

Awareness on Cervical Cancer among Reproductive Aged Women of Kathmandu, Nepal

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ABSTRACT

Background: Cervical cancer is a leading cause of death among women in both developed and developing countries. It is one of the commonest malignancy and prime cause of cancer death among women in Nepal. Nepal Government has prioritized prevention of cervical cancer through screening but still coverage rate for cervical cancer screening service is very low due to the lack of awareness among them. So the objective of the study is to find out awareness on cervical cancer among reproductive aged women.

Methodology: A descriptive cross-sectional study was conducted among reproductive aged women (15-49 years) of Budhanilkantha Municipality of Kathmandu with the sample size 173. Non-probability purposive sampling method was used to select the sample. Structured questionnaire was used and face to face interview technique was adopted for data collection. Data was analyzed using statistical package for social science (SPSS) 16.0 version.

Result: This study revealed that only 17.9% had highest, 71.1% had moderate and 11% had lowest level of awareness on cervical cancer. More than half (58%) of the respondents had no knowledge on causes of cervical cancer and 38.2% of the respondents answered poor perineal hygiene as the risk factor of cervical cancer. Nearly cent percent (98.8%) of the respondents were unaware about the appropriate age for giving vaccine against cervical cancer. Similarly 36.4% answered lower abdominal pain as the major symptoms of cervical cancer whereas same numbers of respondents were unaware of sign and symptoms. Only 26.6% heard about screening test for cervical cancer prevention and 82.7% had not done any screening test in their life time. The study showed that there is association between level of awareness and marital status, age of marriage, occupation and family history.

Conclusion: The results of this study suggest that there is need for the implementation of awareness programs on cervical cancer and its preventive measures in the community level.

Key words: Awareness, Cervical Cancer, Reproductive aged Women

INTRODUCTION

Cancer is one of the greatest threats to women's health and one of the most non-communicable diseases. According to WHO cervical cancer is the fourth most frequent cancer in women with as estimated 5,70,000 new cases in 2018 representing 6.6% of all female cancers. Annually, more than 300,000 women die of cervical cancer, every minute, one woman is diagnosed, and nine in ten women are dying from cervical

cancer in low and middle income countries.

^[1] Therefore, cervical cancer is one of the most common malignancies and the leading cause of cancer deaths in women in less developed countries. The highest incidence and mortality rates are observed in sub-Saharan Africa, Latin America, and South Asia. Cervical cancer is the number one cancer among women in Nepal. The age-standardized incidence and mortality rate of cervical cancer in Nepal is 19 and 12 (per

100,000 per annum), respectively. In comparison to more developed countries, the incidence rate of cervical cancer is 2 times higher while the mortality is almost four times higher in Nepal. [2]

Nepal has a population of 10.16 million women ages 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 2942 women are diagnosed with cervical cancer and 1928 die from the disease. Cervical cancer ranks as the first most frequent cancer among women between 15 and 44 years of age about 5.0% of women in the general population are estimated to harbor cervical HPV- 16/18 infection at a given time and 80.3% of invasive cervical cancers are attributed to HPV's 16 or 18. [3] Reports from the hospital-based registries, cervix cancer was the major cancer followed by breast and ovarian cancer in Nepal. [4] A study in china among 7100 women found that only 7.4% respondents had done Pap smear and 97.4% were not aware about screening test where very few (0.14%) had heard about Human Papilloma Virus. [5]

A cross-sectional study in Nigeria among 305 reproductive aged women revealed that 12.8% had heard about cervical cancer and only 2% had done its screening test. [6] Study among 360 women of rural Nepal found that majority of the participants (87.4%) had inadequate knowledge and almost equal number of women (86.4%) had never done cervical cancer screening practice. [7] A Hospital based study of Nepal revealed that 34.4% had adequate knowledge and people involved in cervical cancer prevention and screening awareness programme were only 9.4%. [8]

Though, national guidelines 2010 for cervical screening in Nepal has prioritized prevention of cervical cancer through screening and has emphasized using VIA approach for cervical cancer screening among reproductive aged women but still coverage rate for cervical cancer screening service is very low (2.45%) in Nepal. [9] Various studies have showed that still

women are not aware of cervical cancer and most of the studies have been conducted in the hospital setting. Therefore, researchers are interested to carry out the research to find out the level of awareness of cervical cancer among reproductive aged women in semi urban setting. The finding of the study would help to evaluate awareness on cervical cancer among reproductive aged women. On the basis of the finding of the study, Municipality could carry out necessary interventions collaborating with other local health centers in order to raise awareness. Likewise, finding of the study would be helpful for future researchers to study on cervical cancer in the community setting.

