

Original Research Article

KAP study of sexually transmitted infections and diseases among under graduate and post graduate students of Rajanna Sircilla District, Telangana

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ABSTRACT

Background: Sexually transmitted infections (STIs) remain a major public health concern among adolescents and young adults in India. Limited awareness, misconceptions, and unsafe sexual practices may increase the risk of transmission and associated health complications. However, the knowledge, attitudes, and practices regarding STIs/STDs among college students in Rajanna Sircilla district, Telangana, have not been explored adequately. Hence, this study aimed to assess the knowledge, attitudes, and practices regarding STIs/STDs among undergraduate and postgraduate students in Rajanna Sircilla district, Telangana.

Methods: A cross-sectional descriptive study was conducted among 210 undergraduate and postgraduate students from selected colleges in Rajanna Sircilla district. Data were collected using a pre-tested structured questionnaire covering socio-demographic information and KAP-related aspects of STIs/STDs. Qualitative insights were obtained through in-depth interviews. Quantitative data were analysed using descriptive statistics, and qualitative responses were thematically analysed.

Results: The majority of participants were female (72.9%) and pursuing graduate studies (83.3%). HIV was the most recognized STI (86.1%), while awareness of infections such as genital herpes, syphilis, and trichomoniasis was limited. Most identified sexual contact and blood transfusion as key transmission routes, and 81.4% acknowledged that multiple partners increase risk. However, discomfort discussing sexual health and limited access to preventive resources persisted. Stigma and misconceptions were evident, and participation in testing or awareness programmes was low.

Conclusions: Despite generally positive attitudes, substantial gaps in knowledge and preventive behaviour remain. Persistent stigma, misinformation, and limited sexual health education call for targeted awareness campaigns, curriculum-based interventions, and de-stigmatisation efforts among young adults.

Keywords: STIs, STDs, Knowledge, Attitude, Practice, Students, Sexual health, Public health education, Telangana

INTRODUCTION

Sexually transmitted infections (STIs) remain a major global public health problem, with more than one million curable infections acquired every day, predominantly among individuals aged 15-49 years.¹ The World Health Organization (WHO) estimates that in 2020 there were 374 million new cases of curable STIs such as chlamydia, gonorrhoea, syphilis, and trichomoniasis.¹ In addition,

over 500 million people are infected with genital herpes, and human papillomavirus (HPV) contributing to more than 311,000 cervical cancer deaths annually.² These infections not only cause reproductive and maternal health complications but also increase susceptibility to HIV and contribute to long-term morbidity.

In India, the burden of STIs/RTIs is substantial, with an estimated 6% of the adult population affected annually.³

Epidemiological studies report high prevalence rates of syphilis, chlamydia, gonorrhoea, and HSV infections.³ According to the National AIDS Control Organization (NACO), India has the third-largest HIV epidemic globally, with 2.1 million people living with HIV.⁴ Telangana has consistently reported high numbers of syphilis and gonorrhoea cases, and although HIV awareness among women is high (93% in NFHS-5), misconceptions and knowledge gaps persist in vulnerable subgroups.⁵ College students represent a critical population, as they are at risk of exposure yet face stigma and limited access to accurate information. Against this backdrop, the present study was undertaken to assess knowledge, attitudes, and practices (KAP) regarding STDs/STIs among degree and postgraduate students in Rajanna Sircilla District, Telangana, supplemented by qualitative insights into stigma, perceptions, and health-seeking behaviours.

METHODS

A descriptive cross-sectional study was conducted among undergraduate and postgraduate students aged 18-25 years in Rajanna Sircilla District, Telangana, during (October 2024 to May 2025). A total of 210 students from seven randomly selected colleges were included using a multistage random sampling technique.

Data were collected using a pretested, structured questionnaire consisting of 49 items covering socio-demographic details, knowledge, attitudes, and practices (KAP) related to sexually transmitted infections (STIs).

In addition, 14 in-depth interviews were conducted to capture qualitative insights on perceptions, stigma, and health-seeking behaviour. The questionnaire was validated by subject experts, and a pilot survey among 20 students was conducted to ensure clarity and reliability. The collected data were entered and compiled in Microsoft Excel and analysed using descriptive statistics such as frequencies and percentages, with findings presented in tables and charts. Qualitative data were transcribed, translated, and thematically analysed to identify recurring patterns. Ethical approval for the study was obtained from the institutional ethics committee, and written informed consent was obtained from all participants with strict maintenance of confidentiality and anonymity.

