



## A Study To Assess The Cervical Cancer Screening Status Among Families Of Medical Students

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### Abstract

#### Introduction:

Cervical cancer is the fourth most commonly occurring cancer in women worldwide and India accounts for 16% of total Cervical cancer cases and 15.2% of cervical cancer deaths in the world. Screening programs have reduced cervical cancer deaths in high-income countries through the detection and treatment of precancerous lesions.

#### Objective:

To assess the status of cervical cancer screening among families of medical students.

#### Methodology:

Descriptive cross-sectional study among medical students.

#### Results:

50.3% of students were aware of the right age for cervical cancer screening practices. 19.5% of the eligible family members underwent screening. 8.4% of total eligible women are undergoing follow up screening.

**Keywords:** Awareness, Cervical cancer, HPV, Screening

### Introduction

Cancer affects all communities worldwide. It is estimated that 10.9 million new cases and 6.7 million deaths occur due to cancer every year.<sup>[1]</sup> Cervical cancer is the fourth most commonly occurring cancer in women and the eighth-most commonly occurring cancer overall.<sup>[2]</sup> The human papillomavirus is the main causative agent of cervical cancer. Approximately 5,70,000 cases of cervical cancer and 3,11,000 deaths from the disease occurred in 2018.<sup>[3]</sup> It constitutes 6.6% of all female cancers. 85-90% of deaths occur in low and middle-income countries.<sup>[4,5]</sup> In 2018 Director-General of WHO announced a call to action for the elimination of cervical cancer as a

public health problem. WHO has called for global action to scale up vaccination, screening, and treatment of precancer, early detection and prompt treatment of early invasive cancers, and palliative care.<sup>[6]</sup>

Screening should be performed at least once for every woman in the target age group (30- 49 years) when it is most beneficial.<sup>[4]</sup> 55-59 is the peak age of incidence of cervical cancer<sup>[7]</sup>, the global average age of death being 59<sup>[3]</sup>. HPV testing, cytology, and visual inspection with acetic acid (VIA) are all recommended screening tests. Cryotherapy or loop electrosurgical excision procedure (LEEP) can provide effective and appropriate treatment for the

majority of women who screen positive for cervical pre-cancer; “screen-and-treat” and “screen, diagnose and treat” are both valuable approaches.<sup>[4]</sup> Screening programs have reduced cervical cancer deaths in high-income countries through the detection and treatment of precancerous lesions.<sup>[5]</sup> It continues to be a major public health problem affecting middle-aged women in less-resourced countries. More than one-third of cervical cancer deaths are in China and India.<sup>[3]</sup> India accounts for 16% of total Cervical cancer cases and 15.2% of cervical cancer deaths in the world. The usual 10-20 years of the natural history of progression from mild dysplasia to carcinoma cervix makes this cancer a relatively early preventable disease and provides the rationale for screening. Despite the existence of national guidelines, the screening coverage in India is appalling low.<sup>[8]</sup>

There is a need for policies advancement of cervical cancer screening programs by focusing on aspects of accessibility, affordability, cervical cancer education, and the necessity of screening to improve screening uptake to control the cervical cancer morbidity and mortality rate in low and middle-income countries.<sup>[9]</sup>

A study among medical workers (nurses, doctors, final-year medical students) in a Mulago teaching and referral hospital in Uganda, the biggest hospital in Uganda, shows that 93% considered cancer of the cervix a public health problem, and knowledge about Pap smear was 83% among respondents. Less than 40% knew risk factors for cervical cancer, eligibility for and screening interval. Of the female respondents, 65% didn't feel susceptible to cervical cancer and 81% had never been screened. Of the male respondents, only 26% had partners who had ever been screened. This shows that the medical workers responsible for opportunistic screening of women are not keen on getting themselves screened.<sup>[10]</sup> Another study among health workers in low resource settings shows there was a good knowledge of cervical cancer and nursing training was their main source of information but 20.6% never underwent screening as they never thought about it. It shows there is a need for nurses to help improve utilization.<sup>[11]</sup> A study of knowledge of screening practices and vaccines was conducted among female medical students in a

medical university in Dominica. About 70% and 72.73% acknowledged being aware of cervical cancer and cervical screening respectively. The awareness status presented by this study was significantly lower than reports in developed countries. This study thus emphasized a need for proper orientation of female medical students on cervical cancer and screening.<sup>[12]</sup> Medical students as the future medical workforce who will serve the community are aware of the benefits of screening; in this context, this study presents the opportunity to assess the status of screening cervical cancer among families of medical students at Andhra Medical College, Visakhapatnam.

