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Awareness and Attitude Regarding Cervical Cancer Screening among Reproductive Age Women

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ABSTRACT

Background: Cervical cancer is preventable so awareness can be as effective as any other method to prevent it. The study aims to assess awareness and attitude regarding cervical cancer screening among reproductive age women in a tertiary level hospital, Kathmandu, Nepal.

Methods: A descriptive cross sectional study was carried out among 170 reproductive age women attending Nepal Medical College Teaching Hospital using purposive sampling technique. A semi structured interview schedule was used to collect data via face to face interview. Data was summarized using frequency, percentage, mean and standard deviation. Multiple logistic regression was used to determine the factors associated with awareness and attitude.

Results: Among 170 reproductive age women, mean age was 31.49 ± 8.70 years. Majority 151 (88.8%) of the women had heard of cervical cancer while 119 (70%) of them had heard about cervical cancer screening. Among them, only 17 (11.3%) had adequate awareness regarding cervical cancer screening. Seventy five (46.6%) of the women had positive attitude towards cervical cancer screening. Employment status [95% CI (0.01-0.38), AOR=0.06, p=0.003] was associated with awareness whereas, ethnicity, employment status and marital status were associated with attitude.

Conclusions: Most of the women were unaware about the cervical cancer screening but nearly half of the respondents had positive attitude. Therefore it is very crucial to provide health education and awareness through supervised client education. Focused group discussion as an effective approach of awareness program can be conducted in order to include specific group such as unemployed and unmarried women.

Keywords: Attitude; awareness; cervical cancer; reproductive age women; screening

INTRODUCTION

Cervical cancer is the fourth most leading cancer among women worldwide. Asia bears 51.6% of the worldwide cervical cancer burden and approximately 90% of the total deaths due to cervical cancer occurred in low and middle-income countries.[1,2] Cervical cancer being a major public health problem in South East Asia is the commonest cancer among women in Nepal.[3,4]

Despite of being preventable disease, screening of cervical cancer in Nepal has not been utilized and is diagnosed in later stage due to various reasons.[5-7] In order to bring improvement in preventive practices including screening, awareness can be an important measure, while the various studies carried out in Nepal shows moderate to lower level of the knowledge of cervical cancer among reproductive aged women.[8-11] Hence, the researcher aims to assess awareness and attitude of cervical cancer and its associated factors among women attending a tertiary level hospital.

METHODS

A cross sectional descriptive study design was carried out among reproductive age women from February 2018 to February 2019. This study was conducted in Nepal Medical College Teaching Hospital (NMCTH), Attarkhel, Jorpati, Kathmandu, as it is one of the tertiary level teaching hospital with high flow of patients and their visitors. Also it was feasible for the researchers.

Sample size was calculated on the basis of prevalence of adequate knowledge of cervical cancer as 12.6% from a study conducted among women living in mid-western rural, Nepal.[9] Thus based on this prevalence,

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with 95% confidence interval with 5% allowable error, the estimated sample size was calculated by using the formula: (n) = $[Z^2pq/d^2]$ [12] where, p= 12.6, n=0.126, q= 1-0.126= 0.874, Z= 95% confidence interval = 1.96, d= 5=0.05 (allowable error). Therefore, the sample size was 170. Non- probability purposive sampling technique was used to select the samples. All the women including patients and visitors of reproductive age group (15-49) attending OPD(Obstetrics and gynecological, Medicine, Surgery, Orthopedics, Eye, ENT, Dermatology) of NMCTH were included in the study. Reproductive age women who were admitted in the hospital, medical personnel and those diagnosed as having cervical cancer were excluded from the study.

