



## Barriers to Cervical Cancer screening and preventive practices among nursing students

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### Abstract

Cervical cancer remains one of the leading causes of cancer-related morbidity and mortality among women worldwide, particularly in low- and middle-income countries. Despite being preventable through vaccination, early screening, and timely treatment, uptake of cervical cancer screening remains suboptimal. Nursing students, as future healthcare providers, play a critical role in promoting preventive health behaviors; however, their own screening practices and awareness may be influenced by various barriers. This study aimed to assess barriers to cervical cancer screening and preventive practices among nursing students. A descriptive cross-sectional study was conducted among 250 undergraduate nursing students using a structured questionnaire assessing knowledge, awareness, perceived barriers, and preventive behaviors. Results indicated moderate awareness levels but low screening uptake. Major barriers identified included lack of perceived susceptibility, fear of positive results, embarrassment, inadequate knowledge of screening guidelines, time constraints, and socio-cultural factors. The study highlights the urgent need for targeted educational interventions and institutional strategies to improve awareness and screening practices among nursing students. Strengthening preventive health education within nursing curricula may enhance future advocacy and community outreach efforts.

**Keywords:** Cervical Cancer, screening barriers, preventive practices, nursing students, HPV Vaccination

### Introduction

Cervical cancer is the fourth most common cancer among women globally, with an estimated 604,000 new cases and 342,000 deaths annually (World Health Organization [WHO], 2023) [4]. Persistent infection with high-risk types of human papillomavirus (HPV) is the primary cause of cervical cancer. Fortunately, cervical cancer is largely preventable through HPV vaccination, regular Pap smear testing, and early treatment of precancerous lesions. Despite the availability of effective screening tools, uptake remains low in many developing countries. Barriers such as limited awareness, cultural stigma, fear, lack of access, and misconceptions significantly influence screening behaviors (Arbyn *et al.*, 2020) [1]. Nursing students represent an important subgroup because they are both beneficiaries and future promoters of preventive healthcare services.

Understanding the barriers faced by nursing students in accessing cervical cancer screening is essential to enhance preventive practices and professional preparedness.

### Review of Literature

#### Global Burden of Cervical Cancer

Cervical cancer disproportionately affects women in low- and middle-income countries, accounting for nearly 90% of deaths (WHO, 2023). In India, cervical cancer remains one of the leading cancers among women, with approximately 123,000 new cases annually (Bruni *et al.*, 2023) [2].

#### Importance of Screening and Prevention

Regular screening through Pap smear and HPV testing significantly reduces incidence and mortality rates (Arbyn *et al.*, 2020) [1]. WHO recommends screening starting at age 21 or within three years of sexual debut. HPV vaccination provides primary prevention against high-risk HPV strains.

#### Barriers to Screening

Studies have identified multiple barriers among young women and healthcare students:

- Lack of knowledge about screening guidelines
- Fear of pain or diagnosis
- Cultural stigma associated with gynecological examination
- Financial and accessibility issues
- Misconceptions about risk (Getahun *et al.*, 2021) [3]

Even among healthcare students, awareness does not always translate into practice, highlighting a gap between knowledge and behavior.

### Methodology

#### Research Design

A descriptive cross-sectional study design was adopted.

#### Setting and Sample

The study was conducted among 250 undergraduate nursing students from selected nursing colleges in Indore. Participants were selected using convenient sampling.

#### Inclusion Criteria

- Female nursing students aged 18–25 years
- Willing to participate
- Not previously diagnosed with cervical cancer

#### Data Collection Tool

A structured questionnaire consisting of four sections:

1. Demographic Data
2. Knowledge Assessment (20 items)
3. Awareness of Screening and HPV Vaccination
4. Barriers to Screening Scale

#### Data Analysis

Data were analyzed using descriptive statistics (frequency, percentage, mean, SD) and inferential statistics (chi-square test).

**Results**

**Demographic Profile**

- Mean age: 20.8 years (SD = 1.4)
- 72% were in the 2nd or 3rd year of study
- 85% had heard of cervical cancer
- 68% were aware of Pap smear testing
- 42% knew about HPV vaccination

**Screening Uptake**

Only 18% had undergone cervical cancer screening.

**Identified Barriers**

Barrier	Percentage (%)
Lack of perceived risk	64%
Fear of positive result	58%
Embarrassment/shyness	55%
Lack of time	49%
Insufficient knowledge	46%
Cultural/religious stigma	38%
Cost concerns	35%

Chi-square analysis revealed a significant association between knowledge level and screening uptake (p < .01)

**Discussion**

Although awareness of cervical cancer was relatively high, screening practices were considerably low. This discrepancy reflects the influence of psychological, cultural, and systemic barriers.

Fear of diagnosis and embarrassment were among the most commonly reported barriers. Similar findings have been reported by Getahun *et al.* (2021) [3], where emotional and social stigma significantly reduced screening participation.

Lack of perceived susceptibility suggests that nursing students may underestimate their own risk due to young age or absence of symptoms. This finding aligns with Health Belief Model constructs, particularly perceived severity and susceptibility.

Time constraints were another major barrier, possibly due to academic workload. Integrating campus-based screening programs may help address this issue.

**Implications for Nursing Education**

1. **Curriculum Integration:** Include comprehensive modules on cervical cancer prevention.
2. **On-Campus Screening Camps:** Improve accessibility.
3. **HPV Vaccination Awareness Programs**
4. **Counseling Services:** Address fear and stigma.
5. **Peer Education Initiatives**

As future healthcare providers, nursing students must not only advocate screening but also model preventive behavior.

**Limitations**

- Cross-sectional design limits causal inference.
- Self-reported data may introduce bias.
- Limited to selected institutions.

Future studies should include larger samples and longitudinal designs.

**Conclusion**

The study identified significant barriers to cervical cancer screening and preventive practices among nursing students, including psychological, cultural, and knowledge-related

factors. Despite moderate awareness, screening uptake remains low. Addressing these barriers through structured educational programs, institutional support, and improved accessibility is essential to enhance preventive health behaviors. Empowering nursing students with knowledge and positive attitudes will strengthen their role as advocates for women’s health in the community.

**References**

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