

# KNOWLEDGE, ATTITUDE, AND PRACTICE REGARDING CERVICAL CANCER SCREENING AMONG FEMALE HEALTH PROFESSIONALS OF A TERTIARY CARE HOSPITAL IN KATHMANDU DISTRICT

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## ABSTRACT

Cervical cancer is the cancer that forms in the tissue of cervix. It is usually slow growing cancer that may not have symptoms but can be found with regular Pap tests and proper screening. Hence it is absolutely necessary for the health workers especially female workers to have proper knowledge about cervical cancer and have a positive attitude to getting screening tests done as per the Cervical Cancer Screening guidelines so that early detection and diagnosis can be done leading to decrease in the incidence of the disease. We have conducted this study to see the knowledge, attitude and practice regarding cervical cancer screening among female health professionals of a tertiary care hospital in Kathmandu District. Overall score for adequate knowledge about cervical cancer among different health professionals was not significantly different ( $\chi^2 = 1.118$ , p-value = 0.572). However, there was a significant association between knowledge and those who underwent screening ( $\chi^2 = 8.481$ , p-value = 0.004). There was no association between Knowledge and attitude towards cervical cancer ( $\chi^2 = 3.144$ , p-value = 0.076). However, there was significant association between attitude and profession ( $\chi^2 = 4.568$ , p-value = 0.033).

## KEYWORDS

Cervical Cancer, screening, knowledge, attitude, practice, female health workers

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## INTRODUCTION

Cervical cancer is one of the most common cancer among women in southeast area.<sup>1</sup> Nearly, half a million of women are newly diagnosed with invasive cervical cancer per year. However, most of them were never screened for the disease. Over 80% of these women are from developing countries.<sup>2</sup> Globally, there are 570,000 cases of cervical cancer. Among them, 311,000 deaths from the disease occurred in 2018. Cervical cancer ranks as the fourth common type of cancer in women, after breast cancer (2.1 million cases), colorectal cancer (0.8 million), and lung cancer (0.7 million).<sup>3</sup>

The incidence rises at 30–34 years of age and peaks at 55–65 years, with a median age of 38 years (age 21–67 years).<sup>4</sup> Estimates suggest that more than 80% of the sexually active women acquire genital HPV by 50 years of age.<sup>5</sup> Cervical cancer is the most common cancer and leading cause of death among Nepalese women.<sup>6–7</sup> According to the 2018 WHO report, the age-adjusted incidence rate of cervical cancer in Nepal is 21.5 per 100,000 population with 2,942 new cases and 1,928 deaths.<sup>8</sup> Screening with Papanicolaou (PAP) test led to significant reduction in mortality in developed countries.<sup>9</sup> Studies have shown that screening with visual inspection with acetic acid reduces mortality due to cervical cancer in developing countries.<sup>10–11</sup> Utilization of screening in Asian countries varies from 50% in Singapore to just 2.6%–5% in India.<sup>12</sup>

National Guideline for Cervical Cancer Screening and Prevention program in 2010 in Nepal had the objective to screen at least 50% of women aged 30 to 60 years to reduce 10% cervical cancer burden within 5 years.<sup>14</sup>

## MATERIALS AND METHODS

We obtained a list of all the female health professionals from both the clinical and basic science Departments of Nepal Medical College Teaching Hospital. Using lottery method, equal proportions of doctors and nurses i.e., 75 doctors and 75 nurses were selected from all the departments. Participants were interviewed using a self-administered questionnaire.

Knowledge about cervical cancer and its screening was assessed using 26 knowledge-related questions that carried 20 correct responses. Each correct response was given 1 point and wrong answer was given 0. The maximum points expected were 20 and the minimum was 0. Bloom's cut-off points were

used to categorize knowledge levels, where 80%–100% correct responses comprise score of 16–20 and meant good knowledge, 60%–79% correct response comprise score of 12–15 and meant moderate knowledge, and <60% correct responses comprise score of < 12 and meant poor knowledge.

