



Cervical Cancer and College Students: Knowledge And Attitude About Common Risk Factors

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ABSTRACT

Cervical cancer is the second most common cancer in women worldwide (1,2). Many studies have shown conflicting results with relation to knowledge and awareness of cervical cancer among college students. This study was undertaken. To study the level of awareness and attitudes towards cervical cancer amongst the college students of Puducherry and to study the awareness of risk factors that are likely to cause cervical cancer amongst the college going population of Puducherry. 503 participants of both sexes from three colleges viz., Medical, Engineering and Arts & Science College were selected. Their awareness was assessed by self-administering questionnaire, their results were analyzed. It is found that there is an inadequate level of knowledge and awareness about the common risk factors and preventive measures of cervical cancer.

KEYWORDS

INTRODUCTION

Cervical cancer constitutes a major problem in women health. According to the WHO, cervical cancer is the second most common cancer in women worldwide and is the most frequent cancer in many developing countries, with an estimate of about 493,243 women diagnosed with it and 273,505 dying from it per year, it is also the world's second most frequent cancer among women between 15 and 44 years of age.^(1,2)

The women of poorer communities are mostly affected with this condition. It is evidenced that approximately 83% of the world's new cases and 85% of all cervical cancer deaths reported are from developing countries.⁽³⁾

The known primary underlying cause is the human papillomavirus (HPV) the risk groups are types 16,18. The most common sexually transmitted infection worldwide, and it is estimated that 50% to 80% of sexually active women are infected at least once in their lifetime.^(4,5) The other known risk factors are the, early onset of sexual activities, multiple sex partners, long use of oral contraceptives, immunosuppressant, smoking and specific dietary factors⁽⁶⁾

The incidence and problems associated with contracting STDs are of great concern, especially among adolescents and young adults. A study showed that 40% of sexually active adolescent women had contracted a STD.⁽⁷⁾ The reason for the increase of STDs is risky sexual behavior, including sexual contact without the use of a condom or barrier.

Pap smear screening tests are useful in detecting early stage cancers⁽⁸⁾ Even though vaccines and screening tests are available for people, awareness about them is poor and hence these services are not being utilized.

Papanicolaou cytological testing (also called Pap smear) is a screening test used in gynecology to detect premalignant processes in the endocervical cancer, effectively reducing the incidence of the cervical cancer by 75%-90%⁽⁹⁾. In developing countries, only about 5% of women have been screened for the disease with Pap smear compared to 40%-50% in developed countries⁽¹⁰⁾. In many developing countries, women's knowledge of cervical cancer and Pap smear is very limited.

Though there are several methods of prevention of cervical cancer, prevention by vaccination is emerging as the most effective option, with the availability of two vaccines-Gardasil and Cervarix⁽¹¹⁾. Current preventive vaccines protect against the two HPV types (16 and 18) that cause about 70% of cervical cancers worldwide.^[12] Several studies have been published examining the vaccine's efficacy, immunogenicity and safety.

Even though vaccines and screening tests are available for people, awareness about them is poor and hence these services are not being utilized. Thus this study is being undertaken to know the awareness level and attitudes amongst the college going students about cervical cancer.

REVIEW OF LITERATURE:

With regard to the knowledge, attitude and awareness about cervical cancer amongst college students, there are conflicting results seen in the previous research and review articles.

In a study titled "Cervical Cancer Screening Among College Students in Ghana: Knowledge and Health Beliefs by Peter N. Abotchie, MPhil and Navkiran K. Shokar, MA, a sample of 157 college students aged 18 and above were chosen and surpris-

ingly the results were only 7.9% of them told that Human Papilloma virus infection increases the risk of cervical cancer. 38.4% said that sexually transmitted disease can be a risk factor, only 1 % uttered that smoking is a risk factor for cervical cancer and 11.4% responded it can follow a family history.

In another study named Awareness, Knowledge, and Beliefs about Human Papillomavirus in a Racially Diverse Sample of Young Adults by Mary A. Gerend, Ph.D and Zita F. Magloire, B.S. A total of 124 students 18–26 years of age from two southeastern universities were taken. More than 75% of the sample had heard of HPV.

Although some misunderstandings were observed, HPV knowledge was relatively high. Women reported greater awareness and knowledge of HPV than did men. Higher perceptions of risk were observed among sexually active participants and those with multiple sexual partners.

In another study named Ethnically diverse female university students' knowledge and attitudes toward human papillomavirus (HPV), HPV vaccination and cervical cancer by Li Ping Wong¹, I-Ching Sam. A cross-sectional survey using a convenience sample. A total of 1083 ethnically diverse female students attending a public university were approached and 650 were interviewed. Knowledge regarding HPV, HPV vaccination, cervical screening and cervical cancer risk factors was remarkably poor.

