

Assess the level of knowledge regarding sexually transmitted diseases

Manish Trivedi¹, Dr. Ravindra H.N², Ashwathi Nair³, Melody Chin'ombe⁴, Priyanshi Kalal⁵, Mahir Khan⁶

¹ Assistant Professor, Parul Institute of Nursing, Parul University, Vadodara, Gujarat, India

² Professor, Parul Institute of Nursing, Parul University, Vadodara, Gujarat, India

³⁻⁶ B.Sc. Nursing Student, Parul Institute of Nursing, Parul University, Vadodara, Gujarat, India

Corresponding Author:

Mr. Manish Trivedi,

Assistant Professor, Parul Institute of Nursing, Parul University, Vadodara, Gujarat, India

Email ID : manish.trivedi21363@paruluniversity.ac.in

ABSTRACT

Background: Sexually transmitted diseases (STDs) continue to pose a significant public health challenge worldwide, especially among adolescents and young adults. College students are particularly vulnerable due to factors such as limited knowledge, risky sexual behaviours, and lack of access to accurate sexual health information. Inadequate awareness about STDs can lead to delayed diagnosis, complications, and further transmission. Assessing the level of knowledge among students is essential to identify educational gaps and to plan targeted interventions.

Objectives: To assess the level of knowledge regarding sexually transmitted diseases among students and to find out an association between knowledge of students regarding sexually transmitted diseases with their selected socio-demographic variables.

Materials and Methods: A quantitative research approach with a descriptive research design was used to assess the level of knowledge regarding sexually transmitted diseases among B.Sc. Nursing students of 2nd, 4th, 5th, and 7th semesters in selected colleges of Vadodara. A total of 100 participants were selected using a convenient sampling technique. Data were collected using a structured knowledge questionnaire designed to assess the students' awareness and understanding of sexually transmitted diseases. The collected data were analyzed using descriptive and inferential statistics to interpret the level of knowledge and identify any significant patterns or gaps.

Result: The study assessed STD knowledge among 100 BSc Nursing students from the 2nd, 4th, 5th, and 7th semesters in Vadodara. Most participants were female (77%), aged 18–23, and unmarried (98%). While 89% had heard about STDs, only 11% had good knowledge; 48% had average, and 41% had poor knowledge. Significant associations were found between knowledge level and semester of study, as well as source of information—students from higher semesters and those informed by healthcare providers performed better. Other factors like age, gender, and marital status showed no significant impact. The findings highlight a need for stronger STD education in nursing curricula.

Conclusion: The study revealed that while a majority of BSc Nursing students were aware of sexually transmitted diseases (STDs), their depth of knowledge varied significantly. Only a small percentage demonstrated good knowledge, whereas a large proportion had either average or poor understanding. Notably, students in higher semesters and those who received information from healthcare providers exhibited better awareness, highlighting the influence of academic progression and credible sources. However, other demographic variables showed no significant association with knowledge levels. These findings underscore the need to strengthen STD-related education and promote the use of reliable sources to enhance knowledge and prepare students for competent clinical practice.

Keywords: Knowledge, Sexually Transmitted Diseases, Students, Colleges

How to Cite: Manish Trivedi, Dr. Ravindra H.N, Ashwathi Nair, Melody Chin'ombe, Priyanshi Kalal, Mahir Khan, (2025) Assess the level of knowledge regarding sexually transmitted diseases, *Journal of Carcinogenesis*, Vol.24, No.7s, 916-920

1. INTRODUCTION

Sexually transmitted diseases (STDs), or sexually transmitted infections (STIs), continue to pose a serious public health

concern across the globe, particularly among adolescents and young adults. The World Health Organization (WHO) estimates that more than one million people contract STIs each day, with the highest incidence observed among individuals aged 15 to 24 years¹. In the Indian context, the burden of STDs is substantial but frequently goes unrecognized due to societal stigma, poor access to screening services, and the absence of structured sexual health education. According to the National AIDS Control Organisation (NACO), the incidence of STDs is increasing among youth populations, including college students, primarily due to unsafe sexual practices, lack of reliable information, and low utilization of health services².

As future healthcare providers, nursing students play a vital role in sexual health promotion, early identification of STDs, and providing patient education. Despite their critical role, research shows that many nursing students have limited knowledge about STDs—particularly less-known infections beyond HIV/AIDS³.

This deficiency can be linked to gaps in academic instruction, insufficient hands-on clinical experience, and a reliance on inaccurate or non-professional sources such as peer groups or social media. A review of adolescent sexual health education in Europe found that young people's awareness of STDs is significantly influenced by the quality and reliability of information they receive⁴. In addition, Fenton and Imrie (2001) argue that a lack of emphasis on STD prevention within medical and nursing education contributes to the ongoing rise in infection rates, even in countries with developed health systems⁵.

