

Nursing Students' Knowledge Regarding Sexually Transmitted Diseases

Rawaa Talib Sekeb¹, Zainalabideen Yasser Jumaa^{2*}, Kadhim Jameel Awad³

¹College of Nursing, Al-Hadi University, Iraq

^{2,3}Community Health Nursing Department, College of Nursing, Al-Qadisiyah University, Iraq

Email: trawaa381@gmail.com, zainalabideen.yasser@qu.edu.iq, Kadhim.jameel@qu.edu.iq

Abstract. Background: Sexually transmitted infections are a severe health issue. Every year, more than 333 million new cases are recorded around the world, with adolescents being the most typically affected demographic. Objectives: To identify the level of nursing students' knowledge regarding sexually transmitted diseases. Methods: A descriptive study design was carried out using an assessment approach from November 12th, 2024, to May 25th, 2025. A non-probability (purposive) sample of 208 nursing students was selected. The questionnaire was designed to identify nursing students' knowledge regarding sexually transmitted diseases in two parts: demographic data (4 items) and nursing students' knowledge regarding sexually transmitted diseases (27 items). Results: The study showed that less than half (48.38%) reported a fair level for the knowledge, less than one third a poor level (27.95%), and less than one quarter a good level (23.65 %). While demonstrating that the overall student knowledge has a significant link with their department, class, at a p-value less than 0.05. Conclusion: The researcher concludes that a significant disparity in students' understanding, highlighting the need for educational development at all levels. Furthermore, statistical analysis revealed a strong correlation between students' general knowledge levels and their department and class ($p < 0.05$), indicating that academic discipline and year of study play a vital role in knowledge development.

Highlights:

1. Less than half of the students had only a fair understanding of STDs.
2. Academic department and class level significantly influenced knowledge.
3. Highlights the urgent need for curriculum-based education interventions.

Keywords: Sexually Transmitted Diseases, Nursing Students, Knowledge Level, Descriptive Study, Health Education

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Introduction

Sexually transmitted infections (STIs) are diseases transmitted between individuals through sexual activity or intimate physical contact. While over 30 different bacteria, viruses, and parasites can cause STIs, eight are notably more prevalent globally [1]. Gonorrhea, syphilis, trichomoniasis, and chlamydial infections are the four curable STIs that arise from these, whereas the other four cause chronic diseases such as hepatitis B (HBV), genital herpes simplex virus (HSV), HIV/AIDS, and human papillomavirus (HPV) [2].

Over 340 million new instances of sexually transmitted diseases (STDs) are reported worldwide each year, making them a serious global health concern. These diseases, which are mostly spread through sexual activity but can also be spread by blood products, are brought on by bacteria, viruses, or protozoa [3].

Sexually transmitted diseases (STDs), which include gonorrhea, chlamydia, syphilis, herpes, and HIV/AIDS, are frequently transmitted through sexual activity. These illnesses affect people's psychological well-being as well as their economies and communities, in addition to their physical health [4].

Young individuals, homosexuals, sex workers, drug users, sharing needles, having rough or unprotected sex, and persons who require regular blood transfusions for specific illnesses are among the high-risk populations for STIs. Additionally, the acquisition of STIs might be influenced by a variety of risk factors. These consist of marginalized groups, social and cultural norms, and economic status. The processes by which the pathogens enter and impact the human body are part of the pathophysiology of STIs. Sexual contact is the primary means of transmission for STIs, including oral, anal, and vaginal intercourse. According to the type of illness, it can also be categorized [5].

Signs and symptoms of STDs include Physical symptoms and other issues including blisters or lumps on the genitals or in the oral or rectal area, painful or burning urination, penile discharge, strange or odorous vaginal discharge, unusual vaginal bleeding, and pain during sex. After the infection, the symptoms could show up a few days later or years later [6].

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Nursing students must be aware of many sexually transmitted diseases. At this point in their education, students can have the necessary knowledge and attitude to properly educate patients and handle and manage cases of sexually transmitted diseases in a way that will eliminate the stigma attached to these illnesses. The health of the communities that nursing students would be serving may be enhanced by their understanding of the aforementioned diseases' signs, prevention strategies, and management [7,8].

