Review Article

Knowledge and Misconceptions Towards HIV/Aids Among the University Students: A Review

Misconceptions Towards HIV/AIDS Among University Students

Sarmad Jamal Siddiqui[1], Rosnah Sutan[2], Zaleha Md Isa[3], Shahid Jamal Siddiqui[4], Vijia Kumar Gemnani[1] and Kaleemullah Abro[1]

ABSTRACT

Objective: To review existing research on the knowledge, attitude, and misconceptions regarding HIV/AIDS among university students in Pakistan. The objective is to gain insights into the effectiveness of educational interventions and their impact on the fight against HIV/AIDS.

Study Design: A comprehensive literature search

Place and Duration of Study: The review was conducted at SMBB Medical University Larkana Pakistan from March 2023 to April 2023.

Materials and Methods: A narrative review of existing studies is performed to gather a comprehensive understanding of the knowledge, attitudes, and misconceptions related to HIV/AIDS among university students in Pakistan. Various electronic databases are searched to identify peer-reviewed articles, reports, and studies that investigate this topic. The selected studies are critically analyzed to extract relevant data and findings.

Results: The review revealed that some studies demonstrate a lack of accurate understanding and misconceptions about the modes of transmission and prevention of the disease. However, educational interventions appear to have a positive influence on students' awareness and attitudes. Medical education, in particular, has shown promise in enhancing knowledge and altering attitudes among medical students and healthcare professionals.

Conclusion: The findings underscore the significance of educational interventions in enhancing awareness and knowledge about HIV/AIDS among university students in Pakistan. By addressing misconceptions and promoting accurate information, these interventions can contribute to the prevention and control of the disease.

Key Words: Human immunodeficiency virus, acquired immunodeficiency syndrome, knowledge, misconceptions, attitude, behavior.

Citation of article: Siddiqui SJ, Sutan R, Isa ZMD, Siddiqui SJ, Gemnani VK, Abro K. Knowledge and Misconceptions Towards HIV/Aids Among the University Students : A Review. Med Forum 2023;34(9):218-222. doi:10.60110/medforum.340950.

INTRODUCTION

Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) is not only a disease, but is also considered as social, cultural, and economical problem globally.

[1.] Department of Community Medicine & Public Health Sciences. SMBB Medical University, Larkana.
[2.] Department of Public Health Medicine, Medical Faculty, Universiti Kebangsaan, Malaysia.
[3.] Department of Public Health Medicine, Faculty of Medicine, National University of Malaysia, 56000 Cheras, Kuala Lumpur, Malaysia.
[4.] Department of Ophthalmology, Khairpur Medical College, Khairpur Mirs.

Correspondence: Rosnah Sutan, Associate Professor of Public Health Medicine, Medical Faculty, Universiti Kebangsaan Malaysia.
Contact No: +60193212256.
Email: rosnah.sutan@ppukm.ukm.edu.my

Received: May, 2023
Accepted: July, 2023
Printed: September, 2023

AIDS is a type of disease which influence the society in terms of its prevalence and incidence, causing high mortality rate and intensive costs.[1,2] It is also considered as one of the most important healthcare problems to many countries with major emphasis on its prevention.[3] In a report of UNIDS, the affected number of people with HIV was 36.7 million by 2015. 2.1 million new cases of HIV were added by the same year.[4]

For the prevention approaches, the use of antiviral drugs is suggested for the help of people who are at risk of getting infection by HIV, called 'pre-exposure prophylaxis), and is becoming an additional preference for strengthening of prevention. Other factors include behavioral change and communication, and prevention programs for key populations. Anti-viral drugs are valuable for the prevention of vertical transmission of HIV. There was a decrease in new cases by 50% in comparison to 2009, due to attitude and knowledge of people in terms of prevention approaches.[5–7]

Literature Review: In Pakistan, first case of HIV was seen in 1987, and since then the disease prevalence is increasing. The viewpoint of Pakistani society is typically a conservative one, though various factors have emerged to raise the rate of HIV prevalence

including drug abusers, sexual practices, unsatisfactory screening of blood products, misconduct by quacks or unregistered practitioners, as well as ineffectiveness of healthcare system for provision of maintainable programs for prevention.[8-10] Close to this perspective, clusters of HIV cases were identified in Kot Mubarak district Dera Gazi Khan, Jalalpur Jattan district Gujrat, Attock jail and Adiyala jail, are appropriate examples for comprehensive explanation.

