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Research Article

### AWARENESS ABOUT CERVICAL CANCER CAUSE, RISK FACTORS AND WARNING SIGNS AND ITS ASSOCIATION WITH SOCIO DEMOGRAPHIC FACTORS AMONG FEMALES

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**Abstract:**

**Purpose:** The purpose of study were, to assess the awareness level of cervical cancer cause, risk factors and warning signs and to determine the association of cervical cancer awareness with sociodemographic factors among females.

**Methods:** Descriptive cross sectional study design was used. Study was conducted in two tertiary care hospitals of Islamabad, Pakistan. A total of 110 females were selected through convenient sampling technique. The knowledge was assessed by using point scale method. Chi square was applied to determine the association between cervical cancer awareness and sociodemographic factors.

**Results:** Overall awareness about cervical cancer was 27.2%. The women who heard about cervical cancer were 36.4% and very few 13% were able to identify that Human Papilloma virus is the causative agent. Almost half of the respondents 53.6% and 46.4% were able to identify contraception and having multiple sexual partners are the risk factor. Respondents who thought that post coital bleeding and vaginal discharge are the signs of cancer were 51.8% and 36.4% respectively. A significant association found between cervical cancer knowledge with Education ( $\chi^2 = 74.109$ ,  $df=12$ ,  $N=110$ ,  $p=.000$ ,  $\Phi = .821$ ), Occupation ( $\chi^2 = 18.479$ ,  $df=2$ ,  $N=110$ ,  $p=.000$ ,  $\Phi = .410$ ) and No. of children ( $\chi^2 = 20.868$ ,  $df=4$ ,  $N=110$ ,  $p=.000$ ,  $\Phi = .436$ ). Age, Income and residency were also significantly associated.

**Conclusion:** There was insufficient knowledge of women about cervical cancer cause, symptoms and risk factors. Establishment of strategies like publicizing, educating through seminars or media and these could be used for spreading awareness about Human papilloma viral infection and cervical cancer.

**Keywords:** Knowledge; Cervical cancer; Human papilloma virus; Risk factors and Warning signs.

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**INTRODUCTION:**

Cervical cancer is a major public health concern in developing countries because it is most growing deadliest and ignorant disease in developing regions [1]. The South Asian region has a high burden of cervical cancer accounting for one fourth of the total world's burden. Globally, >500,000 women diagnosed with cervical cancer each year and poor prognosis leads to 274,000 deaths which makes it, a second leading cause of cancer among women<sup>2</sup>. Whereas, in low and middle income countries where women are undiagnosed and suffering from this disease and die from this disease are around 190,000 every year [2]. Pakistan ranks seventh among countries having the highest number of cervical cancer deaths worldwide and about twenty women die of cervical cancer daily in Pakistan [3]. Another problem faced by developing regions is the detection of disease in late stages, decreasing the chances of cure [4]. The human papillomavirus (HPV) is the main cause of cervical cancer development which is a sexually transmitted virus [5]. In one study, in 2010, almost 99% cervical cancer cases were found to be due to HPV infection [6]. During the past 30 years, cervical cancer rates have much fallen in developed countries due to widely use of screening and treatment programs. But at the same time, in developing countries like Pakistan, the rates have risen or remain unchanged, often due to lack of awareness, no or limited access to health care. This descriptive cross-sectional study was carried out from 25<sup>th</sup> September to 10<sup>th</sup> November 2015 in two Tertiary care Hospitals of Islamabad (Pakistan Atomic Energy Commission General Hospital (PAEC) and Pakistan Institute of Medical Sciences (PIMS)). Convenient sampling technique was used to collect data from participants. Sample size was calculated by taking prevalence to be 26.7%, a precision of 5% and to allow a 95% interval around estimates. The calculated study sample size came out to be 110. Seventy women were selected from PIMS, large sample selected from PIMS because PIMS has MCH center and having large proportion of patients and 40 selected from PAEC hospital. Married women with non-medical background with age between 18 to 49 years were included and those who were having cervical cancer and refuse to participate in study were excluded. A pilot investigation was done on 5 % of population to examine the acceptability, and validity of the questionnaire on 28<sup>th</sup> August 2015 prior to the main study. Questionnaire was designed based on study objectives, taking help from the previous literature and studies available on the topic. The questionnaire was divided into three main sections, first was based on socio-demographic characteristics i.e. current age, education, occupation, monthly

services and absence of screening and treatment programmes [7]. Lack of awareness about the disease and its risk factors decrease the chances of adopting screening programs. Some studies showed that having sufficient knowledge about cervical cancer and screening programs increase acceptance, and uptake of available screening services [8]. Among all cancers, cervical cancer is the one which can be most effectively controlled by organized preventive and screening programmes [9].

