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Original Research Article

# A Descriptive Community-Based Cross-Sectional Study to Understand Knowledge and Attitude towards Cervical Cancer among Reproductive Age Group Women

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**Abstract:**

**Background:** The cervix, which connects the uterus and vagina, can develop cancer. This condition is known as cervical cancer. It is primarily caused by the sexually transmissible pathogen known as the Human Papilloma Virus (HPV). Consequently, cervical cancer can be avoided with efficient HPV infection prevention measures. The condition usually affects women who live in less affluent neighbourhoods. Research shows that 85% of all cervical cancer fatalities and about 83% of new cases worldwide occur in underdeveloped nations. Additionally, the study indicates that many countries' quick socio-economic transformation may lessen malignancies brought on by infections. But this could be changed. By a growing number of new instances that are more closely linked to nutritional, hormonal, and reproductive variables. Cervical cancer is quite uncommon in the developed nations worldwide.

**Aim:** The study aims to analyse a descriptive community-based cross-sectional study to understand knowledge and attitude towards cervical cancer among reproductive age group women.

**Methods:** This was a cross sectional descriptive study conducted at Dr DY Patil Medical College, Pimpri, Pune from April 2020 to March 2023. The study has included participants of all reproductive age women. The selection of population was done using the proportion formula considering the assumption 5% error margin (d = 0.05). To gather information, an interviewer-administered, pretested, structured, and modified questionnaire was used. The study's descriptive statistics, such as frequency, mean, and percent, were calculated with the SPSS software version 29.

**Results:** Around 65% of the participants have heard about the cervical cancer and only 40% have knowledge about the risk factors involve in this disease. In addition to this, 24.2% knew that the major factor of risk in this disease is smoking, followed by multiple sexual partner (22.0%) and poor dietary habits (20.2%). Moreover, the analysis has suggested that 82.0% participants didn't know that HPV is an agent of cervical cancer.

**Conclusion:** Participants' general understanding of cervical cancer and how to prevent it was insufficient. More than 80% of the participants were not aware that HPV is a factor that causes cervical cancer. This is really concerning because preventing HPV infection is the most effective approach to avoid cervical cancer. Apart from this, the finding of study has involved the main information source on cervical cancer was the mass media.

**Keywords:** Cervical Cancer, Knowledge, Attitude, Reproductive age group women



## Background

The cervix, which connects the uterus and vagina, can develop cancer. This condition is known as cervical cancer. It is primarily caused by the sexually transmissible pathogen known as the Human Papilloma Virus (HPV) [1]. Consequently, cervical cancer can be avoided with efficient HPV infection prevention measures. The condition usually affects women who live in less affluent neighbourhoods. Research shows that 85% of all cervical cancer fatalities and about 83% of new cases worldwide occur in underdeveloped nations [2]. Cervical cancer is mostly caused by persistent infection with approximately 15 high-risk HPV strains; of these, HPV-16 and HPV-18 infections account for roughly 70% of cases [3]. Many romantic relationships, younger age at first sexual encounter, early marriage, unhealthy eating habits, weakened immune system, and

tobacco use also act as risk factors for the development of cancer and a chronic HPV infection [4].
Additionally, the study indicates that many countries' quick socio-economic transformation may lessen malignancies brought on by infections. But this could be changed [5]. By a growing number of new instances that are more closely linked to nutritional, hormonal and reproductive variables [6]. Cervical cancer is quite uncommon in the developed nations worldwide. The situation in developing nations, however, is quite the opposite [7]. In the former, the incidence is declining, while in the latter, it is increasing within South America, the Caribbean and Sub-Saharan Africa [8]. Cervical cancer is the primary cause of cancer-related deaths and early deaths among women in Southern Asia.
According to World Health Organization (WHO), the average outpatient cost per patient for cervical cancer is projected to be come to $407.2. It was also projected that the average inpatient cost for hospitalised patients was $404.4 [9]. The total cost of the inpatient stay was $329, with an expected daily increase of $4.2 for each extra day of hospitalisation [10]. As per the analysis, that is quite high and inconceivable for many patients to receive care given the socioeconomic standing of the populace [11].

According to the outcome of study on the health-seeking behaviours of individuals with cervical cancer also showed that women's knowledge of cervical cancer and the majority of them favour conventional treatments as a choice for early-stage treatment of the illness [12]. This study indicates that the obstacles to obtaining any kind of lack of awareness and access to appropriate health care were noted as treatments.

**Aim**

The study aims to analyse a descriptive community based cross-sectional study to understand knowledge and attitude towards cervical cancer among reproductive age group women.

**Method and material**

This was a cross sectional descriptive study conducted at Dr DY Patil Medical College, Pimpri, Pune from April 2020 to March 2023. The study has included reproductive age women. The selection of population was done using the proportion formula considering the assumption 5% error margin (d = 0.05). After deducting the design effect from the 10% non-response rate, the total sample size was 800. In addition to this, random sampling technique was used for selection of the sample.

