KAP STUDY

Breast cancer knowledge and perception among healthcare professionals and senior medical students at Bolan Medical Complex Hospital Quetta, Pakistan

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Abstract

Objective: To assess knowledge and perception about different aspects of Breast Cancer among health care professionals at Bolan Medical Complex Hospital Quetta, Pakistan.

Methods: This cross-sectional study was carried out at Bolan Medical Complex Hospital Quetta from October to December 2017. A total of 312 health care workers including consultants (42), residents (85), medical officers (52), interns (45), nurses (48) and final year medical students (40) took part in the study. The study tool was a self-designed questionnaire with separate sections to assess the knowledge about risk factors, signs and symptoms, screening tools, breast self-examination (BSE), treatment and barriers in seeking medical advice.

Results: Participants had satisfactory knowledge about risk factors and signs of breast cancer but poor knowledge about association of breast cancer with menarche status, oral contraceptive pills and smoking. Majority was aware of mammography benefits and believed that breast cancer is curable with therapy. All perceived that cultural and socioeconomic barriers are the cause of late stage presentation. The nurses particularly were having misconceptions in knowledge about breast cancer risk factors and screening tools.

Conclusion: The current study demonstrated that knowledge related to breast cancer was average and highlighted the need for provision of continuing medical education programmes to improve health practitioners' practice on cancer screening tools. Knowledge was particularly deficient regarding screening modalities and BSE method and timing. Special emphasis is needed to train nurses, so they could play an expanded role in breast cancer care.

Keywords: Breast Cancer, Pakistan, Risk Factors, Awareness,

(JPMA 70: 2432; 2020) **DOI: https://doi.org/10.47391/JPMA.323**

Introduction

Globally, Breast cancer is by far the most common malignancy among women and the commonest cause of cancer related death among women. The incidence of breast cancer is seen to be higher in industrialized countries along with developing countries.[1] According to the American Cancer Society's Breast Cancer Statistics of 2013,1 out of 8 women in the US will develop breast cancer over her lifetime.[2] In Pakistan, according to the Karachi Cancer Registry, Breast cancer is the commonest cancer among females and accounts for one-third of all cancers in them. Moreover, Karachi, the largest city of Pakistan, has the highest incidence of breast cancer compared to Asian population, except Jews in Israel.[3]

Over the past few years, there have been many studies determining the level of knowledge, attitude and practices towards Breast cancer among different populations within healthcare field both internationally and nationally.[4-8] These studies have shown variable conclusions, such as in Iran where poor knowledge of breast cancer was observed among HCPs and emphasis was laid on improving awareness campaigns.[7]

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Another study from Nigeria indicated poor knowledge towards breast cancer among HCPs as well as poor practice of its screening method.[9] Further, a study conducted in Saudi Arabia revealed satisfactory levels of knowledge among HCPs with recommendations of providing better continued medical education programmes to the healthcare providers. Singapore and Turkey have also reported studies where knowledges levels were found to be satisfactory, however the practice in terms of screening and BSE remain misconceptual.[5,6]

In the context of Pakistan, one study has been conducted at the Aga Khan University by Kumar et al, where it was found out that HCPs had an adequate knowledge towards breast cancer risk factors, symptoms and role of mammography, however, lack of knowledge regarding screening modalities and BSE methods was also observed. No data on the issue is available from Balochistan region of Pakistan hence, the current study aimed to contribute local data about knowledge and perception regarding breast cancer among HCPs in Pakistan.

Researchers have long been studying about risk factors of breast cancer and through such studies we now know some of the widely accepted risk factors. These risk factors include increasing age of females, family or personal history of having breast cancer, early menarche and late

menopause, nulliparity, consumption of oral contraceptive pills and late age at full term pregnancy.[10] Among attributable lifestyle factors smoking, obesity and alcohol consumption are considered as major risks for developing breast cancer.[11]