Although many researches have been performed on nurses and doctors but unfortunately, there is scanty information about awareness and knowledge of common women on this potential issue. Awareness among general population can enhance the healthcare seeking practices. 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. Therefore, this study purpose was to determine the awareness level of cervical cancer causes, risk factors, warning signs and association of cervical cancer knowledge with demographic factors among women of 18 years and above attending the gynecology OPD in two tertiary care hospital of Islamabad, Pakistan.

**METHODS:**

income, residency, marital status, number of children, access to health care facility, second consisted of the questions regarding general awareness of cervical cancer (Heard about cervical cancer, source of information, information about prevalence) and third consisted of the questions regarding knowledge of cervical cancer cause (HPV virus), risk factors (Sexually transmitted diseases, multiple sexual partners, old age, poverty, smoking, poverty, early age marriages, null parity) and warning signs/symptoms (Offensive vaginal discharge, post coital bleeding, bleeding after menstruation, lower abdominal pain, fever, lesions on cervix, weakness). Structured Questionnaire was administered as a face-to-face interview to facilitate participant understanding and completeness and thereby ensure the quality of the information. The knowledge was assessed by using point scale method which had three responses i.e. Yes, No and don't know.

**Data Analysis:**

Data was entered and analyzed by using SPSS version 21.0. Descriptive statistic was used to describe the background characteristic profile of the respondents. The causes of cervical cancer, risk factors, and signs/symptoms were determined as

frequencies and percentages. Chi square was applied to determine association between socio-demographic variables and general knowledge about cervical cancer (Heard about cervical cancer, source of information and information about prevalence) and phi test was used to determine the strength of association of those variables.

One hundred ten women were successfully interviewed by means of questionnaire. All women were married and Muslim, 40% women participated in this study were 26-33yrs old, 22% of the respondents were illiterate, only 12.7% were graduated. Most of the women 64.5% were housewife. Monthly income having less than 10,000 were reported as 31.8% and only 15.5% reported that they are having income more than 30,000. 60% women were from rural areas and 48.2% reported that Government hospitals were very far from our homes. Only 51.8% women can avail easily healthcare facility, mostly were from urban setting (Table I). Out of all the respondents, just 36.4% individuals responded as if they know about the term "cervical cancer". Out of this 10.9% and 6.4% heard from media and Health care professionals respectively. Majority of respondents 98.2% did not know any patient with this disease. Just 21.8% respondents correctly identify that it is a most common cancer among women. (Table II)

Overall awareness about cervical cancer was 26.9%. Just 12.7% women knew about Human papilloma virus is the main cause of cervical cancer. The most reported risk factors of cervical cancer were: contraception 53.6%, null parity 48.2%, sexual transmitted diseases 28.2% and multiple sexual partners 46.4%. Other risk factors post coital bleeding, smoking, early age marriages, poverty were also reported. The women reported most common presenting features were: offensive vaginal discharge 36.4%, heavy bleeding after menstruation 34.5%, weakness 30.9%, lesions on cervix 28.2% and fever. In my study the majority of women were having less knowledge about cervical cancer and similar findings have been reported in facility-based study conducted in India among women [10]. One of the reason of lack of information about this disease reported by most women was health care providers, it might be due to the fact that health care providers themselves are not much aware about the severity of this disease 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, they are having not satisfactory level of knowledge [11,12]. In a study conducted in India, less than half of the study population knew about cervical cancer

Permission was taken from ethical review board of both hospitals and written informed consent was signed from respondents and ensured that their information will be used only for research purposes and anonymity and confidentiality will be maintained throughout the research.

