

## Original Research Article

# Awareness about cervical cancer screening among reproductive aged women attending gynaecology outpatient department in ESI PGIMSR & ESIC medical college & Hospital, Joka, Kolkata

Susmita Chaudhuri<sup>1\*</sup>, Rekha Dutt<sup>1</sup>, Shweta Goswami<sup>1</sup>, Joydeb Roychowdhury<sup>2</sup>

<sup>1</sup>Department of Community Medicine, ESIPGIMSR & ESIC Medical College, Joka, Kolkata, India

<sup>2</sup>Department of Obstetrics & Gynecology, ESIPGIMSR & ESIC Medical College, Joka, Kolkata, India

**Received:** 20 February 2017

**Accepted:** 14 March 2017

### \*Correspondence:

Dr. Susmita Chaudhuri,

E-mail: schaudhuri1986@gmail.com

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** Cervical cancer is a leading cause of morbidity and mortality in women especially India. The mainstay of prevention rests on early detection of cases through screening. So, this study aims to determine the knowledge of cervical cancer screening, Human papilloma virus & its vaccination status.

**Methods:** This was an observational study of cross-sectional design conducted among the adult reproductive aged women (18-45 years) visiting Gynaecology OPD at ESI-PGIMSR and ESIC Medical College and Hospital, Joka. A pre-designed and pre-tested interview schedule was prepared. Face to face interview was conducted in local language. Data was compiled & computed in SPSS software version 20.

**Results:** Total respondents were 97. Majority of the respondents (62.9%) belong to the age group of 21-30 years. 8 in 10 participants follow Hinduism. Almost equal percentages of participants were from urban & rural areas (51.5% & 48.5% respectively). 6 in 10 participants had heard about cervical cancer. Majority of the respondents (55%) mentioned friends & family as a source of information. 48.3% of the respondents knew poor genital hygiene as a predisposing risk factor for cervical cancer. Very few knew about other factors like multiple sexual partner (20%), early marriage (33.3%), young age (20%), repeated childbirth (35%), OCP usage (26.7%) as risk factors for cervical cancer. Only one participant had undergone screening test for cervical cancer (1.7%). 46.7% of the respondents were aware about association of HPV infection with cervical cancer. But none of the participants had received vaccine against cervical cancer & they cited lack of awareness as a reason for not receiving the vaccine.

**Conclusions:** A well-designed health education program focusing on effective multipronged IEC strategies utilizing pictorials, audio-visual and personal communication on cervical cancer could yield beneficial results.

**Keywords:** Cervical cancer, Screening, Reproductive women

## INTRODUCTION

Cervical cancer is a leading cause of morbidity and mortality in women especially India. This is the second most common cancer among women worldwide with an estimated 530,000 new cases & 275,000 deaths with overall incidence: mortality ratio of 52%.<sup>1</sup> Developing countries where it is the most common cancer among women, it accounts for 88% of the cases. Cases & deaths

have declined markedly in the last 40 years in the most industrialized countries partly owing to reduction in risk factors but mainly as a result of extensive screening programs. More limited improvements have been observed in developing countries where persistently high rates tend to be the rule.<sup>2</sup> It is estimated that during 2012; 134,420 new cases of cancer cervix have occurred in the country and about 72,825 women died of the disease.<sup>3</sup> In West Bengal, the incidence rate of cervical cancer is 27

per lac population and state has 26,000 cervical cancer patients and more than 50,000 women in precancerous stage.<sup>4</sup>

Important risk factor in the development of cervical cancer is infection with high strain of human papilloma virus. The virus works by triggering alterations in the cells of cervix which led to the development of cervical intraepithelial neoplasia which then progress to cancer.<sup>5</sup> Other co-factors that increase the risk of carcinoma cervix are- early marriage, early child bearing age, multiparity, poor genital hygiene, multiple sexual partners etc.<sup>6</sup> Premalignant changes have no symptoms and are not usually noticeable on visual examination. However by the time it is large enough to detect visually it is usually symptomatic with abnormal bleeding, often after sexual intercourse. Later on there may be watery or foul discharge that is resistant to most of the treatments for the usual vaginal infections.<sup>7</sup>

Accumulated evidence based on etiologic associations and the differential world patterns points to cervical cancer being a preventable disease. Sexual hygiene and the use of barrier contraception may largely achieve this objective but there is a need for long term education and acceptance. A report of WHO has determined that an inadequate knowledge and negative attitude towards screening are thought to be the major factors of cancer cervix development especially in developing countries like India. Very few studies regarding knowledge on cervical cancer screening & HPV infection has been conducted in this eastern part of India. Scattered data were available on the risk factors of cervical cancer. So, this study aims to determine the knowledge of cervical cancer screening, Human papilloma virus & its vaccination status. This will empower women to recognize early warning signals and thus preventing this dreaded disease early.