MATERIALS AND METHODS

It is a descriptive cross sectional study design conducted at Budhanilkantha Municipality which is situated in Kathmandu District, the Province No. 3 of Nepal. Among 13 wards of Budhanilkanta municipality 9,10,11,12 wards were selected purposively where 19,799 reproductive aged women (15-49 years) were residing. From the 4 wards proportionate simple random sampling was adopted. After determination of number in each ward respondent was selected purposively .So The Study Population was reproductive aged women (15-49 years) of given wards who may be married or unmarried.

No of wards	Population of wards	Proportion	Sample size
Ward 9	3041	0.2	0.2×173=17
Ward 10	8144	0.4	0.4×173=69
Ward 11	3273	0.2	0.2×173=35
Ward 12	5341	0.3	0.3×173=52
Total	19,799	1	173

Schematic representation of data collection

The sample size was calculated based on 13 % Prevalence of adequate knowledge using Cochran formula ($n=z^2pq/d^2$). [7] The sample size of 173 was obtained after calculation with 5% allowable error at 95% confidence interval (CI).

A self-developed structured questionnaire including socio-demographic

information and awareness regarding cervical cancer based on literature review was used for collecting data. There were total 39 questions (including multiple responses) to assess the level of awareness which included definition, causes, risk factors, sign and symptoms and preventive measure of cervical cancer. Scoring was '1' for each correct response and '0' for the wrong answer. The analysis of knowledge score was ranked as highest, moderate and lowest knowledge on the basis of mean and standard deviation value of score (where mean was 7.3 standard deviation was 3.9, Mean + SD = Highest knowledge and Mean -SD = Lowest knowledge) Data collection was started after approval of the proposal from Institutional Review Committee (IRC). Participants were explained about the objectives of the study and informed consent was taken from each participant. Data was collected by face to face interview and 15-20 minutes time spent with one respondent.

Content validity was established by extensive literature review, consulting with the subject experts, and peer review. The tool was forward and backward translated into English and Nepali to retain the same concept. The reliability was maintained by pretesting in 17 women in the different ward of study area.

Statistical Analysis

Data analysis was performed using the Statistical Package for the Social Sciences (SPSS version 16.0; IBM Corp., Armonk, NY, USA). Descriptive statistics were used to describe the women's socio-demographic characteristics and Knowledge. The χ^2 test was used for statistical significance of knowledge and socio demographic variables

Ethical consideration

Formal approval was taken from Institutional Review Committee (IRC) of Manmohan Memorial Institute of Health Sciences. Objectives of the study were clearly explained to the participants and informed consent was taken. Both data

collection was conducted in confidential manner. Nobody was forced to participate in the study.

RESULTS

TABLE 1: Socio-demographic variables (n= 173)

Variables	Frequency	Percentage
Age		
15-32	90	52
33-49	83	83
Ethnicity		
Dalit	11	6.4
Madhesi	5	2.9
Janajaati	59	34.1
Muslim	1	0.6
Brahmin/Chettri	89	51.4
Others(Thakuri/Sanyasi/Malla)	8	4.6
Marital status		
Married	134	77.5
Unmarried	34	20.8
Widow	5	1.7
Educational status		
Illiterate	11	6.4
Basic(1-8)	55	31.8
Secondary(9-12)	67	38.7
University	40	23.1
Occupation		
House manager	55	31.8
Agriculture	16	9.2
Business	39	22.5
Service	39	22.5
Labor	4	2.3
Student	20	11.6
Age of marriage		
Unmarried	34	20.8
Below 20 years	87	49.1
20 years and above	52	30.1
Family history		
Yes	20	11.6
No	153	88.6

TABLE 2: Respondents Awareness on meaning, Causes and Risk factors of cervical cancer (n =173)

