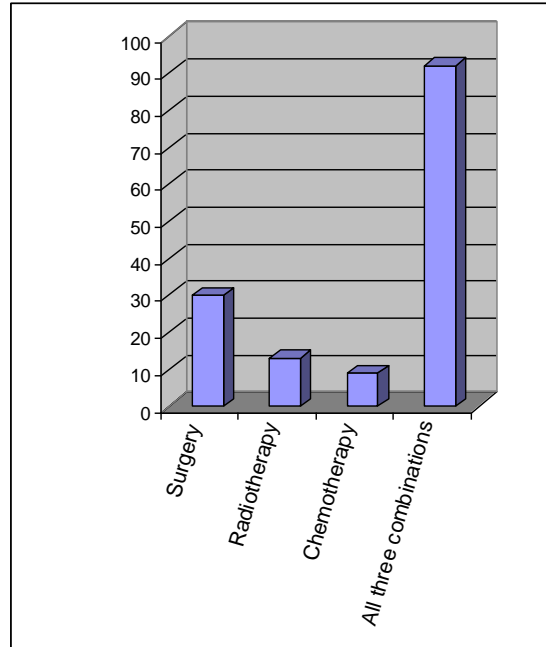


Table 1: Qualifications of respondents

Qualifications of Respondents	Frequency	Percent
Medical undergraduates	53	36.8
Medical Graduate (HO, MO, PG)	29	20.1
Consultants	34	23.6
Nursing Undergraduates	14	9.7
Nursing Staff	14	9.7
Total	144	100.0

Table: II Knowledge about risk factors * Qualification of Respondents cross tabulation.

Risk factors associated with carcinoma breast	Number and % of Respondents with right knowledge					Total
	Medical Undergraduates(%)	Medical Graduate (MBBS, PG trainee)	Medical Specialist (FCPS / Equivalen)	Nursing Undergraduates	Nursing Graduate	
Increasing Age	51(96.2)	29(100)	34(100)	9(64.3)	13(92.9)	136
Positive Family History	52(98.1)	29(100)	34(100)	12 (85.7)	13(92.9)	140
Late Menopause	30(56.6)	26(89.7)	33(97.1)	7(50.0)	9(64.3)	105
Nulliparity	31(58.5)	26(89.7)	30(88.2)	6(42.9)	8(57.1)	101
Obesity	38(71.7)	26(89.7)	31(91.2)	7(50.0)	10(71.4)	112
Contraceptive Pills	35(66.0)	27(93.1)	33(97.1)	13(92.9)	11(78.6)	119
Smoking	36(67.0)	21(72.4)	24(70.6)	5(35.7)	8(57.1)	94

Table III: Consultation preferences after finding lump in breast

To whom consult first after finding lump in breast?	Frequency	%
Surgeon	122	84.7
Oncologist	16	11.1
General Practitioner	4	2.8
Gynecologist	2	1.4
Total	144	100.0

Table : IV Breast Self Examination (BSE) practices * Qualification of Respondents

Breast Self Examination (BSE) practices	Qualification of Respondents. Number and (%)					Total
	Medical Under-graduate	Medical Graduate	Medical Specialist	Nursing Under Graduate	Nursing Graduate	
BSE is helpful for early detection	33 (100%)	13(92.9)	20(100.0)	14(100.0)	14(100.0)	94
Should be done monthly	23(69.7)	5(35.7%)	19(86.0%)	6(42.9%)	5(35.7%)	51
Optimum time for BSE is 1 wk after menstruation	14(42.4%)	1(7.1%)	15(75.0%)	10(71.4%)	6(42.9%)	36
Know all four steps of BSE	10(30.3%)	6(42.9%)	15(75.0%)	4(28.6%)	5(35.7%)	40
Is opposite hand used for BSE?	12(36.4%)	6(42.9%)	14(70.9%)	2(14.3%)	7(50.0%)	41

DISCUSSON

Breast cancer is the most common type and the most common cause of cancer-related mortality among women worldwide¹³. The burden, however, is not equally distributed as the burden of breast cancer is growing in the developing world while declining in the West.^{2, 3,14} Despite several local and international campaigns undertaken to raise the awareness of the public regarding breast cancer, breast cancer screening rates are still low in our country. The health care professionals are the most accessible persons and could play a role in the provision of breast cancer health promotion services to the community. Our results regarding knowledge about most of the risk factors are quite satisfactory. A third, however, was not aware of obesity and smoking as a possible risk factor. Knowledge about the symptoms was acceptable except that most respondents (71%) were unaware of the fact that breast pain usually denotes a

benign underlying pathology rather than breast cancer, which mostly presents as a painless lump. Most of the sample knew about BSE and mammography as screening tools but not about US and MRI. Although majority knew about the importance of BSE, this was not evident from their attitude as overall practice of BSE was a dismal 32%. Knowledge about treatment of breast cancer was adequate as majority were not in favour of a single modality approach.

