

Knowledge, Practice and Factors associated with Utilization of Cervical Cancer Screening Services

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ABSTRACT

Background: Cervical cancer is treatable with regular screening and follow-up practices. The utilization of cervical cancer utilization services is found to be unsatisfactory in the context of Nepal. The objective of this study was to assess the factors that influence knowledge, practice, and utilization of cervical cancer screening among women in the Dhulikhel Municipality, Nepal.

Methods: A cross-sectional study was conducted on 156 married women residing in Dhulikhel Municipality. The study participants were selected using the convenience sampling method. A standard questionnaire was used to collect the information. This study examined socio-demographic data, knowledge, practice, and factors associated with cervical cancer screening. Descriptive and inferential statistics were used to analyze the data.

Results: Only one-fifth (17.9%) of the participants had received a cervical cancer screening. Most participants possessed a sufficient level, 134 out of 85.9%, of information about cervical cancer and cervical cancer screening. Annual healthcare visits ($p=0.00$), participant knowledge ($p=0.014$), and perceived barriers ($p=0.001$) were statistically significant factors in the uptake of cervical cancer screening. Out of those who felt they were highly susceptible, just one-fourth, or 25%, had undergone cervical cancer screening services.

Conclusions: The number of medical visits, participants' knowledge, and perceived barriers had a significant impact on the uptake of cervical cancer screening. However, there was not found any relationship between the use of cervical cancer screening and perceived susceptibility and other socio-demographic factors.

Keywords: Cervical cancer; cervical cancer screening; perceived barriers; perceived susceptibility.

INTRODUCTION

In the world, cervical cancer ranks globally as the fourth most common cancer prevalent in women, with approximately 604,000 being diagnosed and 342,000 dying as a result in 2020.¹ A recent study done in Ethiopia(2024) revealed that cervical cancer screening utilization is low.² It is evident that Nepal's cervical cancer screening rate is more than four times lower than the country's target (70%).³

Cervical cancer is quite prevalent in Nepal. It has high incident rate (16.4 cases per 100,000 women in 2020), including 2,244 new cases and 1,493 fatalities.⁴ Because of a long pre-invasive period, cervical cancer can be treated.⁵ For nearly 50 years, Pap smears have been the standard method in the identification of cervical cancer.⁶

Low level of knowledge and low utilization of cervical cancer are found to be common among Nepali.³ Understanding the associated factors of cervical cancer screening is essential to identify risk populations and design effective interventions. In this context, this research assessed the factors influencing knowledge, practice, and utilization of cervical cancer screening among women in the Dhulikhel Municipality.

METHODS

The study was conducted in Dhulikhel municipality from January 2021 to July 2021. The knowledge, practice, and factors associated with cervical cancer screening in Dhulikhel Municipality were assessed using a descriptive research design. The study's target population was married women aged 30-59 who resided

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in Dhulikhel Municipality. Married women aged 30-59 were selected for the study. The study site was in selective wards of Dhulikhel Municipality. Dhulikhel is located in Kavrepalanchok district at the Eastern rim of Kathmandu Valley. This municipality has a total of 12 wards. The study was conducted only in wards 3, 4, and 6. These wards were chosen because they consist of a health institution, Dhulikhel Hospital. So, comparatively, women in this municipality find it easier to utilize health services. However, they have promoting as well as hindering factors for uptaking cervical cancer screening. Thus, assessing factors in the women who are already aware of matters relating to their health was effective. Unmarried women were excluded from the study. The convenience sampling method was adopted for data collection.

A self-constructed questionnaire was used to assess the variables with cervical cancer screening utilization. It was designed based on the literature and consultation with the research advisor. The questionnaire was both in English and Nepali language and contained the following parts:

Part I: Socio-demographic factors and screening status

Part II: Knowledge factors

Part III: Questions related to perceived susceptibility

Part IV: Questions related to perceived barriers

The knowledge factors were five questions, with one mark for each correct answer. After that, the score was converted into a percentage. The total knowledge level was divided into two categories based on frequency percentage: below 50% and above 50%, respectively, indicating inadequate and adequate knowledge levels.

Questions related to perceived susceptibility and barriers were assessed using a 5-point Likert Scale. The overall level of perceived susceptibility of participants was categorized using mean, which is low (≤ 3.37) and high (>3.37) groups. The overall level of perceived barriers of participants was categorized into low (≤ 2.76) and high (>2.76) groups using a mean value which was 2.76.

Data was collected using the interview method. Data were analyzed using descriptive statistics (frequency and percentage) to express socio-demographic characteristics and other associated factors. At a 5% significance level, inferential statistics (Chi-square test)

was used to test the relationship between variables and cervical cancer screening status. The data was analyzed using the SPSS Version 25. This study was conducted only after getting ethical approval from the Nursing faculty and Institutional Review Committee of Dhulikhel Hospital. Formal approval was taken from wards 3, 4, and 6 of Dhulikhel municipality. Informed consent was obtained from each of the participants to participate in the study.

