Original Article

Awareness Regarding Cervical Cancer among Women Residing in Bharatpur, Chitwan

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ABSTRACT

Introduction: Cervical cancer is one of the most prevalent cancer affecting women globally. It is the fourth most common cancer in women and the seventh overall. Cervical cancer can be cured and prevented by regular pelvic check-up, screening test and vaccination against human papilloma virus. The objective of this study was to find out awareness regarding cervical cancer among women aged 18-49 years residing in Bharatpur Metropolitan City-5, Chitwan.

Methods: A community based descriptive cross-sectional research design was used, 186 women were selected using simple random sampling method. Structured interview schedule was used to collect the data within 2 weeks. The collected data was entered in Epi data 3.1 and exported into IBM SPSS version 20. Data was analysed in terms of descriptive and inferential statistics.

Results: The study revealed that 72.6% of the women were >30 years and 93% of women were literate, among them 35.2% had completed secondary level of education. It was found that only 28.0% of women had good level of awareness and 43.5% of them had poor level of awareness regarding cervical cancer. There was statistically significant relationship between level of awareness with age (p=0.029), ethnicity (p=0.013), marital status (p=0.018) and heard about organism that causes cervical cancer (p=<0.001).

Conclusions: Based on the findings of the study, it is concluded that, almost half of the women have poor level of awareness regarding cervical cancer. Hence, there is need for community awareness program on cervical cancer, its screening and preventive measures through the medium of health personnel, friends and mass media.

Keywords: Awareness, Cervical Cancer, Women.

Introduction

Cervical cancer ranks as the fourth most frequently diagnosed cancer and the fourth leading cause of cancer death in women with an estimated 570,000 cases and 311,000 deaths in 2018 worldwide. It ranks second in incidence and mortality behind breast cancer in lower Human Development Index (HDI) settings; however, it is the most commonly diagnosed cancer in 28 countries and the leading cause of cancer death in 42 countries, the vast majority of which are in SubSaharan Africa and South-Eastern Asia. The highest regional incidence and mortality rates are seen in Africa, with rates elevated in Southern Africa, Eastern Africa, and Western Africa. In relative terms, the rates are 7 to 10 times lower in North America, Australia/New Zealand, and Western Asia.[1] The neighboring country, Indian every year, approximately 120,000 women develop cervical cancer. That accounts for 15.2% of the total cervical cancer deaths in the world.[2]

The World Health Organization (WHO) estimates that

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a crude incidence rate of cervical cancer in Nepal is 24.2 per 100,000 women per year, with 3,504 new cases diagnosed every year and 1,872 deaths.[3]According to GLOBOCAN 2018 in Nepal, out of 26,184 total new cases of cancer in both sexes, all ages, 2942 (11.2%) were new cases of cervical cancer and 1928 (9.9%) were death from cervical cancer. Among 15,912 female all ages cancer cases, there were 2,942 cases of cervical cancer which accounts for 18.5%.[4] According to B. P. Koirala Memorial Cancer Hospital (BPKMCH) Annual Report, 10.40% of cervical was reported in 2014, 11.87% in 2015 and 12.67% in 2016.[5]

Human papillomavirus (HPV) is the virtually necessary (but not sufficient) cause of cervical cancer.[6] Other important co-factors include immunosuppression (particularly human immunodeficiency virus), smoking, parity (a higher number of full-term pregnancies increases risk), and oral contraceptive use.[7]

HPV vaccination programs potentially can reduce the long term future burden of cervical cancer, and the WHO currently recommends as best buys (effective and cost-effective interventions) vaccinations against HPV of girls aged 9 to 13 years. High-quality screening programs are also important to prevent cervical cancer among unvaccinated older women. The WHO recommends the screening of women aged 30 to 49 years—either through visual inspection with acetic acid in low-resource settings, Papanicolaou tests (cervical cytology) every 3 to 5 years, or HPV testing every 5 years—coupled with a timely treatment of precancerous lesions.[8]

Cervical cancer screening and prevention guideline is developed in 2010 in Nepal and the target age group for screening between 30-60 years old and screening interval to be 5 years. The screening method is used visual inspection Acetic Acid (VIA) and Pap smear.[9]

Though cervical cancer screening is available in some areas of Nepal, screening is mostly conducted when women come to the hospital for other medical problems and sometimes only when women present with symptoms. Despite the evidence that universal coverage is important, women in Nepal are not routinely screened before symptoms appear.[10] The success and benefit of screening at a national level as a public health program to control and prevent cervical cancer depends to a great extent on the level of awareness of the potential beneficiaries.[11]

B. P. Koirala Memorial Cancer Hospital is situated in Bharatpur, Chitwan, Nepal; is the center of excellence for cancer in Nepal. Adequate health infrastructure and expert human resources are available to conduct cervical cancer screening. But despite its availability for more than decades lack of knowledge about cervical cancer screening, behavioral risk factors such as husband's extramarital affair and early age at marries, tobacco smoking among participants is quite prevalent.[12] So women's awareness regarding cervical cancer and screening is very important for early diagnosis and treatment of cervical cancer.

