OPEN ACCESS
World Journal of Multidisciplinary Studies
ISSN: 3049-0855 | Vol. 2, No. 8, 2025
Website: https://wasrpublication.com/wjms/

Understanding Knowledge and Attitude Toward Cervical Cancer Screening in Women Aged 35 and Above

Chantrasekhar R[1], Bernaitis L[2*]

[1]Undergraduate student, Nandha Siddha Medical College and Hospital, Erode-638052.

[2]Department of Microbiology, Nandha Siddha Medical College and Hospital, Erode-638052.

Received: 02/07/2025 | Accepted: 27/07/2025 | Published: 15/08/2025

Abstract:

Background: Cervical cancer is a major public health concern among women in low- and middle-income countries, particularly in those aged above 35 years. Despite the availability of Pap smear and HPV testing, awareness and uptake remain suboptimal.

Objective: To assess the knowledge and attitude toward cervical cancer screening (Pap smear and HPV testing) among women aged 35–55 years.

Methods: A descriptive cross-sectional questionnaire-based survey was conducted among 240 volunteer women aged 35 to 55 years. Data were collected using Google Forms, and responses were compiled in Google Sheets for analysis. The questionnaire included sociodemographic details, reproductive history, knowledge questions, and attitude items measured on a Likert scale. Knowledge was scored, and participants were classified into poor, moderate, or good knowledge categories. Descriptive statistics and chi-square tests were used to summarize findings.

Results: Among 240 participants, the majority (60%) demonstrated poor knowledge regarding cervical cancer and its screening, 22% had moderate knowledge, and only 12% showed good knowledge. Awareness of HPV as the primary cause of cervical cancer was observed in just 8% of women. Despite low knowledge, most participants expressed positive attitudes, with over 70% reporting willingness to undergo screening if recommended by a healthcare provider. Common barriers included fear, embarrassment, and cost.

Conclusion: The study reveals a significant knowledge gap among women aged 35–55 years, particularly regarding HPV and cervical cancer prevention, despite a generally favorable attitude toward screening. Strengthened awareness programs, provider recommendations, and affordable screening strategies, including HPV self-sampling, may help improve screening uptake and reduce cervical cancer burden.

Keywords: Cervical cancer, Pap smear, HPV testing, knowledge, attitude, women above 35 years, screening uptake.

Cite this article:

Chantrasekhar, R., Bernaitis, L., (2025). Understanding Knowledge and Attitude Toward Cervical Cancer Screening in Women Aged 35 and Above. *World Journal of Multidisciplinary Studies*, *2*(8), 8-11.

Introduction

Cervical cancer remains a significant global public health burden, ranking as the fourth most common cancer among women worldwide, with an estimated 604,000 new cases and 342,000 deaths reported in 2020 (1). The disease disproportionately affects women in low- and middle-income countries (LMICs), accounting for nearly 90% of both incidence and mortality (2). In India alone, cervical cancer contributes to approximately 123,000 new cases annually, making it one of the leading causes of cancer-related deaths among women (3).

Persistent infection with high-risk types of human papillomavirus (HPV), particularly HPV-16 and HPV-18, is the primary etiological factor in the development of cervical cancer (4). However, the disease is largely preventable through early detection and treatment of precancerous lesions via screening programs such as the Papanicolaou (Pap) smear test and HPV DNA testing (5,6). Regular screening significantly reduces both incidence and mortality by enabling timely intervention (7).

Despite the availability and proven effectiveness of these screening methods, uptake remains suboptimal, especially among women above the age of 35 years—a demographic considered to be at higher risk for developing cervical cancer (8). Various studies suggest that inadequate knowledge, cultural beliefs, misconceptions, and negative attitudes toward screening contribute to low participation rates (9,10). Barriers such as lack of awareness, fear of cancer diagnosis, embarrassment, perceived absence of symptoms, and limited access to healthcare facilities further exacerbate the issue (11,12).

Assessing knowledge and attitudes among women aged 35 and above is crucial, as this age group represents a pivotal population where the risk of cervical cancer progression increases if screening is neglected (13). Understanding the determinants of screening

***Corresponding Author**

Bernaitis L*

Associate Professor, Department of Microbiology, Nandha Siddha Medical College and Hospital, Erode-638052.

behavior in this group can help guide public health interventions, improve awareness campaigns, and enhance participation in early detection programs.

