STM JOURNALS

International Journal of
Oncological Nursing and Practices

Volume 3, Issue 1, 2025
January–June
DOI (Journal): 10.37591/IJONNP

https://journals.stmjournals.com/ijonnp

Research IJONNP

Assess the Knowledge Level Regarding Prevention of Cervical Cancer Among Bachelor of Science Students at Selected Nursing College in Bengaluru

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Abstract

Background: *Cervical cancer is a major global health concern and one of the primary causes of cancer-related fatalities in women, with particularly high incidence rates in India. Early detection and prevention are crucial, but awareness remains insufficient, especially among future healthcare professionals like nursing students. This study evaluates the knowledge of first-year Bachelor of Science (BSc) nursing students regarding cervical cancer prevention.* ***Materials and Methods:*** *A non-experimental, descriptive research design was utilized for the study. A random sample of 60 first-year female BSc nursing students was selected. Data were gathered through a structured questionnaire, which covered demographic details and assessed knowledge regarding the fundamentals of cervical cancer, its risk factors, diagnostic methods, and prevention strategies. Descriptive and inferential statistical techniques, including Chi-square tests, were applied to analyze the data and examine relationships between knowledge levels and demographic factors.* ***Results:*** *The demographic data indicated that the majority of students were aged 18–19 years (60%), predominantly Hindus (60%), unmarried (100%), and without children (100%). While 25% reported a family history of cancer and 41.7% had some previous knowledge about cervical cancer, only 6.7% were vaccinated against it. The knowledge levels revealed that 61.7% of students had an average understanding of cervical cancer prevention, 36.7% had above-average knowledge, and 1.6% had below-average knowledge. Chi-square analysis showed that most demographic factors did not significantly affect knowledge levels, except for family history of cancer, which was significantly associated with better knowledge.* ***Conclusion:*** *The study highlights that first-year BSc nursing students generally have an average understanding of cervical cancer prevention. Although family history of cancer appears to enhance knowledge, factors such as age, religion, and prior knowledge do not significantly impact their understanding. These results highlight the importance of focused educational initiatives that stress the prevention of cervical cancer and the significance of vaccination. Improving educational efforts will better equip nursing students to promote cervical cancer awareness and preventive practices in their future careers.*

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Received Date: December 21, 2024
Accepted Date: February 25, 2025
Published Date: March 05, 2025

Citation: Y. Preethi, S. Bhagyalakshmi, Hephzibah Keren. Assess the Knowledge Level Regarding Prevention of Cervical Cancer Among Bachelor of Science Students at Selected Nursing College in Bengaluru. International Journal of Oncological Nursing and Practices. 2025; 3(1): 21–25p.

Keywords: Cervical cancer, nursing students, knowledge assessment, preventive measures, educational programs

INTRODUCTION

Cervical cancer is a critical global health concern, significantly affecting women's health. It is one of the primary causes of cancer-related deaths among women. The situation is especially concerning in India, where the incidence and mortality rates for cervical cancer remain disturbingly high. Recognizing this context emphasizes the need for focused educational initiatives to tackle the issue effectively [1–3].

In India, cervical cancer often affects women at a young age, and many do not receive timely information or intervention. This is why our study focuses on Bachelor of Science (BSc) nursing students at a nursing college in Bangalore. Nurses play a crucial role in healthcare and education, making them a key group for improving public awareness about cervical cancer. By evaluating their knowledge, we can identify gaps and develop strategies to enhance their understanding, ultimately benefiting broader public health efforts [4].

Cervical cancer starts with abnormal cell growth in the cervix, the lower portion of the uterus. The primary cause is infection with the Human Papillomavirus (HPV), which is transmitted through sexual contact. Various factors can increase the risk of developing cervical cancer, including early initiation of sexual activity, having multiple sexual partners, smoking, and a family history of the condition. In its early stages, the disease often shows no symptoms, making regular screening crucial. As the cancer advances, symptoms may include abnormal vaginal bleeding, discharge, and pelvic pain [5].

