History of Medicine, 2025, 11(1): 762-768
DOI: 10.48047/HM. V11.I1.2025.762-768

Screening For Cervical Lesions in Women Attending Urban Health Training Centre

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ABSTRACT

Cervical cancer remains one of the most significant public health concerns affecting women globally, accounting for substantial morbidity and mortality, particularly in low- and middle-income countries. The majority of cervical cancer deaths—nearly 90%—occur in these regions due to limited access to screening, inadequate awareness, and delayed diagnosis. In India, cervical cancer is the second most common cancer among women, with nearly one-fourth of global cervical cancer deaths reported from the country. Early screening and timely identification of precancerous lesions are crucial to reduce its burden. The present study aims to assess the prevalence of cervical lesions in women aged 30–60 years attending the Urban Health Training Centre (UHTC) at Dhaulana, Pilakhwa Block of Hapur District, Uttar Pradesh. A facility-based cross-sectional study was conducted over a two-year period. Married women within the specified age group who attended OPD services and consented to participate were included, while pregnant, lactating, unmarried women, and those already diagnosed with STIs/RTIs were excluded. Data were collected using a predesigned semi-structured questionnaire that included sociodemographic details, clinical history, menstrual and obstetric history, and physical examination findings. Pap smear screening was performed as per standard guidelines. The findings of the study are expected to provide valuable insights into the prevalence of cervical lesions and associated risk factors in the local population. These insights will contribute to designing targeted interventions and health education programs to promote early detection and prevention. The study highlights the importance of regular screening, awareness creation, HPV vaccination, and improving access to women's health services at the community level. Strengthening screening programs and increasing participation can significantly reduce the burden of cervical cancer and associated mortality among Indian women.

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KEYWORDS: *Cervical Cancer, Pap Smear, Screening, HPV, Women's Health, Urban Health Centre*

INTRODUCTION

Cervical cancer is a major health concern worldwide, ranking as the fourth most frequently diagnosed cancer among women, with an estimated 604,000 new cases in 2020. Of the 342,000 deaths reported globally in the same year, nearly 90% occurred in low- and middle-income countries, reflecting disparities in healthcare access and awareness [1]. The global burden of cervical cancer is disproportionately higher in developing regions, where nearly 83% of new cases and 85% of cervical cancer deaths occur annually. This pattern highlights the urgent need for improved and accessible screening programs.

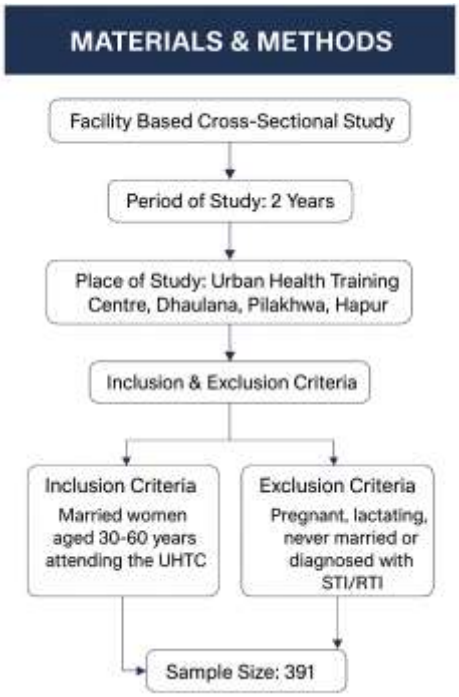
India bears a significant portion of the global cervical cancer burden, recording nearly one-fourth of worldwide cervical cancer deaths. In 2018, India reported approximately 96,922 new cases and 60,078 deaths due to cervical cancer [2,3]. Despite being largely preventable, cervical cancer remains the second most common cause of cancer-related mortality among Indian women [4]. The persistently high incidence is linked to inadequate screening coverage, limited knowledge about HPV infection, and barriers to healthcare access.

Human Papilloma Virus (HPV) infection, particularly from HPV types 16 and 18, accounts for nearly 70% of cervical cancer cases globally [5]. High-income countries have successfully reduced their cervical cancer rates over the past four decades with the introduction of routine HPV vaccination and wide-scale cervical cancer screening. Studies show reductions of up to 65% in incidence due to early detection and management of precancerous lesions.