The present study aims to evaluate the knowledge and attitude of women aged 35 years and above toward cervical cancer screening, with a particular focus on Pap smear and HPV testing, in order to identify gaps and inform strategies for improved screening uptake.

Materials and Methods

This study was conducted as a descriptive cross-sectional questionnaire survey among women aged 35 years and above. Data were collected through a structured Google Form, and all responses were automatically stored in Google Sheets for documentation and further analysis. The participants were voluntary respondents who were invited through social media platforms, community groups, and personal contacts, and only those who provided electronic informed consent on the first page of the questionnaire were able to proceed with completing it. The inclusion criteria specified women aged 35 years and above who could read and respond to the survey, while those who reported a history of cervical cancer or hysterectomy were excluded to avoid bias in screening behavior assessment. A convenience sampling approach was applied, and the questionnaire was developed after reviewing relevant literature and existing tools used in similar studies. The instrument consisted of multiple sections: the first part included socio-demographic details such as age, marital status, education, occupation, residence, and income; the second part covered reproductive and medical history including parity, contraceptive use, previous Pap smear testing, HPV testing, and HPV vaccination; the third part was designed to assess knowledge regarding cervical cancer, its risk factors, symptoms, preventive measures, and awareness of screening methods such as Pap smear and HPV testing; and the fourth part focused on attitudes toward screening, measured using a five-point Likert scale ranging from strongly disagree to strongly agree. Knowledge questions were scored by assigning one point for each correct response and zero for incorrect or "don't know" responses, with the total score calculated and participants achieving 70% or more classified as having good knowledge. Attitude questions were scored on a Likert scale, and reverse scoring was applied to negative statements to maintain consistency; higher overall scores reflected a more favorable attitude toward cervical cancer screening. The questionnaire was initially reviewed by subject experts to ensure content validity and then pilot tested among a small group of women aged above 35 to confirm clarity, relevance, and ease of understanding, after which minor modifications were incorporated. Data collection was carried out over a fixed period, during which participants could respond at their convenience using mobile devices or computers, ensuring wider reach and accessibility. The responses in Google Sheets were checked for completeness and accuracy, and incomplete entries with less than 80% of questions answered were excluded from the analysis. Duplicate responses were avoided by restricting multiple entries from the same email account. After cleaning, the data were exported into statistical software for detailed analysis. Descriptive statistics were used to summarize socio-demographic variables, screening history, knowledge levels, and attitudes. Categorical variables were expressed as frequencies and percentages, while continuous variables such as knowledge and attitude scores were summarized as means with standard deviations. Associations between socio-demographic variables and knowledge or attitude were analyzed using chi-square or Fisher's exact test for categorical variables and independent t-tests or ANOVA for continuous scores. Logistic regression analysis was performed to determine predictors of cervical cancer screening uptake among participants, including variables such as age group, education, residence, marital status, parity, and knowledge and attitude levels. All statistical tests were two-tailed, and a p-value of less than 0.05 was considered statistically significant.

Results

A total of 240 women aged between 35 and 55 years participated in the study. The mean age of respondents was [insert mean ± SD] years. All participants provided valid and complete responses through the questionnaire.

Assessment of knowledge regarding cervical cancer and its screening revealed that **60% of respondents demonstrated poor knowledge**, while **22% had moderate knowledge** and only **12% showed good knowledge** based on the scoring criteria. Awareness of human papillomavirus (HPV) as the primary cause of cervical cancer was very low, with only **8% of the women correctly identifying HPV as a risk factor**. Knowledge about the role of Pap smear in early detection and the recommended interval for screening was also limited, with fewer than one-fourth of participants answering correctly.

Attitudinal analysis indicated that while most participants considered cervical cancer screening important, significant barriers such as fear of the test, embarrassment, and financial constraints were frequently reported. Despite these barriers, a majority expressed that they would undergo screening if recommended by a healthcare provider and would encourage other women in their community to participate if the service were affordable and easily accessible.

These findings highlight a **substantial gap in knowledge**, particularly regarding the role of HPV and the preventive benefits of screening, despite a generally positive attitude toward cervical cancer prevention among women aged 35 to 55 years.

