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To Assess the Knowledge and Awareness about Breast, Cervical and Oral Cancer Screening Among Oncology Nurses in Tertiary Cancer Centre

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ABSTRACT

Background: To better primary health care and better-trained nurses, knowing the causes of cancer provides a basis for understanding the potential for prevention or early detection of the disease. Our study aimed to assess knowledge and awareness about breast, cervical and oral cancer screening amongst oncology nurses at a tertiary cancer centre.

Methodology: An anonymised questionnaire based study was conducted amongst nurses at a tertiary cancer centre. We used NCG e-learning questionnaire to assess knowledge (which includes breast, oral and cervical knowledge and awareness related questionnaire).

Results: A total of 313 participants fulfilled the inclusion criteria and were enrolled in this study. Age range of participants was from 21 to 54 years (mean = 29.8; SD = 8.14). Knowledge and awareness about breast cancer were significantly associated gender ($p=0.014$) and marital status ($p=0.00$). Although, Knowledge and awareness about cervical cancer were significantly associated with gender ($p=0.002$) and years of experience ($p=0.03$). The age ($p=0.001$), marital status ($p=0.002$) and years of experience ($p<0.001$) was statistically significantly associated with knowledge and awareness about oral cancer.

Conclusion: Our data suggest that levels of knowledge and understanding of cervical cancer as well as its preventable nature should be improved. Continuing nurse education may contribute to strengthen cervical cancer screening programs. Nursing staff, if properly aware of this disease, can educate the masses and hence increase health-seeking behaviour in women.

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Background

Cancer is the second leading cause of death, causing one in six deaths globally [1]. A report from the Global Cancer Incidence, Mortality, and Prevalence database (GLOBOCAN, 2018) estimated 18.1 million new cases and 9.6 million cancer deaths worldwide in 2018 [2]. In India, the incidence of cancer is estimated to be 1.15 million, and deaths related to cancer are estimated to be 0.78 million in 2018. The most common cancer site among males was oral cancer (16%), and in females it was breast (28%) followed by cervical cancer (16%) [3-5].

The three most common cancer types in India (oral, breast, and cervical) are far more lethal in NER compared with the rest of India, primarily because of late presentation, delay in diagnosis, and subsequent treatment, which is often inadequate. In addition

to better primary health care and better-trained local nurses, knowing the causes of cancer provides a basis for understanding the potential for prevention or early detection of the disease.

Presently, there is no data published on knowledge and awareness about breast, cervical and oral cancer screening in India. We aimed to evaluate the knowledge and awareness about breast, cervical and oral cancer screening in oncology nurses.

Methods

Participants and study design

This cross-sectional survey based study was carried out at the Tata Memorial Hospital, Mumbai - the largest tertiary referral centre for cancer in India. Medical oncology, paediatric oncology, surgical oncology, head and neck oncology, gynaecologic oncology and radiation oncology were included. Nurses were invited by email to participate voluntarily in an anonymous electronic survey in Feb 2021.

The survey was open for three weeks and a single email was sent after one week as a reminder to complete the form. Nurses were defined as either “speciality” nurses or “super-speciality” nurses based on whether they were pursuing a postgraduate degree or had completed their post-graduation and were pursuing a super-speciality course. Super-speciality nurses differ from speciality nurses, being at different age groups, stages of learning, family pressures, etc and were hence grouped separately.

Study Tools

We employed the NCG e-learning questionnaire, included breast, oral and cervical cancer knowledge assessment related questions scale as the tools for this survey. All items have five response categories in a Likert scale. Each scale ranges from 0 to 100 points, with high scores indicating higher levels of knowledge. Total score on the scale is the average of the scores and a mean score of ≥ 50 are considered as a high level of knowledge. We included a blank space for free comments at the end of the questionnaire.

Statistical analysis

An informed consent form was integrated into the electronic submission form. The questionnaire given to the participants did not have any unique identifiers. The questionnaire given to the participants did not have any unique identifiers. Pearson chi-square test for association or Fisher’s exact test was used to find the association between knowledge levels and demographic. Analysis was done using the Statistical Package for the Social Sciences (SPSS) software (version 20) (IBM Corp., Armonk, N.Y., USA).

Results

Demographics

A total of 313 participants fulfilled the inclusion criteria and were enrolled in this study. Table 1 lists the demographic characteristics of the participants included in the survey. Of those nurses who responded (313) giving a response rate of 100% out of this 303 (96.8%) were females and 10 (3.2%) male. Age range of participants was from 21 to 54 years (mean = 29.8; SD = 8.14) and as to the marital status 225 (71.9%) were single and 87 (27.8%) married. The nurses who participated were from medical ward 86 (26.5%), surgical ward 63 (20.1%), Casualty 13 (4.2%), CT / MRI Dept 7 (2.2%), Intensive care Unit 21 (6.7%), and OPD 38 (12.1%), Operation Theater 58(18.5%) AND Specialized Dept 30(9.6%).