Only 10.3% had heard of the newly released HPV vaccine. Approximately 48% of participants indicated an intention to receive an HPV vaccine. Intention to receive an HPV vaccine was significantly associated with knowledge of HPV and genital warts, and knowledge of cervical screening and cervical cancer risk factors.

In an article named - Awareness and attitude towards human papillomavirus infection and vaccination for cervical cancer prevention among adult males and females in Korea: A nationwide interview survey by Jin-Kyoung Oha, Min Kyung Lima¹, E Hwa Yuna, Eun-Hye Leea, Hai-Rim Shina²,

One thousand male and female adults were included with random sampling. Surprisingly only 13.3% of them were aware of the HPV infection and only 8.6% were aware of the availability of preventive vaccine against HPV.

In another study - Awareness of Cervical Cancer Among Female Students of Premier Colleges in Kolkata, India A Saha¹, A Nag Chaudhury², P Bhowmik¹, R Chatterjee^{2*}, the students had very low level of knowledge about the risk factors for cervical cancer.

Knowledge was least (3%) for 'multiple sex partners' as a risk factor followed by that (4%) for 'other cervical infections'. The largest proportion (29%) of the students recognized smoking as a risk factor compared to their correct responses for the other risk factors evaluated. Out of the total participants 41% responded that sexual activity may be involved with etiology of cervical cancer.

In another study named Knowledge of and attitude towards cervical cancer among female university students in South Africa by E Hoque, M Hoque . Three hundred and eighty-nine students (n=400) completed the survey questionnaire for a 97% response rate. Overall, the mean age of the participants was 20 years with standard deviation of 2 years., less than half (42.9%) of the participants had heard about cervical cancer. Of those who had heard about cervical cancer, almost a quarter (22%) had heard from community health workers

Only 19% had heard about it from the media. Twenty-six (15.6%) of 167 participants who had heard of cervical cancer, did not know any risk factors for cervical cancer and only one respondent (0.6%) knew all the risk factors.

Almost half (48.5%) of the respondents knew that HPV causes cervical cancer. Two (1.2%) students said cervical cancer cannot be prevented and another 96 (58.6%) participants did not know that it is preventable. We found that participants using condoms were twice more likely to have heard about cervical cancer.

From all above stated studies, it is seen that cervical cancer is related to various risk factors and is completely preventable if proper screening is done. Various research articles also show that lack of awareness is the main reason for high prevalence of cervical cancer.

These varying results on the knowledge and awareness of risk factors of cervical cancer and the screening procedures make this an interesting area of research.

AIMS AND OBJECTIVES:

1. To study the level of awareness and attitudes towards cervical cancer amongst the college students of Puducherry.
2. To study the awareness of risk factors that are likely to cause cervical cancer amongst the college going population of Puducherry.

MATERIALS AND METHODS:

Type of study : cross-sectional study

Inclusion criteria : college students of both sexes aged 18 years and above(engineering, medical and nonprofessional college were included)

Exclusion criteria: School students (even above 18 years of age) and college students below 18 years of age.

Number of groups studied: single group (college students from three different colleges)

Sample size : A total of 400 students from three colleges were selected by random sampling.

Calculation of sample size: $N = Z^2 pq/e^2$ ⁽¹³⁾

Where, N-desired sample size

Z- Standard deviation at 95% confidence level (1.96)

p is the proportion of students with knowledge about cervical cancer

According to a study done at Kolkata among college students ⁽¹⁴⁾,

p is taken as 43%

q is the proportion of people = $100-p=100-43=57$

e is the allowable margin of error of 5% = 0.05

Therefore, $N = 1.96^2 \times 0.43 \times 0.57 / (0.05)^2 = 384$ (approximated to 400)

Intervention : a pamphlet having information on cervical cancer was given to participants after completing the questionnaire.

Methodology:

- Consent of the dean/principal of the colleges was obtained. For logistic reasons and for the convenience of the investigator, nearest colleges were selected for the study.
- A total of 400 students were selected from all three colleges by random sampling.
- A self-administered questionnaire as enclosed was given to the students to fill up after obtaining their informed written consent on a purely voluntary basis.
- Information regarding the study and instructions to fill the questionnaire was given to the students by the inves-

- tigator (student) and the guide in understandable manner.
- The questionnaire didn't contain their names or any personal identification data to maintain anonymity of the participants.

OBSERVATION AND RESULTS:

Five hundred and three students (n=503) completed the survey questionnaire. Of them, 251 males (83 from Medical College, 84 from Engineering college and 84 from Arts and Science college) and 252 females (84 from Medical College, 84 from Engineering college, 84 from Arts and Science college) were chosen. The median age of the participants from Medical colleges is 18 years, Engineering College is 19 years, Arts and Science College is 19 years. Virtually, all the sample students were single.