### RESULTS:

15.5%. Other reported presenting features were backache and lower abdominal pain (Table III). Overall awareness about cervical cancer causes, warning signs and risk factors were 12.7%, 30.56% and 37.64% respectively (Fig I). In this study, chi square ( $\chi^2$ ) was applied to determine the association between different demographic variables with cervical cancer awareness (have you heard about cervical cancer; How common is cervical cancer; What is source of information). Analysis showed that significant association present between age and cervical cancer awareness. As shown by the Pearson chi-square results, Age and how common is cervical cancer were significantly associated ( $\chi^2 = 15.363$ ,  $df = 6$ ,  $N=110$ ,  $p = .018$ ,  $\Phi = .374$ ).  $\Phi = .374$  which indicates the strength of the association between two variables. Education was found significantly associated with heard about cervical cancer ( $\chi^2 = 46.786$ ,  $df = 4$ ,  $N=110$ ,  $p = .000$ ,  $\Phi = .652$ ), how common is cervical cancer ( $\chi^2 = 34.550$ ,  $df = 8$ ,  $N=110$ ,  $p = .000$ ,  $\Phi = .560$ ) and source of information ( $\chi^2 = 74.109$ ,  $df = 12$ ,  $N=110$ ,  $p = .000$ ,  $\Phi = .821$ ). A significant association found between occupation and what do you think how common is cervical cancer ( $\chi^2 = 18.479$ ,  $df = 2$ ,  $N=110$ ,  $p = .000$ ,  $\Phi = .410$ ). Number of children and what do you think how common is cervical cancer were also significantly associated ( $\chi^2 = 20.868$ ,  $df = 4$ ,  $N=110$ ,  $p = .000$ ,  $\Phi = .436$ ,  $p = .000$ ). Residency and Income were also significantly associated with heard about cervical cancer and source of information about cervical cancer. (Table V)

### DISCUSSION:

[13]. In Pakistan, only one fourth of the respondents were reported to know about cervical cancer as the most common cause of gynecological cancers. In the same study, only 26% of the participants were aware of one or more risk factors of cervical cancer [14].

Only about a 27.2% of the women were having knowledge about cervical cancer, where as a study conducted in Karachi Pakistan in which authors reported 23% awareness among the participants [15]. However, the awareness rate among women was lower compared to that reported in a study conducted in Rawalpindi where about 60% participants were found to be aware of this disease and in this study

13% women were found to be aware of HPV as causative factor of cervical cancer compared to higher awareness rate reported in Rawalpindi as 22% [16]. Early age marriages, multiple sexual partners and null parity were reported common risk factors in this study. Further, the first most commonly reporting risk factor by women was use of contraception, this finding was different from study results of research conducted in Karachi, Pakistan where multiparity was the most common risk factor reported [17]. Knowledge about other risk factors like age, smoking, poverty and low immunity were also reported but with quite less proportion which is supported by study conducted in Kenya [18]. In developing countries, various studies have been found having insufficient knowledge about warning signs and symptoms of cervical cancer. As in this study women were less aware about the warning signs, post coital bleeding and lower abdominal were most commonly reported presenting features and quite few reported offensive vaginal discharge and lesion on cervix. Few women were completely unaware about any of the symptoms. These findings are supported by studies conducted in Kerala and Ahmedabad, states in India [19].

Additionally, association was found among socio-demographic characteristics of women and knowledge of cervical cancer. And after applying chi square, it showed that women below 25 years and above 41 years were less likely to have knowledge as compare to women between 26 to 41 years. Study conducted in India showed the similar findings [20]. This might be due to the reason that women with advancing 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 or no education and having children less than three likely to have low level of knowledge which is itself explaining that less education deprived one for seeking knowledge and eventually leads to poor health seeking behavior. Study conducted in rural setting of India where overall literacy rate is low, and our findings are comparable with it [21].

#### **Limitations and Strength of the study:**

As selection of participants were from hospital facility so it can over represent the findings as respondents already came some health issues. Further, convenient sampling may cause selection bias. Thirdly, large sample was not taken due to financial constraints and lack of time 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.

#### **CONCLUSION:**

This study demonstrates inadequate and insufficient knowledge of women about cervical cancer cause, symptoms and risk factors. Establishing strategies like publicizing, educating through seminars or media and these could be used for spreading awareness about Human papilloma viral infection and cervical cancer initial symptoms and risk factors among common women. So that they can go to hospital as soon as possible when disease can be controlled and cured.

#### **Author Statements:**

No competing interests involved in the study. No 3<sup>rd</sup> party funding was taken to conduct this study. As no intervention was involved in the study so ethical approval was not required for the study, however, all the ethical principles were taken care while collecting data. An informed consent was taken from the participants. And confidentiality of data was maintained.

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**Table I: Socio-demographic characteristics of women (N=110)**

Variables	Frequency (n)	Percentage %
<b>Age (in years)</b>		
18-25	25	22.7
26-33	44	40
34-41	28	25.5
41-49	13	11.8
<b>Educational status</b>		
Illiterate	24	21.8
Primary	14	12.8
Middle	26	23.6
≥Matric	46	41.8
<b>Monthly Income (in Rupees)</b>		
Less than 10, 000	35	31.8
10,000-20,000	31	28.2
20,000-30,000	31	24.5
More than 30,000	17	15.5

