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Knowledge regarding cervical cancer among undergraduate female students at a selected college of Lalitpur, Nepal

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ABSTRACT

Cervical cancer is the second most common cancer in women living in less developed regions. In Nepal, little is known regarding the knowledge of cervical cancer in female young adults. A descriptive cross-sectional study was conducted to find out the knowledge regarding cervical cancer among undergraduate female students. A self-administered questionnaire was used to collect information from a non-probability sample of 150 female students from Little Angels College of Management in Lalitpur, Nepal. The data were analyzed using descriptive and inferential statistics.

Among the respondents, the mean age was 19.3 ± 1.1 years. Almost all (95%) of the respondents had inadequate knowledge regarding cervical cancer. Fifty-six percent of the respondents knew the meaning of cervical cancer and 35% of the respondents had an average knowledge about risk factors. Almost two-thirds of the students knew that cervical cancer is preventable. Regarding the preventive measures, good hygiene was identified by 68.5% of respondents followed by HPV vaccine 38.3%, using condom 19.5%, and Pap smear test 8.7%. The knowledge about HPV vaccine was only told by 11.3% of respondents. There was no statistically significant association between knowledge with selected variables (age, religion, ethnicity, family income, smoking and sexual practice) in the study.

Based on the findings, it is concluded that female students had inadequate knowledge regarding cervical cancer. This result reflects the need for health awareness campaigns to the students and community regarding cervical cancer, including the symptoms, causes, risk factors and preventive measures.

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INTRODUCTION

Worldwide, cervical cancer is the fourth most frequent cancer in women with an estimated 530,000 new cases in 2012, representing 7.5% of all female cancer deaths. In less developed regions, cervical cancer is the second most common cancer with an estimated 44,500 new cases in 2012 (84% of the new cases worldwide). In 2012, approximately 270,000 women died from cervical cancer; more than 85% of these deaths occurred in low- and middle-income countries (WHO, 2016). The incidence and mortality related to cervical cancer has declined significantly over the past 40 years due to Pap tests in the United States (Centers for Disease Control [CDC], Cervical Cancer Statistics, 2016).

In Nepal, cervical cancer is thought to be the leading cause of cancer-related deaths, where a population of 10.16 million women ages 15 years and older are at risk of developing cervical cancer. The annual number of new cases of cervical cancer is 2,332 while deaths from cervical cancer account for 1,367 cases {(ICO) Information Centre on HPV and Cancer, 2016}. The most important cause of cervical cancer is infection with human papilloma virus. Other risk factors of cervical cancer include genetics, low socioeconomic status, early sexual activity (before 17 year of age), multiple sexual partners, immunosuppression, and smoking (Chintamani, 2011). Primary prevention of cervical cancer includes human papillomavirus (HPV) vaccination to girls aged 9 to 13 years, aiming to reach them before they become sexually active. Secondary prevention for women older than 30 years of age occurs through screening tools such as VIA (visual inspection of the cervix with acetic acid) (PAP TEST) or HPV testing for screening, followed by treatment of detected precancerous lesions that may develop into cervical cancer (WHO, 2014).

Though it's a completely preventable disease, Nepalese, unlike in the western countries, have not been able to prevent cervical cancer due to lack of knowledge regarding the vaccination, lack of availability, and high cost. Primary prevention, such as early detection through increased awareness, the use of HPV prophylactic vaccine among young adolescents (age 9-13) who have not been previously exposed to the infection, organized screening programs, diagnosis and treatment play a vital role in reducing morbidity and mortality related to cervical cancer (Sherpa et al., 2015; Dangal, 2012).

At present, little is known about the knowledge level of young females about cervical cancer and its risk factors. Yet, this is a group where the risk is high of acquiring

HPV infection. Therefore, in this study, undergraduate female students were chosen as a sample, as they fall in an age group eligible for the HPV vaccine and are a group where the risk of acquiring HPV infection is high. This study explored the knowledge about various aspects of cervical cancer. The results could play an important role in determining knowledge gaps that exist and, therefore, help in designing health education messages about cervical cancer.