The questionnaire was prepared in such a way to assess the knowledge, attitude, awareness of the common risk factors of Cervical Cancer amongst the College going population of Puducherry. The following are the results for the questions.

1. What is Cervix?

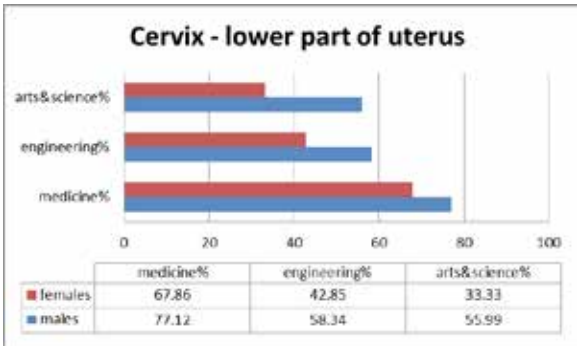


FIGURE 1: Comparing the correct response for cervix amongst the students

Cervix or **cervix uteri** is the lower part of the uterus in the human female reproductive system.. The response for the question what is cervix was as expected, maximum of 77.12% of the males of medicine told the correct answer followed by 67.86% of the females of medicine. The next highest response was seen among Engineering students and the least from the Arts and Science students.

Surprisingly, 22.8% and 32.14% of the males and females of medicine respectively, don't know what is cervix. This question reflects the knowledge amongst the students about cervix.

2. Have you heard about cervical cancer?

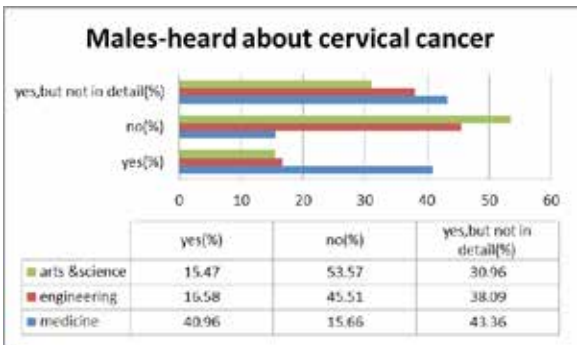


FIGURE 2 : comparing the responses among males of three different colleges .

It's obvious from the graphs that, majority of the male medical students have heard about cervical cancer, but even among them 15.66% haven't heard, this highlights their ignorance. Following medical students a quiet good number of males of

engineering and arts and science students said that they have heard about cervical cancer with a slight higher response from the engineering students.

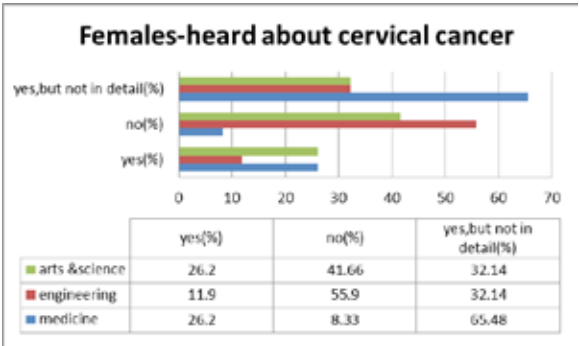


FIGURE 3: comparing the responses among females of three different colleges.

It is evident that, majority of the female medical students have heard about cervical cancer, but even among them 8.33% haven't heard, this is less when compared to the male students. The graph also shows us that females of Arts and Science College are found to have heard about cervical cancer more than the females of Engineering college.

3. If Yes, What was your source of information?

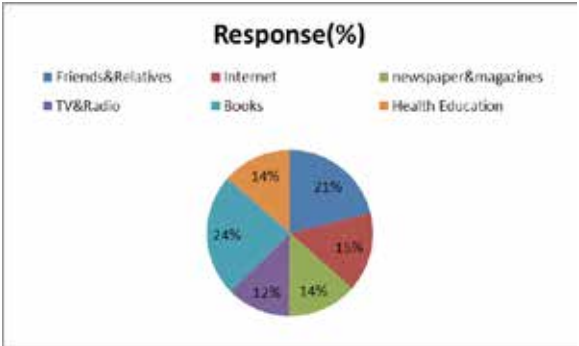


FIGURE 4 : Pie- chart showing the source of information of cervical cancer

From the graph we could see that , among the people who have heard about cervical cancer, friends and relatives stand first as the source of information (24%),followed by books with a percentage of (21%). The least source being TV and Radio. Health education and newspapers constitute almost equal -14% as a source. This result shows that there are less health awareness programmes being conducted to students.

