

## **KNOWLEDGE AND AWARENESS OF CERVICAL CANCER AND SCREENING PRACTICES AMONG NURSES AT LAHORE GENERAL HOSPITAL, PAKISTAN**

### **ABSTRACT**

**Introduction:** Cervical cancer is one of the leading causes of death among women gynecological population of developing countries.

**Objective:** The aim of current study was to find out the knowledge, awareness and screening practices about cervical cancer among nurses at Lahore general hospital, Lahore, Pakistan.

**Material & Methods:** This cross-sectional, descriptive, interview based study was conducted on 250 nurses at Lahore general hospital, Lahore, Pakistan. The duration of this study was from 2018 to 2019 and convenience sampling technique was used. The questionnaire was applied to test the knowledge, awareness and screening practices about cervical cancer among nurses.

**Results:** The results showed that most nurses were in age range of 25-34 years (46%). The results showed that 96% of nurses were aware that cervix cancer is a dangerous disease. In an answer to 'how does one get cervical cancer', early marriage as a cause was known to 75%, smoking as a cause was known to 36.8%, genetics as a cause was known to 6%, and multiple sexual partners as a cause was known to 70%. 11.2% said that patient with this cancer may have no symptoms, 73.6% said that profuse bleeding can be a symptom, and 17.6% said that kidney failure can be a symptom of this cancer. 46.8% were not aware of any blood detection test, 75.6% were aware of pap-testing method, and 95.6% were aware of scanning method. Regarding prevention, 34% said that cervical cancer can be prevented, and out these 34%, 85% said that vaccines can be preventable, 98.8% said yes to pap-smear, and 61% said that safe sex is also a preventive method.

**Conclusion:** It was concluded that majority of nurses at Lahore general hospital need further education regarding knowledge, awareness and screening strategies for cervical cancer.

**KEY WORDS:** Knowledge; Awareness; Cervical cancer; Screening.

## INTRODUCTION

Cervical cancer is one of the leading causes of death among women gynecological population of developing countries.<sup>1</sup> The frequency of cervical cancer is 1/4<sup>th</sup> of the burden of cervical carcinoma.<sup>2</sup> Most of the patients of cervical cancer presents in late advancing stage. The data is largely unknown in Pakistan. The local studies showed that cervical carcinoma was accounted for 3.6% deaths of cancers.<sup>3</sup> The facility of pap-smear and other screening methods of cervical cancer are not available in every part of country. It was found in a study that only 5% Pakistani women were aware of screening for cervical cancer.<sup>4</sup> It was also found in a study that only 2.6% of female had cervical cancer screening by pap-smear once a life.<sup>4</sup> There are many causes of cervical cancer but HPV is most widely investigated etiological factor.<sup>5-7</sup> There are many methods to screen out cervical cancer such as visual inspection, DNA testing and liquid based monolayer cytology, but the pap-smear method is simplest to use and got high sensitivity (50-75%) and specificity (98%).<sup>8-10</sup> There are many preventive methods for cervical cancer that include vaccines and other secondary preventive methods.<sup>11,12</sup> The early detection of cervical cancer needs high cost infrastructure and properly trained health workers for early screening of this carcinoma. Giving a large workforce of nursing and paramedic staff in Pakistan, it is very important to know the knowledge, awareness and screening practices about cervical cancer among nurses. Very few studies have been conducted so far to find out the knowledge, awareness and screening practices about cervical cancer among Pakistani nurses.<sup>13</sup> Following this rationale, it should be investigated about the current knowledge, awareness and screening practices about cervical cancer among nurses at tertiary care hospitals of Lahore, Pakistan. To our knowledge, no study has been conducted so far regarding knowledge, awareness and screening practices about cervical cancer among nurses at Lahore general hospital, Lahore, Pakistan. Therefore, the aim of current study was to find out the knowledge, awareness and screening practices about cervical cancer among nurses at Lahore general hospital, Lahore, Pakistan. The information from this study will be helpful to plan future continuing education programs for nurses of Lahore general hospital, regarding cervical cancer.

