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Research Article

Knowledge and Practice about Cervical Cancer Screening among Women in a Rural Population of South India

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Abstract: Cancer Cervix happens to be the third most commonly diagnosed cancer and fourth leading cause of death among females in the globe. Most of the cases and deaths are seen in developing countries and India attributes to about 15% of the cancer deaths in the world mostly in rural areas. Hence the objectives of this study were to find the knowledge of women regarding cervical cancer, to determine screening practices and determinants, and to identify factors for non screening. A cross-sectional study was carried out among 800 village women of age group 15 years and above using systematic random sampling technique by a predesigned and a pretested questionnaire. Data was analyzed using SPSS version 17. Majority of study subjects were in the age group of 30-60 years. More than the half were illiterate, majority of them were hindu and most of them were married with parity of 1-5. Most of the women belonged to poor socio-economic status. Predictors for doing Pap test were who had knowledge of screening for cervical cancer and Pap test. 57.5 per cent of women with poor knowledge scores cited knowledge factors as compared to only 5.8 per cent of women with good knowledge score for not undergoing screening. A multinomial logistic regression confirmed that those with poor knowledge were significantly more likely to cite knowledge factors than psychosocial factors (OR=3.36, CI 1.007-11.218). Similarly those with at least a primary education were less likely to report knowledge factors compared to psychosocial factors (OR=0.347, CI 0.122- 0.198 $P<0.05$). Major proportions of the rural women were not aware of the risk factors of cervical cancer, the screening process and its importance as well as good hygienic practices. A comprehensive cancer awareness and screening program should be started in the district by involving medical college staff, school teachers, government officials etc. to create awareness about carcinoma cervix and to dispel misconceptions. Efforts should be made to prevent the disease and avert untimely deaths in young women.
Keywords: Cervical cancer, Knowledge, Practice, Screening

INTRODUCTION

Cervical cancer is the third most commonly diagnosed cancer and the fourth leading cause of cancer deaths in females worldwide. More than 85% of these cases and deaths occur in developing countries. India, the second most populous country in the world, accounts for 15.2% of the total cervical cancer deaths [1].

Cancer of the cervix has been the most important cancer in women in India over the past two decades. Since over 70% of the Indian population resides in the rural area, cancer cervix still constitutes the number one cancer in either sex [2]. The usual 10-20 years natural history of progression from mild dysplasia to carcinoma makes cervical cancer a relatively easily preventable disease and provides the rationale for screening [3]. Majority of the women who develop cervical cancer tend to have one or more identifiable factors that increase their risk factors are mutable like smoking, diet while others are immutable like age, race. There are also several misconceptions about cervical cancer and its screening programmes Attitudes and beliefs about cervical cancer among the general population and health care providers can also present barriers to its control [21].

It is possible to prevent deaths due to cervical cancer through various strategies that target women >30 yr for screening and treatment [22]. The introduction of Papanicolaou test led to significant reduction in mortality and morbidity in developed countries. But on the other hand, the screening coverage in developing countries is very low.

Despite existence of national guidelines the screening coverage in India is appallingly low. As a result, very often diagnosis of cervical cancer is based on

opportunistic screening or after the onset of symptoms. Though data from the 20 populations based cancer registries in India indicate a steady decline in cervical cancer incidence rates over the last two decades, still occupies number two position and the risk of disease is still high [4, 20].

Thus in India, the onus of preventing cervical cancer is on the women themselves. Therefore, it is the women's knowledge level, motivation for screening and other psychosocial factors that determine her health seeking behaviour. In India, most studies have either addressed compliance rate of attendees of specially arranged screening programmes or have been done in hospital settings. Hence, this study was aimed to determine knowledge levels of women on cancer cervix, screening practices and their determinants among women aged between 15-50 yr in a rural community of South India.