**Variables and Data Collection**

The variables that were considered for study involve the knowledge level of the individual. Moreover, the independent variable involves the socio-demographic measures like age, religion, income, occupation, and educational status. To gather information, an interviewer-administered, pretested, structured, and modified questionnaire was used. For the knowledge and attitude questions, each right answer was worth one point. The scores were then converted into a percentage for the purpose of interpreting the findings.

**Data Analysis**

The statistical programme Epi-data 3.1 was used to code and enter the data into a computer. After that, the data were exported to SPSS Version 29 for additional analysis. To reduce entry errors and check for anomalies, the data was cleaned and processed and unfilled values. Next, the study's descriptive statistics, such as frequency, mean, and percent, were calculated variables with the SPSS software version 29.

**Results**

**Table 1: Demographic Information**

| Variables | Response | Frequency | Percentage |
|---|---|---|---|
| Age | 18-20 | 310 | 38.75 |
| | 21-25 | 305 | 38.125 |
| | 26-30 | 185 | 23.125 |
| Length of stay in the town | ≤5 years | 220 | 27.5 |
| | > 5 years | 580 | 72.5 |
| Religion | Hindu | 690 | 86.2 |
| | Muslim | 95 | 11.8 |
| | Catholic | 1 | 0.1 |
| | Others | 13 | 1.5 |
| Marital status | Married | 700 | 87.5 |
| | Divorced | 65 | 8.1 |
| | Widowed | 35 | 4.3 |
| Educational level | Can’t read and write | 90 | 11.2 |
| | Read and write | 70 | 8.7 |
| | Primary | 136 | 17 |
| | Secondary | 190 | 23.7 |
| | Preparatory | 64 | 8 |

| | | | |
|---|---|---|---|
| | Diploma or degree | 250 | 31.2 |
| Occupation | Housewife | 240 | 30.0 |
| | Commercial sex worker | 50 | 6.25 |
| | Governmental employee | 230 | 28.75 |
| | Merchant | 199 | 24.875 |
| | Others | 81 | 10.125 |
| Monthly income | ≤ 20000 | 274 | 34.2 |
| | 20000–50000 | 179 | 21.9 |
| | 50000–200000 | 170 | 21.2 |
| | ≥ 200000 | 177 | 22.1 |

Table 1 has provided the information related to the demographic details of the participants. According to analysis, highest number of participants (38.75%) were aged between 18-20 years and belongs to Hindu religion (86.2%). Moreover, majority numbers of participants (55.6%) were married with diploma or degree (31.2%), followed by secondary education (23.7%). Further, 28.75% of the participants were governmental employee, 30.0% housewife, and 24.875% merchant. Moreover, the average monthly income of participant was ≤ 20000 (34.2%) followed by 20000-50000 (21.9%) and 50000-200000 (21.2%).

**Table 2: Knowledge (N=800 for first question and 500 for rest)**

| **Variables** | **Response** | **Frequency** | Percentage |
|---|---|---|---|
| Heard about cervical cancer | Yes | 520 | 65 |
| | No | 280 | 35 |
| Know the risk factors for cervical cancer | Yes | 200 | 40 |
| | No | 300 | 60 |
| Knowledge on risk factors of cervical cancer | Sexually transmitted disease | 100 | 20 |
| | Smoking | 121 | 24.2 |
| | Having multiple Sexual Partners | 110 | 22 |
| | Poor dietary habit | 41 | 20.2 |
| | Early marriage | 98 | 19.6 |
| | Family history of cervical cancer | 20 | 4 |
| | Others | 18 | 3.6 |
| HPV is a causative agent of cervical cancer | Yes | 90 | 18 |
| | No | 410 | 82 |
| Know common symptoms of cervical cancer | Yes | 101 | 20.2 |
| | No | 399 | 79.8 |
| Knowledge on the symptoms of cervical cancer | Intra or Post coital bleeding | 158 | 31.6 |
| | Bleeding after menopause | 138 | 27.6 |
| | Persistent blood-stained vaginal discharge | 90 | 18 |
| | Lower abdominal pain | 70 | 14 |
| | Others | 44 | 8.8 |
| Cervical cancer is preventable | Yes | 325 | 65 |
| | No | 175 | 35 |
| Cervical cancer is curable | Yes | 212 | 42.4 |
| | No | 288 | 57.6 |
| Heard about pap smear test | Yes | 110 | 22 |
| | No | 390 | 78 |
| If yes, where did you hear about Pap smear for the first time? | Relatives | 60 | 12 |
| | Friends | 89 | 17.8 |
| | Health workers | 124 | 24.8 |
| | Mass media | 207 | 41.4 |
| | Others | 20 | 4 |
| How many times should a healthy woman undergo pap smear test? | Only once | 27 | 24.3 |
| | Two times only | 32 | 31.8 |
| | At least three times and above | 48 | 43.9 |

Table 2 has provided information related to knowledge of the participants about cervical cancer. According to analysis, 65% of the participants have heard about the cervical cancer and only 40% have knowledge about the risk factors involve in this disease. In addition to this, 24.2% participants had knowledge that the major factor of risk in this disease is smoking followed by multiple sexual partner (22.0%) and poor dietary habits (20.2%). Moreover, majority of the participants (82%) didn't have an idea that HPV is an agent of cervical cancer. Further, 31.6% participants had idea that the major

symptom of cervical cancer is intra or post coital bleeding. Apart from this, 41.4% of participants have heard about the pep smear from mass media, followed by health worker (24.8%).