The research instrument consisted of a self-constructed semi structured interview-schedule which was developed through consultation with expertise, peer and literature. English version of the tool was developed and then first forward translation then backward translation was done by two independent bilingual translators to find whether the meaning of the questions is retained. It had three parts: Part I consisted 10 questions related to socio demographic characteristics; Part II consisted 4 questions related to cervical cancer related information; Part III consisted 11 questions related to awareness of cervical cancer screening. Part IV (5 point likert scale) consisted 11 statements to assess attitude towards cervical cancer screening. Among the 11 questions, the types of questions related to awareness on cervical cancer screening, there were: 4 Multiple Choice Questions (MCQs) which consists of one single correct response each, 4 multiple response questions (MRQs) which consists multiple correct responses each and 3 yes/no questions. The yes/no questions were not included in scoring while the correct responses for each MCQs and MRQs scored 1. The total score for awareness was 33 and awareness level was analyzed as adequate if score 17 or above ≥ 50% and inadequate if score less than 17 or < 50%. The scoring was done on the basis of a study conducted in Nigeria.[13] The total score for attitude was 55 and neutral score was 33. The score above neutral score was considered as positive attitude and score below neutral score was considered negative attitude based on the study conducted in Chitwan, Nepal.[10] Internal consistency of the attitude scale was assessed by calculating the value of cornbach's alpha which was found to be 0.85.

Ethical permission was taken from the Institutional review committee of Nepal Medical College. After approval, the hospital matron was informed about the study and permission was taken. Data was collected from October 2018 to December 2018. Data was then collected on different days. Reproductive age women were screened for eligibility criteria. The purpose of the study was explained and verbal as well as written informed consent was obtained from the reproductive age women prior to data collection. Data was collected by interviewing the women using interview schedule. The researchers themselves interviewed the reproductive age women at a separate place in the ward or OPD for an average time of 15 to 20 minutes.

The obtained data was coded and entered in MS-EXCEL and exported into the IBM SPSS version 16 for analysis. Data was summarized using descriptive statistics such as frequency, percentage, mean and standard deviation. Multiple Logistic Regression Analysis was done to identify the factors associated with awareness level and attitude.

RESULTS

Table1. Distribution of Socio-Demographic Characteristics (n=170).

Variables	Frequency	Percentage
Age group (in years)		
15-24	38	22.4
25-34	76	44.7
35-44	40	23.5
45-49	16	9.4
Mean ± SD=31.49±8.70 Minimum:16 years Maximum:49 years		
Marital status		
Single	43	25.3
Married	127	74.7
Religion		
Hinduism	143	84.1
Buddhism	14	8.2
Christianity and Islam	13	7.7
Ethnicity		
Brahmin	75	44.1
Chettri	46	27.1
Janjati	38	22.4
Madhesi and Dalit	11	6.4
Educational Status		
Literate	148	87.1
Illiterate	22	12.9
Employment Status		
Employed	55	32.4
Unemployed	115	67.6

Out of 170 respondents, 44.7% were between age group

of 25-34 years with the minimum age of 16 years and maximum of 49 years and 74.7% of respondents were married. Religion profile showed that 84.1% followed Hinduism and 44.1% were Brahmin. Likewise, 87.1 % were literate and 67.6% were unemployed (Table 1).

Table 2. Awareness on Cervical Cancer.

Variables	Frequency	Percentage
Heard of cervical cancer (n=170)		
Yes	151	88.8
No	19.0	11.2
Meaning of cervical cancer (n=151)		
Correct response (Abnormal growth of cells in cervix)	61	40.4
Incorrect response	90	59.6
Awareness on risk factors (n=151)**		
HPV infection	25	16.6
Early marriage	74	49.0
Multiple sexual partners	93	61.6
Multiple pregnancies	54	35.8
Long term use of contraceptives	9	6.0
Low socio-economic status	18	11.9
Family history	31	20.5
Smoking	27	17.9
Poor personal hygiene	37	24.5
Awareness on Sign and symptoms (n=151)**		
Blood spotting	87	57.6
Menstrual bleeding longer and heavier than normal	72	47.7
Bleeding/spotting after sexual intercourse	53	35.1
Pain during intercourse	44	29.1
Unpleasant vaginal discharge	112	74.1
Weight loss	22	14.6
Lower abdominal/ backpain	18	12.0

***Multiple Responses*

Two-fifth (40.4%) of the respondents stated correctly regarding the meaning of cervical cancer. More than half of the respondents (61.6%) were aware that having multiple sexual partners is one of the risk factor for cervical cancer. It is noteworthy that almost 3/4th (74.1%) stated unpleasant vaginal discharge as sign and symptoms of cervical cancer (Table 2).

