

A Cross Sectional Study To Assess The Knowledge and Attitude of Women Aged 21 Years and Above Regarding Cervical Cancer Screening in the OPDs of a Tertiary Care Center of East Khasi Hills, Meghalaya

¹Akansha Bordoloi, ²Ananya Shome, ³Hrituparna Chakraborty, ⁴Koj Resso, ⁵Rosa M.P. Basaiawmoit, ⁶Tage Nunya, ⁷Violina Sharma, ⁸Madhavraj Chauhan, ⁹Ms. M. Alila Jamir, ¹⁰Ms. Rakhi Roy

¹⁻⁸B.Sc. Nursing Student, College of Nursing, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), Shillong – 793018, Meghalaya, India

⁹⁻¹⁰Tutor, College of Nursing, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), Shillong – 793018, Meghalaya, India

Corresponding Author: Violina Sharma, B.Sc. Nursing Student, College of Nursing, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), Shillong – 793018, Meghalaya, India

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Abstract

Cervical cancer develops in a woman’s cervix (the entrance to the uterus from the vagina) and it is a major cause of cancer mortality in women and more than a quarter of its global burden is contributed by developing countries. In India, cervical cancer is the 3rd most common cancer and the leading cause of death with a mortality rate of 8.7 % as per GLOBOCAN 2022. When diagnosed it is one of the most successfully treated forms of cancer and this can be done through cervical cancer screening. Screening plays a crucial role in the early detection and prevention of cervical cancer.

A cross-sectional study was conducted in OPDs of Obstetrics and Gynaecology, General Surgery and Oncology of a tertiary care centre of East Khasi Hills, Meghalaya from 16th June 2025 to 28th June 2025 to

assess the knowledge and attitude towards cervical cancer screening of women aged 21 years and above. A self-administered structured questionnaire and a five-point Likert scale was prepared to assess the knowledge and attitude of women aged 21 years and above attending the OPDs of the above mentioned departments with the sample size of 160 participants. Out of 160 participants who have participated in the study, 106 (66.2%) had good knowledge and 54(33.8%) had poor knowledge regarding cervical cancer screening. 96 (60%) participants had a favorable attitude and 64(40%) participants had an unfavorable attitude regarding cervical cancer screening. There was an association between knowledge of the participants with educational status, occupational status, marital status and number of children.

Keywords: Attitude, Cervical Cancer and Cervical Cancer screening, Knowledge.

Introduction

Background of the Study

Cervical cancer is one of the most common cancers affecting women worldwide, especially in low and middle income countries.¹ It is primarily caused by persistent infection with high risk types of Human Papillomavirus (HPV). Despite being largely preventable, cervical cancer continues to be a significant public health problem due to limited awareness, inadequate screening and poor access to health services. Screening plays a crucial role in the early detection and prevention of cervical cancer. Methods such as Pap smear (cytology), HPV DNA testing, and visual inspection with acetic acid (VIA) have been proven effective in identifying precancerous lesions before they progress to invasive cancer. Regular screening, followed by timely treatment, can significantly reduce both the incidence and mortality of cervical cancer.

Globally, the World Health Organization (WHO) has emphasized the importance of cervical cancer screening as part of its strategy to eliminate cervical cancer as a public health problem. However, in many countries, screening coverage remains low due to social stigma, lack of awareness, limited resources, and inadequate health infrastructure. Studying cervical cancer screening practices is therefore vital to understanding barriers, improving early detection rates, and designing effective health education and intervention programs. This contributes not only to reducing morbidity and mortality but also to achieving sustainable development goals related to health and well-being.

Need of the Study

Cancer is one of the world's largest health problems. The Global Burden of Disease study estimates that around 10

million people died from cancer in 2019, and around one-in-six deaths worldwide were from cancer. Cervical cancer develops in a woman's cervix (the entrance to the uterus from the vagina) and it is a major cause of cancer mortality in women and more than a quarter of its global burden is contributed by developing countries. In India, cervical cancer is the 3rd most common cancer and the leading cause of death with a mortality rate of 8.7 % as per GLOBOCAN 2022². When diagnosed, it is one of the most successfully treated forms of cancer and this can be done through cervical cancer screening. Cervical cancer screening is used to find changes in the cells of the cervix that could lead to cancer. Screening includes cervical cytology (also called the Pap test or Pap smear) testing for Human Papillomavirus (HPV) or both. According to the American College of Obstetrician and Gynecologists (ACOG)⁴ and the Center of Disease Control and Prevention (CDC)³ screening for cervical cancer should begin from the age of 21 years onwards.