A cross sectional study conducted among 283 medical professionals and nurses in Lagos University Teaching Hospital, revealed 100% rate of awareness of breast cancer although 32% of the respondents did not know that breast cancer could be inherited. The major source (76%) of their information about breast cancer was from health professionals. Among the respondents 96% knew self breast examination while 41% knew clinical breast examination as screening method. (82%) percent of the respondents thought

self breast examination should be carried out monthly while very few subscribed to clinical breast examination.¹⁵ In our study 100.0 % of medical students, consultants, nursing students and nurses said that BSE is helpful for early detection of carcinoma breast, while half of the medical students, interns, P.G. Trainees and consultants said that it should be done once a month and only 1/3rd of the nurses gave the same answer. 30.3% of medical students, 42.9% medical graduates, 75% of consultants, 28.6% of nursing students, 35.7% of nurses know all the four steps of BSE. So our health professionals are lagging behind in this respect of knowledge. As the incidence of ca. breast in our country is on the rise as well. Healthcare providers not only play an important role in treating patients but are also responsible for improving patient behaviours and screening, as yearly mammography and clinical breast exam is the single most important step that clinicians can take to reduce suffering and death from breast cancer^{16,18}.

In another cross-sectional survey conducted among nurses working in a general hospital in Lagos to determine their knowledge, attitude and practice regarding breast cancer the knowledge of 204(73%) nurses out of 280, about symptoms, methods of diagnosis and self-breast examination was generally very good. However, only 30% knew the method of self breast examination and only 8% had mammogram within the past three years¹⁷. Nurses possess adequate knowledge about breast cancer but they need more information on cancer risk estimation. Our study showed that 92.9% nursing undergraduate, 71.4% nurse says BSE is appropriate test for early detection of breast cancer, 92.9% nursing undergraduate and nurses says mammography is appropriate test for early detection of breast cancer.

A cross sectional study carried out at Aga Khan University Hospital revealed that more than two third participants (Health professionals) had good knowledge about the risk factors and signs of breast cancer except some dissociation regarding association of menarche status and smoking. Majority was aware of the benefits of mammography. More than 80% had the consensus that breast cancer is curable if detected early and more than 50% thought that a surgeon should be consulted first if lump is palpable. In our study all health care professionals(included in study) except nurses, had 100% knowledge about risk factors of Ca. breast but knowledge about rest of the variables was at little bit lower level regarding percentage^{16, 18}.

Similar study (comprising of different groups of health professionals) done at Al-Mystansireya and Al-Kufa Universities, with total number of 387. Overall,

71% of the participants were not aware that breast cancer is the commonest malignancy among the Iraqi population and 56% did not know that it ranks the first cancer among women worldwide. Only 44.8% knew that mammography, ultrasound, PBE and BSE are used in early detection of breast cancer. While 66.9% of the study sample knew the correct time and frequency to perform BSE before menopause, only 33.7% knew this for postmenopausal women, although 61.9% were aware that the risk increases as women grow older. A large proportion, 44.7%, 49.3% and 71.4% respectively, did not know that nulliparity, late menopause and early menarche are other important risk factors. Although 66.9% believed that postmenopausal obesity could be a risk factor. The majority of the participants, 74.2%, believed that the best way to control breast cancer was through early detection and 72.2% were able to identify other preventive measures that included alcohol abstinence, physical activity, healthy diet, maintaining a healthy body weight and avoiding unprescribed hormonal therapy¹⁹ But the results of our study about risk factors were much better regarding knowledge and preventive practices about carcinoma breast.

CONCLUSION

Our study shows that health care providers at our institute are well aware of the risk factors, signs and screening modalities for breast cancer. Discrepancy was observed regarding the suitable time for BSE and majority of female participants were not practicing it and did not know the correct technique for BSE despite being aware of the fact that by BSE can detect carcinoma breast at an early stage. About 2/3rd respondents were in favor of multimodality approach (surgery, chemotherapy and radiation therapy) as a key to success in treatment of breast cancer.