Abstinence, thorough sexual education, condom usage promotion, routine screening and prompt treatment, immunization (e.g., HPV vaccine), and focused interventions for high-risk groups are all effective STI preventive and control measures [9]. To improve STI identification and management, innovative solutions, including digital health interventions and point-of-care diagnostic tests, are being investigated; however, their adoption depends on people's willingness. Nonetheless, there are still certain obstacles to preventing these diseases, such as young adults' lack of awareness and negative attitudes toward them, including nursing students who will eventually work as healthcare professionals. Furthermore, cultural and religious influences have a big impact on how students view and feel about STI prevention, and the stigma and misconceptions around STIs can cause delays in diagnosis and treatment [10]. Therefore, the study aimed to determine the level of knowledge of nursing college students about communicable diseases and to determine the extent of the danger of this knowledge on the educational level of students.

Method

A descriptive study design has been carried out using an assessment approach from November 12th, 2024, to May 25th, 2025. A non-probability (purposive) sample of 208 nursing students at the University of Babylon / College of Nursing in Babylon City, Al-Hadi College of Nursing Department in Baghdad City, and Nursing Technologies Department at the Technical Institute in Al-Diwaniyah City were selected.

To achieve the research objectives and after a comprehensive review of all previous studies related to students' knowledge of sexually transmitted diseases, a questionnaire prepared by Jaworski & Carey (2007) [11] was used to assess the

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psychometric quality of a self-administered questionnaire's psychometric quality to gauge respondents' understanding of STDs. It is composed of two parts, which include:

Part I: Socio Demographic:

The initial section pertains to the socio-demographic information of the students and has four elements, including age, gender, class, and educational level.

Part II: Nurses' Students' Knowledge Regarding Sexually Transmitted Diseases;

This section consisted of a single domain containing the STDs Knowledge Questionnaire (STD-KQ), which contained 27 items. Each item contained a statement concerning a sexually transmitted disease, and participants were asked to indicate whether it was true or false. Participants were also told not to estimate an answer, but rather to declare that they did not know. Items were scored as correct (score = 1) or incorrect (score = 0). Responses of "don't know" were marked as incorrect. Composite scores based on the total number of accurate items were also generated (scores ranged from 0 to 27).

The researchers met with the students to gain their agreement to participate in the study and to explain the study questionnaire. The data gathering process began on December 25, 2024, and ended on January 10, 2025, in order to accomplish the study's objectives. The information was obtained by using the Arabic version of the self-report questionnaire as a data collecting tool, and having students self-report took approximately 10-15 minutes per student. Version 26 of the SPSS (Statistical Package for Social Sciences) was used to evaluate the study's collected data.

Table 1. Student Distribution According to Their Demographic Traits (n=208)

Demographic data	Rating and intervals	Frequency	Percent
Age / Years	18-20	96	46.2
	21-23	32	15.4
	24-26	24	11.5
	27 and more	56	26.9
	Total	208	100.0

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Gender	Male	64	30.8
	Female	144	69.2
	Total	208	100.0
Department	Institute	48	23.1
	college	144	69.2
	Post-graduate	16	7.7
	Total	208	100.0
Class	First	8	3.8
	Second	48	23.1
	Third	48	23.1
	Fourth	104	50.0
	Total	208	100.0

% = Percent; Freq.= Frequency

Table 2. Overall Level of Nurses' Students' Knowledge Regarding STDs (N=208).

Levels	Frequency	Percent	Overall mean	Overall level
Poor	48	23.1	1.419	Fair
Fair	136	65.4		
Good	24	11.5		
Total	208	100.0		

Overall level of nursing students' knowledge. The results show that 48.38% of respondents fair a decent level of awareness of sexually transmitted diseases, followed by poor levels (27.05%) and good levels (23.65%).

Table 3. The Relationship Between the General Level of Nursing Students' Knowledge Regarding Sexually Transmitted Diseases and Their Demographic Data.