Table 3. Awareness on Preventive Measures of Cervical Cancer (n=151).

Variables	Frequency	Percentage
Preventive measures of cervical cancer **		
Avoiding multiple sexual partner	93	61.6
Avoiding multiple pregnancies	70	46.4
Avoiding early marriage	68	45.0
Avoiding smoking	26	17.2
Avoiding early age of first pregnancy	24	15.9
Avoiding long term use of oral contraceptives	8	5.3
Maintaining perineal hygiene	65	38.2
Early treatment of STI	26	17.2
Regular screening	22	14.6
Getting vaccination against HPV infection	15	9.9
Do not know	17	11.3
Others	21	13.9

Majority (61.6%) were aware that avoiding multiple sexual partner was one of the preventive measure of cervical cancer while only few (9.9%) were aware that vaccination against HPV infection will help prevent cervical cancer (Table 3).

Table 4. Awareness on Screening of Cervical Cancer.

Variables	Frequency	Percentage
Heard about cervical cancer screening (n=151)		
Yes	119	78.8
No	32	21.2
Screening methods (n=119)**		
PAP smear	83	69.7
VIA	2	1.7
HPV testing	7	5.9
Others	27	22.3
Do not know	20	16.8
Screening time ** (n=119)		
Correct response (At the age of 21 yrs)	4	3.4
Incorrect response	115	96.6
Cervical cancer screening frequency ** (n=119)		
Correct response (Every three years)	11	9.2
Incorrect response	108	90.8

***Multiple response*

It was found that (78.8%) of them had heard of cervical cancer screening and surprisingly (16.8%) had not known about the screening methods though they have heard of screening. Screening methods for detecting cervical cancer were revealed as pap smear (69.7%), HPV testing (5.9%) and Visual Inspection with Acetic Acid (1.7%). Only few (3.4%) of the respondents were aware that the age of starting the screening is 21 years. Likewise, only 9.2% were aware that cervical cancer screening should be done every three years (Table 4).

Table 5.Level of awareness and attitude regarding cervical cancer screening (n=151)

Level of awareness	Frequency	Percentage
Adequate	17	11.3
Inadequate	134	88.7
Total	151	100.0
Level of attitude		
Positive attitude	75	49.6
Negative attitude	76	50..4
Total	151	100.0

It is alarming that only (11.3%) of the women had adequate awareness of cervical cancer screening. Though very few had adequate awareness, it was surprising to note that almost half (49.6%) had positive attitude towards cervical cancer screening (Table 5).

In the multiple logistic regression analysis, employment status was the only factor found to be significantly associated with awareness level [95% CI (0.01-0.38), AOR=0.06, p=0.003], while, ethnicity (p=0.033), employment status (p=<0.001) and marital status (p=0.005) were found to be significantly associated with attitude towards cervical cancer. Those women who followed Hindu religion were found to be 4 times more aware than other religions (AOR= 4.05) though the p-value was not significant. Single women were likely to be 4 times more positive towards cervical cancer screening than the married [95% CI (1.55-11.56), AOR=4.24, p=0.005] (Table 6).

Table 6. Factors associated with awareness and attitude

	Knowledge			Attitude		
Variables	P value	AOR	95% CI (LL-UL)	P value	AOR	95% CI (LL-UL)
Age ≤30 (Ref) >30	0.77	0.83	0.24-2.89	0.056	0.43	0.18-1.02
Religion Hindu (Ref) Others	0.19	4.05	0.48-33.97	0.275	2.03	0.57-7.22
Ethnicity Brahmin and Chhetri (Ref) Janajati and Others	0.23 0.66	0.19 1.81	0.01-3.02 0.12-26.46	0.033* 0.14	0.76 0.17	0.01-0.81 0.02-1.79
Educational Status Literate (Ref) Illiterate	0.815	0.79	0.11-5.63	0.85	0.88	0.24-3.32
Employment Status Employed (Ref) Unemployed	0.003*	0.06	0.01-0.38	<0.001*	0.20	0.09-0.46
Marital Status Single (Ref) Married	0.82	0.84	0.18-3.87	0.005*	4.24	1.55-11.56