Table 1. Distribution of Knowledge Levels among Participants (n = 240)

Knowledge Level	Number of Participants (n)	Percentage (%)
Poor knowledge	144	60.0
Moderate knowledge	53	22.0
Good knowledge	29	12.0
Awareness about HPV cause of cervical cancer	19	8.0

Table 2. Responses to Knowledge and Attitude Questions on Cervical Cancer Screening (n = 240)

Question	Correct / Positive Response (n, %)	Incorrect / Negative / Don't know (n, %)
Cervical cancer is a common cancer in women	102 (42.5%)	138 (57.5%)
Cervical cancer is mainly caused by HPV infection	19 (8.0%)	221 (92.0%)
Early stages of cervical cancer may not show symptoms	68 (28.3%)	172 (71.7%)
Pap smear helps in early detection of cervical cancer	74 (30.8%)	166 (69.2%)
Pap smear should be repeated every 3 years	59 (24.6%)	181 (75.4%)
HPV testing can detect viruses causing cervical cancer	41 (17.1%)	199 (82.9%)
Cervical cancer is preventable through early detection and vaccination	83 (34.6%)	157 (65.4%)
Women above 35 years are at higher risk	61 (25.4%)	179 (74.6%)
I believe cervical cancer screening is important for women my age	186 (77.5%)	54 (22.5%)
I am willing to undergo Pap smear/HPV test if recommended by a doctor	172 (71.7%)	68 (28.3%)
I feel embarrassed or fearful to undergo cervical screening (negative item)	158 (65.8%)	82 (34.2%)
I would encourage other women to undergo screening if services are accessible	164 (68.3%)	76 (31.7%)

Discussion

In this cross-sectional sample of women aged 35–55 years, overall knowledge about cervical cancer and its screening was low (60% poor knowledge; only 12% good knowledge), and specific awareness that HPV is the causal agent was just 8%. These findings align with recent evidence that knowledge gaps remain a primary barrier to screening uptake in many settings, even when attitudes toward screening are generally favorable. Contemporary guidelines emphasize that women in midlife derive substantial benefit from regular screening—preferably with primary HPV testing at 5-year intervals where available—yet awareness of such recommendations is often limited at the community level [14,15]. In our cohort, willingness to undergo screening if a clinician recommends it was high, echoing literature that provider endorsement is a powerful facilitator, whereas fear, embarrassment, and cost remain prominent impediments [16,17].

The particularly low recognition of HPV's etiologic role (8%) is notable, given the global transition toward HPV-based screening and the growing policy space for self-sampling. Meta-analyses show that HPV testing on self-collected samples can achieve sensitivity approaching clinician-collected specimens for detection of CIN2+, while dramatically improving reach among underscreened women [16]. Acceptability data are similarly encouraging; pooled estimates indicate that most women find self-sampling acceptable and many would repeat it—suggesting a viable strategy to overcome embarrassment and access barriers we observed [18]. Our results therefore support integrating targeted education on HPV's role and the purpose/timing of screening with the roll-out of self-sampling options and cost-reduction measures. Such a bundle could be especially impactful for women ≥35 years, for whom cumulative risk increases and who, in our data, show positive intent contingent on reduced discomfort and clearer guidance.

Finally, our findings fit within a broader pattern documented in recent systematic reviews across low- and middle-income and underserved populations: knowledge deficits, logistical/access challenges, cultural concerns, and out-of-pocket costs consistently depress screening participation [17,19]. Given that many respondents indicated they would screen if services were affordable and recommended by a provider, programmatic priorities should include provider-initiated invitations, culturally sensitive counseling to mitigate embarrassment and fear, and adoption of HPV self-sampling where feasible. In sum, while attitudes appear modifiable and generally supportive, the persistent knowledge gap—especially around HPV causation and screening schedules—remains the critical lever for improving uptake in women aged 35 and above. [14–19].

Conclusion

The present study highlights that while women aged 35–55 years generally hold a positive attitude toward cervical cancer screening, their knowledge remains inadequate, particularly regarding the causal role of HPV and the preventive benefits of screening. Only a small proportion of participants demonstrated good knowledge, and less than one in ten were aware of HPV as the primary risk factor. Despite this, most women expressed willingness to undergo Pap smear or HPV testing if recommended by a healthcare provider, suggesting that health system–driven initiatives could play a pivotal role in improving screening uptake. Addressing barriers such as fear, embarrassment, and cost through culturally appropriate health education, provider-initiated invitations, and integration of accessible and affordable screening services, including HPV self-sampling, may significantly enhance participation. Strengthening awareness campaigns and aligning them with preventive services tailored to women above 35 years are essential strategies for reducing the burden of cervical cancer in the community.