## METHODS

This was an observational study of cross-sectional design conducted among the adult reproductive aged women (18-45 years) visiting Gynaecology OPD at ESI-PGIMS and ESIC Medical College and Hospital, Joka during the study period i.e. 4 weeks (01/02/16-29/02/16). ESI-PGIMS and ESIC Medical College and Hospital, Joka is a 350 bedded tertiary hospital catering 43 lakhs insured persons. A study which was conducted in hospitals among women who had come to seek to health care reported that 84% were not aware of cervical cancer.<sup>8</sup> This was used for sample size calculation as the study setting and population profiles matched with ours. Using the formula for infinite population  $N = Z^2 pq/d^2$ , for 95% confidence interval and a precision of 10% we got a sample size of 74. Accounting for 20% nonresponse the total sample size was 97. Convenience sampling method was used. Patients who had diagnosed with severe mental disorder, did not give consent for the study & seriously ill were excluded from this study. A pre-designed and pre-

tested interview schedule consisting of three parts like socio-demographic characteristics of the study subjects including age, religion, residence, education etc, Knowledge regarding cervical cancer screening eg. organism causing cervical cancer, screening test for cervical cancer, ideal interval for cervical cancer screening etc., Knowledge regarding HPV and vaccination was prepared. After giving a brief introduction about the topic, verbal consent was taken. Face to face interview was conducted in local language. Data was compiled & computed in SPSS software version 20. Frequency and percentage was calculated. The study was approved by Institutional Ethics Committee. Informed consent from the study participants was taken. Confidentiality of the respondents was maintained.

## RESULTS

Total respondents were 97. Majority of the respondents (62.9%) belong to the age group of 21-30 years. 8 in 10 participants follow Hinduism. Almost equal percentages of participants were from urban & rural areas (51.5% & 48.5% respectively). Almost half of the respondents had completed secondary education. 76.3% of the respondents were housewives. More than 9 in 10 participants were married as shown in Table 1.

6 in 10 participants had heard about cervical cancer. Majority of the respondents (55%) mentioned friends & family as a source of information. Very few (21.6%) participants had mentioned about health care professionals. 48.3% of the respondents knew poor genital hygiene as a predisposing risk factor for cervical cancer. Very few knew about other factors like multiple sexual partner (20%), early marriage (33.3%), young age (20%), repeated childbirth (35%), OCP usage (26.7%) as risk factors for cervical cancer. Majority were aware of symptoms of cervical cancer as excessive vaginal bleeding (92.3%), Mid-cycle bleeding (73.1%). Symptoms like post coital bleeding (30.8%), pain (19.2%) were known to very few to them. Two third of the respondents had knowledge regarding early detection of cervical cancer. More than half of the respondents told that cervical cancer could be curable if detected early. 45% knew that screening test (pap smear) was available for cervical cancer but none had the knowledge about the interval of screening test as shown in Table 2.

Only one participant had undergone screening test for cervical cancer (1.7%). She mentioned that the procedure was painful & embarrassing. Lack of awareness was mentioned as a reason of not availing screening services by the majority of the study subjects (98.3%).

46.7% of the respondents were aware about association of HPV infection with cervical cancer but only 18% of them knew that the disease was asymptomatic & vaccine preventable. But none of the participants had received

**Table 1: Baseline characteristics (N=97).**

Characteristics	Number (n)	Percentage (%)
<b>Age (years)</b>		
≤20	17	17.5
21-30	61	62.9
31-40	13	13.4
>40	6	6.2
<b>Religion</b>		
Hinduism	85	87.6
Islam	11	11.3
Christianity	1	1.1
<b>Residence</b>		
Urban	50	51.5
Rural	47	48.5
<b>Education</b>		
No schooling	4	4.1
Primary schooling	13	13.4
Secondary schooling	46	47.4
Higher secondary schooling	21	21.6
Graduate & above	13	13.5
<b>Occupation</b>		
Skilled	5	5.1
Non skilled	15	15.5
Housewife	74	76.3
Student	3	3.1
<b>Marital status</b>		
Married	90	92.8
Unmarried	6	6.2
Divorced	1	1

