

Knowledge and Attitudes towards Sexually Transmitted Infections among Medical Groups and Non-Medical Colleges at Baghdad University 2024

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Abstract
Sexually transmitted infections (STIs) represent a significant global health challenge, particularly among youth, due to their high prevalence and associated complications. Despite global efforts, limited knowledge and stigma continue to hinder prevention and control. This study assesses the knowledge and attitudes of students in medical and non-medical colleges at Baghdad University regarding STIs, highlighting gaps to inform targeted interventions. A descriptive cross-sectional study was conducted between November 2023 and June 2024, involving 510 students from five colleges at Baghdad University. A structured questionnaire assessed sociodemographics, STI knowledge, and attitudes. Knowledge levels were classified as high, moderate, or low, while attitudes were categorized as positive, neutral, or negative. Data were analyzed using SPSS version 26, with chi-square tests applied for statistical significance ($p < 0.05$). Among the participants, 78% demonstrated low knowledge of STIs, with significantly higher deficiencies among non-medical students (87.1%) compared to medical students (68.6%). Negative attitudes were prevalent (84.1%), with positive attitudes recorded in only 0.4%. Males exhibited better knowledge scores but comparable negative attitudes to females. Conclusion: The study highlights critical gaps in STI knowledge and attitudes, especially among non-medical students. Targeted educational interventions are needed to address these issues and improve awareness and prevention strategies.

Keywords: Sexually transmitted infections, Knowledge, Positive Attitudes, Neutral Attitudes

Introduction

Sexually transmitted diseases (STDs) remain a significant global health concern, with approximately one million new infections occurring every day [1]. This staggering number contributes to an estimated 499 million new cases of curable infections annually [2]. STDs occur when microbes multiply in the genital tract following sexual transmission and can manifest in various ways—from completely asymptomatic cases to severe outcomes like infertility, cancers, and even death. According to the World Health Organization (WHO), over one million sexually transmitted infections (STIs) are acquired daily worldwide [3]. In developed nations like the United States, nearly 27 million new STI cases are reported annually, with about half occurring among young people aged 15 to 24 [4]. In the United Kingdom, more than 142,000 diagnoses were reported within this age group in 2020. In the Middle East and North Africa, the estimated incidence rate for four treatable STIs—chlamydia, gonorrhea, syphilis, and trichomoniasis—stands at 60.6 per 1,000 individuals. Although the region is considered low-risk, its mortality rate of 10.4 per million exceeds that of regions with higher incidence rates [5-8].

In developing countries, the burden of STDs is amplified by the prevalence of incurable viral infections, increased global travel, and changing sexual behaviors [9]. Young people, in particular, are at heightened risk due to insufficient awareness and education about STDs. Research consistently highlights a concerning knowledge gap among teenagers, especially girls, who face increased vulnerability to infections like HIV/AIDS. Factors such as gender-based violence, early sexual initiation, lack of negotiation power in sexual relationships, and limited access to reproductive healthcare further compound their risks. Social stigma,

educational barriers, and fear of unintended pregnancy also prevent many young women from seeking help or practicing safe sex [10-12].

Despite numerous studies examining sexual health knowledge across different age groups and social classes, there remains a lack of focused research on young women's understanding of STDs. Many women have limited knowledge about how these diseases are transmitted or prevented. Addressing these gaps through targeted education and awareness campaigns is essential [13-15].

This study aims to assess the knowledge and attitudes of students in medical and non-medical colleges at Baghdad University regarding STIs. By identifying gaps in understanding, the findings will help inform future interventions to improve sexual health education and awareness among young people.

Methodology

Study design and setting

A cross-sectional descriptive study to evaluate the awareness of Baghdad University students about sexually transmitted diseases and their relationship to social and demographic factors, which was conducted in the city of Baghdad. 2.2 Time of study: - The duration of the study was 9 months (from the first of November 2023 to the end of July 2024).

Study population:

The target population in this study was the students in 2nd, 3rd and 4th classes from collages of Baghdad University that registered before 2022, selected during the study period, and who agreed to participate in the study.

Sampling:

The sample size was considered as a convenient sample, as it includes 510 students selected from the five colleges of the University of Baghdad divided into two groups medical and three non-medical colleges. The non-medical colleges included (Faculty of Education Ibn Rushed, college of Literature and College of Languages) and the medical colleges (Faculty of Dentistry, Faculty of Pharmacy). The sample size divided into 2 parts (255 students were selected from medical college, and 255 selected from non-medical collages. the sample size was distributed to each college based on the number of students in college stages.