Variables	Frequency	Percent
Meaning of cervical cancer		
Pain in the cervix	21	12.1
Swelling in the cervix	35	20.2
Abnormal growth of cells in the cervix*	0	0
Wound in the cervix	93	53.8
Do not know	24	13.9
Causes of cervical cancer		
Virus*	9	5.2
Bacterial infection	32	18.4
Poor nutrition	32	18.4
Do not know	100	58
Risk factors **		
Multiple sexual partner	6	3.5
Early marriage and sexual exposure	7	4
Multiple pregnancies	1	0.6
Sexually transmitted infections	20	11.6
Cigarette/tobacco	21	12.1
Prolonged use of OCPs	1	0.6
Poor perineal hygiene	66	38.2
Do not know	54	31.2
Sign and symptoms**		
Post coital bleeding	2	1.2
Inter menstrual bleeding	7	4
Foul vaginal discharge	55	31.8
Lower abdominal pain	63	36.4
Painful sex	-	-
Do not know	63	36.4

*Correct answer **Multiple response

Table 1 revealed that majority (83%) of respondents belongs to 33-49 years of age. Likewise, most (51.4%) of the respondents belongs to Brahmin/Chhetri ethnic group. Similarly, more than three-fourth (77.5%) of the respondents were married. Women with secondary education were 38.7%. About half (49%) of the respondents got married below 20 years of age and 11.6% respondents have positive family history of cervical cancer.

Table 2 shows that more than half (53.8%) of the respondents answered cervical cancer is a wound in the cervix. Nobody had knowledge about the meaning of cervical cancer. Similarly, 58% of the respondents had no knowledge on causes of cervical cancer and few (38.2%) of the respondents answered poor perineal hygiene as the risk factor of cervical cancer. Similarly 36.4% answered lower abdominal pain as the sign and symptoms of cervical cancer whereas same numbers of respondents were unaware of sign and symptoms.

TABLE 3: Respondents' awareness on preventive measures of cervical cancer (n= 173)

Variables	Frequency	Percent
Is cervical cancer preventable?		
Yes	111	64.2
No	62	35.8
Preventive measures**		
Avoid early exposures	6	3.5
Avoid multiple pregnancies	1	0.6
Use of safe sex practice	26	15
Avoid prolonged use of OCPs	3	1.7
Avoid multiple sexual partner	1	0.6
Vaccination against virus causing cervical cancer	52	30.1
Maintain perineal hygiene	18	10.4
Avoid cigarette/tobacco	6	3.5
Screening	24	13.9
Avoid multiple sex partner	-	-
Heard about HPV vaccine?		
Yes	3	1.7
No	170	98.3
If yes, appropriate age for giving HPV vaccine?		n=3
9-26 years*	3	1.7
40-45 years	0	0
Above 60 years	0	0
Do you know what type of screening test are available?		
Visual Acetic acid test (VIA)	14	8.1
PAP smear test	37	21.4
HPV DNA test	0	0
Colposcopy	0	0
Have you ever done any screening test?		
Yes	30	17.3
No	143	82.7
If yes, what have you done?		
VIA	13	7.5
PAP smear test	17	9.8
HPV DNA test	0	0
Colposcopy	0	0
What type of women needs to do screening?		
Women who are sick	0	0
Sexually exposed women*	108	62.4
Above 65 years	0	0
Do not know	65	37.6
Appropriate time interval for screening		
1 yearly	41	23.7
2 yearly	24	13.9
3-5 yearly*	34	19.7
Do not know	74	42.8
Best time for doing screening test		
During menstrual period	20	11.6
Immediately after menstrual period	40	23.1
10-20 days after first day of last menstrual period *	20	11.6
Do not know	93	53.8

*Correct answer **Multiple response

Table 3 reveals that nearly two-third (64.2%) of the respondents answered cervical cancer is preventable where as 30.1% of the respondents answered maintaining perineal hygiene as the preventive measure of cervical cancer. Nearly cent percent (98.8%) of the respondents were unaware about the appropriate age for giving HPV vaccine. Only 26.6% of the respondents had heard about the screening test done for cervical cancer and among them 21.4% of the respondents heard about PAP smear test. Majority (82.7%) of the respondents had not done any screening test. Nearly two-third (62.45) of the respondents answered sexually exposed women needs to do screening test. 42.8 % of the respondents were unaware about the appropriate time interval for screening where as 53.8% of the respondents had no idea regarding the best time for doing screening test.

