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Research Article

Knowledge and Awareness Regarding Cervical Cancer and Uptake of Pap Smear among Women in Karachi, Pakistan

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Abstract

Objective: To determine the knowledge regarding cervical cancer, its symptoms and risk factors among women of 18 years and above attending the gynecology OPD in two public hospitals Karachi, Pakistan.

Methodology: A cross-sectional survey was held from February to June 2013 in Karachi, Pakistan. 384 females aged 18 years and above attending gynecology clinics in two public sector hospitals were taken through non-probability sampling method. The knowledge was assessed using a point scale method which had binary response i.e. correct and incorrect. A score of 50% (≥ 11 correct responses) was considered as optimum knowledge.

Results: Overall knowledge of cervical cancer was 23% based on scoring. Multiparity (29.1%) and unsafe sexual practice (21.8%) were mostly reported risk factors. Vaginal discharge (23.1%) were commonly reported presenting features of cervical cancer. Uptake of pap smear was 11% among all women. Women with younger had much less knowledge (AOR: 0.56, 95% CI: 0.14 - 0.71) as compare to middle age. Women with no education and 3 or more children were less likely to have sufficient knowledge (AOR: 0.79, 95% CI: 0.51 - 0.89) as compared to the educated. Women with 6 or more children were less likely to have sufficient knowledge (AOR: 0.44, 95% CI: 0.2 - 0.68) as compared to the women with less than 3 children. Married women were more likely to have enough knowledge (AOR: 1.2, 95% CI: 1.01 - 3.11) as compare to unmarried women.

Conclusion: Insufficient knowledge of cervical cancer and about its screening services was found among general population. Establishing strategies for spreading awareness and provision of preventive services is essential through health care providers and media advocacy. Hence to improve health seeking behaviour and enhance early screening rates.

Keywords: *Knowledge; Cervical cancer; risk factors; presenting features and Pap smear*

Introduction

Cervical cancer is one of the leading causes of morbidity and mortality amongst the gynecological cancers worldwide [1]. Globally, > 500,000 women diagnosed with cervical cancer each year and poor prognosis leads to 274,000 deaths among contributing as a second leading cause of cancer among women [2]. Whereas, in low and middle income countries where women are undiagnosed and suffering from this disease, around 190,000 women die every year from this disease. There have been an immense efforts done in developing countries for reducing the burden of cervical cancer but unfortunately limited success has been achieved. There are many reasons behind unsuccessful attempts to much extent due to insufficient knowledge and awareness among women about this disease, also none are aware about causative agent i.e. HPV, also spreading knowledge about cervical cancer to general population is poor by health care professionals

[3]. The South Asian region harbors one fourth of the burden of cervical cancer [4]. In India, there are an estimated 132,000 new cases and 74,000 deaths each year [4]. Most women with cervical cancer in these countries present with advanced disease, resulting in low cure rates [4].

With accessibility and availability to early detection, cases have been dramatically reduced in developed countries [5]. Whereas in developing countries there are several challenges and barriers related to spreading knowledge, availability of vaccine, uptake of cervical cancer screening test [6,7].

In Pakistan, situation of disease burden and severity is largely uncertain. There is no representation of true burden due to Limited information available in institutional and regional cancer registries and due to scarcity of epidemiological data [8,9]. Findings from urban setting in such registries showed that cervical cancer was responsible for 3.6% of cancer motility [10].

For establishing successful strategies for increasing utilization of preventive services, there is need to explore the extent to which potential beneficiaries are aware about the problem. And there is scanty information about awareness and knowledge of women on this potential issue. Therefore, this study aimed to determine the knowledge related to cervical cancer, its symptoms and risk factors and uptake of Pap smear among women of 18 years and above attending the gynecology OPD in two public hospitals of Karachi, Pakistan.

Methodology

Study design, setting and sampling technique: Facility based cross-sectional study was carried out from February to July 2013 in Two public sector hospitals i.e. Jinnah Hospital and Civil Hospital in Karachi where generally women belong to low socioeconomic status. All participants 18 years and above attending gynecology OPD were recruited applying convenient sampling technique.