Study Variables

- Dependent Variable. It is the level of students' knowledge, and attitude towards sexually transmitted infections.
- Independent Variable: Sociodemographic Factors. include age, sex, stage and Field of study.

Data collection tools

Data was collected during 3 months by using a structured self-tested questionnaire, modified from the English version of the International AIDS Questionnaire-English Version (IAQ-E) [15] and from other relevant KAP studies on STDs [16]. The questionnaire was developed in English by reviewing literature, and then translated into local language Arabic for the students. The tool comprised of three parts: part one was a sociodemographic background of students (gender, age, stage level).

Statistical Analysis

Data was translated into a computerized database structure. With SPSS (Statistical Package for Social Sciences), statistical analyses were carried out. Version 26 computer software for windows. Categorical variables were presented as frequency and percentage, Chi-square was used to test the significance of the association between categorical variables, with considered P. Value of < 0.05 was statistically significant.

Results

The study sample included 510 participants, 50% of whom were from medical colleges and the other 50% from non-medical colleges as demonstrated in Figure 1. Females make up 60.6% of the study sample, while males account for 39.4%. The age group of 18 to 20 years represented more than half of the participants (62.2%). The target group was selected from the second, third, and fourth stages (32.2%, 42.4%, and 25.4%, respectively). As shown in the Figure 1.

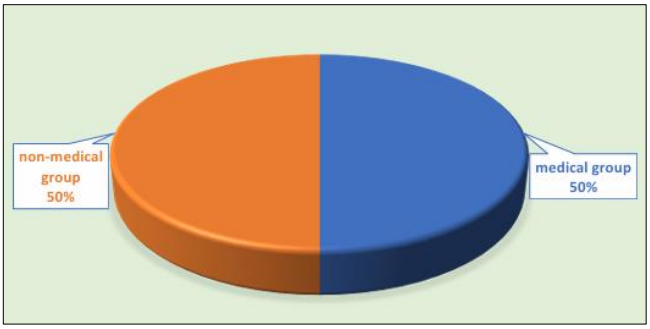


Fig 1: Distribution of study sample according to study field

Figure2 presents the level of knowledge of participants on sexually transmitted diseases was classified into three groups; 'high knowledge' 5 (1%),'moderate knowledge'108 (21%), and 'low knowledge' 397 (78%), as shown in Figure 2. The lowest score was 80%.

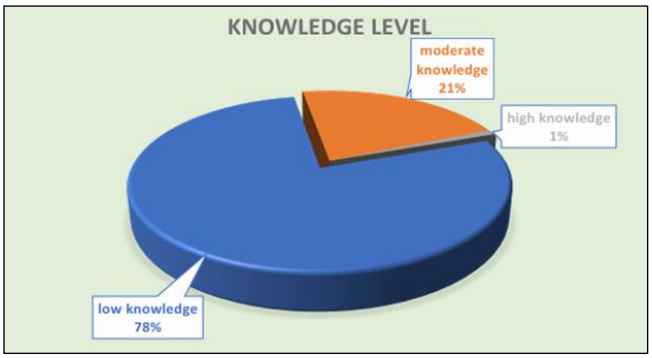


Fig 2: Pie chart of Knowledge level of participants.

The level of attitude of participants on sexually transmitted diseases were classified into three groups; 'high level (0.4%), 'moderate level' (15.5%) and 'low level (84.1%) as shown in (figure 3). The lowest score was 80%.

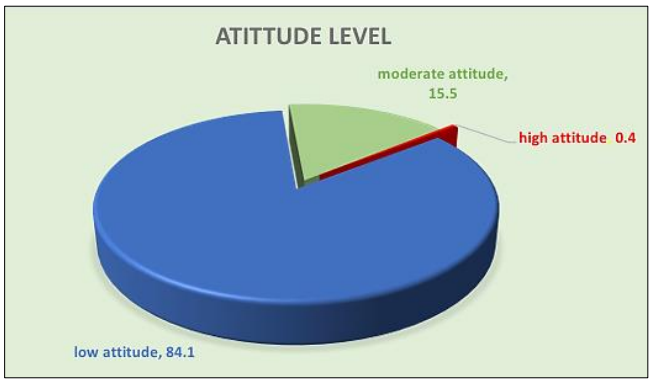


Fig 3: pie chart of attitude level of participants.