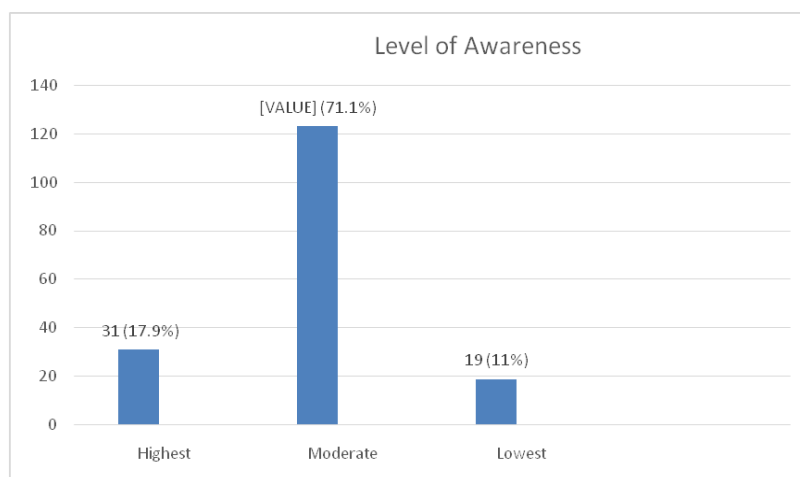


Figure 1: Level of Awareness on Cervical Cancer (n=173)

Knowledge score Mean=7.73 Standard deviation=3.9 Least=3.8 or less Moderate=3.9-11.5 Highest=11.6 or more

The figure illustrates that most of the (71%) respondents had moderate level of awareness on cervical cancer and few (17.9%) had highest level of awareness on cervical cancer. Similarly still 11% respondents having lowest level of awareness about it.

TABLE 4: Association of Level of awareness on Cervical Cancer with Socio-demographic Variables

Variables	Awareness			p-value	Df	Phi/Cramer
	Highest	Lowest	Moderate			
Age						
15-32	13(68.9%)	15(16.7%)	62(68.9%)	0.032*	2	0.026*
33-49	18(21.7%)	4(4.8%)	61(73.5%)			
Mean age=33years						
Ethnicity				0.573	10	0.573
Dalitt	1(9.1%)	2(18.2%)	8(72.7%)			
Madhesi	0%	2(40%)	3(60%)			
Janajati	9(15.3%)	7(11.9%)	43(72.9%)			
Muslim	0%	0%	1(100%)			
Brahmin/Chettri	19(21.3%)	8(9%)	62(69.7%)			
Others(Thakuri/Sanyasi/Malla)	2(25%)	0%	6(75%)			
Marital status				0.025*	4	0.0045*
Married	25(18.7%)	12(9%)	97(72.4%)			
Unmarried	3(8.8%)	7(20.6%)	24(70.6%)			
Widow	3(60%)	0%	2(40%)			
Divorced	0%	0%	0%			
Age of marriage				0.014*	4	0.014*
Unmarried	3(8.8%)	7(20.6%)	24(70.6%)			
Below 20 years	13(14.9%)	11(12.6%)	63(72.4%)			
>20 years	15(28.8%)	1(5.3%)	36(69.2%)			
Educational status				0.355	6	0.355
Illiterate	1(9.1%)	1(9.1%)	9(81.9%)			
Basic(1-8)	10(18.2%)	3(5.5%)	42(76.4%)			
Secondary(9-12)	13(19.4%)	12(17.9%)	42(62.7%)			
University	7(17.5%)	3(7.5%)	30(75%)			

Occupation						
House manager	14(25.5%)	6(10.9%)	35(63.6%)	0.032*	10	0.017*
Agriculture	1(6.2%)	0%	15(93.8%)			
Business	5(12.8%)	5(12.8%)	29(74.4%)			
Service	10(25.6%)	2(5.1%)	27(69.2%)			
Labor	0%	0%	4(100%)			
Student	1(5%)	6(30%)	13(65%)			
History of cervical cancer in the family						
Positive	13(65%)	0%	7(35%)	0.001*	2	0.001*
Negative	18(11.8%)	19(12.4%)	116(75%)			

P value obtained from Pearson chi square, df: degree of freedom, Phi: Phi Cramer's value, p value significant at <0.05

Above table shows that there is significant association between level of awareness with age ($p=0.026$), marital status ($p=0.0045$), age of marriage (0.014), occupation ($p=0.017$) and family history of cervical cancer ($p=0.001$) where as there is no association between other demographic variables in ethnicity ($p=0.573$) and educational status ($p=0.355$).