We assessed attitudes using 8 statement items measured on 5 – point Likert scale (1 strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree). The participants' score from all the 8 statements were summed-up and the average score was calculated. Participants' who scored equal or above the mean (32.4) were considered as having positive attitudes while participants who scored below the mean were considered as having negative attitude.

Practice was assessed by response towards ever undergone cervical screening in past. Finally, all participants who had never undergone screening were asked to state the most important reasons for not undergoing screening.

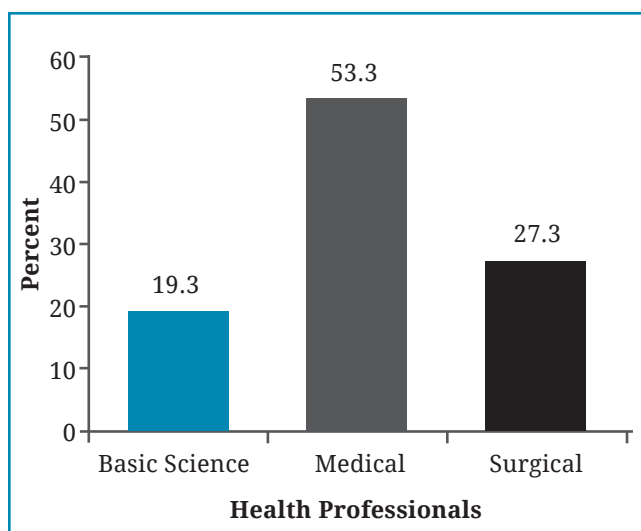
The collected data was entered in Excel sheet and analyzed with IBM SPSS Statistics 16. Descriptive statistics such as mean, standard deviation (SD), frequency, and proportion was used for socio-demographic data and KAP of study population. Association between categorical variables was tested using Chi-square test. P value less than 0.05 was taken as significant.

## RESULTS

Fig. 1 shows the demographic profile of participants among total of 150 female health professionals aged 19–57 years that were surveyed. The mean age was 31.3 years. Equal no. of nurses and doctors were taken in the study. The average years of experience was 6.59 (ranges 0–30 years) with less than half participants having less than 5 years (n = 71, 47.3%) followed by between 5–10 years (n = 39, 26%) of experience.

Fig. 2 showed that based on Bloom's cut off scoring, more than half had poor knowledge (55%), followed by moderate level (36%) and less than one tenth had good knowledge (9%) for cervical cancer.

Overall score for adequate knowledge about cervical cancer among different health professionals was not significantly different ( $\chi^2 = 1.118$ , p-value = 0.572). However, there was a significant association between knowledge and those who underwent screening ( $\chi^2 = 8.481$ , p-value = 0.004).



**Fig. 1:** Distribution of participants on the basis of Specialties

Fig. 3 shows that there were 96 (64%) health professionals who had positive attitudes i.e., they scored equal or above mean (32.4).

There was no association between Knowledge and attitude towards cervical cancer ( $\chi^2 = 3.144$ , p-value = 0.076). However, there was significant association between attitude and profession ( $\chi^2 = 4.568$ , p-value = 0.033).

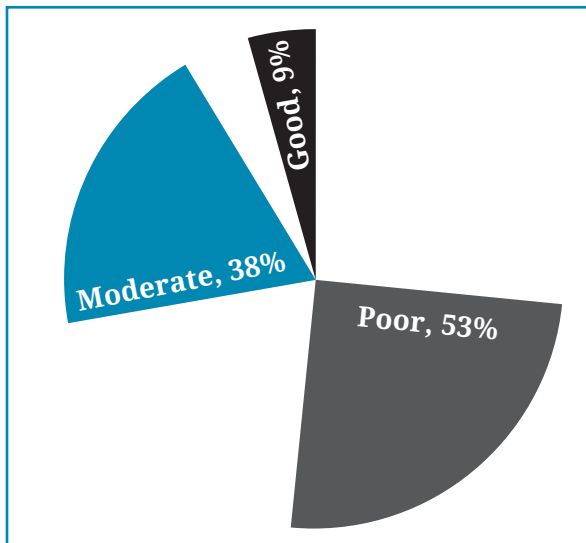
Fig. 4 shows that there were 28 (18.7%) female health professionals who self-reported to have ever been screened for cervical cancer; while others 122 (81.3%) were not screened. The following figure summarizes reasons not undertaking cervical cancer screening by 122 female health professionals.