## **MATERIALS AND METHODS**

This cross-sectional, descriptive, interview based study survey was conducted after taking informed consent and ethics approval on nurses at Lahore general hospital, Lahore, Pakistan. The duration of this study was from 2018 to 2019 and convenience sampling technique was used. The calculated sample size was 250 nurses. In selecting the nurses for this cross-sectional, descriptive, interview based study, we used the following criteria: (1) nurses working at Lahore general hospital, and (2) nurses who gave informed consent. Exclusion criteria were doctors or other health workers working in Lahore general hospital. The questionnaire was applied to test the knowledge, awareness and screening practices about cervical cancer among nurses. The questionnaire consisted of close-ended questions regarding knowledge, and awareness of nurses about cervical cancer, and questionnaire also consisted of questions about current screening practices of hospital nurses for screening cervical cancer. The questionnaire consisted of 3 parts, first was dealing with social and demographic profile data of the selected patients (for example, age, gender, marital status, etc.), second part was composed of questions on the knowledge and awareness about multiple areas of cervical cancer, and third part was composed of questions on the screening component of cervical cancer. Data was analyzed and descriptive stats were used. Percentages and proportions were collected for all the variables to test the knowledge, awareness and screening practices about cervical cancer among nurses at Lahore general hospital, Lahore, Pakistan.

## **RESULTS**

The response rate was 100%. The socio-demographic data (Table I) showed that out of 250 nurses, most of the nurses were in age range of 25-34 years (46%), and most of them were belonging to lower middle class (75%).

The results of the knowledge and awareness part showed that 96% of nurses were aware that cervix cancer is a dangerous disease (Table II). In an answer to 'how does one get cervical cancer', early marriage as a cause was known to 75%, smoking as a cause was

known to 36.8%, genetics as a cause was known to 6%, and multiple sexual partners as a cause was known to 70% (Table II). In an answer to 'which women most get cervical cancer', 69.6% said yes for poor women, and 57.6% said yes for sex workers (Table II).

Table III showed responses regarding symptoms of cervical cancer. 11.2 % said that patient with this cancer may have no symptoms, 73.6% said that profuse bleeding can be a symptom, and 17.6% said that kidney failure can be a symptom of this cancer.

Table III also showed responses regarding diagnosis of cervical cancer. 46.8% were not aware of any blood detection test, 75.6% were aware of pap-testing method, 95.6% were aware of scanning method, and 95.2% were aware of biopsy method.

Regarding prevention, 34% said that cervical cancer can be prevented, and out these 34%, 85% said that vaccines can be preventable, 98.8% said yes to pap-smear as a preventive method, and 61% said that safe sex is also a preventive method.

## **DISCUSSION**

Knowledge and awareness of cervical cancer is very important among all the patients and health workers for timely management and treatment of cervical cancer. Various screening protocol exists for early detection of cervical cancer.<sup>8-10</sup> Studies are inadequate regarding current knowledge, awareness and screening practices about cervical cancer among nurses at tertiary care hospitals of Lahore, Pakistan. To our knowledge, no study has been done so far on nurses at Lahore general hospital, Lahore, Pakistan. Thus, the objective of this cross-sectional, descriptive, interview based study was to find out the knowledge, awareness and screening practices about cervical cancer among nurses at Lahore general hospital, Lahore, Pakistan.

There is high strength of nurses working in Lahore general hospital, Pakistan, but the data of exact number of nurses was not available. Keeping in mind the inclusion criteria, the sample size was 250 nurses in the present study. The sample was selected using convenience sampling technique. This is in agreement with the methodology of previously conducted regional study of Karachi, where sample was selected using convenience sampling technique.<sup>13</sup>

In the present study 3-part questionnaire was used to test the knowledge, practice strategies and awareness of nurses about cervical cancer. The questionnaire consisted of close-ended question, first was dealing with social and demographic profile data of the selected patients, second part was composed of questions on the knowledge and awareness about multiple areas of cervical cancer, and third part was composed of questions on the screening component of cervical cancer. This is agreement with the findings of previous studies where questionnaire was used to test the knowledge, practice strategies and awareness of nurses about cervical cancer.<sup>13-20</sup>

In the present study, out of 250 nurses, most of the nurses were in age range of 25-34 years (46%), 66% were Muslims, 72% were single, and most of them were belonging to lower middle class (75%). The results of the knowledge and awareness part showed that 96% of nurses were aware that cervix cancer is a dangerous disease. Most of them (57%) answered that it is not common in our country. Regarding etiology, early marriage as a cause was known to 75%, smoking as a cause was known to 36.8%, genetics as a cause was known to 6%, and multiple sexual partners as a cause was known to 70%. Regarding incidence and frequency, 69.6% said yes for poor women, 57.6% said yes for sex workers and 15% said that any women can get cervical cancer. This shows that most of the nurses are aware that it is a dangerous disease but there is need of further education regarding etiology and incidence aspect of this disease. This is similar to results of other studies conducted on nurses in other under-developed countries of the world.<sup>14,16,19,20</sup> This is in great contrast to the findings of studies in other developed countries of the world.<sup>21-23</sup>

