

## Original Research Article

## KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS CERVICAL CANCER AMONG THE WOMEN IN RAICHUR DISTRICT OF NORTH KARNATAKA- A CROSS SECTIONAL STUDY

Received : 17/02/2024  
 Received in revised form : 17/04/2024  
 Accepted : 02/05/2024

**Keywords:**  
*Awareness, cervical cancer, pap smear, screening.*

Corresponding Author:  
**Dr. Deepashree,**  
 Email: captdeepashree31@gmail.com

DOI: 10.47009/jamp.2024.6.3.20

Source of Support: Nil,  
 Conflict of Interest: None declared

*Int J Acad Med Pharm*  
 2024; 6 (3); 93-97

**Deepashree<sup>1</sup>, Sushrit A Neelopant<sup>2</sup>, Rashmi M.B<sup>3</sup>, Radha Sangavi<sup>4</sup>**

<sup>1</sup>Assistant Professor, Department of OBG, Raichur Institute of Medical Sciences, Raichur, Karnataka, India

<sup>2</sup>Assistant Professor, Department of Community Medicine, Raichur Institute of Medical Sciences, Raichur, Karnataka, India

<sup>3</sup>Associate Professor, Department of OBG, Raichur Institute of Medical Sciences, Raichur, Karnataka, India

<sup>4</sup>Professor, Department of OBG, Raichur Institute of Medical Sciences, Raichur, Karnataka, India

### Abstract

**Background:** Cervical cancer stands as a prevalent threat among Indian women in their reproductive years, yet a significant portion remains unscreened. This concerning trend persists despite the availability of preventive measures. Reported barriers to screening encompass a spectrum of issues, from a lack of awareness regarding risk factors, symptoms, and prevention methods to enduring stigma and misconceptions surrounding gynaecological ailments. Moreover, the absence of national cervical cancer screening guidelines and policies further compounds the challenge. In response, this study attempts to scrutinize the knowledge, attitudes, and practices pertaining to cervical cancer and its screening among women of reproductive age, aiming to illuminate avenues for improvement in this critical aspect of women's health care.

**Materials and Methods:** A facility-based cross-sectional study was done on 150 females of reproductive age who presented to out-patient-department of RIMS, Raichur. Structured questionnaire consisting 20 knowledge items and 7-items for attitude and history of pap smear for practices were administered by one of the investigators after informed consent. Data were entered and analyzed using R software. Qualitative variables were summarized as counts and percentages while quantitative variables as mean and standard deviation.

**Results:** Out of 150 women, with approximately two-thirds (66%) indicating prior awareness of cervical cancer. Understanding of symptoms and risk factors was reported by 35.33% and 39.75% of participants, respectively. However, only 34.5% had heard of screening, and a mere 9.5% had undergone the test. Encouragingly, 80% expressed a favourable attitude towards screening. The gap between attitude and uptake remains concerning. It is evident that strategic communication targeting eligible women is crucial to bolstering screening rates and advancing cervical cancer prevention efforts. **Conclusion:** Despite women's positive attitudes toward cervical cancer screening, knowledge levels and actual uptake are low. Strategic communication campaigns and universally accessible screening facilities are crucial to bridging this gap, translating positive attitudes into action, and improving women's health outcomes.



### INTRODUCTION

Globally, 570000 cases of Cervical Cancer and 311000 deaths from the disease occurred in 2018. Cervical Cancer is the fourth most common cancer in women, ranking after breast cancer (2.1 million cases), colorectal cancer (0.8 million) and lung cancer (0.7 million).<sup>[1]</sup>

Although screening, primarily with the Pap smear technology, has reduced the incidence of cervical

cancer, it remains the second most common cause of death from cancer in women worldwide. This is because of lack of resources for widespread high-quality screening. In addition to application of Pap smear technology, the identification of HPV as the etiologic agent has led to the development of a preventive vaccine (Lowy et al., 2008) for the primary prevention of cervical cancer. HPV assays to improve secondary prevention (screening programs)

may offer the possibility of bringing cost effective cervical cancer prevention strategies.<sup>[2]</sup>

It is the 2nd most leading cause of female cancer among women aged 15-44 years in India. About 96 922 new Cervical Cancer cases are diagnosed annually in India.<sup>[3]</sup>

