

Original Research Article

A study to assess the knowledge and attitude of female graduate students on cervical cancer

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ABSTRACT

Background: Cervical cancer is one of the most common cancers in women with an average of 468,000 new cases per year. Out of these 80% occur in developing and underdeveloped countries. World Health Organisation statistics show that India carries one fifth of world burden of the disease with 72,600 deaths annually. Key to the success of cervical cancer screening and prevention is the knowledge and awareness possessed by women in general. This requires the honing of knowledge at an impressionable and younger age group.

Methods: It is a questionnaire based cross sectional study and was conducted amongst 4 study groups comprising Medical students, engineering students, nursing students and general graduate students between the age group 18 and 25 years.

Results: According to present study, 93% of medical, 75% of nursing and only 29% of engineering students and 9 % of other students were actually even aware of the term cervical cancer. Assessment of knowledge regarding the risk factors of cervical cancer revealed that 13 medical, 9 nursing, 75 of engineering and 85 of Other Graduates weren't aware of any risk factor that causes cervical cancer. As regards to attitude of the students towards cancer, present study revealed 4 medical, 23 nursing, 10 engineering and 9 general public women think that it is incurable and leads to death.

Conclusions: This study highlights unawareness of various aspects of cervical cancer among young women and the burning need for continuing educational intervention at institute level to emphasise the importance and increase the awareness regarding cervical cancer.

Keywords: Awareness, Cervical cancer, Education

INTRODUCTION

Cervical cancer is one of the most common cancers in women with an average of 468,000 new cases per year. Out of these 80% occur in developing and underdeveloped countries.¹ World Health Organization statistics show that India carries one fifth of world burden of the disease with 67,000 deaths annually.² Human Papilloma Virus (HPV) predominantly HPV 16

and HPV 18 are known causative agents of cervical cancer in 70% of the cases. The virus infects the squamous epithelium of the cervix leading to precancerous, cervical intraepithelial lesions and subsequently to invasive cancer.³ The introduction of Papanicolaou test by George Papanicolaou along with the advent of preventive vaccination against HPV has revolutionized early detection and prevention of cervical cancers.

However, it is appalling to note that the proportion of women screened ranges from about 84% in developed countries to 5% in developing nations like India.^{4,5} Key to the success of cervical cancer screening and prevention is the knowledge and awareness possessed by women in general. This requires the honing of knowledge at an impressionable and younger age group. This study therefore aims at understanding the level of knowledge regarding different aspects of cervical cancer mainly etiology, risk factors, symptoms, screening and vaccination among young female graduate students.

Aim and objectives

To assess perception of female graduate students on cervical cancer.

- To study the awareness levels of cervical cancer among female graduate students
- To assess their perception, knowledge and attitude regarding causes, symptoms, vaccination, screening test for cervical cancer
- To recommend preventive strategies.

METHODS

It is a questionnaire based cross sectional study. The study was conducted amongst 4 study groups comprising medical students, engineering students, nursing students and general graduate students between the age group 18 and 25 years. The sample consists of 100 women in each category. A structured questionnaire with questions regarding different aspects of basic knowledge and awareness on cervical cancer pertaining to etiology, risk factors, symptoms, screening test and vaccination was given to the study groups ensuring confidentiality.

Scoring of questions

- Knowledge about cervical cancer was assessed if the answer to first screen question (Have you heard of/do you know about cervical cancer?) was “yes.” Two components of knowledge were assessed:
 - a) Symptoms/manifestations of cervical cancer (multiple response question): Irregular menstrual bleeding, bleeding after sexual activity
 - b) Risk factors for cervical cancer (multiple response questions): Young age at first sexual intercourse, multiple male sexual partners, high parity, infections with the human papillomavirus, young age at first full term pregnancy, prolonged use of oral contraceptives and HIV infections.

Each response was given 1 mark. So, the maximum was nine and minimum was zero.

- Knowledge about screening and vaccination for cervical cancer was assessed if the answer to first question (Have you heard of/do you know that it is

possible to detect /prevent cervical cancer early?) was “yes.” Five questions were asked for each:

- a) Who should get tested (married, unmarried, any female)
- b) At what age is it advisable to get tested (old women >60 years, young women 20-50, adolescent girls 12-19 years)
- c) Where do you think the testing is done (multiple responses permitted (government hospitals, maternity hospitals, private hospital, nursing homes, private hospitals with attached maternity hospital, women's hospital)
- d) Is it an invasive test?
- e) How many times (frequency) does it need to be done?

Regarding vaccination the questions asked were

- At what age is the vaccine given?
- What is the vaccine called?
- How many doses need to be given?
- Does it protect fully from cervical cancer?
- Can it be given to adults?