### Objectives

To assess the status of cervical cancer screening among families of medical students.

### Methodology:

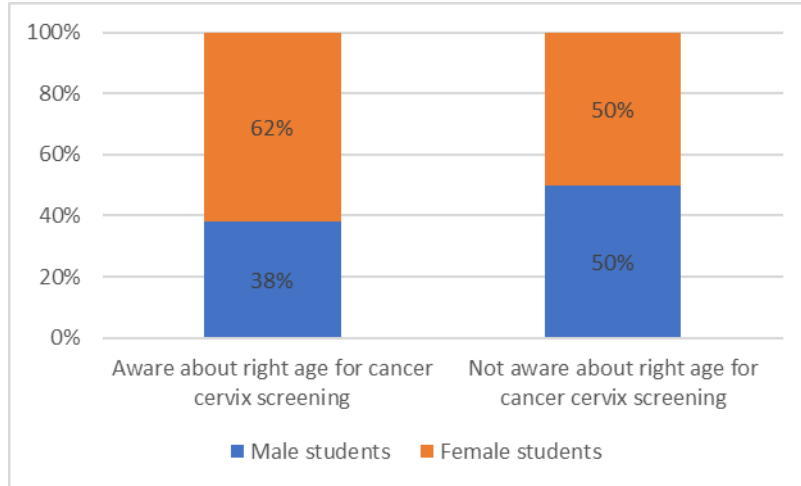
A cross-sectional study was done among Undergraduate medical students from 5<sup>th</sup> semester onward and postgraduates of Andhra Medical College, Visakhapatnam during September 2020 to February 2021.

**Data collection procedure:** The data was collected through a structured questionnaire created using the survey monkey tool. The link for the questionnaire was posted online in student WhatsApp groups. MS-EXCEL was used for data analysis and representation. **Ethical consideration:** Approval was obtained from the institutional ethics committee for conducting the study. Data was collected from those who agreed to giving the online consent to participate. The data obtained from the participant was kept confidential by masking the personnel details obtained.

### Results:

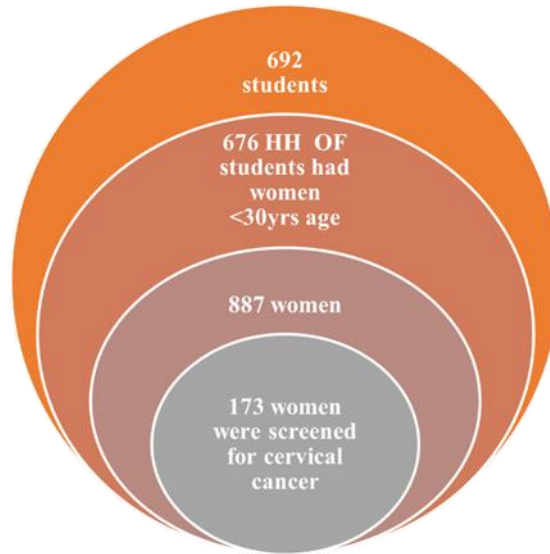
Out of 800 undergraduate medical students, 692 participated in the study. Out of 692 participants, 388 are female students (56.1%) and 304 are male students (43.9%). Students from 5<sup>th</sup> semester - 201 students (29%), 7<sup>th</sup> semester - 182 students (26.3%), 9<sup>th</sup> semester - 174 students (25.1%) and Interns - 135 students (19.5%).