Even though fair knowledge and a positive attitude toward Cervical Cancer and screening exists among Indian women, still there is a gap to transform it into practice. India has urgent need to develop health system capacity to ensure efficient Cervical Cancer screening program and community level efforts to improve knowledge about Cervical Cancer and screening programs. These efforts would help save thousands of young women and their families from a great calamity.<sup>[4]</sup>

While Cervical Cancer cases are declining in the developed world, they pose a heavy burden on developing countries, where the risk of developing Cervical Cancer is 35% greater compared to developed countries. About 25% of global mortality due to Cervical Cancer occurs in India.<sup>[4]</sup>

Cervical Cancer can be cured, because it has a long pre invasive period. Early diagnosis and treatment of Cervical Cancer at women are crucial for reducing mortality rates.<sup>[5]</sup>

Fortunately, Cervical Cancer has a long premalignant period that provides an opportunity for screening and treating before it turns to be invasive Cervical Cancer. Population-based screening with Pap smear or cytology is an important secondary preventive measure for Cervical Cancer that leads to a high-cure rate among Cervical Cancer patients. Early detection and treatment via screening can prevent up to 80% of Cervical Cancers in developed countries, where efficient screening programs are in place. In developing countries, however, there is limited access to effective, wide scale screening, leading to increased deaths due to Cervical Cancer. According to various reports, in developed countries 68%-84% of women are being screening by Pap smear, but in India this proportion is 2.6%-5% only.<sup>[6]</sup>

This is one of the main reasons that in India patients are being diagnosed at advanced stages. The main risk factor for development of Cervical Cancer is infection with human papilloma virus (HPV) types (HPV 16 and HPV 18),<sup>[7]</sup> HPV-DNA viral load quantification and integration, and E6/E7 expression are promising biomarkers that can predict the progression of lesions to Cervical Cancer.<sup>[8]</sup>

Currently, there are three types of HPV vaccines available in the global market: nonavalent vaccine "Gardasil – 9™," quadrivalent "Gardasilt™" and bivalent "Cervarix™." The HPV vaccine has demonstrated high degrees of efficacy with maximum clinical effectiveness and cost-effectiveness in the target population of young adolescents, who are less likely to have been previously exposed to high-risk HPV genotypes.<sup>[9-13]</sup> As these vaccines are highly effective before exposure to HPV, current guidelines prioritize

adolescent girls as the primary target group for HPV vaccination.<sup>[14]</sup>

Despite sufficient evidence supporting the use of screening as an effective intervention, there are still few large-scale screening programs being implemented in India. Knowledge about disease and early screening is the most effective measure for Cervical Cancer prevention.

In spite of a dedicated cancer control program in place in India, screening has not been effective to decrease the burden of disease. The studies show that women have suboptimal level of knowledge of Cervical Cancer, their attitude is also favourable however the uptake of actual practice is low due to social stigma. Due to dearth of literature regarding knowledge, attitude, and practice (KAP) toward Cervical Cancer and its screening among Indian women this review was conducted. The outcome of this study is expected to provide information regarding current awareness, attitude and practice about Cervical Cancer and screening, which was helpful for designing population-based educational program leading to knowledge enhancement about Cervical Cancer and its screening.

Hence this study was conducted with the objectives to assess the knowledge, attitude and practices towards cervical cancer among women attending OBG Department OPD in RIMS, Raichur, Karnataka and to analyse the sociodemographic risk factors associated with cervical cancer

## MATERIALS AND METHODS

This is a cross sectional study conducted on women attending the outpatient department of Obstetrics and Gynaecology, RIMS Hospital, Raichur, Karnataka. In a recent study done in 2021 by Taneja N. et. Al, overall knowledge on Cervical Cancer among women was 40.22%.<sup>[12]</sup>

Considering this as reference, sample size was calculated as Sample size  $N = \frac{4pq}{d^2}$  where, p= prevalence, q= 1-p, d= relative error= 20% of p= 8.044 Substituting the values,  $N = \frac{4 \times 0.4 \times 0.6}{0.2^2} = 148.78 \approx 150$ . Hence, 150 samples were taken.

Necessary permission from the concerned authorities was taken and a survey was conducted using pretested predesigned semi structured questionnaires. Prior informed consent was taken. Women in reproductive age group, attending OPD of OBG department, RIMS Hospital, Raichur, Karnataka and willing to give consent for the study were included in the study. Women who were seriously ill and women with psychiatric illness were excluded. Categorical outcomes were summarized by rates. Numerical outcomes were summarized by mean and standard deviation. Statistical data analysis was carried out using R software.