**Table 1: Knowledge about cervical cancer and its screening among study participants**

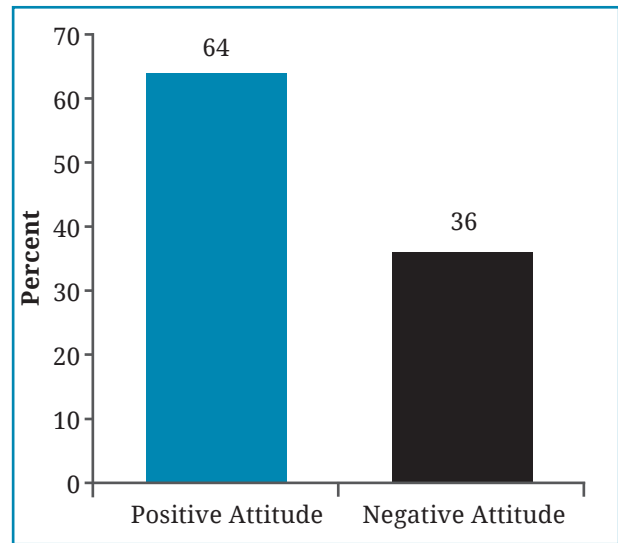
Questions	Response	n (%)
Females can develop cervical cancer who have (n = 150)	Multiple sexual partners	129 (86.0)
	Young age of onset of sexual intercourse	95 (63.3)
	HPV virus infection	128 (85.3)
	Poor genital hygiene	75 (50.0)
	Tobacco and smoking habit	56 (37.3)
	Eat high fatty food	15(10.0)
	History of STD	88 (58.7)
	Use of OCPs	43 (28.7)
	Multiparity	63 (42.0)
Family history	90(60.0)	
Which of the following are the signs and symptoms of cervical cancer?	Intermenstrual bleeding	92 (61.3)
	Foul smelling discharge P/V	103 (68.7)
	Postmenopausal bleeding P/V	87 (58.0)
	Postcoital bleeding P/V	100 (66.7)
	Excess vaginal discharge	72 (48.0)
	Itching in vagina	37 (24.7)
	Pain in lower abdomen	87 (58.7)
Who can undergo cervical cancer screening?	All females irrespective of age and marital status	67 (44.7)
	All married females age above 30 years	89 (59.3)
	All married females of any age	40 (26.7)
	Only females above 50 years of age	13 (8.7)
	Only those women who have any problem	6 (4.0)
	Don't know	2 (1.3)
What are the methods of screening cancer cervix, if any	PAP or VIA as a method	144 (96.0)
	HPV DNA Test as a method	53 (35.3)
	Don't know	3 (2.0)

