

## RESEARCH COMMUNICATION

# Knowledge and Practices on Breast and Cervical Cancer Screening Methods among Female Health Care Workers: A Sri Lankan Experience

RIW Nilaweera\*, S Perera, N Paranagama, AS Anushyanthan

### Abstract

Breast and cervical cancer are the most common causes of cancer mortality among women worldwide, but they are largely preventable. There are limited data on knowledge and practices on screening methods of breast and cervical cancers among female health care workers in Sri Lanka, in spite of having an organized screening programme islandwide. A cross-sectional survey was conducted among 219 female health care workers including public health midwives (68.9%) selected from 6 districts in Sri Lanka using convenient sampling methods. A self-administered questionnaire was used as a pre-test in a capacity building training programme to collect the data. The mean (SD) duration of work experience of the respondents was 12 years and 52.5% were aged over 35 years. Most (76.7%) were married, and a family history of cancer was reported by 24.2%. Over 98% knew about self breast examination. Even though 84.1% practiced it, only 47.9% practiced it on a monthly basis. Clinical breast examination and mammography were known by 94.1% and 64.3% respectively. Only 19.2% had undergone a clinical breast examination within one year and 3.6% had ever undergone a mammography. Only 76.3% knew that a Pap smear detects precancerous stage of cervical cancer. Among 169 married workers, 73.4% had never had a Pap smear and only 17.2% had got it done within the preceding 5 years. Among the reasons for not doing a pap smear within 5 years, 47.0% believed it as not necessary, 17.3% due to fear/dislike, 23.2% as not having symptoms, 3% had not known about it and 3% not known about availability of services. The study findings suggest that the knowledge and practices on breast and cervical cancer screening methods among female health care workers need to be improved. Considering the role that health care workers play in communicating health behaviors to the general public, strengthening health education interventions for this group of females is essential.

**Keywords:** Breast cancer - cervical cancer - screening - health workers - Sri Lankan

*Asian Pacific J Cancer Prev*, 13, 1193-1196

### Introduction

In spite of being breast and cervical cancers are largely preventable, throughout the world over one million of cases report annually (IARC, 2010). While breast cancer being the most common cancer among females accounting more than one fifth of the new cases, cervical cancer is the third most common cancer among females causing high morbidity and mortality in the developing countries (IARC, 2010). Cancer incidence in Sri Lanka is increasing and annually over 14000 new cancer cases being identified (NCCP, 2009). Furthermore, it is the second leading cause of deaths in hospitals leading to a hospital mortality rate of 17.5/100000 population in 2007 (Ministry of Health, 2007). For the year 2005, breast cancer ranked the first cancer among females in Sri Lanka and accounted for 25.4% of the total cancers while cervical cancer ranked the second with 12%. In Sri Lanka, the Age Standardized Rate per 100000 population for female breast and cervical

cancer were 18.3 and 8.9 per 100,000 for the year 2005 respectively (NCCP, 2009).

In Sri Lanka, breast and cervical cancer screening services are provided through network of medical institutions and mainly preventive health units which are managed by Medical Officer of Health (MOH) in respective MOH areas. Islandwide, Well Women Clinics (WWCs) are conducted via office of MOH each area by the team of public health personnel comprising of MOH, Public Health Nursing Sister (PHNS) and Public Health Midwife (PHM). Health education on cancer prevention, including Self Breast Examination (SBE) and services like Clinical Breast Examination (CBE) and Pap smear are provided in these clinics. As it costly and needs economic and human resources, mammography services are available only in few centers government as well as private sector in Sri Lanka.

Even though the prevention services available throughout the country, most of the cancer cases reported at

late stage. The obstacles for primary, secondary prevention and some tertiary prevention in Sri Lanka are the hesitation to visit the physician, patient's embarrassment and lack of knowledge about the risk factors and screening methods.