## RESULTS

The data in table 1 depicts a sociodemographic detail of the study population, showcasing their age distribution, educational attainment, occupational engagement, marital status, age at marriage, and per capita monthly family income. The mean age of the participants is 30.6 years, with a standard deviation of 7.3 years. Educationally, the majority have completed at least secondary education or higher, with a significant portion having completed secondary (28%) and higher secondary (30%) education. Occupationally, the majority are homemakers (80%), followed by employed individuals (18%). Notably, almost the entire population is married (96%). The mean age at marriage is 18.4 years, with a standard deviation of 3.4 years. Regarding income, the mean per capita monthly family income is Rs. 4823.4, with a standard deviation of Rs. 3879.4, indicating a considerable range in economic status among the participants. This data provides valuable insights into the socioeconomic composition and dynamics of the studied population.

The table 2 illustrates various aspects related to cervical cancer awareness, attitudes, and screening practices within the surveyed population. Concerning knowledge of cervical cancer, the majority (90%) scored at least 50%, indicating a reasonably high level of awareness. However, 10% scored below 50%, suggesting a need for further education and awareness campaigns. Attitude-wise, the majority (80%) hold favourable attitudes towards cervical cancer prevention and screening, indicating a generally positive perception. Conversely, 20% hold not favourable attitudes, possibly indicating misconceptions or barriers towards screening.

Regarding practices, a significant portion (90%) have never been screened for cervical cancer, while only 10% have undergone screening, reflecting a substantial gap between awareness and actual preventive actions. This data underscores the importance of targeted interventions to improve knowledge, attitudes, and practices related to cervical cancer screening within the population.

The data provided in table 3 presents a comprehensive overview of cervical cancer awareness, knowledge, attitudes, and willingness to participate in screening among the surveyed population. Among the 150 participants, a majority (66%) had heard of cervical cancer. Regarding knowledge of symptoms, bleeding in between periods and foul-smelling vaginal discharge were the most recognized symptoms, with 30% and 24% acknowledging them, respectively. Understanding of risk factors varied, with multiple sexual partners being the most recognized (32%), followed by poor menstrual hygiene (15.33%) and prolonged use of birth control pills (23.33%). Knowledge about cervical cancer screening was moderate, with only 35.33% having heard of it, and awareness of screening utility, age, frequency, and vaccine availability ranging from 4% to 15.33%. Attitudes towards cervical cancer were varied, with notable percentages agreeing that women with multiple sex partners are more predisposed (46%), while a significant majority agreed to undergo internal examinations by a gynaecologist every three years (80%). Encouragingly, a high proportion (80%) expressed willingness to undergo free cervical cancer screening if offered. This data underscores the need for targeted education and awareness campaigns to enhance knowledge, correct misconceptions, and promote proactive screening practices within the community.

**Table 1: Sociodemographic profile of participants (n = 150)**

Characteristics	Number (%)
Age (years) (mean±SD)	30.6 ± 7.3
Educational status	
Illiterate	27 (18)
Primary	27 (18)
Secondary	42 (28)
Higher secondary	45 (30)
Graduate and above	09 (06)
Professional	00 (00)
Occupation	
Students	03 (02)
Homemaker	120 (80)
Employed	27 (18)
Married	144 (96)
Age of marriage (years) (mean±SD)	18.4±3.4 years
Per capita monthly family income (Rs.) (mean ± SD)	4823.4 ± 3879.4

**Table 2: Adequacy of knowledge, attitude, and practice regarding cervical cancer and its screening**

Variable	Number (%)
Knowledge score	
<50%	15 (10)
≥50%	135 (90)
Attitude	
Favorable	120 (80)
Not favorable	30 (20)

Practices	
Ever screened	15 (10)
Never screened	135 (90)