A study conducted by HN Harsha Kumar and Shubham Tanya on knowledge and screening for cervical cancer among women in Mangalore City (September-October 2014). The study includes 83 participants and the results have shown that majority of the women have poor knowledge about cervical cancer [81.9% (68/83)] and it's screening [85.5% (71/83)]. Only 6 out of 83 women had undergone screening.⁷

A study conducted by M.R. Muthuramalingam and V.R Muraleedharan on the patterns in the prevalence and wealth based inequality of cervical cancer screening in India (26th June 2023). A sample of 5,935 participants was assessed from the state of Meghalaya and the cervical cancer screening weighed prevalence was 0.6¹². Such studies are vital for guiding policymakers, strengthening preventive health strategies, and contributing to the World Health Organization (WHO)

global initiative to eliminate cervical cancer as a public health problem. Addressing this need on cervical cancer screening in the OPDs of a tertiary care center of East Khasi Hills, Meghalaya, through research will ultimately give us the brief information on knowledge and attitude of women aged 21 years and above regarding cervical cancer screening.

Operational Definition

Assessment: It refers to the evaluation of the knowledge and attitude of women aged 21 years and above regarding cervical cancer screening.

Knowledge: It refers to the known facts or information regarding cervical cancer screening among women aged 21 years and above.

Attitude: Means the tendency of women aged 21 years and above to have either a favourable or unfavourable response towards cervical cancer screening.

Cervical cancer screening: It refers to the medical tests and procedure, such as Pap smear, Visual inspection with Acetic Acid (VIA) or HPV DNA testing, that are undertaken to detect precancerous or cancerous changes in the cervix of a woman.

Objectives of the Study

Primary Objectives:

1. To assess the knowledge of women aged 21 years and above regarding cervical cancer screening
2. To assess the attitude of women aged 21 years and above regarding cervical cancer screening.

Secondary Objectives:

1. To find out the association of knowledge with selected demographic variables regarding screening of cervical screening.

Research Methodology

Research Design

A non-experimental, cross-sectional, quantitative research design was adopted in the present study to

assess the knowledge and attitude towards cervical cancer screening in the OPDs of a tertiary care center of East Khasi Hills, Meghalaya.

Variables

Variables are the qualities, properties or characteristics of people, objects, situations, concepts, activities, attitudes etc, which can change or may vary according to the stimulus. The variables can be manipulated or measured.

Independent Variables are the qualities or properties that can be manipulated by researcher to cause an effect on dependent variables. In the present study,

Independent Variables-

Socio demographic variable:

- Age
- Education
- Occupation
- Marital status
- Number of children
- Age of first menstruation

Outcome variables:

Knowledge and attitude towards cervical cancer screening

Setting

The present study was conducted in OPDs of Obstetrics and Gynaecology, General Surgery and Oncology of a tertiary care centre of East Khasi Hills, Meghalaya from 16th June 2025 to 21st June 2025.

Ethical Consideration

In our study, prior permission was obtained from-

1. NEIGRIHMS Scientific Advisory Committee (NSAC)
2. Institution Ethics Committee (IEC)
3. Medical Superintendent, NEIGRIHMS
4. Informed Consent from Participants

Study Population

Women aged 21 years and above attending the OPDs of a tertiary care center of East Khasi Hills, Meghalaya

Sampling Design

A sample design is a subset of population of elements selected by the researchers to participate in their research project.

Sampling Technique

In our study, sampling design is convenient sampling technique

Sample Size

The calculated sample size was 158 and it was rounded up to 160 participants.

Criteria for Sample Selection

Inclusion criteria: Women aged 21 years and above attending hospital OPDs

Exclusion criteria: Women who are not willing to participate

Development of Data Collection Tool

Tools are procedures or instruments used by the researcher to collect data. The research tool was prepared based on the objectives of the study. The following steps were adopted prior to the development of the tool-

- A detailed and extensive review of available literature, books, online resources and guidelines on knowledge and attitude towards cervical cancer screening was done
- Suggestions from experts

Description of Data Collection Tool and Technique

The data collection tools included the following sections:-

Section I: Socio demographic data of the respondent

Section II: Self-Administered Structured Questionnaire to assess the knowledge

Section III: Five Point Likert Scale to assess the attitude

Data Collection Procedure

Prior to data collection, approval was taken from the Principal of College of Nursing, NEIGRIHMS and permission was obtained from the Medical Superintendent of a tertiary care centre of East Khasi Hills, Meghalaya. Data was collected from the OPDs of Obstetrics and Gynaecology, General Surgery and Oncology Department from 16th June 2025 to 21st June 2025, which was a period of one week. Participants who met the inclusion criteria were selected. Prior to data collection a written consent form was taken from the participants on the day of data collection.

Scoring of the Tool:

Section I: It consists of socio-demographic variables of the participants and was not scored.