2. METHODOLOGY

This study employed a descriptive research approach to assess the level of knowledge regarding sexually transmitted diseases (STDs) among B.Sc. Nursing students in selected colleges of Vadodara. A quantitative method was used to enable objective measurement and statistical analysis of student knowledge. The research was conducted at the Parul Institute of Nursing, Vadodara, in a natural classroom setting, providing a familiar environment for participants. A total of 100 students from the 2nd, 4th, 5th, and 7th semesters were selected using a convenient sampling technique based on their availability and willingness to participate. Inclusion criteria involved being enrolled in the specified semesters, having the ability to respond in English, and being present during the data collection period. Students with prior formal education on STDs were excluded to ensure uniformity of baseline knowledge. Data collection was carried out face-to-face using structured questionnaires, ensuring better response accuracy and clarity.

Two self-structured tools were used for data collection: a socio-demographic questionnaire and a structured knowledge questionnaire. The socio-demographic tool collected data such as age, gender, semester, marital status, and source of STD-related information. The knowledge questionnaire included 30 multiple-choice questions covering general awareness, transmission, prevention, testing, and treatment of STDs. Each correct answer received one mark, with scores categorized as good (21–30), average (11–20), or poor (0–10). The tools were validated by experts and piloted on 10 students (10% of the sample), with a Cronbach's alpha greater than 0.7 indicating acceptable reliability. Data were analyzed using SPSS version 26 with descriptive statistics and chi-square tests ($p < 0.05$ considered significant).

3. RESULTS

This section presents the findings of the study on the knowledge regarding sexually transmitted diseases (STDs) among B.Sc. Nursing students.

Frequency and Percentage Distribution of Demographic Characteristics (N = 100)

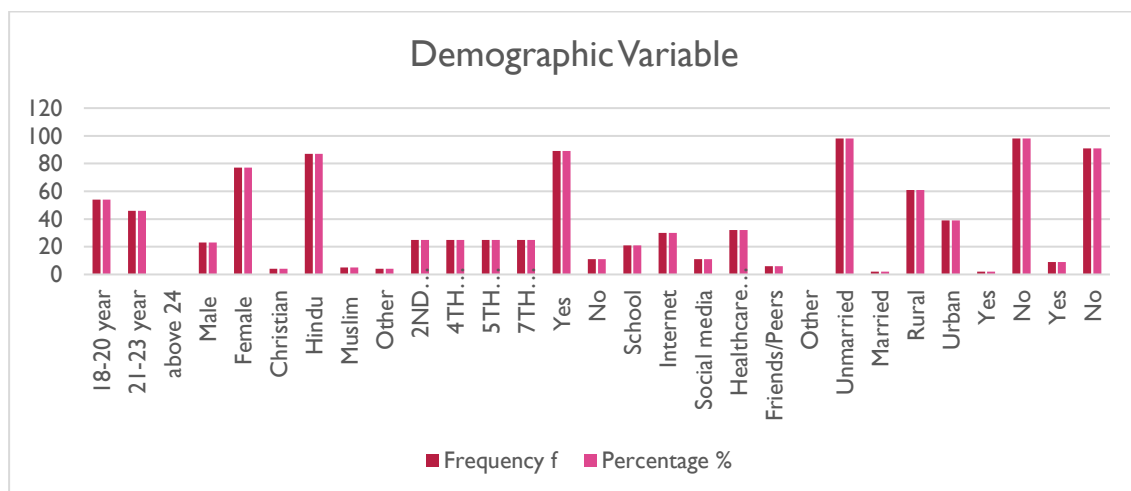


Table 1: Distribution of Participants Based on Knowledge Level (N = 100)

Knowledge Level	Frequency (n)	Percentage (%)
Good (21–30)	11	11%
Average (11–20)	48	48%
Poor (0–10)	41	41%

Level of Knowledge

■ Good (21- 30 Score) ■ Average (11-20 score) ■ Poor (0-10 score)

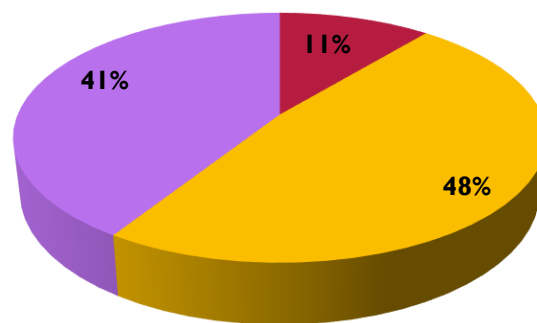


Table 1 shows that only 11% of participants had good knowledge, while a majority had either average (48%) or poor (41%) knowledge of sexually transmitted diseases.