Methods

The descriptive cross-sectional study design was used to find out awareness regarding cervical cancer among women in Bharatpur Metropolitan, 5 Chitwan. According to the 2074 Bharatpur Metropolitan-5 profile, the total population was 5549, among them 2935 were female and 2614 are male population. All the females aged 18-49 were the population of the study. Bharatpur Metropolitan 5 was selected purposively. The sampling frame (1748) from the voting list 2074 was taken from the ward office of Bharatpur Metropolitan 5. The required number of samples were selected by simple random sampling technique (lottery method).
The sample size was calculated as , $n = \dfrac{z^2 pq}{e2}$ (Cochran, 1977). [13]

Where z signified 95% confidence level which is 1.96
Prevalence of the study (p) = 47% (Khadka et al., 2017).[14]
Margin error (e) = ±7% = 0.07
q = 1-p

Then, $n = \dfrac{(1.96)2 \times 0.47 \times (1 - 0.47)}{(0.07)2}$

The sample size (n_0) = 196
Sampling frame (population) (N)= 1748 (women aged 18-49 years)
Adjusting the above sample size for a finite population

$n = \dfrac{n_0}{1 + \dfrac{(n_0 - 1)}{}}$ (Cochran, 1977)

$n = \dfrac{196}{1 + \dfrac{(196 - 1)}{1748}}$

Required sample= 177

To reduce non-response error additional 10% is sample = 195

Ethical approval was taken from CMC-IRC, Chitwan Medical College (p) Ltd. Bharatpur, Chitwan. For the study, the request letter was submitted to the ward office of Bharatpur Metropolitan.[5] The purpose of the study was explained to each respondent. The verbal informed consent was taken from each respondent. The respondents' dignity was maintained by giving the right to reject or discontinue from the research study at any time. The respondents' privacy was maintained during data collection by keeping them in a separate place and confidentiality was maintained by not disclosing the information giving by them. Data were collected in 2 weeks (from 2075/03/06 to 2075/03/20) from a household survey at any time in the day by using a structured interview schedule. In a day 13 – 14 respondents were interviewed.

All collected data were reviewed and checked for completeness, consistency, and accuracy. Coded data were entered in EPI data 3.1. The entered data was exported into IBM SPSS version 20. Data were analyzed by using descriptive statistics (frequency, percentage, median, and standard deviation) and inferential statistics (chi-square).

The level of awareness was categorized based on Modified Bloom's cut off points adopted from James John's study (the knowledge, attitude, practice, and perceived barriers towards screening for premalignant cervical lesions among women in 2011)[15] in which respondents score 80-100 percent were categorized as good awareness, those with the score 60-79 percent were categorized as moderate awareness and those with score <60 percent were categorized as poor awareness level. Therefore, the scores with the respective knowledge levels were good knowledge with a score of more than 10, satisfactory knowledge between 8 and 10, and poor knowledge with a score of less than 8.

Results

Table 1 shows that the majority(72.6%) of the respondents were age group more than or equal to 30 years with a mean age was 35 years minimum age was 19 years and the maximum age was 49 years, 93% were literate. Among the literate women, 32.8% had completed the secondary

level of education. As regards occupation, 49.5% were involved in household work, 66.6% of the respondents were Brahmin/Chhetri, 87.6% of women followed the Hindu religion, 83.9% were married and 57.1% of respondents had less than 20 years long duration of marriage with mean duration was 17 years.

Table 1: Demographic characteristics of the respondents N=186

Variables	Number	Percentage
Age in years		
<30 years	51	27.4
>30 years		
Mean ±SD=35.18±8.46 34, Min=19, Max=49	135	72.6
Educational status		
Illiterate	13	7.0
Literate	173	93.0
Level of education (n=173)		
General Literate	13	7.5
Basic Education	44	25.4
Secondary Education	61	35.2
Bachelor and Above	55	31.7
Occupation		
Service	40	21.5
Business	31	16.7
Agriculture	7	3.8
Housework	92	49.5
Student	16	8.6
Ethnicity		
Dalit	15	8.1
Janajati	47	25.3
Brahmin/ Chhetri	124	66.6
Religion		
Hindu	163	87.6
Buddhist	21	11.3
Christian	2	1.1
Marital Status		
Married	156	83.9
Unmarried	29	15.6
Widow	1	.5
Duration of marriage (n=156)		
< 20 years	89	57.1
≥ 20 years	67	42.9