Section II: It consists of Self-Administered Structured Questionnaire to assess the knowledge with a total of 16 items. Each item number is allotted a score of 1 mark for correct response. There is no negative mark for incorrect answers. The question consists of the following domains:

Domain 1: General Knowledge of cervical cancer

Domain 2: Mode of transmission of cervical cancer

Domain 3: Symptoms of cervical cancer

Domain 4: Cervical cancer screening

Domain 5: Cervical Cancer Vaccine

Section III: It consists of Five Point Likert Scale to assess the attitude. There are 6 positive and 6 negative statements with a total of 12 statements.

For positive statement score of 5, 4, 3, 2, 1 is given to Strongly agree, Agree, Neutral, Disagree, and Strongly Disagree.

For negative statement score of 1, 2, 3, 4, 5 is given to Strongly agree, Agree, Neutral, Disagree, and Strongly Disagree respectively.

Interpretation of Score

Knowledge items: The knowledge of the participants has been classified into good and bad knowledge based on the mean method (mean=10.4)

Good Knowledge: Category score is 10-16

Poor Knowledge: Category score is 0-9

Attitude items

The attitude of the participants has been classified into favorable and unfavorable attitude based on the mean method (mean=43.4)

Favorable Attitude: 43-60

Section I: Findings related to Demographic variables of women aged 21 years above in the selected OPDs (Obstetrics and Gynaecology, General Surgery and Oncology) of a tertiary care center of East Khasi Hills, Meghalaya.

Table 1: Distribution of the selected demographic variables of participants n=160

Demographic Variables	Frequency (f)	Percentage (%)
Age(years)		
21-30	109	68.1
31-40	28	17.5
41-50	15	9.4
>50	8	5
Educational status		
Class 10 and below	22	13.8
Higher secondary	29	18.1
Undergraduates	40	25
Graduates and above	69	43.1
Occupational status		
Unemployed	111	69.4
Employed	49	30.6
Marital Status		
Unmarried	97	60.6
Married	63	39.4
Number of children		
No children	108	67.5
1 and more children	52	32.5

Unfavorable Attitude: 12-42

Analysis, Interpretation and Discussion

Analysis and Interpretation: This chapter deals with the statistical analysis of the data collected. The data collected from the participants was analyzed by using descriptive statistics and inferential statistic (chi-square test). The data is presented in the form of tables and bar diagram.

Age of First menstruation		
Below 11	14	8.8
12 and above	146	91.3
Use of contraception		
Yes	9	5.6
No	151	94.4
Have you ever heard about cervical cancer?		
Yes	107	66.9
No	53	33.1
If yes from whom/where?		
Educational institutes (colleges, books, teachers)	39	24.4
Family or Friends	17	10.6
Health care workers (doctors, nurses, hospital)	16	10
Mass media(TV, social media, internet, awareness programme)	35	21.9
Have you ever undergone cervical cancer screening?		
Yes	3	1.9
No	157	98.1

Table 1 shows that out of 160 participants, 109(68.1%) participants belong to the age group of 21-30 years, 69(43.1%) participants were graduates and above, 111(69.4%) participants were unemployed, 97(60.6%) participants were unmarried, 108(67.5%) participants had no children, 146(91.3%) participants had their first menstruation at 12 and above years of age and 151(94.4%) participants does not adopt any contraceptive methods. There are 107(66.9%) participants who have heard about cervical cancer, 39 (24.4%) from educational institutes, 17(10.6%) from family or friends, 16(10.0%) from health care workers and 35(21.9%) from mass media, additionally only 3 participants (1.9%) out of 160 have undergone cervical cancer screening.

Section II: Findings related to the level of knowledge regarding cervical cancer screening of women aged 21 years above in the selected OPDs (Obstetrics and Gynaecology, General Surgery, Oncology) of a tertiary care center of East Khasi Hills, Meghalaya.

Figure 1: Frequency and percentage distribution of knowledge regarding cervical cancer screening of participants. n=160

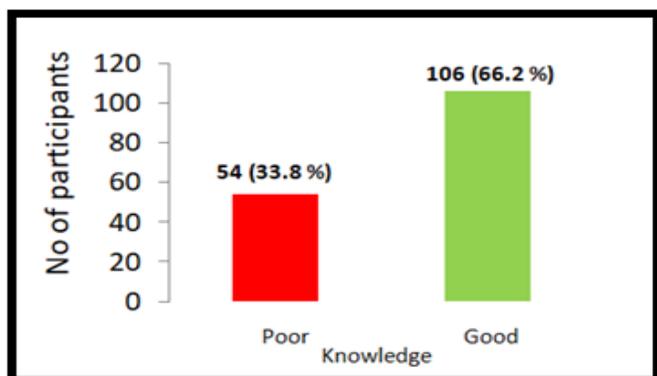


Fig 1 shows that among 160 participants 54(33.8%) of the participants have poor knowledge and 106(66.2 %) have good knowledge regarding cervical cancer screening. The finding shows that 54% have good knowledge

Section III: Findings related to the attitude regarding cervical cancer screening of women aged 21 years above in the selected OPDs (Obstetrics and Gynaecology, General Surgery and Oncology) of a tertiary care center of East Khasi Hills, Meghalaya.