RESULTS

The age range of participants was 30-59 years, with an average age of 45.19 ± 8.24 SD. A nearly equal number of (≤ 45 years) forty-five and less than forty-five years, 75(48.1%) and (> 45 years) above forty-five years, 81(51.9%) of women participants were in the study. The mean age was taken, which was 45 years, and participants were grouped into more than or equal to mean and less than mean. A few participants were illiterate 11(7.1%), and almost 145(92.9%), were literate. About three-fifths of the participants were Newar 99(63.5%), and other ethnicities (Bahun/Chhetri, Madhesi/Terai/Janajati) were 57(36.5%). Most participants followed the Hindu religion 126(80.8%), and 30(19.2%) of participants followed other religions. About four-fifths of participants, 123(78.8%), had two and less than two children, whereas only about one-third of participants, 33(28.2%), had more than two children. Only one-third of participants, 52(33.3%) visited hospitals for health checkup more than once per year. Nearly about one-fifth of participants, 28(17.9%), had adopted cervical cancer screening practice, whereas a fifth of participants, 128(82.1%), had not practised cervical cancer screening practice.

Table 1. Association between socio-demography and cervical cancer screening practice (n=156).

| Variables | Cervical cancer screening practice | | P value |
|--------------------------|------------------------------------|-----------|---------|
| | Yes n (%) | No n (%) | |
| Age (in completed years) | | | 0.62 |
| >45 years | 66 (88.0) | 9(12.0) | |
| ≤ 45 years | 62(76.5) | 19(23.5) | |
| Educational Status | | | 0.387 |
| Illiterate | 25(17.1) | 121(82.9) | |
| Literate | 3(30.0) | 7(70.0) | |
| Caste | | | 0.59 |
| Newar | 19(19.2) | 80(80.8) | |
| Others | 9(15.8) | 48(84.2) | |

Table 1. Association between socio-demography and cervical cancer screening practice (n=156).

| Variables | Cervical cancer screening practice | | P value |
|---|------------------------------------|-----------|---------|
| | Yes n (%) | No n (%) | |
| Religion | | | |
| Hindu | 21(16.7) | 7(23.3) | 0.392 |
| Others | 105 (83.3) | 23(76.7) | |
| Occupation | | | |
| Home-maker | 6(12.8) | 41(87.2) | 0.268 |
| Others | 22(20.2) | 87(79.8) | |
| Number of children | | | |
| ≤2 | 19(15.4) | 104(84.6) | 0.116 |
| >2 | 9 (27.3) | 24(72.7) | |
| Husband stay outside of home for his job. | | | |
| Yes | 7(25.0) | 21(75.0) | 0.273 |
| No | 20(15.7) | 107(84.3) | |
| Hospital visit | | | |
| more than once per year | 19(36.5) | 33(63.5) | 0.00 |
| Once or less than once per year | 9(8.7) | 95(91.3) | |

*= p <0.05

Over half of the participants, 79 out of 100, had heard of the Human Papilloma Virus (HPV) vaccination, despite the fact that all 156 participants (100%) had heard about cervical cancer and cervical cancer screening. 42.9% of the participants, or more than two-fifths, knew that screening should be done thrice or more. Approximately 66% of the 103 participants indicated that screening had to be done a few days after the menstrual cycle.

About four-fifths of participants, 66(88%) above 45 years, and three-fourths of participants, 62(76.5%) of equal and below 45 years, had utilized cancer screening services. However, the age of respondents with cancer screening services (p=0.62) was insignificant in Table 1. However, education status (p=0.38), ethnicity (p=0.58), religion (p=0.58) and job/occupation of participants (p=0.26) was insignificant with the use of cancer screening services. About one-fifth of participants with two or less than two children 19(15.4%), and one-fourth of participants with more than two children 9(27.3%) had used cancer screening services. However, the number of children of participants was insignificant with the utilization of cancer screening services (p=0.11) in Table 1. About one-fourth of participants with job-holding husbands 7(25%), and about one-fifth

of participants without job-holding husbands 20(15.7%) were used cancer screening services. However, the participants' husbands having jobs/occupations was not significantly associated with the utilization of cancer screening services (p=0.27) in Table 1.

Table 2. Association of level of knowledge and cervical cancer screening practice (n=156).

| Level of Knowledge | Cervical cancer screening practice | | P value |
|--------------------|------------------------------------|-------------|---------|
| | Yes n (%) | No n (%) | |
| Adequate | 28 (20.9%) | 106 (79.1%) | 0.014* |
| Inadequate | 0 (0.0%) | 22 (100.0%) | |

*= p<0.05

It is seen that the majority of participants, 134(85.9%), had an adequate level of knowledge, and a minority of participants, 22(14.1%), had an inadequate level of knowledge on cervical cancer and cervical cancer screening. Only about one-fifth of participants with adequate knowledge of cancer screening, 28 (20.9%) had practised cervical cancer screening in Table 2. However, knowledge level was significantly associated with cervical cancer screening practice (p= 0.014).