MATERIALS AND METHODS

A cross-sectional study was conducted among the rural women of a rural field practice area of a Medical college from September to December 2011. For the purpose of sample size calculation and feasibility, the study was pilot tested on 50 women from the area. At 95 per cent confidence level and relative precision of 20 per cent the required sample size was calculated on the basis of awareness, practice of previous studies and the higher sample size of 620 was taken. At a non-response rate of 20 per cent, the calculated sample size was 744. Sampling universe constituted 2105 households in the field practice area. All the houses were enumerated and every tenth house was selected by systematic random sampling technique. All the available women of the age group 15 years and above were interviewed after incorporating the necessary inclusion and exclusion criteria. In this process 800 women were available for interview that formed the study population. Females 15 years or more in age; who are permanent residents of the village; who are ambulatory, not sick and can answer the questionnaire were included. And Females less than 15 years of age; who are not permanent residents of the village; bed ridden and cannot answer the questionnaire were excluded. The predesigned structured close-ended survey questionnaire was pilot tested among the rural women and after making necessary changes was applied for the study population. The Questionnaire was translated into the local language for the benefit of the rural women.

Knowledge regarding the common cancers affecting women, the screening methods of cervical cancer, screening practices were part of the interview schedule. Factors affecting non-screening were also assessed. For assessing socio-economic status Modified B.G Prasad's Scale was used.

Statistical analysis was performed using SPSS version 17. A univariate analysis was done to identify predictors of screening and then multivariate logistic regression was done for the significant values. $P<0.05$ was considered significant. Aspects of knowledge such as cervical cancer being a cancer affecting women, symptoms of cervical cancer, risk factors, whether it can be detected early by screening, and tests available for screening were determined. Each of these categories were scored with a maximum of 0.5-1 awarded for each of the questions with a total of 4. A score of less than 2 was considered to be poor knowledge and more than or equal to 2 was considered to be good knowledge.

RESULTS

In the study majority of study subjects were in the age group of 30-60 years. More than the half were illiterate, majority of them were hindu and most of them were married with parity of 1-5. Most of the women belonged to poor socio-economic status.

Table 1 : Socio-demographic profile of the study population **(n = 800)**

Variable	Number	Percentage
Age in years		
15-30	169	21.1
30-45	245	30.6
45-60	341	42.7
≥60	45	5.6
Literacy status		
Illiterate	420	52.5
Upto 10^{th} standard	246	30.8
Above 10^{th} standard	134	16.7
Religion		
Hindu	711	88.9
Christians	43	5.4
Muslim	46	5.7
Socio-economic status		
Class I	114	14.2
Class II	185	23.2
Class III	255	31.9
Class IV	165	20.6
Class V	81	10.1
Marital status		
Unmarried	119	14.8
Married	645	80.7
Widow	36	4.5
Parity		
0	74	9.2
1-4	524	65.5
≥5	202	25.3

Predictors for doing Pap test were identified (Table 2) and a binary logistic regression analysis showed that women those who had knowledge of screening for cervical cancer, and Pap test were, 2.952 times (CI 1.231-7.458) and 8.108 times CI 2.233-17.996) respectively, were more likely to undergo screening as compared to their counterparts.

The determinants of factors affecting non screening were also studied (Table 3), and 57.5 per cent of women with poor knowledge scores cited knowledge factors as compared to only 5.8 per cent with good knowledge score. A multinomial logistic regression confirmed that those with poor knowledge were significantly more likely to cite knowledge factors than psychosocial factors (OR=3.36, CI 1.007-11.218). Similarly those with at least a primary education were less likely to report knowledge factors compared to psychosocial factors (OR=0.347,CI 0.122- 0.198 $P<0.05$). Those who reported Drs/health staff as the source of information regarding cervical cancer were significantly more likely to report factors related to knowledge (OR=1.680, CI 1.507-1.709, $P<0.001$). The other factors were not found to be significant.