Sample Size

Since no studies were found after literature search on the prevalence of awareness about cervical cancer risk factors and symptoms so sample size was calculated taking prevalence to be 50%, a precision of 5% and to allow a 95% interval around estimates. The calculated study sample size came out to be 384.

Data collection tool

The questionnaire was developed according to objective of the study and after extensive literature search this topic having content specific questions. The questionnaire comprises of two sections, first was based on sociodemographic characteristics i.e. current age, respondent's education and occupation, number of children living, age at marriage and husband's education. Second section was having questions regarding knowledge and awareness about different aspects of cervical cancer like knowledge about symptoms, risk factors, screening and vaccination.

Outcome assessment for knowledge: The knowledge was assessed using a 22 points scale which had binary response, that is, correct and incorrect. Each correct response was scored as 1 and incorrect as 0. A score of 50% (≥ 11 correct responses) was considered as optimum Knowledge.

Data Analysis

Data was double entered in Epi info and analyzed with IBM SPSS version 19. Proportions (%) were calculated for all categorical variables. Multicollinearity was assessed between independent variables. Logistic regression was carried out to assess the associations with predictors, which were characterized by odds ratios (ORs) and associated 95% confidence intervals (95% CIs). Variables were included in multivariate based on their significance at p-value of less than 0.25. then those variables were kept in final model which had p-value of less than 0.05.

Ethical Considerations

A written informed consent was taken from all participants of the study after explaining the study. Participants information's confidentiality has been kept by assigning them a unique identification number. The ethical review committee of Institute of Business Management has reviewed and approved the study. The institutional review board of Jinnah and Civil hospital allowed for data collection from hospital's Gynecology OPDs.

Results

Questionnaire administered to 384 women. Overall knowledge of cervical cancer was 23% based on scoring system. 35.1% women fall under age category of 31 to 45 years of age. 68.4% women were married. 59.6% women were educated and had completed primary and secondary level. 25% women were employed and majority involved in unskilled work. 59.8% women were having 3 to 5 children at the time of survey. 62.8% women were below 18 years at the time of marriage (Table 1). All women were unaware about HPV virus as a causative agent, early screening for its detection and about HPV vaccination. Hence, few reasons were being mentioned for lack of awareness, 79% women reported that health care providers have never told them about this disease, its screening and vaccination. Other 21% reported that vaccination might be costly and unavailable. 34.6% women have ever heard of cervical cancer. For knowledge about risk factors multiple responses were taken into account. 29.1% women reported multiparity, 21.8% women mentioned unsafe sexual practice can be the risk factor which included unprotected sex, multiple sexual partner. 19.7% women mentioned contraception as risk factor. 4.6% women did not know about any of the risk factors. Other mentioned risk factors were age at first coitus, smoking, poor hygiene, family history, nulliparity, etc (Table 2).

Socio Demographic Variables	n	%
Age categories		
18 to 30	118	30.7
31 to 45	135	35.1
> 45	131	34.1
Marital status of the respondents		
Married	263	68.4
Unmarried	121	31.6
Educational status of the respondents		
No education	155	40.3
Education	229	59.6
Educational status of the respondent's husband		
No education	173	45.1
Education	211	54.9
Employment status of respondents		
Employed	96	25
Unemployed	288	75
Housing status		
Rented	201	52.3
Own	183	47.7
No of children living		
< 3 children	74	19.2
3 to 5 children	230	59.8
≥ 6 children	80	21.0
Age at marriage		
< 18	241	62.8
18 to 29	94	24.4
> 30	49	12.8

Table 1: *Summary of socio-demographic characteristics of women, Karachi, Pakistan (n = 384).*

Knowledge and awareness	n (%)
Ever heard about cervical cancer	
No	251 (65.4)
Yes	133 (34.6)
Risk factors of cervical cancer	
Unsafe sexual practice	84 (21.8)
HPV Infection	10 (0.26)
Poor Hygiene	37 (9.6)
Early age at first coitus	55 (14.3)
Family history	93 (24.1)
Smoking	46 (11.9)
Multiparity	112 (29.1)
Old age	22 (5.7)
Contraception	76 (19.7)
Nulliparity	45 (11.7)
Don't Know	18 (4.6)

Table 2: *Knowledge about cervical cancer and its risk factors among women, Karachi, Pakistan (n = 384).*

7.1% didn't know about any of the presenting feature. 23.1% women mentioned vaginal discharge as a presenting feature, followed by 19.2% women who reported itching, 17.7% reported lower abdominal pain, menstrual problem reported by 14.5%. Other symptoms like bleeding per vaginal, fever, weight loss, swelling of cervix, post coital bleeding, weakness and anemia were also reported (Table 3).