Majority of the nurses included in this study were have done GNM(RN&RM) 225(71.9%), 79(25.2%) B.Sc. Nursing / P.B.B.Sc Nursing only, where as 9(2.9%) reported as M.Sc. Nursing. Approximate 203(64.9%) parentage nurses’ married. 162(51.8%) nurses have 4-23 years experience, 82(26.2%) nurses reported <3 years of experience, and >24 years of experience reported 69(22%) nurses.

Knowledge of Oral, Breast, and Cervical Cancer

Distribution of knowledge scores on oral, breast, cervical cancer amongst nurses were showed in figure number 1. Out of the 313 nurses 22.04% the nurses scored level high, 41.5% were moderate level and 36.42% were poor level breast cancer knowledge and awareness (Figure 1). Although, 47.7% the nurses scored level high, 26.20% were moderate level and 30.0% were poor regarding cervical cancer knowledge and awareness amongst nurses. However, 37.7% the nurses scored level high, 33.5% were moderate level and 33.5% were poor regarding oral cancer knowledge and awareness amongst nurses.

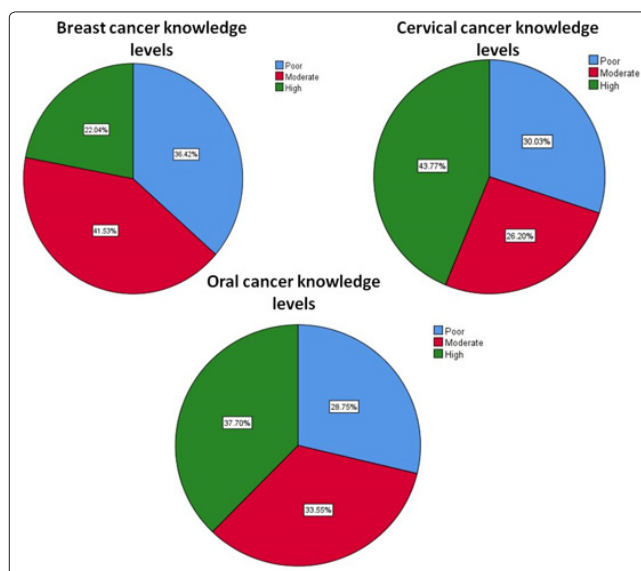


Figure 1: Levels of Knowledge of Nurses about Breast Cancer Oral, and Cervical Cancer and Screening Method

Association of Socio demographic Variable with the Knowledge of Nurses about Breast Cancer Oral, and Cervical Cancer and Screening Method.

Knowledge and awareness about breast cancer were significantly associated gender ($p=0.014$) and marital status ($p=0.001$); however, age, gender, marital status, qualification, number of children, current working area, and number of years not found statistically significant. Although, Knowledge and awareness about cervical cancer were significantly associated with gender ($p=0.002$) and years of experience ($p=0.03$). The age ($p=0.001$), marital status ($p=0.002$) and years of experience ($p<0.001$) was statistically significantly associated with knowledge and awareness about oral cancer. (Table 1)