Demographic Data	Chi-Square Value	D.F.	P-Value
Age	1.953	6	.431
Gender	3.118	2	.328
Department	19.939	4	.001
Class	32.784	6	.000

Table 3 The results of the table (3) show that the overall students' knowledge is significantly related to their department and class. At a p-value less than 0.05 and an insignificant relationship with their demographic data at a p-value more than 0.05.

Discussion

Sexually transmitted diseases (STDs) continue an uncontrolled epidemic, harming people's health, well-being, and productivity in the working age, with the trend showing growing incidence and prevalence across the world [12]. According to the World Health Organization (WHO), adolescence, which spans the ages of 10 to 19 years, is defined as the transition from childhood to adulthood. At this point, the development of sexual desire, sexual affirmation, and the beginning of a sexual life occur [13].

Referring to Table 1, regarding the demographic information of the sample, it is shown that 208 of the sample participated in the study. Distribution of the students by their demographic characteristics, regarding age, the majority of the study sample was between 18-20 years old, and the majority of the study sample were college students in the fourth year. More than two-thirds of the sample participants in the study are female, 69.2 %. The results of this study are consistent with the study conducted by [14,15], which resulted in the majority of the study sample being females, 60 %. In this study overall assessment of Nurses' Students' Knowledge Regarding Sexually Transmitted Diseases, the findings indicate that (48.38%) reported a fair level for the knowledge, poor level (27.95%) and good levels (23.65 %). This study findings agreement with studuy conducted by (Tag Elden Okba et al., 2025) [5] that mention The majority of nursing students had low level knowledge regarding sexually transmitted infections about more than two thirds, slightly less than one fifth of the studied students had moderate level of knowledge, and slightly less than one fifth had high level of knowledge. In contrast, the results of this study are not consistent with the study conducted by Memon et al. (2024) [7] found that the final-year BSN students demonstrated moderate to high levels of awareness and knowledge about STDs).In the results of this study and relation to the relationship between the general assessment of nurses students' knowledge regarding sexually transmitted diseases and their demographic data, the findings was that the overall students' knowledge is significant relationship with their (department, class) at p-value less than (0.05) and insignificant relationship with their

demographic data at p-value more than (0.05). The results of this study are not consistent with the study conducted by (Hamunyela et al. (2024) [16], which mentions that a significant association was noted between knowledge and participants' sex. Developing educational techniques to reduce adverse health consequences is deemed vital, given that early initiation of sexual behaviors may increase vulnerability to sexually transmitted illnesses. Adolescents should be encouraged to learn about STDs, and initiatives to prevent STDs should be carried out to enhance health.

Conclusions

These findings show a significant disparity in students' understanding, highlighting the need for educational development at all levels. Furthermore, statistical analysis revealed a strong correlation between students' general knowledge levels and their department and class ($p < 0.05$), indicating that academic discipline and year of study play a vital role in knowledge development. This could represent variances in curriculum content, instructional techniques, or access to academic help across departments and academic levels. These findings highlight the need to employ tailored instructional initiatives. Institutions should think about modifying curricular frameworks, improving teaching methodologies, and offering more individualized academic support to guarantee that students in all departments and classes have equal opportunities to increase their knowledge. Furthermore, future research might look into the precise characteristics within each department or academic level that contribute to these gaps, allowing for more effective, data-driven educational solutions.

References

- [1] S. K. Abdullah, M. A. Hamzah, B. S. Neamah, and Z. Y. Jumaa, "Knowledge of Nurses in the Respiratory Care Unit Towards Transmissible Pathogenic Bacteria in Patients on Ventilators Continuous Positive Airway Pressure," *Indonesian Journal on Health Science and Medicine*, vol. 1, no. 3, pp. 10–21, 2024.
- [2] M. Lagadinou, E. K. Matzouranis, C. Gogos, et al., "Knowledge and Attitudes of Medical and Nursing Students in a Greek University Regarding Sexually

