Original Research Article

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Awareness of cervical cancer and its risk factors among female students of a pre university college in Bangalore, Karnataka, India

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ABSTRACT

Background: Cervical cancer is a serious public health problem. It is the commonest cancer among women in rural India, and India has the largest burden of cervical cancer patients in the world. Primary intervention focusing on creating awareness in the community will make a difference in present situation of cervical cancer in the country. Objective of the study was to assess the awareness of cervical cancer and its risk factors, Pap smear testing and HPV vaccine among female students of a pre university College.

Methods: A cross sectional study was conducted among female students of a pre University College, near to Raja Rajeshwari Medical College and Hospital. The study was carried out for duration of two months, May and June 2016. A pre tested, semi-structured questionnaire was designed to evaluate their basic awareness on cervical cancer. After the data collection Health education on cervical cancer was given to the students.

Results: Out of 98 students who participated in this study 53 (54%) students were 1st year and 45 (46%) were 2nd year students. Awareness about role of hereditary factor as a risk of cervical cancer was present in 19% of the students and 36% of the students reported that having multiple sexual partners is a risk factor for cervix cancer.45% were not aware of the fact that poor personal hygiene could also be a risk factor. 66% were not aware about HPV vaccine. There was no statistically significant association between place of residence and awareness level and there was a statistically significant difference in the awareness level and the year of study (p<0.003).

Conclusions: There was statistically significant difference in the awareness level between 2nd year and 1 year student. Almost all students haven't heard about Pap smear test. Majority of the students weren't aware about HPV Vaccine.

Keywords: Cervical cancer, Female students, HPV Vaccine

INTRODUCTION

Breast cancer and cervical cancer are the two most common cancers in women. There has been a drastic rise in number of cases since the past two decades. Among the two, cervical cancer is the commonest cancer among women living in rural India and India has the largest burden of cervical cancer patients in the world. One out of every five women in the world suffering this disease belongs to India. Genital infection with human papilloma

virus is a necessary factor for causation of cervical cancer.¹ Also there are many associated risk factors like bad local hygiene, too many children, not enough spacing between children, low nutrition levels and early marriage multiple sexual partners, smoking, early pregnancy all contribute to the risk factors for this kind of cancer.^{2,3}

If family history is positive, then the risk is all the higher. Although it is one of the most common cancers that affect women, cervical cancer is preventable.⁴

There are various factors which can be modified to prevent cervical cancer. It can be completely cured if detected at the earliest stage. All it needs is a little care and lots of awareness. Primary intervention focusing on creating awareness in the community will make a difference in present situation of cervical cancer in the country. Therefore spreading awareness and enhancing the knowledge regarding cervical cancer is absolutely necessary. Hence an effort has been done to assess the awareness of cervical cancer among female college students.

Objective of the study was to assess the awareness of cervical cancer and its risk factors, pap smear testing and HPV vaccine among female students of a pre – university college.

METHODS

It was a cross sectional study for two months conducted at Government Pre University College in Bidadi, Bangalore, Karnataka, India. All the female students of the pre university college were considered for the study. Pretested, semi-structured Questionnaire was used as study tool.

Sample size

As per records maintained in the administrative office of the pre university college, there are totally around 110 female students including PUC 1st Year and 2nd Year. Hence complete enumeration of the female students will be done for the study. Considering the absentees on the day of the study, 98 was the sample of the study.

Inclusion criteria

All the female students present on the day of study and willing to participate in the study.

Exclusion criteria

Those not willing to give consent

Method of data collection

A cross sectional study will be conducted among female students of a pre University College, near to Raja Rajeshwari Medical College and Hospital, Bangalore, Karnataka, India. All the students present on the day of the study and gave consent will be included in the study. A pre tested, semi-structured questionnaire was designed to evaluate their basic awareness on cervical cancer. The questionnaire, in its first part included information on age, study stream, place of permanent resident, type of family.

Remaining part of the questionnaire contained questions regarding awareness of cervix cancer and its risk factors, pap smear test and human papilloma virus vaccine. There were 14 questions, administered to assess the awareness of cervical cancer. Of which if the respondent scored < 50 %, the student was considered to have below average awareness level and those who scored > 50% was considered to have above average awareness level regarding cervical cancer. After the data collection health education on cervical cancer was given to the students.

Statistical analysis

The data was collected and compiled in MS Excel sheet and analyzed by using SPSS (Statistical Package for Social sciences) version 20.0. Descriptive statistics has been presented and Chi square test was the test of significance used during analysis.