REFERENCES

1. Dundar PE, Ozmen D, Ozturk B, Haspolat G, Akyildiz F, Coban S, et al. The knowledge and attitudes of breast self-examination and mammography in a group of women in a rural area in western Turkey. *BMC cancer* 2010; 6:43.
2. Bhurgri Y, Kayani N, Faridi N, Pervez S, Usman A, Bhurgri H, et al. Patho-epidemiology of breast cancer in Karachi '1995-1997'. *Asian Pac J Cancer Prev* 2009; 8:215-20.
3. Sohail S, Alam SN. Breast cancer in Pakistan - awareness and early detection. *J Coll Physicians Surg Pak* 2012; 17:711-2.
4. Lee EO, Ahn SH, You C, Lee DS, Han W, Choe KJ, et al. Determining the main risk factors and high-risk groups of breast cancer using a predictive model for

- breast cancer risk assessment in South Korea. *Cancer Nursing* 2009; 27:400-6.
5. Awodele O, Adeyomoye AA, Oreagba IA, Dolapo DC, Anisu DF, Kolawole SO, Ishola IO, Adebayo KA, Akintonwa A. Knowledge, attitude and practice of breast cancer screening among nurses in Lagos University Teaching Hospital, Lagos Nigeria. 2009 Apr-Jun;19(2):114-8 Department of Pharmacology, College of Medicine, University of Lagos.
 6. Sadler GR, Dhanjal SK, Shah NB, Shah RB, Ko C, Anghel M, et al. Asian Indian women: knowledge, attitudes and behaviors toward breast cancer early detection. *Public Health Nurs* 2011; 18:357-63.
 7. Fung S. Factors associated with breast self-examination behaviour among Chinese women in Hong Kong. *Patient Educ Couns* 2010; 33:233-43.
 8. Badar F, Faruqi ZS, Ashraf A, Uddin N. Third world issues in breast cancer detection. *J Pak Med Assoc* 2008; 57:137-40.
 9. Maxwell AE, Bastani R, Warda US. Misconceptions and mammography use among Filipino-and Korean-American women. *Ethn Dis* 2011; 8:377-84.
 10. Choudhry UK, Srivastava R, Fitch MI. Breast cancer detection practices of south Asian women: knowledge, attitudes, and beliefs. *Oncol Nurs Forum* 2008; 25:1693-701.
 11. Han Y, Williams RD, Harrison RA. Breast cancer screening knowledge, attitudes, and practices among Korean American women. *Oncol Nurs Forum* 2000; 27:1585-91.
 12. McCance KL, Mooney KH, Smith KR, Field R. Validity and reliability of a breast cancer knowledge test. *Am J Prev Med* 1990; 6:93-8.
 13. RIW Nilaweera, S Perera, N Paranagama, AS Anushyanthan. Knowledge and Practices on Breast and Cervical Cancer Screening Methods among Female Health Care Workers: A Sri Lankan Experience; *Asian Pacific J Cancer Prev*, **13**, 1193-96.
 14. Odusanya OO, Tayo OO. Breast cancer knowledge, attitudes and practice among nurses in Lagos, Nigeria. *Acta Oncol*. 2011;40(7):844-8.
 15. Awodele O, Adeyomoye AA, Oreagba IA, Dolapo DC, Anisu DF, Kolawole SO, Ishola IO, Adebayo KA, Akintonwa A. Knowledge, attitude and practice of breast cancer screening among nurses in Lagos University Teaching Hospital, Lagos Nigeria: 2009 Apr-Jun;19(2):114-8 Department of Pharmacology, College of Medicine, University of Lagos.
 16. M. Ayesha, F. Nauman, M. Nahal, K. Shiyam. Knowledge, attitude and preventive practices for breast cancer among health care professionals at Aga Khan Hospital Karachi. *J Pak Med Assoc*. 2009 Jul;59(7):474-8.
 17. Awodele O, Adeyomoye AA, Oreagba IA, Dolapo DC, Anisu DF, Kolawole SO, Ishola IO, Adebayo KA, Akintonwa A. Knowledge, attitude and practice of breast cancer screening among nurses in Lagos University Teaching Hospital, Lagos Nigeria: 2009 Apr-Jun;19(2):114-8 Department of Pharmacology, College of Medicine, University of Lagos
 18. M. Ayesha, F. Nauman, M. Nahal, K. Shiyam. Knowledge, attitude and preventive practices for breast cancer among health care professionals at Aga Khan Hospital Karachi. *J Pak Med Assoc*. 2009 Jul;59(7):474-8.
 19. Yeliz Yelen Akpınar¹, Zeynep Baykan^{2*}, Melis Naçar², İskender Gün³, Fevziye Çetinkaya.
 20. Knowledge, Attitude about Breast Cancer and Practice of Breast Cancer Screening among Female Health Care Professionals: A Study From Turkey;
 21. *Asian Pacific J Cancer Prev*, **12**, 3063-3068