4. Have any of your family members, friends or relatives are found to have cervical cancer?

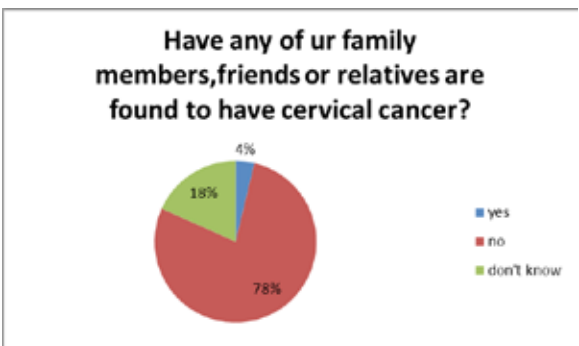


FIGURE 5 : Pie chart showing the presence of cervical cancer among the counterparts of the participants

Majority of 78% said that none of their family members or friends are found to have cervical cancer.18% said that they don't know and 4% uttered yes. The figure 78% is not absolutely reliable, as there can occur 2 possibilities, either they are completely free from cancer at present or there can be some cases which the participants may not be aware of.

5. Can cervical cancer be inherited?

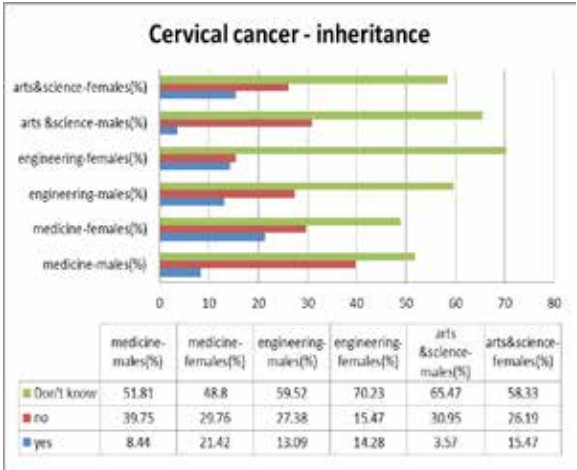


FIGURE 6: graph showing the awareness about cervical cancer inheritance.

The graph shows: Only 8.44%- males and 21.42%-females of the medical college knows that cervical cancer can be inherited. Comparing this we come to know that females have a slight higher awareness about cervical cancer than males. Same is the situation even in engineering and Arts and Science College. 13.09% -males and 14.28% -females of engineering course; and 3.57%-males and 15.47%-females of arts and science course said yes. But majority of the students were genuine in answering that they don't know. This is to be highlighted. Lack of awareness amongst them is the sole reason for such ignorance.

6. Most important cause for cervical cancer –Human Papilloma virus

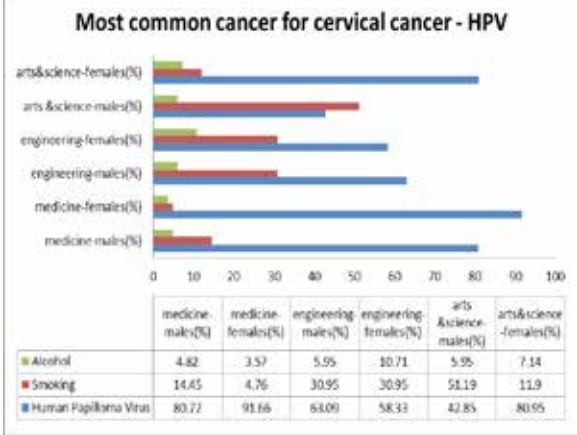


FIGURE 7: graph depicting the awareness about the most common cancer for cervical cancer

The most common cause for cervical cancer is Human Papilloma Virus infection. Surprisingly, 80.72% -males and 91.66% -females of medical course; 63.09%-males and 58.33%-females of engineering course; 42.85%-males and 80.95%-females of arts and science said HPV is the most common cause. The other option included smoking which is also a risk factor for cervical cancer, but HPV being the most important one. Few responses were also for smoking, the majority being 51.19% -males of arts and science.

7. Do you think smoking can precipitate cervical cancer?

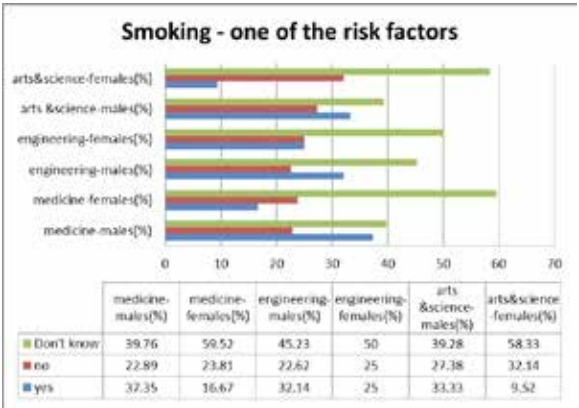


FIGURE 8: graph depicting the awareness about smoking as a risk factor for cervical cancer.