RESULTS

With respect to the socio – demographic factors, majority (59%) were at the age of 16 years. PUC 1st year students formed that major group of the study accounting for 54%. Majority (53%) of the students were from Arts Stream. Students from rural area accounted for 54%. Students from Nuclear family accounted for 88%.

Table 1: Socio demographic profile of the students.

Characteristics	Category	Frequency	Percent
Age (in years)	15	5	5
	16	58	59
	17	30	31
	18	5	5
	Total	98	100.0
Year of study	PUC 1st	53	54.1
	year		
	PUC 2nd	45	45.9
	Year		
	Total	98	100.0
Study stream	Arts	52	53.1
	Commerce	32	32.7
	Science	14	14.3
	Total	98	100.0
Place of	Urban	45	45.9
residence	Rural	53	54.1
	Total	98	100.0
Type of family	Nuclear	86	87.8
	Family		
	Joint	12	12.2
	Family		
	Total	98	100.0

In present study Majority (96%) were not aware of the causative agent and 71% of the students were not aware of the age of occurrence of cervical cancer. Majority of the students knew that early marriage (59%), Sexual activity at an early age (49%), smoking (66%) as a risk factor for Cervical cancer. Majority of the students didn't know the following factors as a risk for cervical cancer:

Low consumption of fruit/vegetables (44%), Use of intrauterine device (93%), Hereditary factor (62%), Having sex with multiple partners (57%), Poor personal hygiene related to cervical cancer (45%), Use of birth control pills for longer duration (49%) and Having multiple pregnancies as a risk factor (58%).

Table 2: Distribution of students with respect to awareness regarding risk factors of cervical cancer.

Knowledge	Answer	Frequency	Percent
Causitive Agent	correct	4	4.1
	Wrong	94	95.9
	Total	98	100.0
Age of occurrence	30 - 50 years	22	23
-	Above 50 years	6	6
•	Don't know	70	71
	Total	98	100
Marriage at an early age is a risk factor for cervical	Yes	58	59
cancer	No	2	2
	Don't Know	38	39
	Total	98	100
Sexually active at early age can cause cervical	Yes	49	50
cancer	No	-	-
	Don't know	49	50
	Total	98	100
Smoking as a risk factor for cervical cancer	Yes	65	66
	No	2	2
1	Don't know	31	32
	Total	98	100
Low consumption of fruit/vegetable can cause	Yes	18	18
cervical cancer	No	37	38
cor vicur curren	Don't know	43	44
	Total	98	100
Use of intra-uterine device is a risk factor for	Yes	3	3
cervical cancer	No	4	4
cei viedi cancei	Don't know	91	93
	Total	98	100
Hanaditam, faatan	Yes	19	19
Hereditary factor		19	
	No		19
	Don't know	60	62
YY 1 14 14 1	Total	98	100
Having sex with multiple partners	Yes	35	36
	No	7	7
	Don't know	56	57
	Total	()()	100
Poor personal hygiene related to cervical cancer		98	
	Yes	38	39
	Yes No	38 16	39 16
	Yes No Don't know	38 16 44	39 16 45
	Yes No Don't know Total	38 16 44 98	39 16 45 100
Use of birth control pills for longer duration	Yes No Don't know Total Yes	38 16 44 98 44	39 16 45 100 45
Use of birth control pills for longer duration	Yes No Don't know Total Yes No	38 16 44 98 44 6	39 16 45 100 45 6
Use of birth control pills for longer duration	Yes No Don't know Total Yes No Don't know	38 16 44 98 44 6 48	39 16 45 100 45 6 49
	Yes No Don't know Total Yes No Don't know Total	38 16 44 98 44 6 48 98	39 16 45 100 45 6 49 100
Use of birth control pills for longer duration Having multiple pregnancies	Yes No Don't know Total Yes No Don't know Total Yes	38 16 44 98 44 6 48 98 9	39 16 45 100 45 6 49 100 9
	Yes No Don't know Total Yes No Don't know Total Yes No No No No No	38 16 44 98 44 6 48 98	39 16 45 100 45 6 49 100 9
	Yes No Don't know Total Yes No Don't know Total Yes	38 16 44 98 44 6 48 98 9	39 16 45 100 45 6 49 100 9

Table 3: Distribution of students according to awareness regarding Pap smear test for cervical cancer.