METHODOLOGY

A descriptive cross-sectional study was carried out to identify the level of knowledge regarding cervical cancer among adolescent females at Little Angels College of Management located at Lalitpur, Nepal. The study population was 150 undergraduate female students who were selected using a non-probability sampling approach. Data were collected using a structured self-administered questionnaire that was developed from the literature. Twenty-one correct/incorrect questions were distributed to measure the knowledge level and one score was given to a correct answer. The 21-item questionnaire collected information on socio-demographic characteristics, knowledge of cervical cancer, and sexual practice. The following criteria were set for the scoring of the level of knowledge: Inadequate Knowledge – Below 50%; Moderate Knowledge – 50–74%; Adequate Knowledge – 75 % and above.

Data were collected over a period of 10 days in the month of October 2016. Questionnaires on paper were distributed individually in the classroom maintaining anonymity. Participation in the study was voluntary and written informed consent was obtained from respondents prior to their participation. Ethical approval was taken from Nepal Health Research Council.

The data collected were entered and analyzed using Statistical Package for Social Sciences (SPSS version 23). There were 10 knowledge-related questions for cervical cancer; one point was awarded for every correct response. ANOVA was used to test the associations between categorical variables. The level of significance was set at 0.05.

RESULTS

Table 1 shows that most (95.3%) of the respondents had inadequate knowledge regarding cervical cancer.

Among the respondents, 56% answered correctly the meaning of cervical cancer. Likewise, half (50.7%) of the respondents knew about the risk factor of cervical cancer as multiple sexual partners. On an average, 35% of the respondents had the knowledge regarding risk factors.

Respondents were asked to indicate which, out of five options, were the signs and symptoms of cervical cancer. Table 3 shows that 68.2% answered any unusual discharge

Variables	Frequency	Percentage
Inadequate	143	95.3
Moderate	7	4.7
Mean±SD	31.42±11.07	Range (9–72.7)

from vagina followed by excessive bleeding during periods (28.4%), and bleeding between menstruation (26.4%). A minority (14.9%) answered as bleeding after sexual intercourse.

Table 4 illustrates that more than half (63.3%) of the respondents stated that cervical cancer can be prevented. A majority (68.5%) knew about the preventive measures as good hygiene, while just above two-fifths of the respondents stated taking fluids and a sample from the cervix as the screening approach for cervical cancer. Thirty percent had average knowledge on preventive measures.

As shown in Table 5, most (88.7%) of the respondents didn't know about the HPV vaccine. Similarly, most of them (92.6%) thought only females were eligible for the vaccine. Likewise,

Table 2. Knowledge on Meaning and Risk Factor of Cervical Cancer (n=150)

Characteristics	Frequency	Percentage
Meaning		
Wound of cervix	40	26.7
Pain in the cervix	4	2.7
Abnormal growth of cells in the cervix	84	56
Swelling in the cervix	22	14.7
Risk factor*		
Smoking	40	27
HPV infection	57	38.5
Multiple sexual partners	75	50.7
Early marriage	72	48.6
Obesity	16	10.8
Mean knowledge of risk factors±SD	(35.1351±15.40768) range (20–100)	
*Multiple response		

Table 3. Knowledge on Sign and Symptoms of Cervical Cancer (n=150)

Characteristics	Frequency	Percentage
Sign & Symptoms*		
Fever	21	14.2
Bleeding between menstruation	39	26.4
Any unusual discharge from the vagina	101	68.2
Excessive bleeding during periods	42	28.4
Bleeding after sexual intercourse	22	14.9
*Multiple response		

Table 4. Knowledge on Prevention and Screening of Cervical Cancer (n=150)

Characteristics	Frequency	Percentage
Possibility of cervical cancer prevention		
Yes	95	63.3
No	55	36.7
Preventive measures*		
Using condom	29	19.5
Good hygiene	102	68.5
HPV vaccine	57	38.3
Pap smear	13	8.7
Screening *		
By taking piece of cervical tissue	39	26.0
Blood test	76	50.7
By taking fluids/cells of the cervix	63	42.0
Urine test	42	28.0
Preventive measures Mean ±SD (30.0671±12.65427)	(range= 20-80)	

34.8% of respondents thought that the HPV vaccine is available paying on private hospital, and the majority (44.7%) didn't know about the recommended age group for vaccine. Table 6 shows very few (4%) of the respondents were involved in a sexual relationship.

Table 7 reveals that there is no statistical significant relationship between knowledge regarding cervical cancer and the selected variables with 95 % confidence interval (CI).