Presenting Feature of cervical cancer	n (%)
Lower abdominal pain	68 (17.7)
Bleeding per vaginal	42 (10.9)
Discharge per vaginal	89 (23.1)
Fever	53 (13.8)
Menstrual Problems	56 (14.5)
Weight Loss	45 (11.7)
Itching	74 (19.2)
Swelling of cervix	19 (4.9)
Postcoital bleeding	23 (5.9)
Weakness	62 (16.1)
Anemia	31 (8.1)
Don't know	27 (7.1)

Table 3*: Knowledge about presenting features of Cervical Cancer among women, Karachi, Pakistan (n = 384).*

Among all women, only 11% had their Pap smear test done in last one year (Figure 1). Women with younger had much less knowledge (AOR: 0.56, 95% CI: 0.14 - 0.71) as compare to middle age. Women with no education and 3 or more children were less likely to have sufficient knowledge (AOR: 0.79, 95% CI: 0.51 - 0.89) as compared to the educated. Women with 6 or more children were less likely to have sufficient knowledge (AOR: 0.44, 95% CI: 0.2 - 0.68) as compared to the women with less than 3 children. Married women were more likely to have enough knowledge (AOR: 1.2, 95% CI: 1.01 - 3.11) as compare to unmarried women (Table 4).

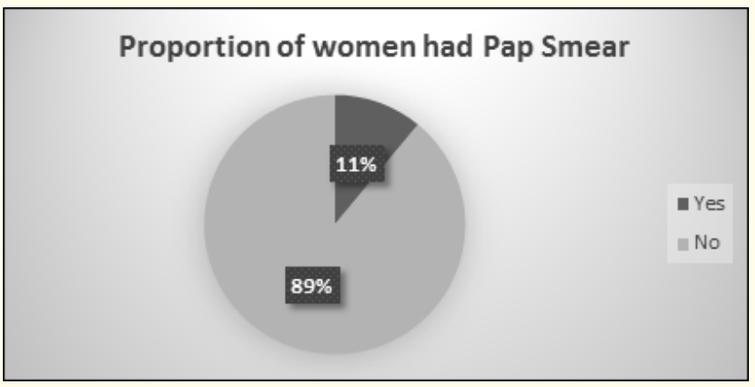

Figure 1: *Proportion of women who had Pap Smear in last one year.*

Characteristics	Unadjusted OR (95%CI)	Adjusted OR (95%CI)
Age categories*†		
18 to 30	0.61 (0.23 - 0.91)	0.56 (0.14 - 0.71)
31 to 45	1	1
> 45	0.91 (0.77 - 0.97)	0.89 (0.71 - 0.94)
Marital status of the respondents *†		
Married	1.71 (1.12 - 3.23)	1.2 (1.01 - 3.11)
Unmarried	1	17.1
Educational status of the respondents *†		
No education	0.81 (0.53 - 0.90)	0.79 (0.51 - 0.89)
Education	1	1
Educational status of the respondent's husband		
No education	1.1 (0.8 - 3.3)	
Education	1	-
Employment status *		
Employed	1	
Unemployed	0.69 (0.23 - 1.7)	-
Housing status *		
Rented	1.46 (1.11 - 2.71)	
Own	1	-
No of children living *†		
< 3 children 3 to 5 children ≥ 6 children	1 0.88 (0.62 - 0.96) 0.42 (0.19 - 0.67)	1 0.81 (0.59 - 0.92) 0.44 (0.2 - 0.68)
Age at marriage		
< 18	0.78 (0.61 - 1.89)	
18 to 29	1.9 (0.81 - 2.01)	-
> 30	1	