Smoking is one of the risk factors for cervical cancer; it can cause cervical intraepithelial neoplasia (CIN).Amongst the students of all three colleges, only 37.35% -males and 16.67% females of medicine; 32.14%-males and 25% females of engineering course; 33.33% males and 9.52% females of arts and science uttered smoking can precipitate cervical cancer. Majority answer was don't know, which shows their ignorance.

8. Can sexually transmitted disease may also be a risk factor?

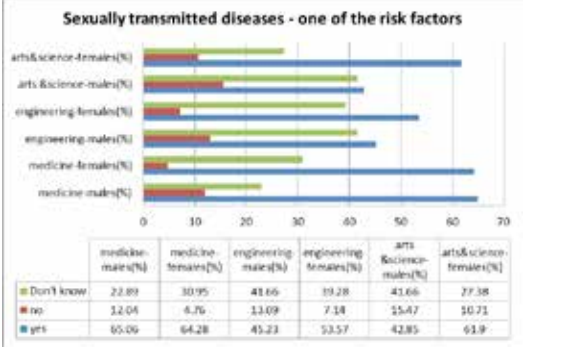


FIGURE9: graph depicting the awareness about sexually transmitted disease as a risk factor for cervical cancer.

Other sexually transmitted diseases can also be a risk factor for cervical cancer. About half of the participants of all three colleges had knowledge that sexually transmitted diseases could be a risk factor for cervical cancer (65.06% -males and 64.28% females of medicine; 45.23%-males and 53.57% females of engineering course; 42.85% males and 61.9% females of arts and science). Here too females are found to have a little higher awareness about cervical cancer.

If yes, Can condoms offer protection against cervical cancer?

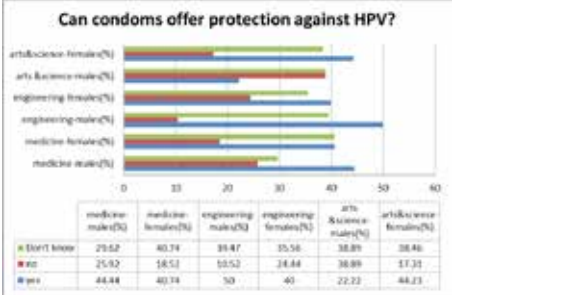


FIGURE 10. Graph depicting the awareness about the use of condoms in protecting against cervical cancer

Condoms are protective aids to prevent against sexually transmitted diseases and to certain extent found to be useful in protecting against cervical cancer by preventing HPV infection transmission. We found that this awareness was least among males of arts and science (22.22%) and highest among males of engineering (50%). The disappointment was that nearly 25% of them were not sure whether condoms can offer protection, and other 25% said that it can't.

9. Do you think that use of oral contraceptives can be a risk factor for cervical cancer?

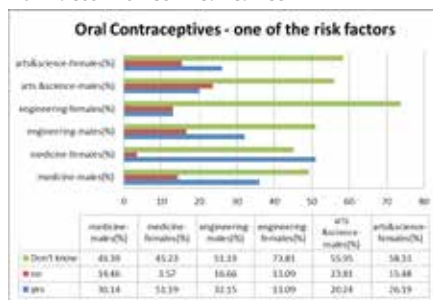


FIGURE 11: Graph depicting the awareness about the use of contraceptives as one of the risk factors

Women's risk of developing cervical cancer is more with use of oral contraceptives. Males of medicine -36.14% and females-51.19% said "Yes" to this question and this constitutes the highest response. Females of engineering -73.81% were the highest to say don't know. Majority of the response from both sexes was don't know.

10. At what age females are more prone to get cervical cancer?

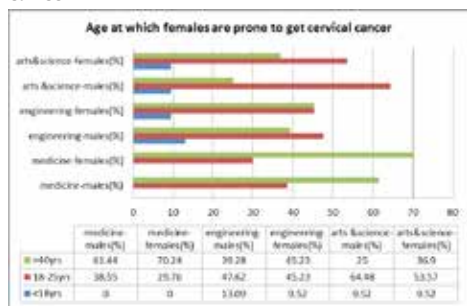


FIGURE 12: Graph depicting the awareness about the age at which females are more prone to get cervical cancer.

Females of more than 40 years are more prone to get cervical cancer. Medical students, as expected, had a higher knowledge with a percentage of 61.44% males and 70.24% females. The next highest response was from age group 18-25 years, arts and science students males-64.48% and females 53.57%; 47.62%-males and 45.23% females of engineering course. There was 0 response for age <18 years amongst medicine students.

11. Can cervical cancer be treated?



FIGURE 13: Graph depicting the awareness -whether cervical cancer can be treated.