DISCUSSION

This study is limited to female undergraduate students of Little Angels College of Management, Lalitpur, Nepal. Findings of this study revealed poor knowledge regarding cervical cancer among female undergraduate students even though cervical cancer is the leading cause of cancer deaths among women in Nepal. The findings were similar to the study conducted in Saudi Arabia and India where 98% and 95.7% of the participants respectively had a low level of knowledge regarding cervical cancer (Al-Sheikh et al., 2014; Saha et al., 2010).

Findings of this study showed that more than half of the respondents correctly answered the meaning of cervical cancer, which was similar to the finding seen in Australia (Rao, Heathcote, Jackson, & Rousseau, 2015).

Similarly, only a minority of the respondents identified PAP smear as the preventive measure in this study. This is similar to the study conducted in India, where only 11% knew about the PAP smear as a preventive measure. There is a need to increase health awareness programs in order to strengthen their knowledge (Al-Sheikh et al., 2014).

Table 5. Knowledge Regarding HPV Vaccine (n=150)

Variables	Frequency	Percentage
HPV vaccine		
Yes	17	11.3
No	133	88.7
Eligibility for vaccine*		
Males	33	22.1
Females	138	92.6
Availability of vaccine*		
Paying on government hospital	10	15.2
Paying on private hospital	23	34.8
Free supply during government camp	22	33.3
Not available in Nepal	15	22.7
Recommended age group for vaccine		
Not answered	28	18.7
9-25 years	19	12.7
26-40 years	33	22.0
41-50 years	3	2.0
Don't Know	67	44.7

Table 6. Response Regarding Sexual Practice (n=150)

Characteristics	Frequency	Percentage
Involvement in sexual relationship		
Yes	6	4.0
No	144	96.0

In this study, the majority of the students did not know about the HPV vaccine. The finding is supported by a similar study conducted in Johannesburg, South Africa and Kuala Lumpur where 88.2% and 73.7% of participants respectively did not know that there is a vaccine to prevent cervical cancer (Rashwan, Ishak & Sawalludin, 2013; Kalau, 2012).

In this study, there was no association seen between knowledge and age. In India, knowledge was associated with age, where high knowledge regarding cervical cancer was seen among the students above 20 years of age and low knowledge was seen among the students less than 20 years (Saha et al., 2010). Similarly, in the present study, there was no association between family income with knowledge. This is in contrast to a study carried out in Johannesburg, South Africa, where knowledge was found to be high among the students with high socioeconomic status and low among low economic status students (Rashwan, Ishak, & Sawalludin, 2013).

Table 7. Association of Knowledge of Cervical Cancer between Selected Variables (n=150)					
Variables	Frequency	Mean	Std. Deviation	F value	P value
Age					
Less than or equal to 20	130	31.1538	11.19303	0.58	0.44
21 and above	20	33.1818	10.33371		
Ethnicity					
Brahmin/Chhetri	54	30.3872	11.77469	1.02	0.39
Janajati	67	31.8860	11.20391		
Madhesi	23	30.4348	8.92775		
Muslim	2	36.3636	0.00000		
Dalit	4	40.9091	11.13404		
Religion					
Hindu	115	31.3834	10.80315	0.33	0.80
Buddhism	30	30.9091	12.76751		
Islam	2	38.6364	3.21412		
Christian	3	33.3333	6.94330		
Family Income					
<10,000	9	27.7778	10.27626	0.67	0.51
10,000–50,000	92	31.2747	9.85414		
>50,000	49	32.3748	13.24023		
Family history					
Yes	6	34.0909	14.86857	0.36	0.54
No	144	31.3131	10.93913		
Smoking					
Yes	11	33.0579	15.35945	0.25	0.61
No	139	31.2950	10.72416		
Sexual Practice(n=6)					
Yes	6	37.1212	12.66761	1.66	0.19
No	144	31.1869	10.98526		

Statistically Significant, ANOVA (P value <0.05)

CONCLUSION

In this study, the majority of undergraduate female students had inadequate knowledge regarding cervical cancer. In particular, knowledge about preventive measures and the HPV vaccine is lacking among female students. Therefore, awareness regarding cervical cancer and its preventive measures, especially the PAP test and HPV vaccine, should be focused in Nepal for the prevention of cervical cancer.

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