**Figure 1: Awareness of the right age for cervical cancer screening practices among medical students**



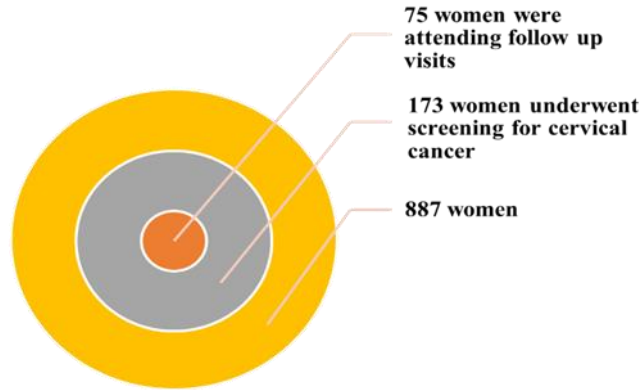
Out of 692 participants, only 348 (50.3%) students were aware of the right age for cervical cancer screening practices. Among them 216 (62%) were female students and 132(38%) male students. About 344 (49.7%) were not aware of the right age of cervical cancer screening. Of which 172 are male (50%) and 172 are female (50%). According to this study More female students are aware about the right age to start cervical cancer screening practices than male students.

**Figure 2: Family members who underwent screening**



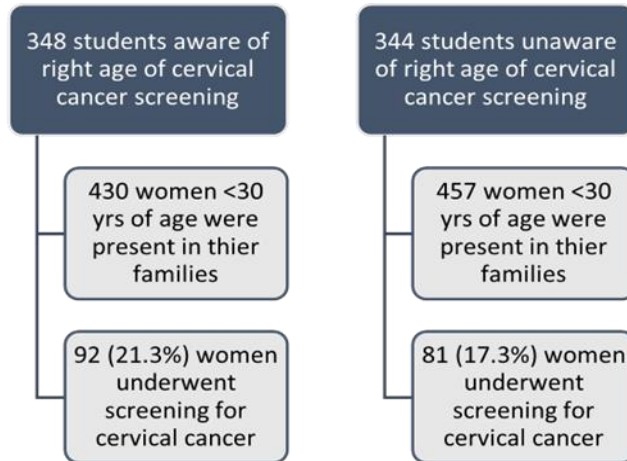
Among 692 students, women above 30 are present in families of 676 students which is 97.7%. This shows that women eligible for screening are present in families of almost all students. The total eligible women in all the families are 887 out of which only 173 women are screened which is only 19.5%..

**Figure 3: Awareness among male and female medical students with cervical cancer**



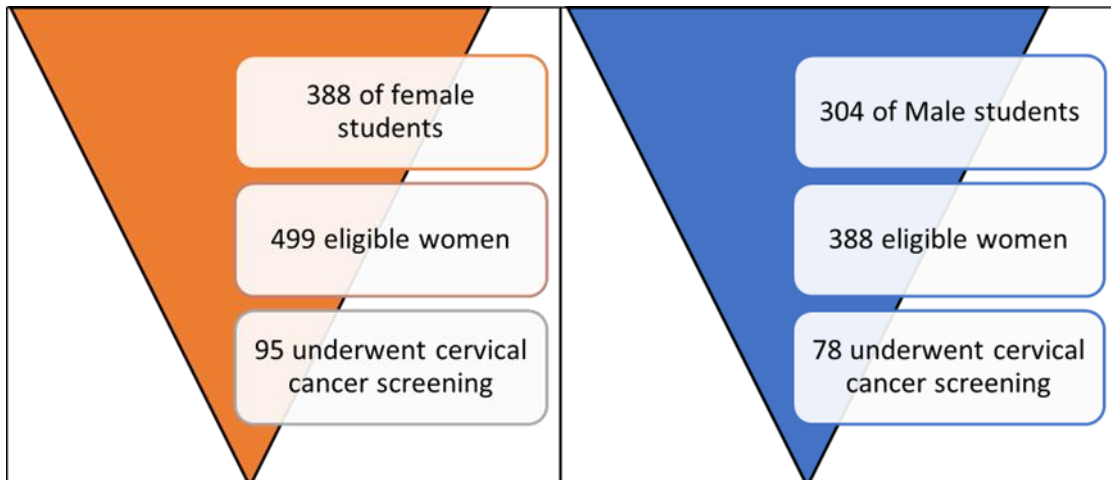
Among the 348 students who are aware, there are 430 eligible women in families of students who are aware, only 92 of them underwent screening which is 21.3% of total women who are eligible. Among the 344 students who are not aware, there are 457 eligible women in families of students who are not aware, only 81 of them underwent screening which is 17.3% of total women who are eligible.