A survey studies conducted in Sri Lanka found that majority of women had never been screened for cervical cancer during their life time. In the district of Kalutara cumulative coverage of Pap smear was 2.2% during 1996-2000 (Liyange, 2009) while it was only 6.5% in the district of Gampaha (Gamage, 2009). In 2008 and 2009 only 94156 and 85927 Pap smears were done through WWCs in Sri Lanka (FHB, 2010).

The ways to reduce breast and cervical cancer incidence are provide knowledge, appropriated attitude and convenience 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 improvement (Olumuyiwa, 2001; Demireloz et al, 2010; Oranratanaphan et al., 2010).

There is minimal information is available related to cancer screening methods among female health care workers in Sri Lanka. This study was performed to evaluate the knowledge and practice of the female health care providers as a baseline guide to identify gaps and improve their knowledge and practices on breast and cervical cancer screening methods and make them to perform a better role in communicating these preventive health behaviours to the general public.

## Materials and Methods

The study was conducted as a cross sectional survey among female government health care workers, working in health institutions including offices of MOH in six districts of Sri Lanka including North East Province. The subjects were recruited from the participants who attended a series of capacity building workshops conducted by National Cancer Control Programme, Ministry of Health from August 2011 to December 2011. The survey done as a pretest prior to commencement of these workshops. All female participants were invited to participate in the study. Informed verbal consent of each participant was sought and obtained. Participants were assured of the confidentiality of their responses.

A self-administered questionnaire with close ended questions which had been pre tested on group of female health care workers was used as the survey instrument. The questionnaire elicited information on the sociodemographic characteristics of the health care workers, knowledge and practices on SBE, CBE and mammography and knowledge and practices on Pap smear. Statistical analysis was performed with the SPSS software.

## Results

### *Sociodemographic characteristics of participants*

We included 219 married female health care workers from 6 districts. The sociodemographic characteristics are shown in Table 1. Majority of the participants were PHMs (68.9%), mean years of working experience was 12(SD =10.2), which most of them, the education equal or less than GCE (A/L) 76.6% and the marital status were married 76.7%.

### *Knowledge and practices of breast cancer screening methods*

The knowledge aspect on breast cancer screening methods, most participants aware of SBE(98.6%) and CBE(94.1%) but not on mammography(64.3%).

**Table 1. Sociodemographic Characteristics of Participants**

Variable	N=219 (%)	
Age Category(years);	<35	104 (47.5)
	35-45	48 (21.9)
	46-55	50 (22.8)
	>55	17 (7.8)
Working Experience(years);	Mean 12, SD 10.2	
Job Category;	Medical Officer	2 (0.9)
	Nursing officer	35 (16.0)
	PHNS	3 (1.4)
	SPHM	12 (5.5)
	PHM	151 (68.9)
	Other	16 (7.3)
Educational Qualifications;	Upto GCE O/L	5 (2.3)
	Passed GCE O/L	13 (5.8)
	Passed GCE A/L	150 (68.5)
	Diploma/Degree	36 (16.4)
	Missing	2 (0.9)
Marital Status;	Unmarried	50 (22.8)
	Married	168 (76.7)
	Widowed	1 (0.5)
Family history of cancer;	53 (24.2)	

**Table 2. Knowledge and Practices of Breast Cancer Screening Methods**

Variable	N=219 (%)
Aware on screening methods	
SBE	216 (98.6)
CBE	206 (94.1)
Mammography	141 (64.3)
Frequency of SBE be undertaken by participants	
Never	35 (15.9)
Irregular	56 (25.6)
Monthly	105 (47.9)
Once in 6 month	12 (5.5)
Yearly	9 (4.2)
Missing	2 (0.9)
Frequency of CBE be undertaken by participants	
Never	143 (65.3)
< one year	42 (19.2)
> one year	15 (6.8)
> five years	16 (7.3)
Missing	3 (1.4)
Underwent a mammogram in life time	8 (3.6)