Each response was given 1 mark. So, the maximum was ten and minimum was zero.

- Attitude towards the disease was assessed by a single question on its outcome. No marks were awarded if the respondent thought it to be incurable or did not respond, 1 mark was given if early detection was linked with cure. The questionnaire was marked out of 20 overall. The knowledge was graded as: 0-5- Very poor level of knowledge; 6-10- Poor level of knowledge; 11-15- Medium level of knowledge; 16-20- Good level of knowledge.

RESULTS

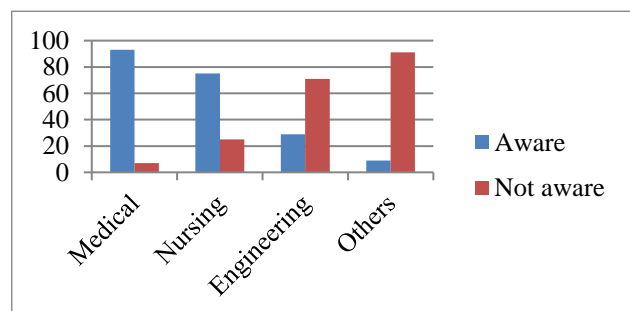


Figure 1: Awareness of the term cervical cancer.

According to present study, 93% of medical, 75% of nursing and only 29% of engineering students and 9 % of other students were actually aware of the term cervical cancer (Figure 1). 74% of medical, 56% of nursing and 3% of engineering students were aware that Human Papilloma Virus is the causative agent of cervical cancer (Figure 2).

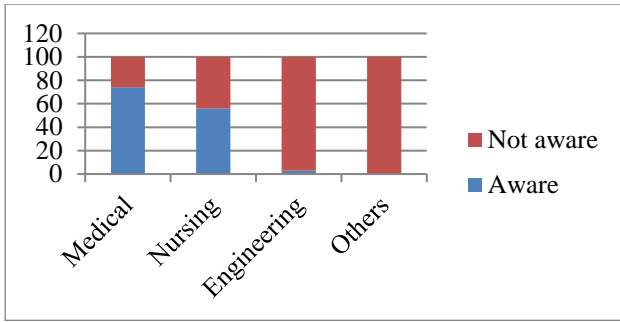


Figure 2: Knowledge of causative organism being HPV.

Assessment of knowledge regarding the risk factors of cervical cancer like early age at sexual intercourse, multiple sexual partners, multiparity, smoking, oral contraceptives, STD and history of cervical cancer in family, revealed that 13 medical, 9 nursing, 75 of engineering and 85 of Other Graduates weren't aware of any risk factor that causes cervical cancer (Table 1).

Awareness regarding Symptoms of cervical cancer like Irregular vaginal bleeding, Foul smelling discharge revealed that only 47 of medical, 37 of nursing 7 engineering students and only 3 others were aware of the two presenting symptoms (Table 2).

Table 1: Knowledge regarding risk factors of cervical cancer.

Risk factors	Medical	Nursing	Engineering	Others
Not aware of any risk factors	13	9	75	85
Aware of 1-5 risk factors	76	91	25	15
Aware of 6-7 risk factor	11	0	0	0
Total	100	100	100	100

Table 2: Awareness regarding presenting symptoms of cervical cancer.

Symptoms	Medical	Nursing	Engineering	Others
Not aware of any symptom	13	35	81	95
Aware of at least single symptom	40	28	12	2
Aware of two symptoms	47	37	7	3
Total	100	100	100	100

Availability of vaccination for cervical cancer, Prevention of cancer by it, no of doses, Vaccination has any major side effects? Other than medical and nursing students' awareness level was low in other groups.

Only 27 medical, 12 nursing, 2 engineering and 2 other students were aware of the correct no of doses of vaccination (Table 3). Question about awareness regarding Pap smear revealed that 22 of medical, 62 of

nursing, 91 of engineering and 92 of other graduate women are not having any knowledge regarding pap smear (Figure 3).

As regards to attitude of the students towards cancer, present study revealed 4 medical, 23 nursing, 10 engineering and 9 general public women think that it is incurable and leads to death. Most of the participants from general students have no idea regarding this aspect (Table 4).

Table 3: Knowledge regarding vaccination.

Knowledge regarding vaccination	Medical	Nursing	Engineering	Other graduates
No knowledge regarding vaccination	18	51	81	87
Answered at least one question regarding vaccination	22	34	8	4
Answered two or more questions	60	15	11	9
Total	100	100	100	100

Table 4: Attitude towards outcome of cervical cancer.