Accordingly, UNESCO has emphasized its consideration on certification of comprehensive education on HIV/AIDS.[11] Research on more than half-million individuals in Sub-Saharan Africa explained that females who have completed their secondary education were less likely to contract the HIV/AIDS.[12] A recent review by World Food Program amongst Sub-Saharan African girls showed positive correlation to their being less susceptible to contract the HIV/AIDS.[13]

Pakistan was previously considered high risk nation as with low prevalence when first incidence of HIV occurred, but with increasing the rate, it was labelled as in 'concentrated phase' of epidemic.[14] According to National AIDS Control Program, the reported cases of HIV were 120,000 with estimated prevalence rate of 0.1%. Although, the actual data is not completely accessible, and the prevalence rate is estimated to be higher than reported.

CDC has defined young age as 13-24 years of life.[15] Many researchers have concluded that significant improvement can be obtained by focusing on predisposing factors. Good knowledge advances to optimistic and positive attitude of individuals which will help in various ethical and practical applications.

In university students of Iran, HIV/AIDS-related education lecture of 30-45 minutes showed improvement and up-gradation in their attitude and knowledge.[16] In order to fulfill the gaps and promote positive attitude towards patients, well-established information and educational training should be performed at both undergraduate and postgraduate levels. Currently, there is no review of data available to discuss the knowledge, misconceptions, and attitudes towards HIV/AIDS among university students. This review provides the review and discussion regarding these factors and misconception among university students in Pakistan.

MATERIAL AND METHODS

Literature Search Strategy: A comprehensive literature search was conducted in various electronic databases, including PubMed, Google Scholar, and relevant institutional repositories. The search was carried out using keywords such as "HIV/AIDS," "knowledge," "misconceptions," "university students," and "Pakistan." The search was limited to articles published in English up until the date of the review.

Setting and Duration: This review was conducted among the students of different education institutes of Pakistan. The duration of this narrative review was during March & April 2023 and place was SMBB Medical University Larkana Pakistan.

Inclusion and Exclusion Criteria: Studies were included if they focused on the knowledge and misconceptions related to HIV/AIDS among university students in Pakistan. Both quantitative and qualitative studies were considered. However, studies with inadequate sample sizes, unrelated topics, or insufficient data were excluded from the review.

Data Extraction: Relevant data from selected articles were extracted using a predefined data extraction form. The extracted information included study characteristics (authors, year of publication), study design, sample size, demographic details of participants, key findings related to knowledge and misconceptions about HIV/AIDS, and study limitations.

Quality Assessment: The quality of each included study was assessed using appropriate tools based on the study design. Studies were evaluated for methodological rigor, sample representativeness, data collection methods, and reporting clarity.

Synthesis and Presentation: The findings from the included studies were synthesized and presented in a structured manner. A narrative synthesis approach was used to summarize the results of individual studies, highlight common trends, and explore variations in knowledge and misconceptions across different regions and demographics in Pakistan.

Discussion and Implications: The synthesized findings were discussed in light of existing literature and the broader context of HIV/AIDS awareness and education in Pakistan. The implications of the review's findings for public health interventions, policy development, and future research were considered and discussed.

RESULTS

A Review" presents a comprehensive overview of various studies conducted on the knowledge and misconceptions surrounding HIV/AIDS among university students in Pakistan. The studies analyzed in this review span from 2007 to 2022 and encompass a variety of regions, methodologies, and sample sizes.

Limited Knowledge and Awareness: The review consistently highlights that a significant portion of university students in Pakistan lack accurate and comprehensive knowledge about HIV/AIDS. The percentage of students with satisfactory awareness and knowledge is consistently low across the years and regions.