This question was framed to know the attitude of the students towards cervical cancer. Medicine students showed a positive attitude towards cervical cancer by uttering that it can be treated with a majority of 59.03%-males, 54.13% females while majority of engineering students answered-don't know. Arts and science females showed a positive attitude 52.38% said "Yes" and males - a little lower response of 36.91%

12. Have you ever heard of Pap smear?

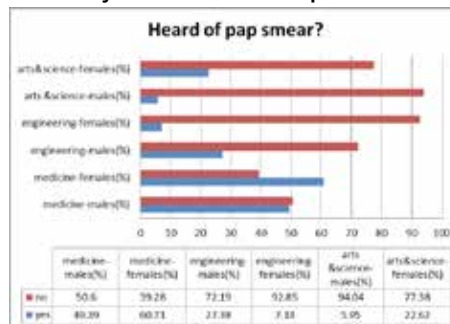


FIGURE 14: Graph depicting the response among students whether they ever heard about Pap smear.

Surprisingly, 50.6% of males and 39.28% of females of medicine haven't heard of Pap smear. Other college students almost more than 70% haven't heard of Pap smear.

13. If Yes, Can regular screening with Pap smear reduce the cervical cancer?

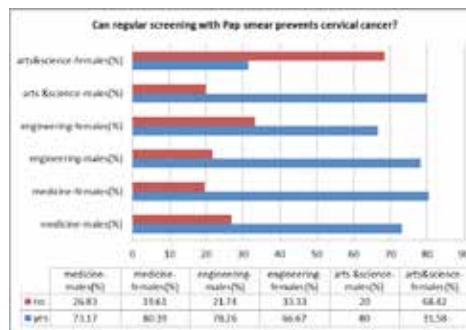


FIGURE 15: Graph showing the response of participants for the question-Can regular screening with Pap smear reduces the cervical cancer?

Among all students who said that they have heard about cervical cancer, majority of them had positive attitude towards it and they said regular screening with Pap smear can reduce cervical cancer. Percentage of students who showed positive response marks the highest - 73.17% males and 80.39% females of medicine; 78.26% males and 66.67 females of Engineering and 80% males of Arts and Science. Except for the females of Arts and Science the majority of the answer was "no" with a percentage of 68.42%.

14. What do you think is the right time for the Pap smear to be done for the first time in females?



FIGURE 16: Graph depicting the awareness among students the right time for doing pap smear for the first time in females.

Medicine students with majority of 55.42% males and 52.38% females said that Pap smear should be done within 3 years of onset of sexual activity; while the next highest response is to do after menopause. Among the other two colleges; almost equal response – to do it after menopause and within 3 years of onset of sexual activity is seen. While, there was least response from all the students – to do it before attaining puberty.

15. Are there any vaccines available to prevent cancer cer-

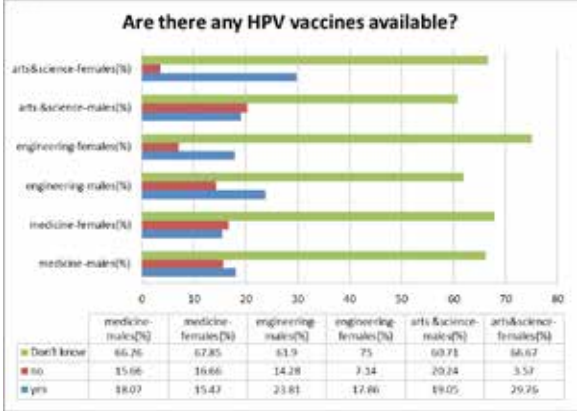


FIGURE 17 : Graph depicting the awareness among students about the vaccine foe cervical cancer.

Currently there are two vaccines Cervarix and Gardasil available for cervical cancer. But the response was very less amongst the students. Most of them (more than half of the participants) answered “Don’t Know”. Even among medical students the response was less accounting to about 18.07% - males and 15.47 – females said “Yes”.

If yes, what would be the right age to give it?

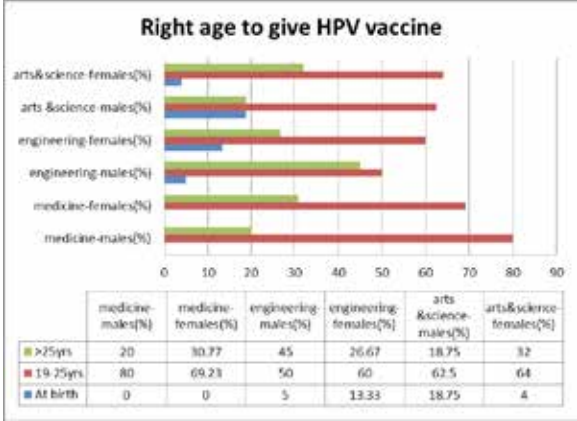


FIGURE 18: graph showing responses amongst the students for the question which is the right time to give HPV vaccine

Among the participants who said “Yes”, almost half of them said, that the vaccine should be administered within the age of 19-25 years. There is 0 response among medical students – to give at birth. While even among medicine students 20%-males and 30.77% females said that it can be give after 25 years of age. Among the other college students majority response is to give it between 19-25 years and the next highest was for 19-25years.