Mean±SD=17.26±8.35 Min=2,Max=35

Table 2 shows that 2.2% of the respondents had a family history of cervical cancer. Among them, 75% of the mothers of respondents were suffered from cervical cancer. Regarding the history of cervical cancer screening, 28.5% had done the screening, 43.5% of the respondents said that there is the availability of screening services in their locality, 69.1% said that it takes ≤30 minutes to reach the screening service site. Only 14.5% were involved in the awareness programs, 32.3% had heard about the organism that causes cervical cancer and 3.8% were vaccinated against cervical cancer. The majority (89.94%) of the respondents had received information from electronic media (not shown in table).

Table 2: Disease-related information of respondents
N=186

Variables	Number	Percentage
Family history of cervical cancer		
Yes	4	2.2
No	182	97.8
Relationship (n=4)		
Grandmother	1	25
Mother	3	75
Cervical cancer screening done (n=186)		
Yes	53	28.5
No	133	71.5
Availability of cervical cancer screening service (n=186)		
Yes	81	43.5
No	105	56.5
The distance of services in minutes by walking (n=81)		
≤30 minutes	56	69.1
>30 minutes	25	30.9
Involvement in cervical cancer prevention and screening awareness program		
Yes	27	14.5
No	159	85.5
Heard about the organism that causes cervical cancer		
Yes	60	32.3
No	126	67.7
Vaccinated against cervical cancer		
Yes	7	3.8
No	179	96.2

Table 3 shows that the majority (95.7%) of the respondents responded that women who have multiple sexual partners is a risk factor of cervical cancer and only 12.4% responded that visual Inspection with Acetic acid is a method of cervical cancer screening.

Table 3: Awareness of the respondents on cervical cancer
N=186

Statements	Correct Response	
	Number	Percentage
Abnormal growth of tissue of cervix is meaning of cervical cancer	70	37.6
Early age of sexual intercourse before 16 years is risk factor of cervical cancer	94	50.5
Women who delivered more than three children is risk factor of cervical cancer	146	78.5
Women who have multiple sexual partners is risk factor of cervical cancer	178	95.7
Pelvic pain/lower abdominal pain/post coital bleeding is sign and symptom of cervical cancer	146	78.5
Procedure for detecting cervical cancer is meaning of cervical cancer screening	79	42.5
Pap smear test is measure of cervical cancer screening	124	66.7
Visual Inspection with Acetic acid is method of cervical cancer screening	23	12.4
Cervical Screening is done after 3 years of sexual exposure	31	16.7
Appropriate time interval of cervical screening is every 3 years	65	34.9
Best time to perform cervical screening is after 7 days of menstruation	104	55.9
Duration of abstinence from sexual intercourse before cervical screening is 3 days	52	28.0
Duration of discontinuation of vaginal medication prior to screening is 3 days	74	39.8
Radiotherapy/chemotherapy/surgery is treatment of cervical cancer	138	74.2
Vaccination, avoid early and multiple sexual relationships and doing cervical screening is preventive measure of cervical cancer	177	95.2

Table 4 reveals that 43.5% of respondents had a poor level of awareness and 28% had a good level of awareness regarding cervical cancer.

Table 4: Level of awareness of the respondents on cervical cancer

N=186

Level of Awareness	Number	%	CI
Good	52	28.0	21.54-34.45
Satisfactory	53	28.5	
Poor	81	43.5	

Table 5 shows that the level of awareness was statistically significant with the age of respondents (p= 0.029), ethnicity (p=0.013), marital status (p=0.018) and heard about the organism that causes cervical cancer (p=< 0.001).

Table 5: Association between the level of awareness of cervical cancer and socio-demographic variables