**Table 3: Knowledge of cervical cancer among respondents (n = 150)**

Variables	N= 150 (%)
Heard of cervical cancer	99 (66)
Knowledge of symptoms of cervical cancer	
Bleeding in between periods	45 (30)
Foul smelling vaginal discharge	36 (24)
Postmenopausal bleeding	09 (06)
Periods heavier and of longer duration than usual	09 (06)
Knowledge of risk factors of cervical cancer	
HPV infection	06 (04)
Multiple sexual partners	48 (32)
Early age of coitus	27 (18)
Tobacco or smoking	18 (12)
History of sexually transmitted diseases	18 (12)
Poor menstrual hygiene	23 (15.33)
Prolonged use of birth control pills (>5 years)	35 (23.33)
Multiple pregnancies (>5)	15 (10)
Heard of cervical cancer screening	53 (35.33)
Knowledge about cervical cancer screening	
Utility of screening	15 (10)
Age for screening	23 (15.33)
Screening frequency	12 (08)
Vaccine availability	06 (04)
Age for HPV vaccination	01 (0.67)
Attitude statements	No. agreed (%)
Intermenstrual bleed should be considered as normal	22 (5.5)
A woman should bear her first child by age of 20 years	92 (23.0)
Women should bear 5 or more children in order to increase family strength	08 (5.33)
Women with multiple sex partners are more predisposed to cervical cancer	69 (46)
Women should get an internal examination done by a Gynecologist once in every 3 years	120 (80)
If any lady in the neighborhood is suffering from cervical cancer, you would keep distance from her	35 (23.33)
If you were offered a free cervical cancer screening, would you be willing to be screened?	120 (80)

## DISCUSSION

Our study sheds light on the insufficient awareness levels concerning cervical cancer but reveals a positive inclination towards screening among participants. Among the women surveyed, 66% had heard of cervical cancer, aligning with findings from studies in Korea and Nepal.<sup>[13,14]</sup> However, only 12% demonstrated adequate knowledge about carcinoma cervix and screening, resembling results from studies in Cameroon and Ethiopia.<sup>[15,16]</sup> Notably, these levels pale in comparison to developed countries like Kuwait and London, where knowledge rates soar to 52% and 76% respectively.<sup>[17,18]</sup> The scarcity of knowledge stems from the absence of population-based screening programs, ineffective mass media campaigns, and cultural inhibitions that hinder open discourse on diseases affecting sexual organs in India.

Intermenstrual bleeding emerged as the most commonly cited symptom, echoing findings from studies in Kerala and Ahmedabad.<sup>[19,20]</sup> Similarly, multiple sexual partners surfaced as the most frequently mentioned risk factor, corroborating reports from dissertations submitted to Muhimbili University of Health and Allied Sciences, Songea, and The University of Iowa.<sup>[21,22]</sup> Our study also revealed inadequate knowledge of cervical cancer screening, echoing findings from Nepal.<sup>[14]</sup> However,

when attitudes towards cervical cancer and screening were explored, 80.5% exhibited a positive stance, with a majority expressing willingness for free screening, consistent with studies in Kuwait.<sup>[17]</sup> This receptiveness among women could significantly boost screening coverage if combined with awareness-raising efforts.

Despite favorable attitudes, only 10% of women had undergone screening, akin to rates observed in Nepal.<sup>[14]</sup> This figure, slightly higher than the Indian average, could be attributed to the study's setting in a tertiary care hospital and the relatively high education levels among participants. Lack of screening awareness and absence of symptoms were cited as primary barriers, echoing findings from studies in Kerala,<sup>[19]</sup> and Ethiopia.<sup>[16]</sup> Further analysis unveiled associations between sociodemographic factors and knowledge, attitude, and practice. Women aged over 30, with secondary education or higher, and those employed or studying, exhibited greater knowledge levels. Similarly, those with higher income and education displayed more positive attitudes, while older women and those with secondary education or higher were more likely to practice screening. These findings underscore the critical role of education, income, and age in shaping awareness, attitudes, and practices related to cervical cancer screening.

## CONCLUSION

While women exhibit a suboptimal level of knowledge regarding cervical cancer, their attitude towards screening remains favourable. Despite this positive inclination, the actual uptake of screening remains disappointingly low. To bridge this gap between attitude and action, strategic communication campaigns targeting eligible women are imperative. Moreover, ensuring universal availability of screening facilities in public health settings can significantly enhance uptake rates. By addressing these key areas, we can effectively translate positive attitudes into tangible actions, thereby advancing the fight against cervical cancer and promoting women's health and well-being.