Misconceptions about Transmission and Immunity: Several studies reveal the prevalence of misconceptions among university students regarding the transmission of HIV/AIDS. Additionally, a concerning percentage of

students believe in various forms of immunity, such as the misconception that Muslims or Pakistanis are immune to the disease. These misconceptions indicate a lack of accurate information dissemination.

Discipline and Year-wise Differences: Some studies highlight differences in awareness and knowledge levels based on the students' academic disciplines and years of study. Medical and pharmacy students tend to have better awareness and knowledge compared to non-medical students.

Effectiveness of Educational Interventions: One quasi-experimental study suggests that educational interventions, such as counseling, can positively influence students' knowledge and attitude towards HIV/AIDS. The study indicates that such interventions motivate students to share disease-oriented information and reduce the prevalence of misconceptions.

Negative Attitudes and Lack of Ethical Responsibility: The review reveals instances of negative attitudes among students, particularly in the medical and dental fields. Some students show reluctance to treat HIV/AIDS positive cases, with reasons including fear of cross-infection and a lack of ethical responsibility. These findings underscore the importance of addressing stigmatization and ethical considerations in medical education.

Variation in Knowledge Levels: Studies consistently indicate variation in knowledge levels among university students, with medical students generally having better awareness compared to students in other fields. This suggests that there might be a need for tailored educational programs targeting specific disciplines.

Urgent Need for Educational Initiatives: The review collectively emphasizes the urgent need for comprehensive educational initiatives to address the gaps in knowledge, misconceptions, and negative attitudes surrounding HIV/AIDS. The lack of accurate knowledge regarding transmission, symptoms, and preventive measures underscores the importance of well-structured educational campaigns.

Table No. 1: Studies Related to HIV/AIDS Awareness Among University/College Students and Their Findings and Outcomes

Study	Year	Place	Type	Sample size	Findings/ Outcomes
Khan et al[17]	2022	Southern Punjab	Cross-sectional survey	300	This study showed that students knew little about the infection and illness.44% of students thought this disease will spread like others. 39% of respondents thought Muslims and Pakistanis were immune to this disease and misunderstood its transmission.
Hasnain et al. [18]	2021	Peshawar	Cross-sectional survey	500	-Awareness among the students towards HIV/AIDS lacked while the ratio of correctness of answers was high in pharmacy students as compared to non-medical students.
Chaudry et al. [19]	2019	Gujrat	Quasi-experimental study	370	-Intervention worked. Counselling encouraged students to dispel disease-related myths.
Amin et al. [20]	2018	Karachi	Cross-sectional survey	193	Senior students knew more than first- and second-year students.Most HIV/AIDS patients were not treated. Dental students were more unfavourable. Refusing treatment was linked to fear of cross-infection and unethical behaviour.
Ali et al.[21]	2017	Lahore	Cross-sectional survey	414	-Both medical and dental students lack the possible information regarding the disease.
Rehan et al. [22]	2016	Rawalpindi/ Islamabad	Cross-sectional survey	1,031	76% of university students misunderstood transmission and prevention, while 57.1% thought it was not preventable. Medical students knew more than non-medical students. Stigmatising attitudes, transmission, and prevention were unfamiliar to pupils, stressing the need for education.
Abrar & Ghouri[23]	2010	Eight cities of Sindh Province of Pakistan	Cross-sectional survey	1545	Knowledge among the students was not sufficient.

Khan et al. [24]	2007	Peshawar	Cross-sectional survey	500	-Satisfactory awareness and knowledge were found among medical students. There were differences in level of awareness of preclinical, clinical, and Junior classes.
Shaikh et al. [25]	2007	Karachi	Cross-sectional survey	357	This study shows that 7% Medical students only had adequate information towards the transmission of HIV/AIDs and 6% only had adequate information towards the symptoms.