**Table 3: Attitude (N=500)**

| Variables | Response | Frequency | Percentage |
|---|---|---|---|
| Believe having multiple sexual partners is risk factor for cervical cancer | Yes | 360 | 72 |
| | No | 140 | 28 |
| Believe cervical cancer is transmittable through sexual inter course | Yes | 110 | 22 |
| | No | 390 | 78 |
| Believe HIV positivity increases the chance of getting cervical cancer | Yes | 320 | 64 |
| | No | 180 | 36 |
| Believe use of oral contraceptive pill is a risk factor for cervical cancer | Yes | 70 | 14 |
| | No | 430 | 86 |
| Think that smoking is a risk factor for cervical cancer | Yes | 335 | 67 |
| | No | 165 | 33 |
| Think early marriage is a risk factor for cervical cancer | Yes | 360 | 72 |
| | No | 140 | 28 |
| Think cervical cancer is a major health problem for female of reproductive age group | Yes | 437 | 94.6 |
| | No | 63 | 12.6 |
| Think it is possible to detect cervical cancer with early screening before symptoms appear | Yes | 250 | 50 |
| | No | 250 | 50 |
| Think early detection of cervical cancer is good for treatment out come | Yes | 456 | 91.2 |
| | No | 44 | 8.8 |
| Believe cervical cancer is preventable | Yes | 390 | 78 |
| | No | 110 | 22 |
| Think it is possible to cure cervical cancer | Yes | 236 | 47.3 |
| | No | 264 | 52.7 |

Table 3 has analyzed the data about the attitude of participants considered for the evaluation regarding cervical cancer. As per the analysis, the attitude of participants suggested that multiple sex partner is major factor of cervical cancer. However, 78% considered that it is not transmitted through sexual intercourse. Further, 64.0% agreed that HIV positive patients have higher chances of cervical cancer and 86% participants believed that use of oral contraceptive pill does not increase the risk of cervical cancer. Additionally, 72% participants considered the early marriage is a risk factor for cervical cancer and 94.6% agreed that it's a major health problem in females from reproductive age groups.

**Discussion**

According to this study, 500 (65%) individuals, or more than half had heard about cervical cancer. This result is in line with research conducted in Qatar, Niger, and North Korea, where more than 85%, 72% and 62% of respondents said they were aware of cervical cancer, respectively. In terms of information, developing and under developing nations have positive trends. However, this data is insufficient to generate the understanding that the three research and this one reflects.

In addition, 65.0% stated they have heard of cervical cancer, and 42.2% participants responded that cervical cancer is curable and avoidable, Moreover, 65.0% said that there are preventative and therapeutic measures for cervical cancer. According to a Korean study, the majority of respondents (64%) were unaware that cervical cancer can be avoided. This consistency may once more result from individuals' differing levels of knowledge across the two investigations [13]. It may also result from the absence of details regarding cervical cancer prevention and treatment.

Only 47 (43.9%) of those who had heard of the pap smear test agreed that a woman in apparent good health should get one at least three times in her lifetime. This indicates that most people who had heard of the Pap smear test were unaware of its frequency and/or how many times they should get one in their lifetime. This is in addition to the general lack of knowledge on the test. This is consistent with research from Niger and Iran, which indicate that only 50.6% and 44.3% of respondents, respectively, were aware of cervical cancer screening tests [14].

Additionally, this study attempted to evaluate the women's attitudes, and of those (500) who were aware of cervical cancer, 360 participants believe that having early marriage and numerous sexual partners are risk factors for cervical cancer. This could be attributed to the general perception in the society that any unsafe diseases are a risk factor for sexual activity. Because the community holds that

those who engage in several sexual relationships will always face consequences from God for their transgressions. Similarly, 437 (94.6%) participants thought that cervical cancer was a serious health issue in women of reproductive age group [15].

## Conclusion

Participants' general understanding of cervical cancer and how to prevent it was insufficient. More than 80% of the participants were not aware that HPV is a factor that causes cervical cancer. This is really concerning because preventing HPV infection is the most effective approach to avoid cervical cancer. Apart from this, the finding of study has involved the main information source on cervical cancer was the mass media. An isolated problem cannot be solved. Moreover, governmental, and non-governmental entities as well as other concerned organisations must cooperate to raise women's broad awareness of cervical cancer and ways to avoid it.

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