**Table 2: Attitudes of Study participants regarding cervical cancer and its screening (n=150)**

Attitude Variable	Level of agreement (Likert Scale)				
	Strongly Agree, No. (%)	Agree, No. (%)	Neither agrees nor disagrees, No. (%)	Disagree, No. (%)	Strongly disagree, No. (%)
Cervical cancer is one of the most important cancer in Nepal	76 (50.7)	67 (44.7)	1 (0.7)	5 (3.3)	1 (0.7)
Any adult women including you can develop cervical cancer	76 (50.7)	66 (44.0)	5 (3.3)	3 (2.0)	0
All married women age 30-65 years should undergo screening	112 (74.7)	38 (25.3)	0	0	0
Screening can help in early detection and better treatment	132 (88.0)	17 (1.3)	1 (0.7)	0	0
If screening is free and will cause no harm, then you will undergo screening	77 (51.3)	54 (36.0)	11 (7.3)	7 (4.7)	1 (0.7)
It is embarrassing to undergo screening procedure	9 (6.0)	25 (16.7)	23 (15.3)	53 (35.3)	40 (26.7)
Screening will not cause any harm to patient	72 (48.0)	59 (39.3)	10 (6.7)	7 (4.7)	2 (1.3)
Screening procedure can be painful	10 (6.7)	40 (26.7)	43 (28.7)	44 (29.3)	13 (8.7)



**Fig. 2:** Distribution of Participant on the basis of Level of knowledge



**Fig. 3:** Distribution of Participant on the basis of attitudes towards cervical cancer.

**DISCUSSION**

This study focused on finding out about Knowledge, Attitude and Practice about Cervical Cancer screening among health care workers in Nepal Medical College and Teaching Hospital, a tertiary health care center in Kathmandu, Nepal.

In Nepal, various studies have been done to assess the knowledge, attitude and practice methods regarding carcinoma of cervix.

Study done by Shrestha et al showed 65.7% respondents had heard about cervical cancer. However, only 42.9% and 18.1% had knowledge about screening for cervical cancer and Pap smear test respectively while more than 85% of women had positive attitude towards screening but the practice of Pap smear test in the respondents was only 10.5%.<sup>13</sup>

In our study in tertiary center of Kathmandu shows a total of 150 female health professionals aged 19-57 years were surveyed with a mean

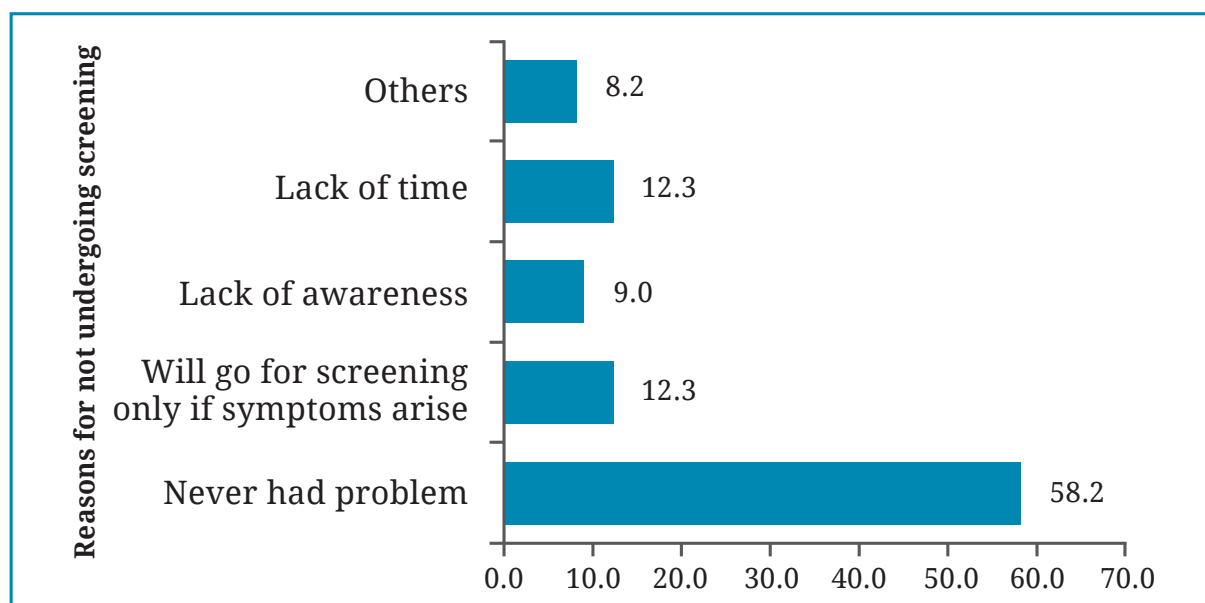


Fig. 4: Reasons for not undergoing screening by Health Professionals (n=122)

age of 31.27 years. Equal number of nurses and doctors were taken in the study.