Table 3. Association between perceived susceptibility and cervical cancer screening practice (n=156).

| Perceived Susceptibility | Cervical cancer screening practice | | P value |
|--------------------------|------------------------------------|-----------|---------|
| | Yes n (%) | No n (%) | |
| High | 14(25.0%) | 42(75.0%) | 0.086 |
| Low | 14(14.0%) | 86(86.0%) | |

Table 3 shows that only one-fourth of 14(25.0%) participants with a high level of perceived susceptibility and about one-fifth of 14(14.0%) participants with a low perceived susceptibility had used cervical cancer screening services. However, the level of perceived susceptibility was not significantly associated with cervical cancer screening services (p=0.08).

Table 4. Association between perceived barriers and cervical cancer screening practice. (n=156)

| Perceived Barriers | Cervical cancer screening practice | | P value |
|--------------------|------------------------------------|----------|---------|
| | Yes n (%) | No n (%) | |
| High | 5(17.9) | 82(64.1) | <0.00* |
| Low | 23(82.1) | 46(35.9) | |

*= p<0.05

Table 4 shows about one four fifth of participants 23(82.10%) of low level of perceived barriers and about

one fifth of participants 5(17.9%) of high level of perceived barriers had adopted cervical cancer screening service. So, perceived barriers was significantly associated with cervical cancer screening services ($P=.01$) in table 4.

DISCUSSION

The findings of this study, 28(17.9%) revealed that the participants had undergone cervical cancer screening and a significant association is found between cervical cancer screening behaviour and knowledge factors. Perceived vulnerability and cervical cancer screening behavior did not significantly correlate in this investigation. This study strongly correlated perceived barriers and cervical cancer screening behaviour.

In a similar study conducted in Nepal by Acharya Pandey et al. (2017), 18.3 per cent of respondents had got cervical cancer screening.⁷ In a previous study in Kenya, the awareness about cervical cancer was 77% among the women, which was a rapid increment compared to previous studies conducted in the same country.⁸⁻¹⁴ In 2018, Al-Amro Suzanne Q. et al. conducted a study in Jordan and discovered that 156 (31.2 %) of 500 age-eligible Women had undergone cervical cancer screenings.⁸ According to UK statistics, cervical cancer screening coverage for the total target age group was 72 % in 2019/20.⁹ This research finding shows that all participants ($n=156$) had heard about cervical cancer, which is slightly different from the previous study conducted in Nepal. In the previous study done by Acharya R and Karmacharya E, Nepal, it was found that 94.4% had heard about cervical cancer, and 5.6% were unaware of it.⁷ People are more aware of matters pertaining to their health nowadays. A study by Esin et al. in Turkey (2011) also had the same finding.¹⁰ But the results are different from a 2019 study by Annan F, Oppong Asante K, and Kugbey N. in Ghana, which found that knowledge about cervical cancer, perceptions of susceptibility, perceived seriousness, and perceived benefits were significant and positively correlated with increased screening behaviours.¹¹ According to Ampofo A. et al.'s 2020 study conducted in Ghana, there were notable disparities between the participants' interest in screening and their perceptions of risks, benefits, barriers, and cues for action.¹⁵ In this study, a significant relationship between cervical cancer screening behavior and perceived barriers was found ($p<0.00$), which is similar to those of a previous study conducted in Klang Valley, Malaysia¹² and contradicts the findings of Ibekwe C, et al. in Botswana (2010).¹³

The screening adoption in middle-income nations

remains low as compared to developed ones. According to this study, Nepal's uptake of cervical cancer screening remains inadequate. This may be the result of people not being aware of issues pertaining to their health. Despite being aware of cervical cancer and its screening options, many do not make good use of the screening programs. This could be because of stigmas associated with using healthcare services. Examining the variables related to cervical cancer screening can yield information for authorities and healthcare professionals. The essential actions to raise the uptake of cervical cancer screening can be put into place by addressing the underlying causes. Based on the study's findings, it is advised to carry out similar research on a larger scale. A few participants have undergone cervical cancer screening; concerned authorities can start awareness and screening campaigns.

CONCLUSIONS

Only few participants have completed cervical cancer screening in Dhulikhel Municipality. It was discovered that individuals who visited these health centers frequently in a year had increased screening practices. It was discovered that participant knowledge and perceived barriers to cervical cancer screening were statistically significant. However, there was no correlation between perceived susceptibility and cervical cancer screening. The use of cervical cancer screening was found to be influencing perceived barriers.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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