DISCUSSION

This study was mainly undertaken to know about the knowledge, attitude and awareness of the common risk factors of cervical cancer amongst the college going population of Puducherry.

Three colleges viz, medical, engineering and Arts and science were chosen. The results obtained are shown above.

First question is what is cervix, maximum of 77.12% of the males of medicine told the correct answer followed by 67.86% of the females of medicine. We expected that 100% of the medical students should know about cervix, but it was surprising that even some students were not able to tell the correct answer, the main reason for that is suspected to be the low standard of medical education. The students of the medical colleges now-a-days don't care to know more about a particular topic; rather they concentrate in scoring marks. May be these students when they complete their undergraduate course will come to know more about cervical cancer. The next highest response for this question was from engineering students followed by the arts and science students. This shows the standard of students in engineering college is more than the arts and Science College.

Only about of males 54.57% and 44.04% of females of engineering; and 46.43% of males and 58.34% of females of arts and science college and have heard about cervical cancer. This is far less than the study done among undergraduate students in Ibadan (71%).⁽¹⁵⁾ This is mainly due to lack of awareness among the college students of Puducherry. There are hardly any health education programmes conducted for engineering and arts and science students ,this ignorance is the root cause for incidence of cervical cancer now-a-days. However among medical college students 84.32% males and 91.68% females have heard about cervical cancer. Though a quiet good number of people had heard about cervical cancer 100% is not reached, which is generally expected. This reflects the standard of medical education and the quality of medical students.

Among the people who have heard about cervical cancer, friends and relatives stands first as the source of information (24%). When compared to other study done with South African undergraduate students 23.3% heard it from friends and 18.4% from family members.⁽¹⁶⁾This suggests us that friends and relatives of the participants too have heard about cervical cancer and there is sharing of information among the community. Once they come to know about the risk factors, symptoms and complications, they take more care in preventing it ,which is possible only when awareness is created.

The next source is book, being college students they are bound to read many books which help them to learn things. The least source being TV and radio (12%). It is far less when compared to other study done among South African undergraduate students 27.7% heard it from TV, Radio/newspapers. ⁽¹⁶⁾ This is because media is more concerned about entertaining people rather than creating awareness.

People are more exposed to media, so if steps are taken to promote health education via media it would be a good step in creating awareness. Health education and newspapers constitute only about 14%. Students of medical college ought to know about cervical cancer before the complete their under graduation but that is not the case for the students of other colleges, so if mass awareness has to be created health education programmes are necessary.

Cervical cancer may run in some families. Majority of the students from all these colleges uttered that they ‘DON’T KNOW’ whether cervical cancer can be inherited. Even medical students are not sure of the inheritance. This also forms one of the main reasons for the incidence of cervical cancer in the community. When 1st degree relatives are found to have affected, there are 2 to 3 fold higher risk for the person concerned. If awareness is created to them they would advise their mother sisters and even friends to have regular screening.

The most common cause for cervical cancer is Human Papilloma Virus infection. Surprisingly, 80.72% -males and 91.66% -females of medical course; 63.09%-males and 58.33%-fe-

males of engineering course; 42.85%-males and 80.95%-females of arts and science said HPV is the most common cause. Compared to another study -In America, 70% of adults 18 years and older have never heard of HPV, the causative agent for cervical cancer⁽¹⁷⁾, the awareness is less among engineering and arts and science students.

Amongst the students of all three colleges, only 37.35%-males and 16.67% females of medicine; 32.14%-males and 25% females of engineering course; 33.33% males and 9.52% females of arts and science uttered smoking can precipitate cervical cancer. It is less when compared to other study done among health care workers and college students in Iraq ⁽¹⁸⁾ (57.58%) of participants correctly answered that the smoking increasing the risk of cervical cancer, the knowledge about smoking as a risk factors was different from one study to another, for instance, Ali et al.,⁽¹⁹⁾ found that (7%) of the respondents knew that the smoking increasing the risk of cervical cancer, In Thailand, Phianmongkhon et al.,⁽²⁰⁾ reported higher knowledge level about the smoking.

About half of the participants of all three colleges had knowledge that sexually transmitted diseases could be a risk factor for cervical cancer (65.06% -males and 64.28% females of medicine; 45.23%-males and 53.57% females of engineering course; 42.85% males and 61.9% females of arts and science).