**Knowledge:** The study conducted in 150 health care professionals, showed that the knowledge about cervical cancer and its screening in most of the health care workers was poor (55%) with only 9% having a good knowledge. However, the knowledge about PAP and VIA being the screening tools for cervical cancer was present in 96% respondents. The findings were better in comparison to the study conducted by Shrestha et al<sup>16</sup> in 2016 which demonstrated that only 42.9% had knowledge regarding cervical cancer and its screening and 18.1% had knowledge about PAP smear.

There were several misconceptions about cervical cancer risk factors, signs and symptoms. Most participants believed that Tobacco and smoking habit was a risk factor for cervical cancer (n = 56, 37.3%) and few (n = 15, 10%) believed that consumption of high fatty food was also a risk factor for cervical cancer. There was also a misconception regarding the signs and symptoms of cervical cancer. Some believed itching in vagina was a sign of cervical cancer (n = 37, 24.7%).

**Attitude:** Majority of the healthcare workers had a positive attitude towards cervical screening (64%). The respondents believed that cervical cancer is one of the most important cancer in Nepal and any adult woman including themselves can develop cervical cancer (n = 76, 50.7%).

Most of the responds agreed that all married women age 30-65 years should undergo

screening (n = 112, 74.7%) along with 88% of the respondents believing that screening can lead to early detection and better treatment. Only 6% of the respondents considered screening procedure to be embarrassing. Overall the attitude among the healthcare workers in this study was very positive towards screening.

In Nepal, the majority (about 95%) of women still never d cervical cancer screening according to the report by Ranjit *et al* in 2016.<sup>15</sup> Moreover, the proportion of unscreened women for cervical cancer is much higher among the illiterate women and living in the rural region. It can be concluded that level of knowledge regarding cervical cancer is quite poor while screening is met with positive attitude and enthusiasm, which unfortunately in real life practice doesn't translate to a large group of women undergoing screening for cervical cancer via Pap Smear or VIA testing i.e., a vast majority of women in Nepal have never undergone any screening procedure.

**Practice:** Despite the fact that majority of health care workers had a positive attitude towards cervical screening, only 18.7% participant have ever been screened for cervical cancer throughout their life. Among 81.3% who never got screened, 58.2% mentioned the reason for not undergoing screening was that they never had a problem and 12.3% mentioned about the requirement of screening only in presence of symptoms. This finding is consistent with the study by Khanna et al<sup>19</sup> conducted in India where despite of positive attitude about cervical cancer screening in community health care workers, only less than 10% of workers had undergone screening.

In conclusion, health workers are the pillars of health care system of the country. However, the study shows that there is a significant requirement for awareness programs to increase active participation in screening which directly reduces the mortality due to cervical cancer. If awareness and education regarding Cervical Cancer and its screening can be provided to this population, they can act as a powerful resource to increase awareness in the general public. Research findings may vary depending on sample size. A recommended approach is to generalize findings after performing the research on updated sample

size, location and/or demography.