Table 2: Association between Demographic Variables and Knowledge Score

Sr. No	Demographic Data	Category	Level of Knowledge			Chi-Value	df	p-Value
			Good	Average	Poor			
1	Age	18-20 year	07	22	25	2.503	2	0.286
		21-23 year	04	26	16			
		24 above	00	00	00			
2	Gender	Male	00	12	11	3.734	2	0.155
		Female	11	36	30			
3	Religion	Christian	00	02	02	2.812	6	0.832
		Hindu	11	40	36			
		Muslim	00	03	02			
		Other	00	03	01			
4	Year/ semester and program of study	2 ND semester BSc	03	06	16	26.731	6	0.000*
		4 TH semester BSc	00	12	13			

		5 TH semester BSc	07	16	02			
		7 TH semester BSc	01	14	10			
5	Do you have any information regarding sexually transmitted diseases	Yes	09	42	38	1.258	2	0.522
		No	02	06	03			
6	If YES kindly mention the source of information	School	00	06	15	23.703	8	0.003*
		Internet	02	15	13			
		Social media	00	07	04			
		Healthcare Provider	09	16	07			
		Friends/Peers	09	16	07			
		Other	00	00	00			
7	Marital Status	Unmarried	11	48	39	2.927	2	0.230
		Married	00	00	02			
8	Residential area	Rural	06	31	24	0.556	2	0.757
		Urban	05	17	17			
9	Have you ever been tested for STIs?	Yes	00	02	00	2.211	2	0.331
		No	11	46	41			
10	Have you ever been posted in a ward with STD patient?	Yes	00	06	03	1.948	2	0.378
		No	11	42	38			

Table 2 shows a statistically significant association was found between knowledge level and semester of study ($p = 0.000$), indicating that students in higher semesters had better knowledge. Source of information was also significantly associated with knowledge level ($p = 0.003$). Those who received information from healthcare providers tended to have better knowledge. Other demographic variables (age, gender, marital status, residential area, etc.) were not significantly associated with knowledge scores.

4. DISCUSSION

The present study involved 100 B.Sc. Nursing students, with the majority (54%) aged between 18–20 years and 46% aged 21–23 years; none were above 24. Most participants were female (77%), while 23% were male. In terms of religion, 87% identified as Hindu, followed by Muslims (5%), Christians (4%), and other religions (4%). An equal number of students (25%) were enrolled in each of the 2nd, 4th, 5th, and 7th semesters. A significant majority (89%) reported prior awareness of sexually transmitted diseases (STDs), mainly informed by healthcare providers (32%), the internet (30%), and schools (21%), with smaller contributions from social media (11%) and peers (6%). Most students were unmarried (98%), which is notable given their age group, and 61% resided in rural areas compared to 39% from urban settings. Experience with STDs was limited, with only 2% ever tested for STIs and 9% having been posted in a ward with STD patients.

A similar study conducted by Nandini Gopalamenon, Remya Ramachandran and Aiswarya K Venugopal found that most respondents were male undergraduate students with a mean age of 19.32 years. The majority identified as Muslim and were unmarried. Notably, over 90% had received information about sexual health, primarily from friends.

The findings of present study indicate only **11% of student's demonstrated good knowledge**, while **48% had average**, and **41% had poor knowledge**. A similar study conducted by Rossi et al. (2022) among first-year medical students in

Argentina found that 38% had high, 40% medium, and 22% low knowledge of STIs.

The study found that most demographic variables, such as age, gender, religion, and marital status, were not significantly associated with students' knowledge of STDs. However, knowledge levels were significantly linked to the semester of study and the source of information. Students in higher semesters and those who received information from healthcare providers had better knowledge, while those relying on school or social media had poorer understanding. A similar study conducted by Prof Sasikala A et al. (2024) among women showed that their knowledge level was not influenced by their age and socio-economic status.

5. CONCLUSION

The study revealed that while a majority of BSc Nursing students were aware of sexually transmitted diseases (STDs), their depth of knowledge varied significantly. Only a small percentage demonstrated good knowledge, whereas a large proportion had either average or poor understanding. Notably, students in higher semesters and those who received information from healthcare providers exhibited better awareness, highlighting the influence of academic progression and credible sources. However, other demographic variables showed no significant association with knowledge levels. These findings underscore the need to strengthen STD-related education and promote the use of reliable sources to enhance knowledge and prepare students for competent clinical practice.

Disclaimer

The study was not funded by any internal or external agency, but rather by the author's efforts.

Consent and ethical approval:

The research was completed with appropriate research guidelines, the study was proposed and submitted to the ethical committee, Parul University Institutional Ethical Committee for Human Research (PUIECHR/PIMSR/00/081734/8238), Limda, Vadodara, and expert of the committee approved the study.

Conflict of Interests

The authors declare no conflict of interest related to the conduct or reporting of this research.

6. ACKNOWLEDGMENT

The authors express their gratitude to all the participants who took part in this study.

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