**p-value significant, LL= Lower Limit, UL= Upper Limit*

DISCUSSION

Out of 170 women, 151 (88.8%) of the respondents had heard about cervical cancer which was consistent with the study conducted in Rukum district, Nepal (77.5%).[8] Similarly, various studies from Nepal, Nigeria, Uganda and India shows the percentage of the women who had heard about cervical cancer ranges from 65% to 99%.[9,13,14,15]

Majority of the women (88.7%) had inadequate awareness level in this study which was similar to the study conducted in Mid-western rural, Nepal (87.4%),[9] whereas the study conducted by Shrestha et al in one of the tertiary care hospital showed inadequate knowledge on cervical cancer among 53% of the respondents.[11] This might be because of the variation in the location i.e., rural and urban, variation in educational level and other socio-economic characteristics of the respondents.

Nearly fifty percent (49.6%) of the respondents in our study had positive attitude towards cervical cancer screening which is contradictory to the findings of the study in mid-western rural Nepal[9] which showed favorable attitude among 71.7% and a study done in All India Institute of Medical Sciences, Bhopal[15] with positive attitude among 80.5% of the participants while Shrestha, et.al,[11] found positive attitude among 38% of the respondents which was consistent with our study finding.

The most frequently cited risk factors of cervical cancer in this study was multiple sex partners (61.6%) followed by early marriage (49.0%), multiple pregnancies (35.8%) and poor personal hygiene (24.5%), whereas the least cited risk factors were HPV infection, smoking and family history. The findings were similar to the study carried in Rukum, Nepal[8], Nigeria[13] and Uganda[14] which revealed multiple sex partners, early age at intercourse, multiple pregnancies and poor personal hygiene as the most cited risk factors. While the study conducted in Uganda found HPV (Human Papilloma-virus) infection and smoking as the other most cited risk factors which contrast with our study findings.[14] The reason behind this might be because of the different setting, experiences as well as different level of awareness among the participants. The least cited risk factors in the study of Rukum[8] were hereditary, smoking and prolong use of Oral Contraceptive Pill (OCP) which supports our findings except the use of OCP.

The most cited sign and symptoms in this study were unpleasant vaginal discharge (74.1%), blood spotting (51.2%), menstrual bleeding heavier and longer than normal (47.7%) and pain during intercourse (29.1%). This finding of our study is similar to the findings of the study carried in Uganda [14] and Nigeria.[13] In our study, the least cited symptoms were lower abdominal pain and weight loss, whereas the study conducted in Nigeria revealed lower abdominal pain as one of the most cited symptoms.[13] The study conducted in Bhopal revealed post-menopausal bleeding and heavy menstrual bleeding as the least cited symptoms.[15]

More than 3/4th (78.8%) of the respondents were aware about cervical cancer screening which contradicts with the findings of study carried out in Rukum (15.5%)[8] and Bhopal (34.5%).[15] Out of them (78.8%), 69.7% were aware about Pap smear test which is inconsistent with the study finding carried by Shrestha, et.al. (42.9%)[11] as well as the study conducted in Bhopal (34.5%).[15]Only 1.7% of the women who had heard of cervical cancer screening were aware about VIA (Visual Inspection with Acetic Acid) testing and 5.9% were aware about HPV (Human Papilloma-virus) blood testing.

Employment status was the only factor associated with awareness level, while ethnicity, employment status and marital status were found to be associated with attitude. One of the strange findings in our study was that the unmarried women were found to have 4 times more positive attitude towards cervical cancer screening than the married. The reason behind this finding might be because of the variation in educational and awareness level among married and unmarried women. The study conducted in mid-western rural Nepal showed that knowledge and attitude were influenced by the educational status of the women.[9] The study in Bhopal revealed age, educational level, age at marriage and per capita family income as the predictors of knowledge on cervical cancer while attitude was found to be influenced by education, age at marriage and family income.[15]

CONCLUSIONS

Most of the women were unaware about the cervical cancer screening but nearly half of the respondents had positive attitude. Despite of having positive attitude towards cervical cancer screening, awareness regarding cervical cancer was not enough. Hence, it is very crucial to provide health education and awareness campaign regarding cervical cancer screening and prevention among the respondents through supervised client education.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

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