Among signs and symptoms of breast cancer, the most common ones documented are swelling or lump in all or part of a breast, skin irritation, dimpling of breast skin, color change of breast skin, breast pain and nipple retraction. Unusual discharge from breast other than milk can also be a sign of breast cancer. Redness or rash or other changes of areola can also indicate an underlying cancer.[12] Screening modalities of breast cancer are being continually studied upon by researchers. The most recommended screening method is mammography above the age of 40. Breast self-examination has long been a screening method, but it is currently not recommended by most expert groups.[13] However, Breast Health Global Initiative (BHGI) still recommends breast self-examination for early diagnosis of breast cancer in third world countries.[1] On the other hand, ultrasound and MRI are newer screening modalities and evaluation of their effectiveness are still under research.[13] While therapeutic options of breast cancer are complex and varied,[14] death rates of breast cancer from 1990 – 2013 have reduced 34% in USA,[2] while local data on survival rates is yet unavailable for comparisons.

In Pakistan, the screening modalities for breast cancer are availed by only 9.5% of urban and 4.8% of rural females. Moreover, radiological facilities are only present for 2.5% of urban and 0.7% of rural females. According to previous studies, most Pakistani breast cancer patients present late for medical help and nonetheless awareness among general population stands as one of the barriers to early presentation,[1] while studies also show that increasing women's awareness on the issue rears better results in terms of early detection.[15] Therefore, this study aimed to assess knowledge and perception about different aspects of Breast Cancer among health care professionals at Bolan Medical Complex Hospital Quetta, Pakistan.

Methods

This study was a questionnaire-based cross-sectional study, which was conducted on consultants, residents, medical officers, interns, nurses and medical students in their final year of medical education in Bolan Medical Complex Hospital.

The study was conducted over a period of 1 year and 4 months starting from October 2017 to January 2019. The data collection was completed over a period of 3 months, October to December 2017

For the sample size, an estimated population for participant groups was calculated using Raosoft sample size calculator (Raosoft 2004), taking a confidence level of 95% and 5% margin of error and 50% response distribution.[15] A sample of 362 were needed for the study. However, we distributed 400 questionnaires to receive maximum of them back, 312 questionnaires were returned as a result.

The questionnaires were distributed randomly among consultants, residents, medical officers, interns, nurses and final year medical students in Bolan Medical Complex Hospital. The total sample of 312 was collected from the setup, making the response rate 78%, while the dropout rate was 22%.

The study tool was a self-designed questionnaire, validated by cross checking with our supervisor, after which a pilot study was conducted on 20 participants, followed by data collection.

It was divided into 7 sections, that were:

Section 1 - Demographic Section

Section 2 - Knowledge about risk factors

Section 3 –Knowledge about symptoms of Breast cancer

Section 4 – Knowledge about screening methods for Breast Cancer

Section 5 - Knowledge about Breast self-examination

Section 6 – Knowledge about treatment of breast cancer

Section 7 – Perception towards barriers in seeking medical help for Breast cancer

All the questions had 2 options YES and NO, out of which only one was to be checked for each question.

There were 400 questionnaires that were distributed randomly among Health care practitioners of both genders, including data from consultants 42, residents 85, medical officers 52, interns 45, nurses 48 and final year medical students 40. The questionnaires were filled and handed over to the research team after completion

The study was reviewed by the Institution review board of Bolan Medical Complex Quetta. All participants signed an informed written consent of confidentiality before filling the questionnaire.

Analysis of data was done manually by calculating descriptive statistics; frequencies and percentages of the collected data.

Results

The number of respondents in the study was 312, including102 males and 209 females.

Table-1: The frequency of responses from the Health Care Providers (HCPs) regarding knowledge about factors associated with increased risk of breast cancer (n=312).