<b>Occupation</b>		
Housewife	71	64.5
Working women	39	35.5
<b>Residency</b>		
Urban	44	40.0
Rural	66	60.0
<b>No. of Children</b>		
No Child	12	10.9
< 3	31	28.2
>3	67	60.9

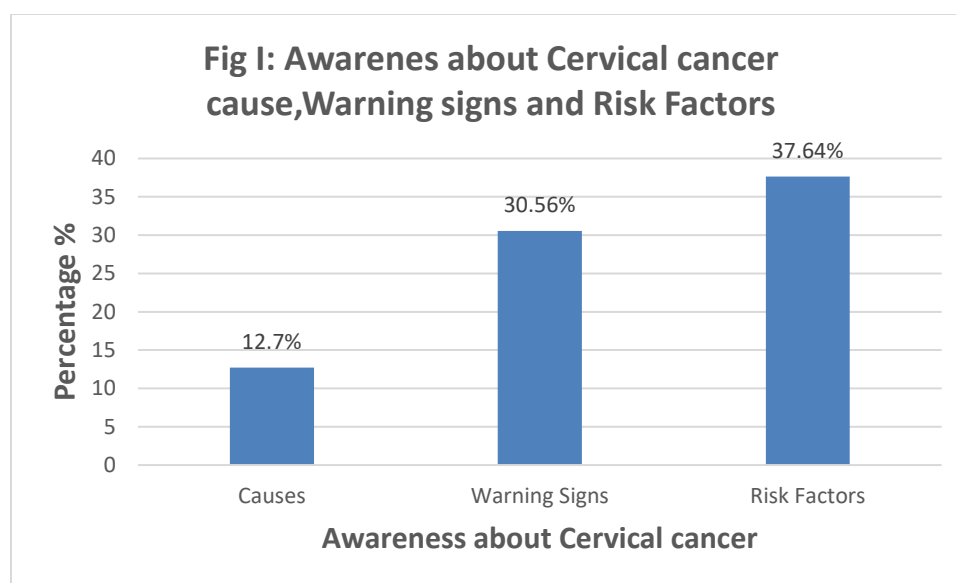
**Table II: Knowledge of Cervical cancer among females of two Tertiary care hospital of Islamabad (N=110)**

Variables	Frequency (n)	Percentage %
<b>Information about cervical cancer</b>		
Yes	40	36.4
No	70	63.6
<b>Sources of information</b>		
Media	12	10.9
Healthcare professionals	7	6.4
Friends & relatives	21	19.1
Not heard	70	63.6
<b>Know about any victim of disease</b>		
Yes	2	1.8
No	108	98.2
<b>How common cervical cancer</b>		
Less	25	22.73
Most	24	21.82
Don't know	61	55.45

**Table III: Awareness about cause, risk factors and warning signs of cervical cancer among females of two Tertiary care Hospital of Islamabad (N=110)**

Variables	Yes %	No%	Don't know %
<b>Causes</b>			
Human papilloma Virus	12.7	10	77.73
<b>Risk Factors</b>			
Sexually Transmitted Diseases	28.2	8.2	63.6
Multiple sexual partners	46.4	10.9	42.7
Old age	20	17.3	62.7
Poverty	42.7	20.0	37.3
Smoking	28.2	20.0	51.8
Low Immunity	38.2	24.5	37.3
Early age marriages	42.7	11.8	45.5
Contraception	53.6	21.8	24.5

Nulliparity	48.2	22.7	29.1
Having Full term pregnancy	28.2	57.3	14.5
<b>Warning Signs/Symptoms</b>			
Lower abdominal pain	44.5	14.5	40.9
Backache	12.7	22.7	64.5
Offensive vaginal discharge	36.4	10.9	52.7
Bleeding after menstruation	34.5	31.8	33.6
Post-coital bleeding	51.8	7.3	40.9
Fever	15.5	10.0	74.5
Lesions on cervix	28.2	15.5	56.4
weakness	30.9	9.1	60.0



**Table V: Association of demographic factors with cervical cancer awareness**

<b>Association of Variables</b>	<b>Chi Square</b>	<b>df</b>	<b>P value</b>	<b>Phi</b>
Age with Heard about cervical cancer	8.667	3	.034	.281
Education with Heard about cervical cancer	46.786	4	.000	.652
Residency with Heard about cervical cancer	32.083	1	.000	.540
Education with How common is cervical cancer	34.550	8	.000	.560
Occupation with How common is cervical cancer	18.479	2	.000	.410
Number of children with How common is cervical cancer	20.868	4	.000	.436
Education with source of information	74.109	12	.000	.821
Income with source of information	19.852	9	.019	.425
Residency with source of information	36.746	3	.000	.578