- Transmitted Diseases," *International Journal of Environmental Research and Public Health*, vol. 21, no. 3, p. 251, 2024, doi: 10.3390/ijerph21030251.
- [3] C. Voyiatzaki, E. Nikolakopoulos, E. Gourni, and C. Bakola, "Awareness, Knowledge, and Risky Behaviors of Sexually Transmitted Diseases Among Young People in Greece," *International Journal of Environmental Research and Public Health*, vol. 18, no. 19, p. 10022, 2021.
- [4] C. Elendu, E. N. Orji, and A. M. Adebayo, "Global Perspectives on the Burden of Sexually Transmitted Diseases: A Narrative Review," *Medicine*, vol. 103, no. 20, p. e38199, 2024.
- [5] R. A. F. T. E. Okba, M. H. Ahmed, A. F. M. El-Adham, and A. M. El-Refaey, "Knowledge and Attitude of Nursing Students Regarding Sexually Transmitted Infections," *Tanta Scientific Nursing Journal*, vol. 36, no. 1, 2025.
- [6] S. R. Prabhu, N. Van Wagoner, J. Hill, and S. Sawleshwarkar, *Sexually Transmissible Oral Diseases*, Hoboken, NJ: John Wiley & Sons, 2023, p. 890.
- [7] M. Memon, Z. Junejo, S. Ghanghro, F. Khuwaja, and A. Soomro, "Knowledge, Awareness, and Attitudes Toward Sexually Transmitted Diseases (STDs) Among Final Year BSN Students," *Zakariya Journal of Education, Humanities and Social Sciences*, vol. 2, no. 2, pp. 14–22, 2024.
- [8] S. K. Abdullah and Z. Y. Jumaa, "Secondary School Students' Knowledge Toward Oral Health: A Cross-Sectional Study," *International Journal of Advanced Nursing Studies*, vol. 12, no. 1, pp. 22–25, 2024.
- [9] J. Henry, "Working Conditions and Health in MENA Region During the COVID-19 Pandemic: Keeping an Eye on the Gap," *Occupational Medicine and Health*, vol. 10, p. 431, 2022.
- [10] M. Frank, P. Simon-Uriah, E. Ootobo, A. Akpan-Idiok, F. Atakwulu, and S. Benard, "Knowledge and Attitude Towards Sexually Transmitted Infections Preventive Strategies Among Undergraduate Student Nurses in a Tertiary Institution, South-South, Nigeria," *Obstetrics and Gynecology International Journal*, vol. 16, no. 1, pp. 14–20, 2025, doi: 10.15406/ogij.2025.16.00781.
- [11] B. C. Jaworski and M. P. Carey, "Development and Psychometric Evaluation of a Self-Administered Questionnaire to Measure Knowledge of Sexually Transmitted Diseases," *AIDS and Behavior*, vol. 11, pp. 557–574, 2007.

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<https://doi.org/10.21070/ijhsm.v2i1.176>

- [12] K. Sinka, "The Global Burden of Sexually Transmitted Infections," *Clinical Dermatology*, vol. 42, no. 2, pp. 110–118, 2024.
- [13] K. Proulx, B. Daelmans, V. Baltag, and P. Banati, "Climate Change Impacts on Child and Adolescent Health and Well-Being: A Narrative Review," *Journal of Global Health*, vol. 14, p. 04061, 2024.
- [14] S. B. Jadoon, S. Nasir, G. Victor, and A. J. Pienaar, "Knowledge, Attitudes and Readiness of Nursing Students in Assessing People's Sexual Health Problems," *Nurse Education Today*, vol. 113, p. 105371, 2022.
- [15] Z. Y. J. Al-Gharify and R. K. Faraj, "Quality of Life for Adult Clients with Obesity Who Attend Consultation Clinics at Teaching Hospitals in Al-Diwaniya City," *Annals of the Romanian Society for Cell Biology*, vol. 25, no. 4, pp. 12519–12530, 2021.
- [16] L. U. Hamunyela, H. N. Niiikondo, and M. N. Nakweenda, "Nursing Students' Knowledge and Attitudes on Sexually Transmitted Infections Prevention at Training Institution in Namibia," *Health SA Gesondheid*, vol. 29, p. 2483, 2024.