Knowledge	Response	Frequency	Percentage
Heard of Pap smear test	Yes	1	1
	No	97	99
	Total	98	100

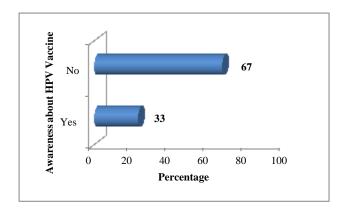


Figure 1: Distribution of study subjects according to their awareness about HPV Vaccine.

Out of 98 students, 67% were not aware about HPV vaccine. (Figure 1) Almost all students haven't heard about Pap smear test (Table 3). According to place of residence 79% of the students from rural area and 80% of the students from urban area were having below average awareness level regarding cervical cancer. There was no statistically significant association between place of residence and awareness level which suggests that rural as well as urban females do not differ significantly in the knowledge regarding cervical cancer. (Table 4) About 33% of the 2nd year students and 9% of the first year students had above average awareness level. The difference was found to be s statistically significant (p<0.003) (Table 5).

Table 4: Association between place of residence of the students and their awareness level.

Place of Residence	Awareness Level		Total	P value
	< 50%	> 50%		
Urban	36 (80%)	9 (20%)	45	0.926
Rural	42 (79%)	11 (21%)	53	
Total	78	20	98	

Table 5: Association between the year of study of the students and their awareness level.

Year of study	Awareness Le	Awareness Level		P value
	< 50%	> 50%		
PUC 1	48 (90%)	5 (10%)	53	0.003
PUC 2	30 (67%)	15 (33%)	45	
Total	78	20	98	

DISCUSSION

Awareness is the key to prevent cervical cancer. But today in India, cervical cancer is the most common kind of cancer due to lack of knowledge, lack of access to the resources and an 'it-cannot-happen-to-me' attitude. 'It's tragic that cervical cancer mostly hits the young population and the most important thing to understand is that it is completely preventable and, therefore awareness needs to be given at the earliest to the young population. In our study 23% knew usual age of occurrence whereas in a study by Saha A et al. it was about 43%. Sexual activity at an early age was recognised as a risk factor by 50% of the students and in a study conducted by Joy T et

al. awareness in relation to sexually active at early age can cause cervix cancer was 26.1% (Indian), 38.8% (Nepal) and 27.7% (Srilanka), in which it was found that Indians were less aware.⁶

Smoking as a risk factor was recognised by 66% of the students whereas in a study by SahaA et al. it was about 29% and in a study by Joy T et al. it was found to be 31.8%. ^{5,6} About 18% of the students reported low consumption of fruits and vegetables can be a risk factor for cervical cancer similar result was found in a study by Saha A et al. 12% recognised it as risk factor. ⁵ Knowledge about multiple sex partners as a risk factor was found in 7% of the students and it was only 3% in a

study by Saha A et al whereas in a study by Teresa Joy et al awareness in relation with multiple sex partners can cause cervix cancer was 39.8% (Indian), 51.3% (Nepali) and 43.85 (Srilankan) showed that it was the Indians with least awareness. 5.6 Hereditary factor as a risk factor for cervical cancer was reported by 19% of the students in present study whereas in a study by Joy T. et al it was only 5.1%. Poor personal hygiene was recognised as risk factor by 39% of the students whereas in a study by Saha A et al. 14% of the students identified poor personal hygiene as a risk factor

In present study only 1% of the students have heard of Pap smear test and in a study by Saha A et al. where only 11% had heard about Pap smear test. The results of our study and that from other studies too suggest that the awareness about cervical cancer among the college students appears to be at a lower level. In present study, awareness about use of birth control pills can't prevent HPV infection was present in 45% of the students and in a study by Teresa Joy et al it was about 28%. In present study 33% of the students had heard about HPV Vaccine. According to another cross sectional study conducted in Brazil, only 37% of the students reported that they "had ever heard about HPV".

Limitations

The study was carried out in only one women's college in the city; hence caution needs to be applied before generalizing the results to entire population.

CONCLUSION

The students were not aware about most of the risk factors for cervical cancer. Almost all students haven't heard about Pap smear test. Majority of the students weren't aware about HPV Vaccine. There was statistically significant difference in the awareness level between $2^{\rm nd}$ year and 1 year student.

Recommendations

Health education programs in colleges and in community will help in creating awareness about cervical cancer and its risk factors. Female students at college are also can serve as most important source of information in educating and bringing awareness about cervical cancer in the community.

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Institutional Ethics Committee

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