In the present study, 11.2% said that patient with this cancer may have no symptoms, 73.6% said that profuse bleeding can be a symptom, 17.6% said that kidney failure can be a symptom of this cancer and 42.8% said that women with menopausal age group mostly get this type of cancer. Regarding diagnosis, 46.8% were not aware of any blood detection test, 75.6% were aware of pap-testing method, 95.6% were aware of scanning method, 17.6% were aware of HPV testing method, and 95.2% were aware of biopsy method. Regarding prevention, 34% said that cervical cancer can be prevented, and out these 34%, 85% said that vaccines can be preventable, 98.8% said yes to pap-smear as a preventive method, and 61% said that safe sex is also a preventive method. This shows that most of the nurses are not aware about common clinical presentations of this disease

but their knowledge regarding screening tests was optimal. Most of the nurses were not updated regarding prevention aspects of this disease. This shows that there is also a need for further education regarding prevention aspects of this disease. This is similar to results of other studies conducted on nurses in other under-developed countries of the world.<sup>15-18</sup> However, this is in great contrast to the findings of studies in other developed countries of the world.<sup>21-23</sup> Cervical cancer screening should be introduced at the level of school and colleges, and women organizations should also be involved for eradication of this cancer at initial stages. Screening of cervical cancer is very important and a key step to prevent progression of disease to the advanced stages. The findings of the present study should be considered when planning a hospital-based cervical cancer screening program for health professionals and other health workers. The main limitations of this study are its descriptive nature, convenience sampling technique, lack of blinding, and small sample size. Regardless of these limitations, this study provided data for the majority of nurses at Lahore general hospital regarding their knowledge, awareness and know-how of screening strategies of cervical cancer. Hospital-based continuing medical education sessions are suggested to increase the knowledge, awareness and know-how of screening strategies of cervical cancer among nurses.

## CONCLUSION

It was concluded that the majority of nurses at Lahore general hospital need update regarding knowledge, awareness and know-how of screening strategies for cervical cancer. Hospital-based continuing medical education sessions are suggested to increase the knowledge, awareness and know-how of screening strategies of cervical cancer among the nurses of Lahore general hospital.

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**Comment [J1]:** Delete the selected text in the discussion because it is already scribed in the conclusion.

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UNDER PEER REVIEW



| Variable   | Proportions (n) | Percentage (%) |
|------------|-----------------|----------------|
| <b>Age</b> |                 |                |
| 20-24      | 110             | 44%            |
| 25-34      | 115             | 46%            |

Table I: Socio-demographic data (N=250)

|                              |     |       |
|------------------------------|-----|-------|
| 35-40                        | 25  | 10%   |
| <b>Religion</b>              |     |       |
| Muslim                       | 165 | 66%   |
| Christian                    | 70  | 28%   |
| Hindu                        | 15  | 6%    |
| <b>Marital Status</b>        |     |       |
| Married                      | 70  | 28%   |
| Unmarried                    | 180 | 72%   |
| <b>Socio-economic status</b> |     |       |
| Lower                        | 48  | 19.2% |
| Middle                       | 189 | 75.6% |
| Upper                        | 13  | 5.2%  |

Table II: Knowledge and awareness of nurses about etiology (N= 250)

| <b>Variable</b>                     | <b>Proportions (n)</b> | <b>Percentage (%)</b> |
|-------------------------------------|------------------------|-----------------------|
| <b>What is CA cervix?</b>           |                        |                       |
| Infection of cervix                 | 1                      | 0.4%                  |
| Ordinary disease                    | 2                      | 0.8%                  |
| Dangerous disease                   | 240                    | 96%                   |
| Don't know                          | 2                      | 0.8%                  |
| <b>Is it common in our country?</b> |                        |                       |
| Yes                                 | 12                     | 4.8                   |
| No                                  | 144                    | 57.6                  |