Attitude towards outcome of cervical cancer	Medical	Nursing	Engineering	Other graduate
It is incurable, it will lead to death	4	23	10	9
It can be cured if detected at an early stage	96	65	70	5
No response	-	12	20	86
Total	100	100	100	100

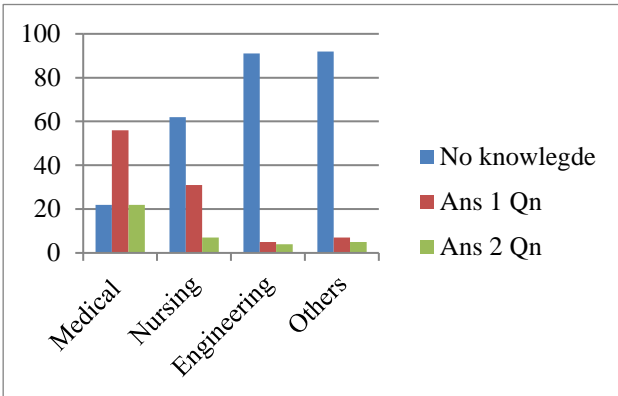


Figure 3: Knowledge about screening test i.e. PAP.

Good level of knowledge was seen in only 7 medical students and on the other end of the spectrum we 68 other graduate students, 47 engineering students, 4 nursing students had very poor level of knowledge regarding cervical cancer.

Table 5: Overall knowledge regarding cervical cancer.

	Medical	Nursing	Engineering	Others
0 score	1	4	47	68
1-5 score	14	34	40	26
6-10 score	43	45	7	5
11-15 score	35	17	6	1
16-20 score	7	-	-	-

0-5- very poor level of knowledge, 6-10- poor level of knowledge, 11-15- medium level of knowledge, 16-20- good level of knowledge.

DISCUSSION

The knowledge regarding cervical cancer in present study revealed a low level across all graduate students. Various similar studies conducted in Bhutan, Malaysia, Kolkata, and USA have reports similar results.⁶⁻⁹ In present study about 48% of students had not even heard of cervical cancer and HPV. This was especially true for graduate students in nonprofessional colleges where almost 90% revealed lack of basic knowledge. Similar low knowledge levels have been seen even in studies from developed countries like UK and USA.⁹⁻¹¹ Low levels of awareness among different population groups in four developing countries including India has been highlighted by Bringham et al.¹²

Raising awareness regarding risk factors other than HPV, like young age at first sexual intercourse, multiple male sexual partners, high parity, infections with the human papillomavirus, young age at first full-term pregnancy, prolonged use of oral contraceptives and HIV infections, will assist in halting the growth of cervical cancer in the population. Moreover, this will also increase the help seeking behavior in women with high risk factors. Half of present study population was not aware of even one risk factor of cervical cancer and only about 3% were aware of most of the risk factors involved. This corroborates with other studies both in India and other countries.^{6,8-11,13,14}

Only about 24% of students in present study were knowledgeable regarding the symptoms and signs of cervical cancer. Amongst medical and nursing students too this knowledge was lacking. 53% of medical students and 63% of nursing students were unaware of most signs and symptoms. Similar results among medical students was seen in a study in Saudi Arabia.¹⁴ The importance of this knowledge is highlighted in a study by Jayant et al where the presentation at stage 1 and II increased from 38% to 51% after educational intervention in the study population about signs and symptoms of cervical cancer.¹⁵

Cytological screening based on Pap smear plays a major role in reducing both the incidence and mortality of invasive cervical cancer. In the USA and Canada, the reduction in the incidence of cervical cancer and the subsequent reduction of female mortality rate was attributed to the widespread introduction of the Pap smear screening program as a secondary preventive measure for early detection of cases. Knowledge regarding PAP smear as a screening test was a huge lacuna despite its propaganda. Almost 90% of engineering and graduate students had poor levels of knowledge regarding this test. The range of awareness in various studies was 53% in Bhutan, 80% in Taiwan, and 94% in Greece.^{6,16,17} Knowledge regarding vaccination and treatment is dismal too with only 30% of study population having some awareness. This has been seen in other studies among both Indian 18 and international graduates too.^{14,19}

CONCLUSION

The strength of the study is the number of varied students from various fields that it covers. The inclusion of health care related studies like medicine and nursing may create

a bias amongst the groups. This study highlights unawareness of various aspects of cervical cancer among young women and the burning need for continuing educational intervention at institute level to emphasize the importance and increase the awareness regarding cervical cancer. Intervention at this level will not only ensure a healthier population, but the younger population can also educate masses, increase the health seeking behavior in women and thus reduce the burden of cervical cancer in the society worldwide.

Current study suggests that awareness campaigns be taken up in earnest in various educational institutes regarding cervical cancer thus enabling the woman and the society to fight the rise of cervical cancer. We also propose the need to undertake similar studies about awareness and education interventions.

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

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