Despite the availability of preventive measures like the HPV vaccine and Pap smear tests, there is still a lack of awareness about cervical cancer prevention. This lack of knowledge is concerning, especially among healthcare providers like nurses, who have a significant role in educating patients and promoting health practices. The gaps in knowledge highlight the need for educational programs that can provide accurate and comprehensive information about cervical cancer. By using a structured questionnaire, we will evaluate the students' understanding of these areas. The results will help us identify specific knowledge gaps and guide the creation of a self-instructional module designed to improve their awareness. This educational tool will be tailored to address the needs identified through our study, with the goal of enhancing the students' knowledge and, by extension, their ability to educate others about cervical cancer prevention [6].

Focusing on BSc nursing students in Bangalore provides valuable insights into the educational needs of future healthcare professionals. The findings will contribute to ongoing efforts to reduce cervical cancer incidence through better education and awareness, ultimately supporting public health initiatives and improving patient outcomes [7].

MATERIALS AND METHODS

The study used a non-experimental, descriptive research design to observe and document the knowledge of first-year Bachelor of Science nursing students at Aditya College of Nursing, Bangalore, about cervical cancer prevention. The focus was on these students because of their future role in healthcare and patient education. A sample of 60 female students was randomly selected to ensure equal chances of inclusion and minimize bias. Data were gathered using a structured questionnaire created based on a review of existing literature and input from experts.

The questionnaire had two parts: one for demographic information and the other for assessing knowledge in four key areas: cervical cancer basics, risk factors, diagnostic procedures, and prevention measures. The data collection was done in a classroom setting. Data analysis involved both descriptive statistics to summarize the knowledge levels and inferential statistics, like Chi-square tests, to explore relationships between knowledge and demographic factors.

RESULTS

The demographic data shows that most first-year BSc nursing students are aged 18–19 years (60%), predominantly Hindus (60%), unmarried (100%), and without children (100%). A significant portion, 25% (15 students), reported a family history of cancer, and 41.7% (25 students) had some previous knowledge of cervical cancer. Media was the primary source of information for 50% (30 students), while books and journals were the least utilized sources (11.7%, or 7 students). Despite some awareness, only 6.7% (4 students) were vaccinated against cervical cancer (Table 1).

The data indicates that the majority of first-year BSc nursing students have an average level of knowledge about cervical cancer prevention, with 61.7% (37 students) falling into this category. A smaller group, 36.7% (22 students), demonstrated above-average knowledge, while only 1.6% (1 student) had below-average knowledge. This distribution suggests that most students have a satisfactory understanding of cervical cancer prevention (Table 2 and Figure 1).

The chi-square test results show that most demographic variables, including age, religion, previous knowledge, source of information, and vaccination status, do not have a statistically significant association with the students' knowledge of cervical cancer prevention, as their chi-square values are lower than the critical table values. However, family history of cancer is significantly associated with knowledge levels (X^2 Calculated =7.3627, X^2 TV=5.991), suggesting that students with a family history of cancer might have different knowledge levels compared to those without such a history (Table 3).

Table 1. Frequency and percentage distribution of demographic characteristic of the bachelor of science nursing students (N=60).

S.N.	Demographic characteristic	Frequency	Percentage
1.	*Age (years)*		
	16–17	21	0.35
	18–19	36	0.6
	20–21	1	0.017
	22 and above	2	0.033
2.	*Religion*		
	Hindu	36	0.6
	Christian	17	0.283
	Muslim	4	0.067
	Others	3	0.05
3.	*Marital status*		
	Unmarried	60	1
4.	*Number of children*		
	No children	60	1
5.	*Family history of cancer*		
	Yes	15	0.25
	No	45	0.75
6.	*Previous knowledge of cervical cancer*		
	Yes	25	0.417
	No	35	0.583
7.	*Source of information*		
	Media	30	0.5
	Books and journals	7	0.117
	Friends and family	8	0.133
	Seminars and conferences	15	0.25
8.	*Vaccinated against cervical cancer*		
	Yes	4	0.067
	No	56	0.933

Table 2. Frequency and percentage distribution of level of knowledge regarding prevention of cervical cancer among bachelor of science students (N=60).