DISCUSSION

The study was designed to assess level of awareness on cervical cancer among reproductive aged women of Kathmandu. Data were collected from 173 respondents and results were tabulated, analyzed and interpreted.

Socio-demographic information of the respondents

In this study, the total number of respondents was 173, aged 15-49 years. Majority (83%) of respondents belongs to 33-49 years of age. Likewise, half (51.4%) of the respondents belongs to Brahmin/Chhetri ethnic group. Similarly, more than 3/4 (77.5%) of the respondents were married, 38.7% of the respondents had secondary (9-12) level education. About 50% of the respondents got married below 20 years of age and only 11.6% had the positive family history of cervical cancer.

Awareness on Cervical Cancer

The current study shows that, only 17.9 % of the respondents had adequate level of awareness on cervical cancer. The finding is consistent with the findings of the study conducted in mid-western, Nepal that is 13% had adequate knowledge on cervical cancer. ⁽⁷⁾ In this study 38.2% of the

respondents answered poor perennial hygiene as the risk factor of cervical cancer which was inconsistent to the study findings conducted in teaching hospital Chitwan where 27.7% of the respondents answered multiple sexual partners as the risk factor. ⁽⁸⁾

Similarly, in this study 36.6% and 31.8% of the respondents answered lower abdominal pain and foul vaginal discharge are the sign and symptoms of the cervical cancer which were consistent (20% respondents answered lower abdominal pain) to the study conducted in Delhi India and another study in Ethiopia found that offensive vaginal discharge (35.3%) is the main symptoms of cervical cancer. ^(10, 11) In this study 64.2% of respondents answered that cervical cancer is preventable which is similar to the findings of Ethiopia where 63.9% respondents answered the same. ⁽¹¹⁾

Regarding the awareness on vaccination against Human Papilloma Virus (HPV) 98.3% of the respondents were not aware. This is consists with others study findings in Tertiary care hospital in Puducherry, India (87.2%) and a study among women of Nepal (66%). ^(12,13) The result in this study shows that minority (17.3%) of the women had ever done screening test. This finding is similar to the finding of Penyak Village, Koba Sub district, Bangka Tengah District where only 23% did screening test. ⁽¹⁴⁾ To the question who should do screened for cervical cancer, majority of the respondents (62.4%) reported sexually active women as reported in other study. ^(15, 16)

In this study only 9.8% women had undergone Pap smear test which is similar to the study findings conducted in Uttar

Pradesh India which concluded only 8% women had done it. ⁽¹⁷⁾

Association between awareness and Socio-Demographic variables

The findings of the present study reveals that there is significant association between age ($p=0.026$), marital status ($p=0.025$), age at marriage ($p=0.014$), occupation ($p=0.032$) and family history ($p=0.001$). The study conducted in Kathmandu showed that there was association between age of marital status ($p=0.003$) with knowledge. ⁽¹⁵⁾ Similarly, the study conducted in mid-western rural, Nepal revealed that there was association between occupation (0.002) and family history (0.001) with knowledge. ⁽⁷⁾ There is no significant difference in knowledge when compared with education level is consistent with the study findings of Uttar Pradesh India. ⁽¹⁷⁾

CONCLUSION

Based on the findings of the present study it can be concluded that respondents had only moderate level of awareness on cervical cancer. Most of the respondents were not aware on the risk factor and symptoms of cervical cancer. Majority of respondents were unaware about the vaccine against Human Papilloma Virus (HPV). Though, more than three-fourth of the respondents had idea about cervical cancer being preventable but very few of the respondents had done screening test. The study showed that there is significant association between level of awareness and age, marital status, age of marriage, occupation and family history of cervical cancer. Thus, findings suggest that there is need of awareness program about cervical cancer and its prevention in the community level.

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