		Consultants	Residents	Medical Officers	Interns	Nurses	Medical students	Total n (%)
Increasing age	Yes	40	71	40	33	32	28	244 (78.2)
	No	2	14	12	12	16	12	68 (21.7)
Family history	Yes	42	85	51	44	30	28	280 (89.7)
	No	0	0	1	1	18	12	32 (10.3)
Early menarche	Yes	30	72	34	37	24	23	220 (70.5)
	No	12	13	18	8	24	17	92 (29.5)
Late menopause	Yes	31	68	41	32	20	22	214 (68.5)
	No	9	17	11	13	28	18	96 (30.7)
Nulliparity	Yes	34	62	43	30	27	21	217 (69.55)
	No	8	23	18	15	21	19	104 (33.3)
Obesity	Yes	27	56	43	32	30	30	218 (69.9)
	No	15	29	10	13	18	10	95 (30.5)
Oral	Yes	23	46	34	31	32	15	181 (58.0)
contraceptive pills	No	19	39	29	14	16	25	142 (42.0)
History of breast cancer	Yes	38	71	41	33	38	27	248 (79.4)
	No	4	14	14	12	11	13	68 (21.7)
Smoking	Yes	32	65	41	35	35	32	240 (76.9)
	No	10	20	11	13	18	8	80 (24.3)

Table-2: Knowledge of Health Care Providers (HCPs) about the presenting symptoms of breast cancer.

		Consultants	Residents	Medical Officers	House officers	Nurses	Medical students	Total
Lump	Yes	42	83	50	44	45	40	304
	No	0	2	2	1	3	0	8
Disparity in size	Yes	38	46	41	25	28	23	201
	No	4	39	11	20	20	17	111
Discharge	Yes	39	53	40	30	35	25	222
	No	3	32	12	15	13	15	90
Ulcer	Yes	30	62	40	34	39	24	229
	No	12	23	12	11	13	16	87
Pain	Yes	11	31	31	32	41	30	176
	No	31	54	21	13	7	10	136

Table-3: Knowledge of Health Care Providers (HCPs) about the screening methods.

		Consultants	Residents	Medical officers	House officers	Nurses	Medical Students	Total
Mammogram	Yes	42	76	45	32	27	34	256
	No	0	9	7	13	21	6	56
Ultrasound	Yes	35	67	39	28	24	24	217
	No	7	18	13	17	24	16	95
MRI	Yes	21	58	28	23	16	13	159
	No	21	27	24	39	42	27	180
BSE	Yes	23	52	25	21	19	21	161
	No	19	33	27	24	29	19	151

Table-4: Perception of Health Care Providers (HCPs) about barriers of breast cancer screening.

		Consultants	Residents	Medical Officers	House officers	Nurses	Medical students
Embarrassment	Yes	32	62	30	30	30	30
	No	10	23	22	15	18	10
Too scared	Yes	30	56	41	25	28	28
	No	12	29	11	20	20	12
cost	Yes	29	53	40	30	29	26
	No	13	32	12	15	18	14
Lack of female doctor	Yes	28	23	30	24	28	25
	No	14	62	22	21	20	15

Table 1 shows frequencies of responses received from the participants regarding knowledge about factors associated with increased risk of breast cancer. Most of them (244) agreed that increasing age is a risk factor, while 280 agreed that family history could be a risk factor. Most of the participants (220) agreed that early menarche was a determinant, while 214 participants agreed that late menarche was a determinant. Majority 217(69.5%) of them responded that nulliparity was a risk factor, while 218(70%) also agreed that obesity is a risk factor. Further, most participants 181(58%) agreed that oral contraceptives are a risk factor, while 248(79.5%) thought that history of breast cancer is a risk factor. Majority of participants 240(77%) thought that smoking is also a risk factors for breast cancer as well.

Table 2 displays responses towards knowledge about presenting symptoms of breast cancer. Most participants 304(97.4%) respondents knew that lump can be a presenting symptom. A total of 201 agreed that disparity in size is a symptom for breast cancer, while 222(71.5%) responded that discharge from breast could be a presenting symptom. Ulcer and pain could be presenting symptoms was stated by 299(99%) and 176(56.4%), respectively.

Table 3 displays responses

received towards knowledge about screening methods. Majority of the participants 256(82%) said that mammography is used as screening method, while 217 said that ultrasound could be used as a screening method. Most 159(51%) said that MRI could be a screening method, while 161(51.6%) also said that BSE could be a screening method for breast cancer.

Most of the respondents 237 (76%) said that BSE helps in early diagnosis of breast cancer, while majority of them (61%) said that it should be done monthly. Twenty two percent respondents 68 (22%) said that BSE must be carried out before menstruation, 56 (18%) said that it must be done after menstruation and majority confessed that they did not know about appropriate time to perform BSE.