Table 2: Specific knowledge regarding cervical cancer

Knowledge	Total No	Practice No.	OR(95%CI)	P value
Knowledge of screening	658	65	2.952(1.231,7.458)	0.036
Knowledge of Pap test	59	18	8.108(2.233,17.996)	0.000
Knowledge of symptoms	426	47	2.242(0.647,3.428)	0.586

Table 3 Independent determinants of reasons for not screening (n=205)

	Knowledge factor	Resource factor	Psychosocial factor	Total	P value
Education					
Primary	17	7	6	30	0.093
Secondary	81	26	10	117	
Graduate and above	33	10	15	58	
Knowledge score					
Poor	118	35	21	174	0.059
Good	12	10	9	31	
Source of Knowledge					
Health staff	61	14	12	87	0.042
Others	72	24	22	118	

DISCUSSION

Though three fourths of the population knew that cervical cancer could be detected early by a screening test, only 2.25 per cent had ever done the Pap test. This finding was similar to the finding of rest of India [5, 6].

There can be many factors which can decide women participation in cervical cancer prevention programs. In our study it was found lack of awareness, having neither symptom nor disease, lack of knowledge regarding where to go for the test, never seen anyone doing it and never felt that it is needed were the factors associated with not undergoing screening . Among rural women the important factors which prevents them from undergoing cervical screening appears to be lack of knowledge about the disease and having no concept of prevention. Therefore, in the context of implementing a successful cervical cancer prevention program it becomes very essential to identify the reasons which are preventing women from using the services [7].

In Kolkota study also it was seen that preventive health check up in the absence of symptom was not given much importance among women [8]. A study done on African, American and Hispanic women showed that in spite of absence of symptoms, the perception of vulnerability to cervical cancer determined Pap smear testing [9]. Lack of knowledge about where to go was also found to be a significant barrier for the screening among Hispanic women [10]. The factors that determined not to undergo screening in Kolkata were lack of knowledge regarding where to go for Pap test, fear that the test is painful, anxiety about the result, thinking that the test is costly and feeling shy to undergo test etc [8]. These factors were categorized as psychosocial factors in our study. These factors were lack of interest, fear of pain and embarrassment. In an

organized screening program done in Singapore, it was found that fear of discomfort and embarrassment were most important barriers for screening [11].As screening is a preventive service done on healthy individuals, so it is not considered important by asymptomatic persons because they have much more difficult problems to solve in their daily life [12]. The International Agency for Research on Cancer (IARC) also supports the facts that women failed to be undergo screening due to many factors among them important once were lack of resources, insufficient knowledge, difficulty in accessing the health care delivery system, cultural and psychosocial factors, fear of pain or lack of family support and no active involvement of community [13].

In our study it was found that there was significant association between having knowledge of screening test and undergoing Pap test. This finding could be related to the fact that these women may be approaching health care facility for different health needs and subsequently opportunistic screening might have been done on them. In another study also it was found that the women who come under frequent contact with the health care delivery system were associated with an increased use of screening services [14]. In many other studies it was found that factors like having appropriate knowledge, with increasing age and having married was significantly associated with undergoing Pap test [8, 15, 16]. It is seen that to get the greatest public health impact to prevent cancer cervix the optimal age for screening is 30-39 years, once or twice visit to health care centre can reduce the lifetime risk of cervical cancer by 25 to 35% [17]. By conducting health education regarding cervical cancer screening women can be motivated to undergo Pap test. In order to give health education community leaders and male members of the family should be involved. The idea of health education should not be just providing information but should be a process of reconstructing concepts in the lives of women [18].

The primary health centers where cervical screening should be made available are already limited, under resourced in terms of man power, infrastructure and equipments and also over burdened in most of the developing countries [12]. In recent studies it has been found that visual screening can lead to a significant reduction in disease and is easy to use in all health care setting [19].So it should be included as a regular screening test.

Although cervical cancer is the second leading site of cancer among women but still women in the community lack knowledge about the risks, symptoms and availability of screening test for this particular cancer. Conducting health education and creating awareness about cervical cancer is thus a critical element in determining whether a woman will undergo Pap test or not.