Screening interventions such as Pap smear tests, HPV-DNA testing, and VIA (Visual Inspection with Acetic Acid) play a crucial role in early identification of cervical intraepithelial neoplasia (CIN). However, despite strong evidence supporting their effectiveness, screening rates remain suboptimal in India. Barriers include low awareness, cultural stigma, limited resources, and inadequate training among healthcare providers.

This study aims to evaluate the prevalence of cervical lesions among married women aged 30–60 years attending OPD services at the Urban Health Training Centre, Dhaulana, Pilakhwa Block of Hapur District, Uttar Pradesh. By analyzing demographic factors, clinical characteristics, and Pap smear findings, the study seeks to identify risk factors contributing to cervical lesions. The outcomes will provide crucial data to strengthen local screening initiatives and improve women's health outcomes.

MATERIALS & METHODS



Study Design: Facility-based cross-sectional study.

Study Duration: 2 years.

Study Location: Urban Health & Training Centre (UHTC), Dhaulana, Pilakhwa, Hapur District, Uttar Pradesh.

Study Population: Married women aged 30–60 years attending OPD services at the UHTC.

Inclusion Criteria:

- Married women aged 30–60 years.
- Attending UHTC OPD services.
- Provided written informed consent.

Exclusion Criteria:

- Pregnant women.
- Lactating women.
- Never-married women.
- Women previously diagnosed with STIs/RTIs.
- Women refusing consent.

Sample Size Calculation: Based on Aswathy et al. (2015), cervical lesion prevalence in Delhi = **15.4/100,000**.

Using formula: $n = z^2 \times p(1-p) / d^2$, where: z = 1.96, p = 15.4/100000, d = 0.0005

Calculated sample size = **2366.061**, rounded to **2366 participants**.

Data Collection Tools: Data was collected using a predesigned, semi-structured questionnaire with three sections:

1. **Sociodemographic data:** Name, age, education, employment, socioeconomic status.
2. **Clinical history:** Menstrual, obstetric, medical, family history.
3. **Clinical examination & Pap smear findings.**

Procedure: Participants were informed about the study objectives, screening process, and significance. Written informed consent was obtained. Each participant underwent:

- General physical examination
- Pelvic examination
- Per speculum examination
- Pap smear collection using Ayre's spatula
- Smear fixation and transport to pathology lab

Pap smears were interpreted using **The Bethesda System (TBS)**.

Data Analysis:

- SPSS version 26
- Descriptive statistics
- Chi-square test
- Visualization using graphs

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RESULTS

A total of 2366 women participated in this study. The mean age was 43.2 years. Majority (54%) belonged to the 40–50 age group. Most participants (61%) were of low socioeconomic status, and 72% were homemakers.

Common symptoms included vaginal discharge (38%), menstrual irregularities (24%), pelvic pain (12%), and post-coital bleeding (4%).

Pap Smear Findings:

- NILM: 1842 (77.8%)
- Inflammatory changes: 382 (16.1%)
- ASCUS: 48 (2.0%)
- LSIL: 56 (2.3%)
- HSIL: 24 (1.0%)
- Squamous Cell Carcinoma: 14 (0.6%)

Risk factors significantly associated with abnormal smears included early marriage (<20 years), multiparity, low socioeconomic status, and poor menstrual hygiene.

Table 1: Distribution of Pap Smear Findings

Pap Smear Category	Number of Cases	Percentage (%)
NILM	1842	77.8
Inflammatory	382	16.1
ASCUS	48	2.0
LSIL	56	2.3
HSIL	24	1.0

Squamous Cell Carcinoma	14	0.6

DISCUSSION

The study highlights that although the majority of women exhibited NILM results, a significant proportion demonstrated precancerous lesions, underscoring the importance of routine cervical screening. Findings align with studies reporting similar prevalence of LSIL and HSIL in Indian populations. Early detection through Pap smear screening remains essential to reducing cervical cancer incidence and mortality. Strengthening awareness and expanding screening facilities can significantly benefit women in underserved regions.

SUMMARY

This study assessed cervical lesions among women aged 30–60 attending UHTC, Dhaulana. A total of 2366 women were screened using Pap smear testing. While most had normal results, a notable proportion exhibited precancerous or malignant lesions. Early marriage, multiparity, and poor menstrual hygiene were significant risk factors. The study emphasizes the necessity for routine screening, community education, and increased access to women's healthcare services. Strengthening cervical cancer screening programs can significantly reduce morbidity and mortality among women.

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