**Figure 4: Follow up status of those who screened**



173 women who underwent screening only 75 women are under follow-up which is 8.4% of total eligible women.

**Figure 5: Comparison between gender of respondent and family screening status**



Only 95 out of 499 i.e., 19% of families of female students underwent screening out of total women who are eligible. Only 78 out of 388 i.e., 20% of families of male students underwent screening out of total women who are eligible.

## Discussion:

### Awareness of cervical cancer and screening

Cervical cancer is largely a preventable disease. An important strategy towards the reduction of its burden in a developing country is by early diagnosis and management of the premalignant lesions of the disease; this would be achieved via screening of women at risk. The current study evaluated the awareness and cervical cancer screening status among families of medical students. On literature search several studies were found done among different parts of the country pertaining to awareness about cervical cancer.

In our study population overall awareness was 50% while it was 62% among female participants. A study done by Deborah Akpo et al among female medical students in 2016 reported that (72.73%) of the students interviewed were aware of cervical cancer screening.<sup>[12]</sup> In a study done by Chidebe Christian Anikwe et al in 2021<sup>[13]</sup> among female undergraduates of Ebonyi State University, it was found that 79.4% were aware of the screening test. The difference of awareness could be due to the mode of data collection, study setting or even due to the variety of different semester students being part of the study.

Coming to awareness among the general population, study done by. In a study done by Aredo MA et al in 2021<sup>[14]</sup> conducted among women attending maternal health services at Aira Hospital, Ethiopia it was found that almost 46.8% of study participants had knowledge about cervical cancer screening. HN Harsha Kumar et al in 2014<sup>[15]</sup> Women in Mangalore City reported awareness of 18% and 15% screening status. Only 15% of the women who attended the hospital are aware of the cervical screening as per the study done by Roy B et al in 2008<sup>[16]</sup>. Community based studies from India have found that educated women had better knowledge in studies done by Aswathy S et al, Asthana S et al and Basu P et al respectively.<sup>[17,18,19]</sup>

In the present study it was observed that only 12.4% women of families of medical students were aware of the screening test. The low level of awareness about cervical cancer among the family members of medical students who are the respondents of the study, was lower than expected.

Practice of cervical cancer screening in the present study was 10.4% in families of medical students. In a study done by HN Harsha Kumar et al in 2014 Women in Mangalore City<sup>[15]</sup> only 7.2% had undergone screening. Only 7.2% of the women had ever undergone Pap smear testing. Community based studies have reported that 2%-6.9% of women got tested.<sup>[17,18]</sup> There was not much difference in proportions (7%-8%) for screening status among "nurses" working in tertiary care centers<sup>[19,20,21,22]</sup> when compared with the general population and exposing the gap between awareness and practice.

In a study done by Deborah Akpo et al among female medical students in 2016<sup>[12]</sup> reported that 11.24% of the respondents have undergone cervical screening. Though awareness level of the disease is high among the respondents, this did not correspond to high screening practice level which was only 11.24%.

Similar findings of low participation in screening programmes have been recorded in other developing countries<sup>[23,24,25,26]</sup>. In a study carried out in Ghana, the uptake was 8.5%.<sup>[27]</sup> The low level of participation in cervical cancer screening programmes observed in this study and similar studies from African countries is unlike the findings in most developed countries advanced screening programs where participatory level in cervical cancer screening was high. In a study from Germany, most women in the study group had a Pap smear test at least once a year and only a few had a smear less frequently than every five years.<sup>[28]</sup> Also, among Chinese American women in the United States, uptake of Pap smear was as high as 84%.<sup>[29]</sup> This poses a challenge to the effective cervical cancer control programme corroborating an earlier work from Netherlands which indicated that a major reason for non-uptake and pulling out of screening programmes is because some women feel they are healthy.<sup>[30,31]</sup>

Considering the profession of the medical students, they are expected to be more knowledgeable regarding benefits of screening when compared to the

general population in the community. The screening practice at family level of doctors' families would motivate other community members about the cervical screening benefits which could contribute to overall prevention and control of cervical cancer.

### Conclusion

The level of awareness of cervical cancer and screening is lower than expected among the families of medical students.

### Recommendation

There is a need to improve health advocacy programs among the general population, focusing on cervical cancer screening programs while the government makes screening services affordable.

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