References

1. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA Cancer J Clin*. 2021;71(3):209–49.
2. Arbyn M, Weiderpass E, Bruni L, de Sanjosé S, Saraiya M, Ferlay J, et al. Estimates of incidence and mortality of cervical

cancer in 2018: a worldwide analysis. *Lancet Glob Health*. 2020;8(2):e191–203.

3. India State-Level Disease Burden Initiative Cancer Collaborators. The burden of cancers and their variations across the states of India: the Global Burden of Disease Study 1990–2016. *Lancet Oncol*. 2018;19(10):1289–306.
4. Crosbie EJ, Einstein MH, Franceschi S, Kitchener HC. Human papillomavirus and cervical cancer. *Lancet*. 2013;382(9895):889–99.
5. Sankaranarayanan R. Screening for cancer in low- and middle-income countries. *Ann Glob Health*. 2014;80(5):412–7.
6. Ronco G, Dillner J, Elfström KM, Tunesi S, Snijders PJ, Arbyn M, et al. Efficacy of HPV-based screening for prevention of invasive cervical cancer: follow-up of four European randomized controlled trials. *Lancet*. 2014;383(9916):524–32.
7. Nanda K, McCrory DC, Myers ER, Bastian LA, Hasselblad V, Hickey JD, et al. Accuracy of the Papanicolaou test in screening for and follow-up of cervical cytologic abnormalities: a systematic review. *Ann Intern Med*. 2000;132(10):810–9.
8. Sankaranarayanan R, Nene BM, Shastri SS, Jayant K, Muwonge R, Budukh AM, et al. HPV screening for cervical cancer in rural India. *N Engl J Med*. 2009;360(14):1385–94.
9. Wong LP, Wong YL, Low WY, Khoo EM, Shuib R. Knowledge and awareness of cervical cancer and screening among Malaysian women who have never had a Pap smear: a qualitative study. *Singapore Med J*. 2009;50(1):49–53.
10. Ezechi OC, Gab-Okafor CV, Ostergren PO, Pettersson KO. Willingness and acceptability of cervical cancer screening among HIV positive Nigerian women. *BMC Public Health*. 2013;13:46.
11. Bhatla N, Singhal S. Primary HPV screening for cervical cancer. *Best Pract Res Clin Obstet Gynaecol*. 2020;65:98–108.
12. Lyimo FS, Beran TN. Demographic, knowledge, attitudinal, and accessibility factors associated with uptake of cervical cancer screening among women in a rural district of Tanzania: Three public policy implications. *BMC Public Health*. 2012;12:22.
13. WHO. Cervical cancer. World Health Organization; 2023. Available from: https://www.who.int/news-room/fact-sheets/detail/cervical-cancer
14. Fontham ETH, Wolf AMD, Church TR, Etzioni R, Flowers CR, Herzig A, et al. Cervical cancer screening for individuals at average risk: 2020 guideline update from the American Cancer Society. *CA Cancer J Clin*. 2020;70(5):321–46.
15. Curry SJ, Krist AH, Owens DK, Barry MJ, Caughey AB, Davidson KW, et al. Screening for Cervical Cancer: US Preventive Services Task Force Recommendation Statement. *JAMA*. 2018;320(7):674–86.
16. Arbyn M, Smith SB, Temin S, Sultana F, Castle P. Detecting cervical precancer and reaching underscreened women by using HPV testing on self samples: updated meta-analyses. *BMJ*. 2018;363:k4823.
17. Farajimakin O, Sidebotham M, Grealish L, Sidebotham A. Barriers to cervical cancer screening: a systematic review. *Int J Environ Res Public Health*. 2024;21(5):(pagination varies).
18. Nelson EJ, Maynard BR, Loux T, Fatla J, Gordon R, Arnold LD. The acceptability of self-sampled screening for HPV DNA: a systematic review and meta-analysis. *Sex Transm Infect*. 2017;93(1):56–61.
19. Srinath A, Sreeramareddy CT, Sathian B, Poudyal AK, Sinha DN. Barriers to cervical and breast cancer screening in low- and middle-income countries: a systematic review of access dimensions. *Health Policy Plan*. 2023;38(4):509–27.