Different studies had yielded different results, for instance, Lima et al., ⁽²¹⁾found that (20.0%) of the women knew that HPV transmitted by sexual contact, In Colombia, (80.2%) of respondents didn't know that HPV was sexually transmitted ⁽²²⁾, while in Thailand, Phianmongkhon et al.,⁽²⁰⁾ reported higher levels of knowledge (83.2%) among nurses.

Condoms are protective aids to prevent against sexually transmitted diseases and to certain extent found to be useful in protecting against cervical cancer by preventing HPV infection transmission. We found that this awareness was least among males of arts and science (22.22%) and highest among males of engineering (50%). Another study showed that (1.2%) students said cervical cancer cannot be prevented and another (58.6%) participants did not know that it is preventable.⁽¹⁶⁾ This when compared to our study more than 30% of the participants don't know that condoms can offer protection.

Women's risk of developing cervical cancer is more with use of oral contraceptives. Males of medicine -36.14% and females-51.19% said "Yes" to this question and this constitutes the highest response. Females of engineering -73.81% were the highest to say don't know. Majority of the response from both sexes was don't know. Now-a-days, oral contraceptive use is increasing among the community which puts women at higher risk of developing cervical cancer. Awareness should therefore be created to limit the use.

Females of more than 40 years are more prone to get cervical cancer. Medical students, as expected, had a higher knowledge with a percentage of 61.44%males and 70.24-females, Arts and science students' males-64.48% and females 53.57%; 47.62% males and 45.23% females of engineering course. This indicates most of the students are aware that cervical cancer affects usually menopausal women.

49.39%males, 60.71% females of medicine, 27.38%male,7.14% females of engineering ; 5.95% males and 22.62%-females have heard about pap smear. When compared to another study⁽¹⁶⁾ (41.9%) participants had heard about the Pap smear test medical students had a greater knowledge . but engineering and Arts and science students' awareness was less when compared to that study.

Among all students who said that they have heard about cervical cancer, majority of them had positive attitude towards it and they said regular screening with Pap smear can reduce cervical cancer. Percentage of students who showed positive

response marks the highest – 73.17% males and 80.39% females of medicine; 78.26% males and 66.67 females of Engineering and 80% males of Arts and Science. This positive attitude would help participants to know more about cervical cancer and spread awareness amongst others, our study was based on this, we hope that we created little awareness amongst them and they were really eager to know about cervical cancer.

Medicine students with majority of 55.42% males and 52.38% females said that Pap smear should be done within 3 years of onset of sexual activity; Among the other two colleges; almost equal response – to do it after menopause and within 3 years of onset of sexual activity is seen. This difference of response from different courses is due to lack of awareness among engineering and arts and science and incomplete awareness among medical students. When compared to other study ⁽¹⁶⁾ where (6.1%) mentioned that the first Pap smear should be done at the age of 30 years ,engineering and arts and science students response is little higher.

Currently there are two vaccines Cervarix and Gardasil available for cervical cancer. But the response was very less amongst the students. More than half of the participants answered "Don't Know". Even among medical students the response was less accounting to about 18.07% - males and 15.47 – females said "Yes". Among the participants who said "Yes", almost half of them said, that the vaccine should be administered within the age of 19-25 years. In another study conducted among Women Attending a Tertiary Care Hospital in Puducherry, India 2.8% said that vaccines are available to prevent cervical cancer, when compared to this in our study there is slightly greater positive response. The level of knowledge on risk factors for cervical cancer and the Pap smear test is poor and thus utilization of these facilities is less.

From the above results it is clear that there is lack of awareness amongst college going population in Puducherry. Even medical students' awareness is less this lack is only tip of the iceberg.

We should encourage medical students in group discussions, interactive sessions and forums where all the doubts and aspects of HPV and its association with cervical cancer can be highlighted and clarified.

Engineering and arts and science college students should also be educated about cervical cancer many health educations have to be conducted.

Since students are more exposed to media, all media should take steps to spread awareness amongst them.

Media not only educates college students but also other members in family. Wide and effective spreading of awareness about the disease among women and men must form an integral part of public health policy of government.

CONCLUSION:

The present study shows inadequate levels of knowledge and awareness about (HPV), other common risk factors, Pap smear test and HPV vaccines among study groups especially the college students. Education and screening programs are needed to prevent HPV infection. Though cervical cancer is the leading cancer among women in, our study has shown that they are ignorant about this completely preventable disease. Hence, extensive health education to the college students is needed to improve their knowledge with an emphasis on the fact that both vaccination and screening are the new standards for prevention of cervical cancer, as HPV vaccination prevents most of the cervical cancer and screening can detect precancerous lesions which can be mitigated by treatment. Also utilization of the services of media like television, newspaper and radio can have massive impact in improving the knowledge.

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