RESULTS

Table 1 presents the sociodemographic characteristics of respondents. A total of 210 students participated, with the majority being female (72.9%), undergraduates (83.3%), day scholars (83.8%), and unmarried (97.6%). Most resided in rural areas (58.6%), and family literacy varied.

Table 2 presents the knowledge of respondents regarding STIs/STDs. HIV/AIDS was the most recognized STI, while awareness of other STIs such as herpes genitalis, hepatitis B, syphilis, gonorrhoea, and trichomoniasis was limited. Sexual contact and blood transfusion were identified as primary transmission routes, though some misconceptions persisted.

Table 1: Sociodemographic characteristics of respondents (n=210).

Variables	Categories	Frequency	Percentage
Gender	Male	57	27.1
	Female	153	72.9
Education	Undergraduate	175	83.3
	Postgraduate	35	16.7
Year of study	1 st year	37	17.6
	2 nd year	62	29.5
	3 rd year	109	51.9
	4 th year	2	1.0
Type of residence	Day scholar	176	83.8
	Hostel	34	16.2
Living area	Rural	123	58.6
	Suburban	41	19.5
	Urban	46	21.9
Marital status	Married	5	2.4
	Single	205	97.6
Head of family literacy	Illiterate	57	27.1
	Primary education	62	29.5
	Secondary education	65	31.0
	Graduate and above	26	12.4

Table 2: Knowledge of respondents regarding STIs/STDs (n=210).

Parameters (Most recognized STI)	Frequency	Percentage
HIV/AIDS	181	86.2
Herpes genitalis	55	26.2
Hepatitis B	53	25.2
Syphilis	35	16.7
Gonorrhoea	38	18.1
Trichomoniasis	21	10.0
Pubic lice	19	9.0
Transmission routes identified	Sexual contact	168
	Blood transfusion	112
	Needle prick	84
	Mother-to-child	61
	Kissing/touching	74
	Mosquito bites	42
	Sharing clothes	28
Recognized symptoms	Pain	123
	Discharge	93
	Swelling/abscess	82
Complications identified	Infertility	100
	Cancer	75
	PID	72

Table 3: Attitudes of respondents towards STIs/STDs (n=210).

Statement	Agree (%)	Disagree (%)
Sex before marriage is acceptable	19.0	81.0
Multiple sexual partners acceptable	13.3	86.7
Same-gender sexual relationships acceptable	35.7	64.3
Sexual education should be included in schools	70.5	29.5
Comfortable with sex with infected partner (protected)	31.9	68.1
Condoms can prevent STIs	60.0	40.0
Feel shy purchasing condoms	61.0	39.0
Believe stigma persists for STI patients	43.8	56.2

Table 4: Practices of respondents related to STIs/STDs (n=210).

Practice	Frequency	Percentage
Ever vaccinated against STIs	12	5.7
Discussed STIs with peers/partners	63	30.0
Aware of local STI testing facilities	50	23.8
Participated in awareness programmes	60	28.6
Testing history		
Never tested	123	58.6
Annual testing	6	2.9
Every 6 months	12	5.7
Every 3 months	11	5.2
Sexual education exposure		
Received in school	85	40.5
Never received	68	32.4
Found useful (among those exposed)	143	68.1

Table 3 presents the attitudes of respondents towards STIs/STDs. Most students opposed premarital sex and

multiple sexual partners but showed some openness to same-gender relationships. The majority supported sex

education in schools, although stigma toward individuals with STIs was acknowledged.

Table 4 presents the practices of respondents related to STIs/STDs. Preventive behaviours were low, as reflected in the small proportion vaccinated against STIs, limited participation in awareness programmes, and infrequent testing. Sexual education exposure was moderate, with 85 (40.5%) students reporting school-based instruction, while 143 (68.1%) of those exposed found it useful.

Qualitative insights

Interviews with 14 participants highlighted similar gaps in knowledge, attitudes, and practices. Knowledge was largely restricted to HIV, with minimal awareness of other infections and preventive measures. Misidentification of symptoms was common, and transmission was often described inaccurately. Attitudes were heavily shaped by fear and moral judgment, with many associating STIs with immoral behaviour and suggesting social isolation for affected individuals. However, a few respondents emphasized the importance of psychosocial support and compassionate care. Communication barriers emerged as a central theme, with students expressing discomfort in discussing sexual health with family, teachers, or peers of the opposite sex. Sexual health was often described as a taboo topic, and the lack of dialogue reinforced misconceptions and hindered preventive behaviours. Although structural barriers to healthcare access were less evident, limited awareness and communication were key obstacles to timely health-seeking practices.