Table 4: *Logistic regression for association of sociodemographic factors with optimal knowledge of cervical cancer among women, Karachi, Pakistan (n = 384).*

** P value < 0.25in bivariate logistic regression model*

† P value < 0.05 in multivariate logistic regression model

OR: Odds ratio, CI: Confidence interval

Discussion

In our study the majority of women were having suboptimal knowledge about cervical cancer and similar findings have been reported in facility based study conducted in India among women [11]. As reported by the women about reasons for lack of awareness and one of the reason found was lack of information given by health care providers to women about the disease. This might be due to the fact that health care providers themselves are not much aware about the severity of this issue as reported in one of the study conducted among health care professionals in Pakistan and Thailand about their knowledge and it was found to be sub optimal [12,13].

Various studies have been found in developing countries on awareness about presenting features cervical cancer among general population which has shown insufficient knowledge of the women on the concerned issue [14-16]. Based on such findings in previous studies it can be predictable that considering the sub optimal knowledge about this disease in health professionals, the knowledge in general population of our country is quite low. As in our study women were less aware about the presenting features and quite few reported vaginal discharge which was to be the commonly reported presenting feature among the respondents followed by reporting of itching and lower abdominal pain as a symptom. Few women were completely unaware about any of the symptoms. These findings are supported by studies conducted in Kerala and Ahmedabad, states in India [17,18].

None of the participants were familiar about HPV infection which can lead to cervical cancer, its early detection and vaccination for protection from it. This finding is supported from the study conducted in Korea [19] and Cameroon [20].

Multiparity and unsafe sexual safe practices were reported commonly in this study. The findings are comparable to the study conducted among women of 18 years and above in Tanzania [21]. Further, third most commonly reporting risk factor by women was use of contraception. Knowledge about other risk factors like age at first coitus, smoking and family history was also reported but with quite less proportion which is supported by study conducted in India [22].

Few women had undergone for Pap smear test, which is an alarming situation as it's a screening test for early detection and lead to prevention of cervical cancer. This study finding is comparable with one conducted among women in Nepal [23] One of the reasons behind less awareness about the cervical cancer screening and low uptake of pap smear is due to the fact that health care providers do not explain women and discuss about such aspects. Hence, this finding reflects that even our health care providers have insufficient knowledge about the secondary prevention of cervical cancer as reported in a study conducted among health care professionals in Pakistan [12]. Eventually, it results in late diagnosis and poor prognosis of the disease [24].

Additionally, association was found among socio-demographic characteristics of women and knowledge. And after adjusting variables final model of multivariate showed that women below 18 years and above 45 years were less likely to have knowledge as compare to women between 31 to 45 years. And married women were more likely to have enough knowledge. Study conducted in India showed the similar findings [11]. This could be due to the reason that women with this advancing reproductive age group are more exposed to gynecological related issues and go more to health care facilities so comparatively get more knowledge about this issue.

Women with less education and having children 3 or more were less likely to have enough knowledge which is itself explaining that less education deprived one for seeking knowledge and eventually leads to poor health seeking behaviour. Study conducted in rural setting of India where overall literacy rate is low and our findings are comparable with it [17].

Study Limitations and Strengths

As selection of participants were from hospital facility so it can over represent the findings due to respondents coming with some health outcomes. Further, convenient sampling may cause selection bias into the study. Due to non- availability of a formal data base of nursing staff. Third limitation is that as it was the facility based study so the findings cannot be generalized to the general population.

However, this study gives some insight about knowledge of cervical cancer among women which highlights the dire need and future direction to focus on community based research determining the knowledge about cervical cancer, its screening and uptake of Pap smear among general population health need of the general population.

Conclusion and Recommendations

This study highlights that despite the inadequate and insufficient knowledge about cervical cancer, their attitude is favorable towards gaining knowledge and demand for screening. Though, uptake is quite low in practice. Health advocacy and mass media communication focusing on eligible women may increase awareness and adequate provision of screening services in public health facilities may encourage women for the uptake of Pap smear.

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