Figure 2: Frequency and percentage distribution of attitude regarding cervical cancer screening of participants n=160

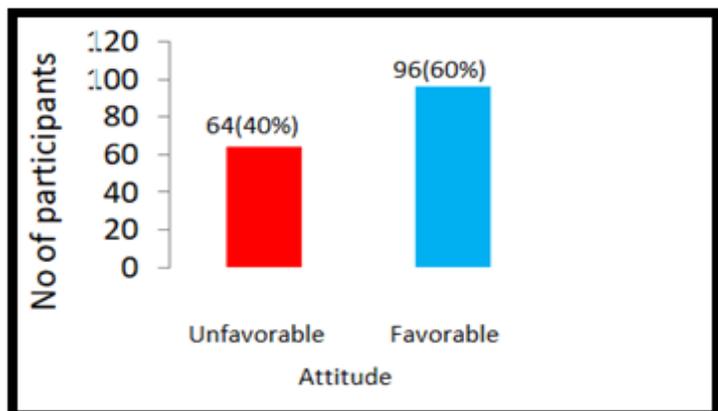


Fig 2 shows that among 160 participants, 64 (40%) participants had unfavorable attitude and 96 (60%) of the participants had highly favorable attitude regarding cervical cancer screening.

Section IV: Findings related to the association between knowledge and selected demographic variables regarding cervical cancer screening of women aged 21 years and above in the selected OPDs (Obstetrics and Gynaecology, General Surgery and Oncology) of a tertiary care center of East Khasi Hills, Meghalaya.

Table 2: Association between knowledge and selected demographic variables regarding cervical cancer screening n=160

Demographic variables	Poor Knowledge	Good knowledge	df	Chi-square	Tabulated value
Educational status					
Class 10 and below	16(72.7%)	6(27.3%)			
Higher secondary	14(48.3%)	15(51.7%)	3	24.97	16.27*
Undergraduate	7(17.5%)	33(82.5%)			
Graduate and above.	17(24.6%)	52(75.4%)			
Occupational status					
Unemployed	32(28.8%)	79(71.2%)	1	3.92	3.84*
Employed	22(44.9%)	27(55.1%)			
Marital status					
Married	29(46.0%)	34(54.0%)	1	7.01	10.83*
Unmarried	25(25.8%)	72(74.2%)			
Number of children					
No children	30(27.8%)	78(72.2%)	1	5.3	5.41*
1 and more children	24(46.2%)	28(53.8%)			

*P value is <0.05 shows significance

Table 2 shows that there is significant association of knowledge with the following demographic data i.e.; education, occupation, marital status, number of children.

Discussion

Present Study	Relevant Study
Most of the women about 66.2% had good knowledge and 33.8 % of the women had poor knowledge regarding cervical cancer screening	Ajeru Patricia Aketoko and FawazRudainy (March 2025) conducted a study on assessing the knowledge, attitude and practices on Cervical Cancer Screening among Women of Reproductive age attending gynaecology clinic in HoimaReginal Referral Hospital and found that about 68.2% of women had poor attitude towards cervical cancer screening ²⁰
About 60%of women had favorable attitude towards cervical cancer screening and 40 % of the women had unfavorable attitude towards cervical cancer screening	A study on knowledge, attitude and practice toward cervical cancer screening among women attending health facilities in Central Ethiopia published on March 22, 2022 showed that 50.7% had good knowledge and less than half,46.1% had a positive attitude towards cervical cancer screening ⁵
In the present study it was found that there is a significant association of knowledge with the following demographic data i.e.; education (p=0.00),occupation (p=0.048), marital status(p=0.008) and Number of children (p=0.021).	SmitaShrestha and PrativaDhakal (March 2017) conducted a study to assess the knowledge, attitude and practice regarding cervical cancer screening among women attending a teaching hospital, Bharatpur, Chitwan. The study showed that only education level of women was statistically significant with level of knowledge regarding cervical cancer screening (p=0.041) ¹⁴
	HN Harsha Kumar, Shubham Tanya (2014 September-October) conducted a study on knowledge and screening for cervical cancer among women in Mangalore city. This was a questionnaire based cross sectional study conducted among the women attending the outpatient department of teaching hospitals attached to Kasturba Medical Hospital. The result shows majority of women have poor knowledge about cervical cancer (81.9%) and its screening (85.8%) ⁷

Conclusion

Based on the findings of the study it can be concluded that majority of the participants had good knowledge and favorable attitude regarding cervical cancer screening. The study also found that there was an association between knowledge of the participants with educational

status, occupational status, marital status and number of children.

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