DISCUSSION

This study assessed the knowledge, attitudes, and practices regarding sexually transmitted infections and diseases (STIs/STDs) among degree and postgraduate students aged 18-25 years. The findings indicate partial awareness, conservative yet stigmatized attitudes, and poor preventive practices, which are consistent with previous literature from India and other low- and middle-income countries.

Knowledge of STIs and STDs

In the present study, HIV was the most widely recognized STI (86.2%), whereas awareness of other infections such as syphilis, gonorrhoea, and trichomoniasis was considerably lower. Participants often associated symptoms with nonspecific signs like fever or weight loss, indicating gaps in recognition. These results are comparable with studies conducted in Manipal and Vadodara, where HIV/AIDS was the most commonly identified infection while awareness of other STIs remained low, and misconceptions about transmission routes persisted.^{6,7} Similarly, Subbarao and Akhilesh found that most Indian college students had limited awareness of STIs other than HIV, with incorrect beliefs

about transmission through casual contact.⁸ Studies among high school and rural populations also reported poor recognition of STIs beyond HIV, reflecting a widespread lack of comprehensive knowledge.^{9,10} Collectively, these findings highlight that despite HIV awareness campaigns, knowledge about other STIs remains insufficient across different demographic groups.

Attitudes toward STIs, STDs, and affected individuals

Students in this study demonstrated largely conservative beliefs, with most disapproving of premarital sex and multiple sexual partners, yet some expressed openness toward same-gender relationships. At the same time, stigma was evident, as many participants associated STIs with immoral behaviour and felt infected individuals should be socially isolated. These findings are in line with results from Manipal, where students expressed both supportive and stigmatizing views toward those with STIs.⁶ A study in Himachal Pradesh also reported strong moral judgments and stigma associated with STIs, despite awareness of HIV/AIDS.¹¹ Similarly, Meena et al observed that stigma and negative perceptions were common among both general populations and HIV patients in northeastern India.¹² Such attitudes may hinder health-seeking behaviours and perpetuate discrimination, underscoring the need for interventions that promote empathy and destigmatization in addition to knowledge dissemination.

Practices related to STI prevention and sexual health

The study revealed significant gaps in preventive practices. Only 5.7% of participants reported vaccination against STIs, less than one-third had discussed STIs with peers or partners, and more than half had never undergone STI testing. Participation in awareness programs was also limited. These findings are consistent with other Indian studies, which showed that although HIV was widely known, preventive practices such as condom use, testing, and vaccination were rarely adopted.^{6,7,10} Rizwan et al similarly reported low utilization of preventive services among married women in rural Haryana, attributing it to stigma, lack of awareness, and accessibility issues.⁹ Globally, inadequate preventive practices among youth are often linked to poor integration of sexual health education within curricula and social discomfort in discussing sexual health openly.^{7,10}

Overall implications

The convergence of these findings with other Indian and regional studies indicates that awareness campaigns have successfully highlighted HIV, but broader STI education remains limited. Persistent stigma, moral judgment, and poor preventive practices suggest that interventions should go beyond knowledge dissemination to include comprehensive sexual health education, communication training, and community-level destigmatization programs.

Integration of sexual health into academic curricula, accessible testing facilities, and peer-led awareness programs may help address these gaps.

This study was limited to a single district with a relatively small sample size, which may restrict the generalizability of findings. Self-reported data may also have been influenced by social desirability bias.

Future research should include larger, multi-centric samples and employ mixed methods to capture deeper insights. Strengthening school- and college-based sexual health education, integrating stigma-reduction strategies, and improving access to testing and counselling services are strongly recommended. The students in this adolescent and young adult groups are most captive for behaviour change initiatives and has the potential to instill a sustainable strategy especially for STIs and STDs.

CONCLUSION

This study revealed that while HIV awareness among students was high, knowledge of other STIs, preventive practices, and open discussion about sexual health remained limited. Stigma and misconceptions further hindered health-seeking behaviour. Strengthening sexual health education, destigmatization, and access to preventive services are essential to address these gaps.

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