DISCUSSION

This narrative review focused on studies conducted in Pakistan, examining the knowledge, attitudes, and misconceptions regarding HIV/AIDS among university students.[15-16]

Khan et al. (2022) conducted a study in Southern Punjab, revealing significant knowledge gaps concerning HIV and AIDS. The study underscored the necessity of increasing awareness about HIV status, addressing stigma, fear, beliefs, social support, organizational capacity, and certification programs in collaboration with governmental and non-governmental organizations.[17]

Another study by Amin et al. in Karachi evaluated the knowledge, attitudes, and stigma related to HIV/AIDS.[20] They found moderate knowledge and misconceptions about HIV/AIDS among students. Amin et al. also highlighted the inadequacy of HIV transmission knowledge among first-year students compared to those in subsequent years.[20]

Chaudry et al, identified poor knowledge levels among university students in Gujrat, Pakistan, with a mean knowledge score of 35.57 before educational intervention.[19]

In a study of university students in Lahore, Ali et al. found insufficient knowledge and suboptimal attitudes among medical and dental students towards HIV/AIDS, with a mean knowledge score of 10.02.[21]

Rehan et al.'s study among students in Rawalpindi and Islamabad revealed a mean knowledge score of 62.7, with females exhibiting greater knowledge than males.[22].

Hasnain et al. conducted a study in Peshawar, where most students had basic knowledge about HIV/AIDS, although some remained unaware of the disease.[18] Similarly, Khan et al. in Peshawar found that the majority of students recognized HIV/AIDS as a communicable disease but displayed reluctance to share personal items with HIV-infected individuals.[24].

CONCLUSION

This review explored many factors and evaluated knowledge, attitude, and misconception regarding HIV/AIDS. The reviewed studies indicate that university students in Pakistan generally lack accurate and comprehensive knowledge about HIV/AIDS, and various misconceptions persist regarding transmission, immunity, and treatment. The findings highlight the importance of effective educational interventions to address these gaps and promote accurate awareness, especially among students in non-medical disciplines.

Author's Contribution:

Concept & Design of Study:	Sarmad Jamal Siddiqui
Drafting:	Rosnah Sutan, Zaleha Md Isa
Data Analysis:	Shahid Jamal Siddiqui, Vijia Kumar Gemnani, Kaleemullah Abro,
Revisiting Critically:	Sarmad Jamal Siddiqui, Rosnah Sutan
Final Approval of version:	Sarmad Jamal Siddiqui

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Hallberg D, Kimario TD, Mtuya C, Msuya M, Bjorling G. Factors affecting HIV disclosure among partners in Morongo, Tanzania. Int J AfrNurs Sci 2019; 10:49-54.
2. Edi Putra IGN, Januraga PP. Social Capital and HIV Testing Uptake among Indirect Female Sex Workers in Bali, Indonesia. Tropical Med Infectious Disease 2020; 5(2):73.
3. Najafi Z, Taj L, Dadras O, Ghadimi F, Moradmand B, SeyedAlinaghi S. Epidemiology of HIV in Iran. Curr HIV Res 2020;18(4):228-236.
4. Del Rio C. The global HIV epidemic: What the pathologist needs to know. Semin Diagn Pathol 2017;34(4):314–7.
5. SeyedAlinaghi S, Taj L, Mazaheri-Tehrani E, Ahsani-Nasab S, Abedinzadeh N, McFarland W, et al. HIV in Iran: onset, responses, and future directions. AIDS 2021;35(4):529–42.
6. Chao QY, Xu Y, Xiang JD, Wang X, Wang F, Yang J, et al. Epidemiological analyses of regional and age differences of HIV/AIDS prevalence in China, 2004–2016. Int J Infect Dis 2019;81: 215–20.
7. Ghalehkhani N, Farhoudi B, Gouya MM, Sharifi H, SeyedAlinaghi S, Kamali K, et al. The HIV treatment cascade in people living with HIV in Iran in 2014: Mixed-method study to measure losses and reasons. Int J STD AIDS 2019;30(13): 1257–64.