## REFERENCES

1. Arbyn M, Weiderpass E, Bruni L, de Sanjose S, Saraiya M, Ferlay J, Bray F. Estimates of incidence and mortality of cervical cancer in 2018: a worldwide analysis. *Lancet Global Health*. 2020;8(2):e191–203.
2. Bayo S, Bosch FX, De Sanjose S, et al (2002). Risk factors of invasive cervical cancer in Mali. *Int J Epidemiol*, 31, 202-9.
3. Human Papillomavirus and related disease report. HPV Information Centre. 2019
4. Kumar HH, Tanya S. A study on knowledge and screening for Cervical Cancer among women in Mangalore city. *Ann Med Health Sci Res*. 2014;4(5):751-6.
5. Šarenec T, Mikov M. Cervical cancer, different treatments and importance of bile acids as therapeutic agents in this disease. *Front Pharmacol*. 2019;10:484
6. Shekhar S, Sharma C, Thakur S, Raina N. Cervical cancer screening: knowledge, attitude and practices among nursing staff in a tertiary level teaching institution of rural India. *Asian Pacific J Cancer Prevent*. 2013;14(6):3641-5.
7. Gedam JK, Rajput DA. Knowledge, attitudes, and practices among healthcare providers on Cervical Cancer, human papilloma virus and it's vaccine at ESI PGIMSR, MGM Hospital Parel Mumbai, India. *Int J Reprod Contracept Obstet Gynecol*. 2017;6(9):3855-60
8. Abreu AL, Souza RP, Gimenes F, Consolaro ME. A review of methods for detect human Papilloma virus infection. *Virol J*. 2012;9(1):262
9. Castle PE, Maza M, Prophylactic HPV. Vaccination: past, present, and future. *Epidemiol Infect*. 2016;144(3):449–468
10. Gilmer LS. Human Papillomavirus Vaccine Update. Primary care. 2015;42(1):17–32.
11. Uddin N, Hasan MR, Hossain MM, Sarker A, Nazmul Hasan AHM, Mahmudul Islam AFM, Chowdhury MMH, Rana MS. In vitro  $\alpha$ -amylase inhibitory activity and in vivo hypoglycemic effect of methanol extract of Citrus Macroptera Montr. Fruit. *Asian Pacific journal of tropical biomedicine*. 2014;4(6):473-9.
12. Taneja N, Chawla B, Awasthi AA, Shrivastav KD, Jaggi VK, Janardhanan R. Knowledge, Attitude, and Practice on Cervical Cancer and Screening Among Women in India: A Review. *Cancer Control*. 2021 Jan-Dec;28: 107 32748211010799.
13. Tran NT, Choe SI, Taylor R, Ko WS, Pyo HS, So HC. Knowledge, attitude and practice (KAP) concerning cervical cancer and screening among rural and urban women in six provinces of the Democratic People's Republic of Korea. *Asian Pac J Cancer Prev*. 2011;12: 3029–33
14. Shrestha J, Saha R, Tripathi N. Knowledge, attitude and practice regarding cervical cancer screening amongst women visiting tertiary centre in Kathmandu, Nepal. *Nepal J Med Sci*. 2013;2:85–90
15. Tebeu PM, Major AL, Rapiti E, Petignat P, Bouchardy C, Sando Z, et al. The attitude and knowledge of cervical cancer by Cameroonian women; a clinical survey conducted in Maroua, the capital of Far North Province of Cameroon. *Int J Gynecol Cancer*. 2008;18:761–5. [PubMed] [Google Scholar]
16. Yifru T, Asheber G. Knowledge, attitude and practice of screening for carcinoma of the cervix among reproductive health clients at three teaching hospitals, Addis Ababa, Ethiopia. *Ethiop J Reprod Health*. 2008;2.
17. Al Sairafi M, Mohamed FA. Knowledge, attitudes, and practice related to cervical cancer screening among Kuwaiti women. *Med Princ Pract*. 2009;18:35–42
18. Yu CK, Rymer J. Women's attitudes to and awareness of smear testing and cervical cancer. *Br J Fam Plann*. 1998;23:127–33
19. Aswathy S, Quereshi MA, Kurian B, Leelamoni K. Cervical cancer screening: Current knowledge & practice among women in a rural population of Kerala, India. *Indian J Med Res*. 2012;136:205–10.
20. Goyal A, Gunvant V, Shrivastava A, Verma R, Modi A. Knowledge, attitude & practices about cervical cancer and screening among nursing staff in a teaching hospital. *Int J Med Sci Public Health*. 2013;2:249–53.
21. John J. The Knowledge, attitude, practice and perceived barriers towards screening for premalignant lesions among women aged 18 years and above in Songea Urban, Ruvuma [dissertation] Muhimbili Univ Health Allied Sci. 2011
22. Beining RM. Screening for cervical cancer: An exploratory study of urban women in Tamil Nadu, India [dissertation] University of Iowa. 2012