|                                    |     |      |
|------------------------------------|-----|------|
| Don't know                         | 94  | 37.6 |
| <b>How does one get Ca Cervix?</b> |     |      |
| <b>Early Marriage</b>              |     |      |
| Yes                                | 189 | 75.6 |
| No                                 | 28  | 11.2 |
| Don't know                         | 33  | 13.2 |
| <b>Smoking?</b>                    |     |      |
| Yes                                | 92  | 36.8 |
| No                                 | 28  | 11.2 |
| Don't know                         | 130 | 52   |
| <b>Hereditary?</b>                 |     |      |
| Yes                                | 16  | 6.4  |
| No                                 | 76  | 30.4 |
| Don't know                         | 158 | 63.2 |
| <b>Infection?</b>                  |     |      |
| Yes                                | 38  | 15.2 |
| No                                 | 34  | 13.6 |
| Don't know                         | 178 | 71.2 |
| <b>Multiple sex partners?</b>      |     |      |
| Yes                                | 175 | 70   |
| No                                 | 26  | 10.4 |
| Don't know                         | 49  | 19.6 |

Table III: Knowledge and awareness of nurses about spread of disease (N= 250)

| Variable  | Proportions (n) | Percentage (%) |
|---|-----------------|----------------|
| <b>Which age group is likely to get Ca Cervix</b> |                 |                |
| Any age group                                     | 64              | 25.6           |
| Reproductive age group                            | 28              | 11.2           |
| Menopausal age group                              | 107             | 42.8           |
| Don't know  | 51              | 20.4           |

| <b>CA cervix is common in which type of women?</b> |     |      |
|--|-----|------|
| <b>Rich</b>  |     |      |
| Yes  | 48  | 19.2 |
| No   | 174 | 69.6 |
| Don't know   | 28  | 11.2 |
| <b>Poor</b>  |     |      |
| Yes  | 174 | 69.6 |
| No   | 48  | 19.2 |
| Don't know   | 28  | 11.2 |
| <b>Sex-workers</b>                                 |     |      |
| Yes  | 144 | 57.6 |
| No   | 08  | 3.2  |
| Don't know   | 98  | 39.2 |
| <b>Any women</b>                                   |     |      |
| Yes  | 39  | 15.6 |
| No   | 163 | 65.2 |
| Don't know   | 48  | 19.2 |

Table IV: Knowledge and awareness of nurses symptoms and age (N=250)

| <b>Variable</b>                          | <b>Proportions (n)</b> | <b>Percentage (%)</b> |
|--|------------------------|-----------------------|
| <b>A patient with Ca Cervix may have</b> |                        |                       |
| No symptoms                              |                        |                       |
| Yes                                      | 28                     | 11.2                  |
| No                                       | 189                    | 75.6                  |
| Don't know                               | 33                     | 13.2                  |
| Profuse bleeding                         |                        |                       |
| Yes                                      | 184                    | 73.6                  |

|                |     |      |
|----------------|-----|------|
| No             | 22  | 8.8  |
| Don't know     | 44  | 17.6 |
| Kidney failure |     |      |
| Yes            | 44  | 17.6 |
| No             | 58  | 23.2 |
| Don't know     | 148 | 59.2 |

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Table V: Knowledge and awareness of nurses about prevention (N=250)

| Variable                             | Proportions (n) | Percentage (%) |
|--------------------------------------|-----------------|----------------|
| <b>How can Ca cervix be detected</b> |                 |                |
| Blood test                           |                 |                |
| Yes                                  | 42              | 16.8           |

|   |            |     |      |
|---|------------|-----|------|
|   | No         | 91  | 36.4 |
|   | Don't know | 117 | 46.8 |
| Paptest   | Yes        | 189 | 75.6 |
|   | No         | 20  | 08   |
|   | Don't know | 41  | 16.4 |
| Scanning  | Yes        | 239 | 95.6 |
|   | No         | 2   | 0.8  |
|   | Don't know | 9   | 3.6  |
| HPV testing   | Yes        |     |      |
|   | No         | 44  | 17.6 |
|   | Don't know | 111 | 44.4 |
| Cervical biopsy   | Yes        | 95  | 38   |
|   | No         | 238 | 95.2 |
|   | Don't know | 10  | 04   |
|   |            | 2   | 0.8  |
| <b>Can Ca cervix be prevented</b>                         |            |     |      |
|   | Yes        | 85  | 34   |
|   | No         | 153 | 61.2 |
|   | Don't know | 12  | 4.8  |
| <b>If yes to above question, how can it be prevented?</b> |            |     |      |
| Vaccine   | Yes        | 73  | 85   |
|   | No         | 12  | 14.1 |
| Papsmear  | Yes        | 84  | 98.8 |
|   | No         | 01  | 1.1  |
| Safe sex  | Yes        | 52  | 61.1 |
|   | No         | 33  | 38.8 |