8. Fatima N, Anwar N, Ul Mujtaba H, Shamsi T. Compliance of documentation by health-care professionals: Evaluation of transfusion practices at bedside. Glob J Transfus Med 2021;6(2):183.
9. Hamidazada M, Cruz AM, Yokomatsu M. Vulnerability Factors of Afghan Rural Women to Disasters. Int J Disaster Risk Sci 2019;10(4): 573–90.
10. Abdullah MA, Shaikh BT. Confusion and denial: need for systems thinking to understand the HIV epidemic in Pakistan. J Ayub Med Coll Abbottabad 2014;26(3):396–400.
11. Adesina MA, Olufadewa II. Comprehensive Sexuality Education (CSE) Curriculum in 10 East and Southern African Countries and HIV Prevalence among the Youth. Eur J Environ Public Heal 2020;4(1):2542–4904.
12. Lucas AM, Wilson NL. Schooling, wealth, risky sexual behaviour, and HIV/AIDS in sub-saharan Africa. J Dev Stud 2019;55(10):2177–92.
13. Savary S, Akter S, Almekinders C, Harris J, Korsten L, Rötter R, et al. Mapping disruption and resilience mechanisms in food systems. Food Secur 2020;12:695–717.
14. Joulaei H, Shooshtarian S, Dianatinasab M. Is UNAIDS 90-90-90 target a Dream or a Reality for Middle East and North Africa Region on Ending the AIDS Epidemic? A Review Study. AIDS Rev 2018;20(2).
15. Mahat G, Kelly S. Factors affecting risk-taking behaviors among sexually active adolescents tested for HIV/STD. Public Health Nurs 2023;40(4): 550–5.
16. Jodati AR, Nourabadi GR, Hassanzadeh S, Dastgiri S, Sedaghat K. Impact of education in promoting the knowledge of and attitude to HIV/AIDS prevention: a trial on 17,000 Iranian students. Int J STD AIDS 2007;18(6):407–9.
17. Khan K. Assessing Perception and Knowledge regarding HIV and AIDS among High School, College and University students of South Punjab, Pakistan. Int J Res Publ 2022;99(1).
18. Hasnain M, Khan S, Begum S, Muhammad B, Alam S, Zeerak SK. Level of Knowledge and Attitude of Undergraduate Students of University of Peshawar about HIV/AIDS and its Patients. RADS J Pharm Pharm Sci 2021;9(3):151–9.
19. Chaudry ZA, Khan SA, Chaudry ZA, Khan A, Ali S, Khan AK. Impact of Awareness Campaign on the Knowledge of Risk Factors of HIV & AIDS among Students of University of Gujrat, Pakistan. J Rawalpindi Med Coll 2019;23.
20. Amin F, Aslam K, Yasmin R, Butt AK. Knowledge, Attitude And Stigma of Dental Students Towards Hiv/Aids Patients. J Pak Dent Assoc 2018;27(03):140–6.
21. Ali A, Ali NS, Nasir U, Aadil M, Waqas N, Zil-E-Ali A, et al. Comparison of Knowledge and Attitudes of Medical and Dental Students towards HIV/AIDS in Pakistan. Cureus 2018;4.
22. Rehan M, Waheed U, Sarwar M, Arshad M, Satti HS, Zaheer HA. Knowledge, attitude, practices and awareness regarding HIV/AIDS among university students of Islamabad and Rawalpindi, Pakistan. Ann PIMS ISSN 2016;1815:2287.
23. Abrar N, Ghouri AM. AIDS/HIV Knowledge, Attitude and beliefs of Adolescents of Pakistan. Eur J Soc Sci 2010;16(2):275–85.
24. Khan H, Ishaq M, Khan H, Ishaq T. Knowledge and attitude of students regarding HIV/AIDS in Peshawar University. Rawal Med J 2008;33(1): 18–21.
25. Shaikh FD, Khan SA, Ross MW, Grimes RM. Knowledge and attitudes of Pakistani medical students towards HIV-positive and/or AIDS patients. Psychol Health Med 2007;12(1):7–17.