**Table 2: Distribution of the study subjects according to the responses regarding knowledge on cervical cancer screening (N=60).**

Knowledge	Number (n)	Percentage (%)
<b>Heard of cervical cancer (N=97)</b>	60	61.9
<b>Source of information*</b>		
Book	3	5
Social media	16	26.6
Health professional	13	21.6
Family & friends	33	55
<b>Predisposing factors of cervical cancer*</b>		
Multiple sexual partner	12	20
Early marriage	20	33.3
Young age	12	20
Repeated childbirth	21	35
OCP usage	16	26.7
Poor genital hygiene	29	48.3
<b>Symptoms of cervical cancer*</b>		
Excessive vaginal bleeding	24	92.3
Mid-cycle bleeding	19	73.1
Post coital bleeding	8	30.8
Pain	5	19.2
<b>Knowledge about early detection of cervical cancer</b>	40	66.7
<b>Knowledge regarding curability of cervical cancer if detected early</b>	34	56.7
<b>Knowledge on screening test of cervical cancer</b>	27	45
<b>Knowledge on interval of screening</b>	0	0

**Table 3: Distribution of the study subjects according to the knowledge on HPV & its vaccination (N=97).**

Knowledge	Number (n)	Percentage (%)
<b>Knowledge on association of HPV organism with cervical cancer</b>	28	46.7
<b>HPV infection asymptomatic</b>	11	18.4
<b>HPV infection vaccine preventable</b>	11	18.3
<b>Received vaccination</b>	0	0
<b>Reason stated as lack of awareness for not receiving vaccination</b>	97	100

vaccine against cervical cancer and they cited lack of awareness as a reason for not receiving the vaccine as shown in Table 3.

## DISCUSSION

In our study 60% of the study subjects were aware about cervical cancer which was almost similar with the findings conducted in Kerala where 72.1% of the participants were aware of cervical cancer as a type of cancer affecting women & 74.2% knew that it could be detected early by a screening test but only 47 (5.8%) could name the Pap test as the screening method of cervical cancer.<sup>9</sup> Similar findings were reported from a study conducted in Mysore where majority of the women had knowledge about cervical cancer (81.9%) and its screening (85.5%).<sup>10</sup> 45% knew that screening test (pap smear) was available for cervical cancer which is similar with the study finding conducted in Delhi where 40% of the study subjects were aware about cervical cancer screening & 32% had adequate knowledge as they had heard of cervical cancer and its screening tests and knew the ways/tests for detecting and preventing cervical cancer.<sup>10</sup> In a study conducted among rural women in Kerala, 1.5% said screening should be done monthly, 20 (2.5%) said 1-2 yearly and 23 (28%) every 2 to 3 years but in our study none had the knowledge about the interval of screening test. This shows that participants did not have in-depth awareness about screening test.

The cardinal symptoms of cervical cancer mentioned included bleeding (289, 35.7%) and pain (70, 8.6%). Lack of hygiene and multiple sexual contacts were the only two risk factors cited by 3.9 per cent (32) and 1.6 per cent (13) respondents respectively.<sup>9</sup> In our study, 48.3% of the respondents knew poor genital hygiene as a predisposing risk factor for cervical cancer. Very few knew about other factors like multiple sexual partner (20%). Majority were aware of symptoms of cervical cancer as excessive vaginal bleeding (92.3%), Mid-cycle bleeding (73.1%). Symptoms like post coital bleeding (30.8%), pain (19.2%) were known to very few to them. Our findings were better compared to study conducted southern part, could be because of mass media exposure rate is higher here. Various symptoms & risk factors are widely broadcasted though knowledge dissemination regarding screening is poor.

55% of the respondents mentioned friends & family as a source of information in our study. Very few (21.6%) participants had mentioned about health care professionals which is in contrast with a study that shows 40% of the awareness comes from health care professional. That shows a big gap in the role of health care provider in disseminating information & counselling regarding cervical cancer screening. 26% respondents of our study mentioned about social media as a source which is again in contrast where only 10% reported as social media source.<sup>10</sup> That shows social media exposure rate is high in this setting that could be utilised as a media for spreading awareness among all the age-groups. In a study conducted in Kerala among rural reproductive women showed that the most common and important source of information mentioned was media (452, 55.8%) followed by health workers and doctors (273, 33.74%). Family and friends was cited by 119 (14.7%).<sup>9</sup>