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## REFERENCES

- Anantharaman VV, Sudharshini S, Chitra A. A cross-sectional study on knowledge, attitude, and practice on cervical cancer and screening among female health care providers of Chennai Corporation. *J Acad Med Sci* 2013; 2: 124-8.
- Varughese J, Richman S. Cancer care inequity for women in resource poor countries. *Rev Obstet Gynecol* 2010; 3: 122-32.
- Arbyn M, Weiderpass E, Bruni L *et al.* Estimates of incidence and mortality of cervical cancer in 2018: a worldwide analysis. *Lancet Glob Health* 2020; 8: e191–e203
- Kaarthigeyan K. Cervical cancer in India and HPV vaccination. *Indian J Med Paediatr Oncol* 2012; 33: 7–12.
- Singh N. HPV and cervical cancer-prospects for prevention through vaccination. *Indian J Med Paediatr Oncol* 2005; 26: 20–3.
- National Cancer Registry Program. Hospital based cancer registry 10 years consolidated report. (2003-2012). Chitwan, Nepal; 2015.
- National Cancer Registry Program. Report of hospital based cancer registry 2015. Bharatpur, Chitwan, Nepal; 2017. Available: [www.bpkmch.org.np](http://www.bpkmch.org.np). Cited on: May 2022.
- GLOBOCAN. The global cancer observatory: Nepal factsheet. In: International Agency for Research on Cancer, World Health Organization. 2018. Cited on: Jul 2019. Available: <http://gco.iarc.fr/today/data/factsheets/populations/524-nepal-fact-sheets.pdf>
- Landy R, Pesola F, Castañón A, Sasiemi P. Impact of cervical screening on cervical cancer mortality: estimation using stage-specific results from a nested case-control study. *Brit J Cancer* 2016; 115: 1140.
- Shastri SS, Dinshaw K, Amin G *et al.* Concurrent evaluation of visual, cytological and HPV testing as screening methods for the early detection of cervical neoplasia in Mumbai, India. *Bull World Health Organ* 2005; 83: 186-94.
- Basu P, Mittal S, Vale DB, Kharaji YC. Secondary prevention of cervical cancer. *Best Pract Res Clin Obstet Gynaecol* 2018; 47: 73-85.
- Sherris J, Wittet S, Kleine A, Sellors J, Luciani S, Sankaranarayanan R. Evidence-based, alternative cervical cancer screening approaches in low-resource settings. *Int Perspect Sex Reprod Health* 2009; 35: 147-52.
- Shrestha J, Saha R, Tripathi N. Knowledge, attitude and practice regarding cervical cancer screening amongst women visiting tertiary center in Kathmandu, Nepal. *Nepal J Med Sci* 2013; 2: 85–90.
- Family Health Division. National guideline for cervical cancer screening and prevention in Nepal. Kathmandu: Government of Nepal Ministry of Health and Population; 2010.
- Ranjit A, Gupta S, Shrestha R, Kushner AL, Nwomeh BC, Groen RS. Awareness and prevalence of cervical cancer screening among women in Nepal. *Int J Gynaecol Obstet* 2016; 134: 37–40.
- Shrestha S, Dhakal P. Knowledge, attitude and practice regarding cervical cancer screening among women attending a teaching hospital, Bharatpur, Chitwan. *J Family Reprod Health* 2017; 11: 18–23.
- Thapa N, Maharjan M, Petrini MA *et al.* Knowledge, attitude, practice and barriers of cervical cancer screening among women living in mid-western rural, Nepal. *J Gynecol Oncol* 2018; 29: e57.
- Ranabhat S, Tiwari M, Dhungana G, Shrestha R. Association of knowledge, attitude and demographic variables with cervical Pap smear practice in Nepal. *Asian Pac J Cancer Prev* 2014; 15: 8905-10.
- Khanna D, Khargekar N and Budukh A. Knowledge, attitude and practice about cervical cancer and its screening among community healthcare workers of Varanasi District, Uttar Pradesh, India. *J Family Med Prim Care* 2019; 8: 1715-9.
- Chawla B, Taneja N, Awasthi AA, Kaur KN, Janardhanan R. Knowledge, attitude, and practice on screening toward cervical cancer among health professionals in India-A review. *Womens Health* 2021; 17: 17455065211017066. doi: 10.1177/17455065211017066.