Most of the respondent 287 (92%) said that triple therapy is the best modality for treatment. Most 252 (81%) said that chemotherapy could prolong life for a breast cancer patient and most 275(88%) said that a breast surgeon should be contacted if someone feels a breast lump.

Table 4 shows responses received towards perception about barriers to breast cancer screening.

Discussion

KAP (Knowledge, Attitude and practice) studies regarding breast cancer awareness among HCPs are important in the long run towards control of breast cancer in the population. It had been proposed earlier that better knowledge among HCPs can greatly affect health education among the community.[16] Hence, the results of this survey could efficiently answer questions regarding levels of knowledge and perception of HCPs to better understand the current scenario of breast cancer awareness in the city.

The knowledge towards risk factors of breast cancer among HCPs has been studied in different countries with varied results in various regions. A Nigerian study by Odusanya et al, in 2009 reported poor knowledge regarding risk factors among HCPs, while another study from Kingdom of Saudi Arabia suggested satisfactory knowledge among HCPs.[4,8] In the current study, most of the participants had average knowledge about risk factors similar to another study from Pakistan in 2009,[15] however a significant percentage of HCPs in the current survey were unaware of oral contraceptives and nulliparity being risk factors of breast cancer.

Regarding presenting symptoms of breast cancer, knowledge among participants in the current survey was satisfactory. Results are also consistent with 2009 study from Pakistan, where four major symptoms of breast cancer were under discussion, that are, breast lump, disparity in size of breast, discharge and ulcer.[15] In addition, in the current survey 176 participants also agreed that pain is a presenting symptom of breast cancer.

In the present study, most of the participants were unaware of the fact that MRI could be a screening modality for breast cancer, which was also the result in a previous study.[15] Most respondents however knew that mammography, ultrasound, breast self-examination were screening methods. The specific knowledge regarding BSE among HCPs in the current study was good in terms of knowing that BSE could help in early detection, but majority of them did not know that it must be done monthly and were also unaware of the best time of menstrual cycle to perform it. These results in terms of level of knowledge regarding BSE are similar to previous studies.[5,6,15] Nonetheless, the practice of BSE by female HCPs was not asked in the current survey.

Regarding treatment therapies for breast cancer, most participants were well aware. Majority 275 (88%) were sure that triple therapy is the best option for treatment and that therapy could prolong life, similar to a previous study by Saeedi et al.[8] However, in this study participants were also asked about their perception towards who to visit if someone feels a breast lump to which, most were confident for a breast surgeon.

Perhaps, the most important results obtained from our study were regarding perception towards barriers to breast cancer screening. Maximum participants perceived that embarrassment was a major barrier in seeking medical help for breast cancer, while most other believed that fear of positive diagnosis is a hinderance to getting medical help too. These results have previously not been generated by other local studies, however treatment cost as a barrier to breast cancer screening has previously been discussed by Sharma et al.[17]

Nonetheless, our study is the first study that assessed a wide range of awareness factors regarding breast cancer among HCPs of Bolan Medical Complex Hospital, Quetta, which had previously never been studied in the region.

Conclusion

Participants of the current survey had a fair knowledge about risk factors and signs of breast cancer but poor knowledge about association of breast cancer with menarche status, oral contraceptive pills and smoking. Majority was aware of benefits of mammography and believed that breast cancer is curable if detected early. All were of the opinion that cultural and socioeconomic barriers are a major cause of late stage presentation. The current study, in a nutshell, demonstrated that knowledge related to breast cancer was average and hence,

highlighted the need for provision of continuing medical education programmes to improve health practitioners' practice on cancer screening tools. Knowledge was particularly deficient regarding screening modalities and BSE method and time. Special emphasis is needed to train nurses, so they could play an expanded role in breast cancer care.

Disclaimer: The abstract was present as a poster in 4th Breast cancer in young women conference in Lugano Switzerland in October 2018 and published in the abstract book The Breast October 2018 volume 41, supplement 1, Page S10

Conflict of Interest: None.

Funding Sources: None.

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