REFERENCES

1. Ferlay J, Shin HR, Bray F, Forman D, Mathers CD, Parkin D; GLOBOCAN 2008, Cancer Incidence and Mortality Worldwide : IARC Cancer Base No.10.Lyon, France : International Agency for Research on Cancer, 2010. Available from http://globocan.iarc.fr.2010.
2. National Cancer Registry Programme (NRCP,ICMR); Time trends on cancer incidence rates: 1982-2005. Bangalore: NRCP, 2009.
3. WHO; Comprehensive Cervical Cancer Control: A guide to essential practice. WHO, 2006: 32, 49.
4. Three year report of population based cancer registries 2006-2008. New Delhi: ICMR, National Cancer Registry Programme, 2010.
5. WHO; World Health Survey. Geneva: WHO, 2003.
6. Gakidou E, Nordhagen S, Obermeyer Z; Coverage of cervical cancer screening in 57 countries: low average levels and large inequalities. PloS Med., 2008; 5: e132.
7. Allison B, Amie B, Patricia C, Jennifer W, Janet B, Ilana D; Factors affecting preventive services in low resources settings. Salud Publica de Mexico, 2003; 45: 408–415.
8. Roy B, Tricia ST.; Cervical cancer screening in Kokata, India: Beliefs and predictors of cervical cancer screening among women attending a women's Health Clinic in Kolkata. J Cancer Educ., 2008; 23: 253–259.
9. Kelly A, Kimberlee G; Factors influencing cancer screening practices of underserved women. J Am Acad Nurse Pract., 2007; 19: 591–601.
10. Byrd TL, Petterson SK, Chavez R, Heckert A; Cervical cancer screening beliefs among young Hispanic women. Prev Med., 2004; 38: 192–197.
11. Seow A, Wong ML, Smith WCS, Lee HP; Beliefs and attitudes as determinants of cervical cancer screening: A community based study in Singapore. Prev Med., 1995; 24:134–141.
12. Tsu VD, Pollach AE; Preventing cervical cancer in low resource settings: How far have we come and what does the future hold? Int J Gynaecol Obstet., 2005; 89: S55–S59.
13. International Agency for Research on Cancer (IARC); Handbook of cancer prevention; Cervix cancer screening. Volume 10, Lyon, France, 2005.
14. Lantz PM, Weigner ME, House JS; Education & immuno differentials in breast & cervical cancer screening: Policy implication for rural women. Med Care., 1997; 35: 219–236.
15. Coffey P, Arrossi S, Bradley J, Dzuba I, White S; ACCP Community Involvement Affinity Group. Seattle WA: Alliance for Cervical Cancer Prevention, 2004. Improving screening coverage rates of cervical cancer prevention programs: a focus on communities (Issues in Depth No:4. Available from http://www.path.org/files/RH_accp_improve_screening.pdf

16. Risendal B, Dezapien J, Fowler B, Papenfuss M, Giuliano A; Pap smear screening among urban Southwestern American Indian women. Prev Med., 1999; 29: 510–518
17. Jacqueline S, Scott W, Amy K, John S, Silvana L, Rengaswamy S *et al.*; Evidence based, alternative cervical cancer screening approaches in low resource settings. Int Perspect Sexual Reprod Health, 2009; 35: 1–14.
18. Bradley J, Risi L, Denny L; Widening the cervical cancer screening net in a South African township: who are the underserved? Health Care Women Int., 2004; 25: 227–241.
19. Sankaranarayanan R; Screening for cervical and oral cancers in India is feasible & effective. Nat Med India., 2005; 18: 281–284.
20. Government of India - World Health Organization Collaboration Programme 2004-2005. Guidelines for cervical cancer screening programme, 2006.
21. Ravikiran E, Vijaya K; A Study on Awareness of Risk Factors of Carcinoma Cervix among Rural Women of Nalgonda District, Andhra Pradesh. National Journal of Research in Community Medicine, 2013;2(2): 111-115.
22. Goldie SJ, Gaffikin L, Goldhaber-Fiebert JD, Gordillo-Tobar A, Levin C, Mahe C *et al.*; Alliance for Cervical Cancer Prevention Cost Working Group. Cost-effectiveness of cervical cancer screening in five developing countries. N Engl J Med., 2005; 353: 2158–2168.