S.N.	Level of knowledge	Frequency	Percentage
1.	Below average	1	1.6%
2.	Average	37	61.7%
3.	Above average	22	36.7%

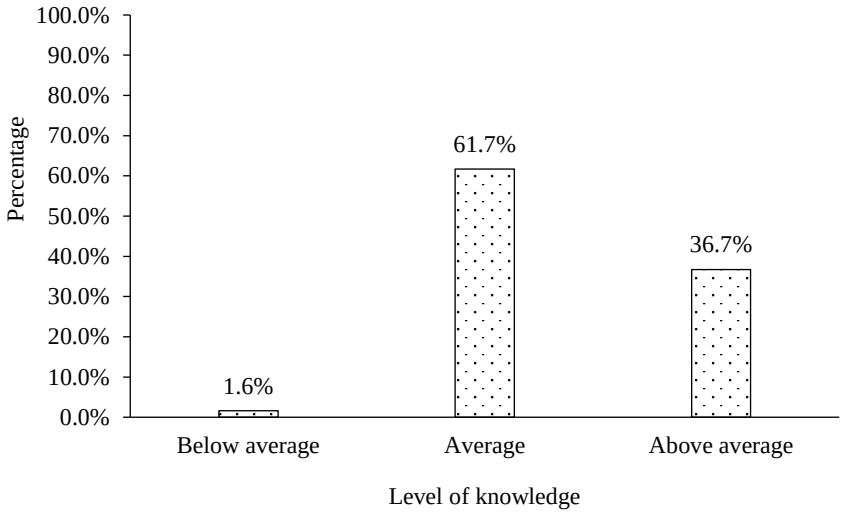

Figure 1. Level of knowledge regarding prevention of cervical cancer.

Table 3. Association between level of knowledge and selected demographic variables (N=60).

Demographic variable	Degrees of freedom	Chi-square calculated	Chi-square table value	Significance
Age	6	2.7122	12.592	Not Significant
Religion	6	5.2979	12.592	Not Significant
Family History of Cancer	2	7.3627	5.991	Significant
Previous Knowledge	2	0.8637	5.991	Not Significant
Source of Information	6	2.8368	12.592	Not Significant
Vaccinated Against Cancer	2	0.2225	5.991	Not Significant

DISCUSSION

The study assessed the knowledge of first-year BSc nursing students at Aditya College of Nursing regarding cervical cancer prevention. The demographic data revealed that most students are young (aged 18–19 years), predominantly Hindus, unmarried, and without children. A notable proportion of students had previous knowledge of cervical cancer, with media being the primary source of this information. Despite this, only a small percentage were vaccinated against cervical cancer, indicating a potential gap in preventive practices [8].

The results showed that the majority of students had an average level of knowledge about cervical cancer prevention, with a smaller group demonstrating above-average knowledge and a minimal number with below-average knowledge. This suggests that while many students possess a reasonable understanding of the topic, there is still room for improvement [9].

The chi-square analysis revealed that most demographic variables, such as age, religion, previous knowledge, source of information, and vaccination status, did not have a significant impact on the students' knowledge levels. This indicates that these factors may not strongly influence the students' understanding of cervical cancer prevention. However, a significant association was found between family history of cancer and knowledge levels. Students with a family history of cancer showed different levels of knowledge compared to those without such a history, suggesting that personal or familial health experiences may play a crucial role in shaping awareness and understanding of cervical cancer [10].

CONCLUSION

This study looked at how much first-year BSc nursing students at Aditya College of Nursing know about preventing cervical cancer. The majority of students had an average understanding, with a small

number demonstrating higher knowledge and only one student having less knowledge. The results showed that having a family history of cancer was linked to knowing more about cervical cancer, which suggests that personal health experiences make a difference. However, factors like age, religion, and previous knowledge did not show a strong impact on students' understanding. This suggests the necessity for improved educational programs that emphasize the significance of vaccination and the prevention of cervical cancer. Such programs should consider students' personal health backgrounds and use various sources of information to improve their knowledge. Improving education on these topics will help students become better informed and more effective in their future roles as healthcare providers.

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