**Table 3. Knowledge and Practices of Cervical Cancer Screening Methods**

Variable	N %
Knowledge on Pap smear (n=219)	
Can detect cervical cancer	48 (21.8)
Can detect precancerous stage of cervical cancer	167 (76.3)
Don't know	2 (0.9)
Pap smear undertaken by participants (n=169)	
Never	124 (73.4)
< 5 years	29 (17.2)
> 5 years	16 (9.4)
Reasons that they avoid Pap smear (n=169)	
Not known	5 (3.0)
Unaware on Pap smear services	5 (3.0)
Pap smear not necessary	79 (47.0)
Dislike/fear on Pap smear	29 (17.3)
No symptoms of cervical cancer	39 (23.2)
Others	1 (0.6)

Regarding practices related to breast cancer screening method, only 47.9% practiced SBE monthly and 65.3% had never undergone CBE in their life time (Table 2).

#### *Knowledge and practices of cervical cancer screening methods*

The knowledge aspect, most participants knew that Pap smear could detect precancerous stage cervical cancer (76.3%). In practice aspect, surprisingly only 26.6% of the married participants screened with Pap smear in their life time. The main reasons that they delayed or avoid screening Pap smear were perceived as not necessary (47.0%), no symptoms (23.2%), fear /embarrassment (17.3%) (Table 3).

## Discussion

Many studies related to breast and cervical cancer in Sri Lanka have focused on females in the community (Gamage, 2009 & Kumari, 2011). The concept of Well Woman Clinic was introduced in 1996 to screen women reproductive organ malignancies as part of the reproductive health programme. Ten years after initiation, the progress of the programme has been slow (FHB, 2010). Even though orientation of healthcare providers is an important determinant of use of cancer screening programmes, minimal data available on knowledge and practice of cervical and breast cancer screening methods among health care providers in Sri Lanka.

The participants in our study were aware about breast cancer screening methods like SBE and CBE. However, a significant proportion of them were not using these methods adequately. The proportion of our respondents who used breast cancers screening methods is comparable with the rates reported from study among health workers in Neigeria which showed SBE was most frequently done (89%), with 39% conducting this procedure at monthly intervals. Furthermore, low proportion of awareness and usage of mammography services among participants may indicate the need of expansion of mammography services through out the country which is presently confined only to few districts. The improvement of gaps needs to be

addressed with the emphasis on these screening methods in basic training courses as well as continues in in-service training programmes. Especially for primary health care workers as they mostly involved in health promotion in the community.

Cervical cancer is the second most common cancer in Sri Lankan women. (NCCP, 2007; IARC, 2010). Even though, Pap smear services are available island wide through Well Women Clinic Programme, the coverage of the Pap smear is quite low in Sri Lankan population (Gamage, 2009; Liyanage, 2009; FHB 2010)

The results of this study shows that knowledge and practice on Pap smear among participants were quite low. Only 76.3% knew that Pap smear detects precancerous stage of cervical cancer. Among 169 married workers, 73.4% had never had a Pap smear and only 17.2% had got it done within the preceding 5 years. This is very much low compared to studies conducted among female medical workers in Thailand. (79.5% and 59%) (Oranratanaphan et al., 2010 & Thanappaprasr et al., 2010). The most common reasons in females who avoid Pap smear are fear of vaginal examination, embarrassment and not concern the risk (Chicharoen et al., 1998). The reason avoiding Pap smear in our study was shown in the same way which indicated the main reason was believed it as not necessary (47%) followed by due to fear/dislike(23.2%). This highlights the importance of addressing cultural barriers related to Pap smear such as embarrassment of females for this procedure. It is surprising to see 3% participants who work in medical institutions not directly involved in Well Women Clinic Programme not known about availability of Pap smear services.

In conclusion, the female health care worker plays important roles as a health educator and a promoter. Therefore, unsatisfactory knowledge and low compliance with screening recommendations may lead to negative impact on community in undergoing a Pap smear. To improve the quality of cervical cancer screening services, health education interventions addressing on cervical cancer prevention and compliance with recommendations Pap smear are essential for this category of females.

## Acknowledgements

We are grateful to all the female health care workers who participated in the study.

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