The results of the current study showed that the positive attitude of the participants was greater among those with high knowledge, while the negative attitude was more pronounced among those with low knowledge, with a statistically significant correlation. As shown in Table 1.

Table 1: Comparison between knowledge and attitude among study sample.

Level of knowledge	Level of Attitude			Total	P value
	Low Attitude	Moderate Attitude	High Attitude		
Low knowledge	357	40	0	397	**0.001***
	89.9%	10.1%	0.0%	100.0%	
Moderate knowledge	71	36	1	108	
	65.7%	33.3%	0.9%	100.0%	
High knowledge	1	3	1	5	
	20.0%	60.0%	20.0%	100.0%	
Total	429	79	2	510	
	84.1%	15.5%	0.4%	100.0%	
P value < 0.05 statically significant*					

Discussion

Sextual transmitted diseases are responsible for many health, social and economic problems around the world. In addition, insufficient knowledge and wrong attitudes towards STI transmission routes and prevention measures. Medical students should be knowledgeable enough not to consider themselves at risk of infection while evaluating a patient [18-20]. Knowledge of STI and their complications and attitude of the young generation toward sexual health are important in planning preventive and treatment strategies. Most of the people may be aware about HIV/AIDs because of the awareness created by media and government programs; however, knowledge about STIs other than HIV/AIDS is low in the developing countries [21]. The fact that the highest rates of STIs are being registered in young men and women is raising some concerns, taking into consideration that these infections can seriously deteriorate both male and female reproductive health [22-25].

The data gathered during this research revealed that there are disparities in participants' knowledge on different STIs and the causative agents of these STIs. The results of the knowledge gaps matched those of related studies on Saudi Arabian university students' familiarity with STIs [26-28]. For example, the participants get high scores when asked if HIV, Genital herpes, syphilis, and gonorrhea were STIs (86.5%,60%, 54.1% and 44.9% respectively) while, only 31% of participants were able to correctly identify hepatitis B virus and 41.6% for HCV these results agree with study conducted in Iraq [29]. Also have been reported, in Uganda and Nigeria of college and undergraduate students have heard about AIDS, respectively [30, 31]. It has been observed that AIDS is the most well-known sexually transmitted disease compared to other diseases such as viral hepatitis. This can be attributed to the common belief among people that the most prevalent way to transmit HIV is through sexual intercourse, while they believe that hepatitis is transmitted more through blood than through sex. University students in Iran have been reported to have higher levels of knowledge and awareness of sexually transmitted diseases, HIV was the most commonly recognized STI (98.2%) [32]. In Malaysia, a quarter of students revealed that chlamydia, hepatitis B and hepatitis C are STDs [33] the current study showed that tuberculosis was incorrectly identified as a sexually transmitted disease by a percentage of our students (26%), compared to a study in Turkey that reported only 8% [34]. The possible explanation of these differences might be related to variations in study setting and sample constitution. Regarding the causative factors, it has been known that mosquitoes cause sexually transmitted diseases at a rate of approximately 30% in some studies in Malaysia. This differs from the current study, where it constitutes 2.5%, while sexual contact was identified as the most important mode of transmission by the vast majority of students (84.5%), which aligns with other results observed in Nigeria and Canada [35].

Some participants, particularly men and those with prior sexual experience, displayed positive attitudes toward STIs. Our study revealed that individuals with good knowledge about sexually transmitted diseases tended to have positive attitudes, whereas a lack of knowledge contributed to negative or fearful perceptions among others. Similarly, a previous study conducted in northern Iraq found that higher awareness and heightened personal risk perception regarding STIs were linked to improved prevention practices. This suggests that enhancing public knowledge about STIs could foster more positive attitudes and healthier practices [36-39].

Conclusion

This study highlights significant deficiencies in STI knowledge and attitudes among university students in Baghdad, with pronounced gaps among non-medical students and females. These findings underscore the urgent need for targeted interventions to improve awareness and foster positive attitudes toward STI prevention and management. There are still many gaps in knowledge, as well as negative attitudes towards condoms and methods of preventing sexually transmitted infections, with some differences between genders.

Ethical consideration

The official agreement will be obtained from the Scientific Committee at the Department of Community Medicine. College of Medicine the University of Baghdad, and the Iraqi Board for medical specialties / Scientific Council for Community Medicine.

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