Factors	Total	Knowledge Breast cancers			P-value	Knowledge Cervical cancers			P-value	Knowledge oral cancers			P-value
		Poor	Moderate	High		Poor	Moderate	High		Poor	Moderate	High	
Age, Years													
<=25	82(26.2%)	30(26.3%)	37(28.5%)	15(21.7%)	0.141	37(39.4%)	17(20.7%)	28(20.4%)	0.057	37(41.1%)	27(25.7%)	18(15.3%)	0.001
26-45	154(49.2%)	51(44.7%)	60(46.2%)	43(62.3%)		37(39.4%)	42(51.2%)	75(54.7%)		34(37.8%)	52(49.5%)	68(57.6%)	
>=46	77(24.6%)	33(28.9%)	33(25.4%)	11(15.9%)		20(21.3%)	23(28%)	34(24.8%)		19(21.1%)	26(24.8%)	32(27.1%)	
Gender													
Female	303(96.8%)	110(96.5%)	127(97.7%)	66(95.7%)	0.014	91(96.8%)	80(97.6%)	132(96.4%)	0.002	89(98.9%)	99(94.3%)	115(97.5%)	0.058
Male	10(3.2%)	4(3.5%)	3(2.3%)	3(4.3%)		3(3.2%)	2(2.4%)	5(3.6%)		1(1.1%)	6(5.7%)	3(2.5%)	
Marital status													
Married	225(71.9%)	84(73.7%)	93(71.5%)	48(69.6%)	0.001	58(61.7%)	65(79.3%)	102(74.5%)	0.748	52(57.8%)	77(73.3%)	96(81.4%)	0.002
Single	87(27.8%)	30(26.3%)	37(28.5%)	1:00 AM		35(37.2%)	17(20.7%)	35(25.5%)		38(42.2%)	28(26.7%)	21(17.8%)	
Widow / Widower	1(0.3%)	0(0%)	0(0%)	1(1.4%)		1(1.1%)	0(0%)	0(0%)		0(0%)	0(0%)	1(0.8%)	
Qualification													
B.Sc. Nursing / P.B.B.Sc. Nursing	79(25.2%)	26(22.8%)	33(25.4%)	20(29%)	0.718	31(33%)	18(22%)	30(21.9%)	0.163	27(30%)	22(21%)	30(25.4%)	0.460
GNM	225(71.9%)	86(75.4%)	92(70.8%)	47(68.1%)		59(62.8%)	61(74.4%)	105(76.6%)		59(65.6%)	81(77.1%)	85(72%)	
M.Sc. Nursing	9(2.9%)	2(1.8%)	5(3.8%)	2(2.9%)		4(4.3%)	3(3.7%)	2(1.5%)		4(4.4%)	2(1.9%)	3(2.5%)	
Do you have children													
No	110(35.1%)	40(35.1%)	46(35.4%)	24(34.8%)	0.886	43(45.7%)	23(28%)	44(32.1%)	0.457	46(51.1%)	32(30.5%)	32(27.1%)	0.056
Yes	203(64.9%)	74(64.9%)	84(64.6%)	45(65.2%)		51(54.3%)	59(72%)	93(67.9%)		44(48.9%)	73(69.5%)	86(72.9%)	
Current clinical working areas													
Casualty	13(4.2%)	4(3.5%)	8(6.2%)	1(1.4%)	0.167	2(2.1%)	5(6.1%)	6(4.4%)	0.996	5(5.6%)	4(3.8%)	4(3.4%)	0.165
CT / MRI Dept	7(2.2%)	4(3.5%)	1(0.8%)	2(2.9%)		4(4.3%)	1(1.2%)	2(1.5%)		1(1.1%)	3(2.9%)	3(2.5%)	
Intensive care Unit	21(6.7%)	5(4.4%)	13(10%)	3(4.3%)		5(5.3%)	6(7.3%)	10(7.3%)		6(6.7%)	7(6.7%)	8(6.8%)	
Medical/ chemotherapy ward	83(26.5%)	29(25.4%)	34(26.2%)	20(29%)		17(18.1%)	14(17.1%)	52(38%)		22(24.4%)	25(23.8%)	36(30.5%)	
OPD	38(12.1%)	14(12.3%)	20(15.4%)	4(5.8%)	0.257	12(12.8%)	14(17.1%)	12(8.8%)	0.564	16(17.8%)	16(15.2%)	6(5.1%)	0.451
Operation Theater	58(18.5%)	22(19.3%)	27(20.8%)	9(13%)		16(17%)	23(28%)	19(13.9%)		15(16.7%)	21(20%)	22(18.6%)	
Specialized Dept	30(9.6%)	9(7.9%)	11(8.5%)	10(14.5%)		10(10.6%)	4(4.9%)	16(11.7%)		11(12.2%)	7(6.7%)	12(10.2%)	
Surgical Ward	63(20.1%)	27(23.7%)	16(12.3%)	20(29%)		28(29.8%)	15(18.3%)	20(14.6%)		14(15.6%)	22(21%)	27(22.9%)	
Experience													
<3 years	82(26.2%)	32(28.1%)	35(26.9%)	15(21.7%)	0.436	33(35.1%)	16(19.5%)	33(24.1%)	0.03	40(44.4%)	26(24.8%)	16(13.6%)	<0.001
4-23 years	162(51.8%)	52(45.6%)	64(49.2%)	46(66.7%)		41(43.6%)	46(56.1%)	75(54.7%)		31(34.4%)	56(53.3%)	75(63.6%)	
>24 years	69(22%)	30(26.3%)	31(23.8%)	8(11.6%)		20(21.3%)	20(24.4%)	29(21.2%)		19(21.1%)	23(21.9%)	27(22.9%)	

Discussion

The present study was conducted among staff nurses in order to evaluate their Knowledge of Nurses about Breast Cancer Oral, and Cervical Cancer and Screening Method. Moderate level knowledge related to about Breast Cancer Oral, and Cervical Cancer and Screening Method. The findings of this study about knowledge of nurses regarding oral, breast and cervical cancer are consistent with reports of [6]. Whereas, other studies done by different authors that showed nurses identify certain aspects of oral, breast and cervical cancer, their knowledge is still moderate level [7,8]. Being nursing profession, a improve knowledge of preventable cancer diseases like breast, oral and cervical cancer is expected from them [7-10].

Our study showed significant association between the age, gender, marital status, years of experience and the knowledge and awareness toward oral, breast, and cervical cancer. Similar findings showed by previous studies [7-10]. Surprisingly breast, oral and cervical screening are shared by authors who have conducted studies on utilization of cervical, breast and oral cancer screening services by health workers [7-11]. The limitation of this study is, only conducted in single centre.

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