Variables	Level of Awareness of Cervical cancer			χ^2 Value	p-Value
	Good No. (%)	Satisfactory No. (%)	Poor No. (%)		
Age in years					
< 30 years	15 (29.4)	14 (27.5)	22 (43.1)	7.103	0.029
>30 years	19 (14.1)	33(24.4)	83 (61.5)		
Level of education					
School Level	17(14.4)	31 (26.3)	70 (59.3)		
College Level	17 (25.0)	16 (23.5)	35 (51.5)	3.248	0.197
Occupation					
Employed	26 (36.6)	16 (22.5)	29 (40.8)	4.706	0.095
Unemployed	26 (22.6)	37 (32.2)	52 (45.2)		
Ethnicity					
Brahmin/Chhetri	37 (29.8)	42 (33.9)	45 (36.3)	8.745	0.013
Others	15 (24.2)	11 (17.7)	36(58.1)		
Religion					
Hindu	49 (30.1)	47 (28.8)	67 (41.1)	3.950	0.139
Others	3 (13.0)	6 (26.1)	14 (60.9)		
Marital status					
Unmarried	13 (44.8)	10 (34.5)	6 (20.7)	8.052	0.018
Married	39 (24.8)	43 (27.4)	75 (47.8)		
Duration of marriage					
< 20 years	24 (27.0)	19 (21.3)	46 (51.7)	4.014	0.134
≥20 years	15 (22.4)	24 (35.8)	28 (41.8)		
Heard about the organism that causes cervical cancer					
Yes	29 (48.3)	13 (21.7)	18 (30.0)	18.336	<0.001
No	23 (18.3)	40 (31.7)	63 (50.0)		

Significance level at 0.05

Discussion

In this study, 37.6% of the respondents correctly said the meaning of cervical cancer. Contradict findings show that 56% of the respondents knew the meaning of cervical cancer.[16] In this study, 50.5% and 95.7% of the respondents responded that initiation of sexual intercourse before 16 years of age and having multiple sexual partners are the risk factors of cervical cancer respectively. Contrast findings are reported in the study done in India, Nepal, and Srilanka in which awareness

in relation to sexually active at an early age can cause cervix cancer was 26.1% (India), 38.8% (Nepal) and 27.7% (Srilanka). Awareness in relation to multiple sex partners can cause cervix cancer was 39.8% (India), 51.3% (Nepal) and 43.85 (Srilanka).[17]

In this study, 66.7% of the respondents responded that the Pap smear test is a measure of cervical cancer screening. A similar finding is reported in the study by Shrestha and Dhakal revealed that 68.8% were aware that pap smear is a screening test for cervix cancer[18] and it is contradicted with the study done by Shrestha, Saha and Tripathi revealed that only 18.1% of respondents were aware of Pap smear test[19] and with the findings of the study done by John (2.9%).[15] In this study 12.4% of respondents mentioned that VIA as the screening test for cervical cancer screening. The finding is supported by John (11.3%)[15] and inconsistent finding with the finding of Shrestha and Dhakal 2017 which revealed that 21.5% mentioned Visual Inspection with Acetic Acid (VIA) as the screening test for cervical cancer.[18] Similarly, 34.9% of the respondents revealed that an appropriate time interval for cervical screening is every 3 years. The finding is inconsistent with the study of Shrestha and Dhakal 2017 and Shrestha (2014) showed that 7.3% and 21.0% of them said that screening should be done every 3 years interval respectively.[18, 20] As per findings, 55.9% said that the best time to perform cervical screening is after 7 days of menstruation. In the study Shrestha and Dhakal (2017) and Shrestha (2014), 33.3% and 34% of the respondents knew screening should be done 10-20 days of menstruation respectively. [18, 20]

In the present study, 28% of the respondents had a good level of awareness, 28.5% of the respondents had a satisfactory level of awareness, and 43.5% of the respondents had a poor level of awareness. The study conducted in Chitwan by Ranabhat and Thapa (2018) reported similar findings that 27.4% of the women had a good level of awareness, 22.9% had a fair level of awareness, and 49.7% of women had a poor level of awareness in cervical cancer.[21] The study conducted by Harsh and Tanya (2014) in Mangalore, India demonstrated contrast finding that 6% of the respondents had good awareness, 12% had satisfactory

awareness, and 81.9% had poor awareness in cervical cancer.[22] A low level of awareness might be due to lack of population-based screening programs, inefficient mass media campaigns, and cultural barriers wherein women in Nepal feel shy to discuss the diseases affecting the sexual organs.

This study demonstrated a significant relationship between the level of awareness of cervical cancer and age of respondents (p=0.029) which is in accordance to the study conducted by Shrestha et al. (2013) in Nepal (p=0.013).[19]

Conclusion

Based on the findings of the study, it is concluded that almost half of the women have a poor level of awareness regarding cervical cancer. There is a statistical association between level of awareness with age, ethnicity, and marital status and heard about the organism that causes cervical cancer. Therefore, there is a need to conduct an awareness program on cervical cancer, it's screening, and preventive measures through the medium of health personnel, friends, and mass media like television, radio, and newspaper as these are the common source of information. Cervical cancer screening health camps and awareness programs can also be conducted at the community level.

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