Various community based studies have reported that 2%-6.9% of women got tested for cervical cancer screening.<sup>9,11</sup> In Kerala, 6.9% had ever done Pap test & Mysore study, 7.2% of the women had ever undergone Pap smear testing.<sup>9,12</sup> In our study also almost 2% of the participants had undergone pap smear test. In our study 98% of the participants told lack of awareness as a reason for undergoing screening test & one participant who had undergone screening mentioned that the procedure was painful & embarrassing. Similar findings were reported in Kolkata study where most of the women did not appreciate the importance of preventive health check up in the absence of symptoms. The most frequently reported obstacles to screening in Kolkata included not knowing where to obtain a Pap test; the test is painful, anxiety about results and cost. Some other determinants included being scared of the tests, feeling shy etc.<sup>8</sup>

46.7% of the participants knew about association of HPV infection in the etiology of cervical cancer which is similar to the study findings where the majority of the patients did not know that HPV had been established as an etiology of most cervical cancers and also 32.3% participants were aware of the ability of the HPV vaccine to prevent cervical cancer. In this study only 18.2% of them knew cervical cancer is vaccine preventable, this could be because lack of knowledge & awareness about HPV vaccination. None of the study participants received vaccination & cited lack of awareness as a reason. In

various other studies this is a reason for low coverage of HPV vaccination.<sup>13</sup>

## CONCLUSION

Most of the women had poor knowledge and none had undergone screening for cervical cancer. Very few had idea about preventive vaccination. As it was a questionnaire based study there could be response bias. This study is limited by not conducting in the community and was restricted to few women attending the OPDs. A well-designed health education program focusing on effective multipronged IEC strategies utilizing pictorials, audio-visual and personal communication on cervical cancer could yield beneficial results. Missed opportunities for Pap smears would be minimized if healthcare providers maximise their efforts to use each patient contact for counselling about the test. Active participation of health-care professionals is encouraged. It helps in formulation of strategies for optimal utilization of Pap test. As mass media was the common source of information, they could be used to raise the awareness of the women to promote early detection.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

## REFERENCES

1. The world Health Report. 1997. WHO, Geneva, Switzerland.
2. Globocan 2012. World Fact Sheet (June 2012). Section of the cancer information. International Agency for research on cancer. Lyon, France.
3. Globocon 2008. India fact sheet. Section of the cancer information. International Agency for research on cancer. Lyon, France.
4. Roychaudhuri S. Sociodemographic & behavioural risk factors for cervical cancer & knowledge in urban areas of North Bengal, India. Asian Pac J cancer. 2012;13(4):1093-6.
5. WHO/ILO Information centre on HPV and cervical cancer. Summary report 2010, Geneva, WHO. 2010.
6. Gottlieb N, Nicole H. "A primer on HPV." National cancer Institute 2002. Bethesda, USA. Available at: <http://www.cancer.gov/newsletter/benchmarks-vol2issue4page2>. Accessed on 19 February 2016.
7. Stanley K. 1981. Cervical cancer screening. World health. 1981: 21-3.
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;23:253-9.
9. Awasthy S, Quereshi MA, kurain B, Leelamoni K. Cervical cancer screening: Current knowledge & practice among women in a rural population of Kerala, India. Indian J Med Res. 2012;136(2):205-10.
10. Das B, Gupta K, Ranjan R, Singh M. Knowledge, attitude and practice of cervical cancer screening in women visiting a tertiary care hospital of Delhi. Indian Journal of Cancer. 2014;51(3):319-23.
11. Asthana S, Labani S. Factors Associated with Attitudes of Rural Women Toward Cervical Cancer Screening. Indian Journal of Community Medicine. 2013;38:246-8.
12. Kumar HN, Tanya S. A Study on Knowledge and Screening for Cervical Cancer among Women in Mangalore City. Ann Med Health Sci Res. 2014;4(5):751-6.
13. Hussain NA, Alkhenzian A, Mcwalter P, Qazi N, Alshmassi A, Farooqi S et al. Attitudes and perceptions towards HPV vaccination among young women in Saudi Arabia. J Family Community Med. 2016;23(3):145-50.

**Cite this article as:** Chaudhuri S, Dutt R, Goswami S, Roychowdhury J. Awareness about cervical cancer screening among reproductive aged women attending gynaecology outpatient department in ESI PGIMSR & ESIC medical college & Hospital, Joka, Kolkata. Int J Community Med Public Health 2017;4:1319-23.