

HIV and AIDS Awareness among Medical Students- A Cross Sectional Survey

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Abstract

Original Research Article

Despite widespread awareness of HIV/AIDS healthcare trainees continue to have misconceptions along with knowledge gaps this study examines osh state university undergraduate medical students awareness attitudes preventive behaviours along with understanding about antiretroviral medication the participants range in age from 17 to 50. **Methods:** A cross-sectional survey was completed by IMF undergraduate medical students ages 17 to 50 a total of 102 students were included demographic information antiretroviral medication art awareness understanding of HIV transmission along with prevention common misconceptions willingness to get tested for HIV along with prior exposure to HIV education initiatives were all gathered. **Results:** Men made up 56.6% of the 102 responders, women made up 41.5 %along with 1.9 % did not reveal their gender the majority 67.9% resided in cities with 32.1% living in villages condoms prevent HIV according to 82% of respondents. 90 % of respondents identified unprotected sexual contact as the main way that HIV is spread. 88 % of respondents correctly recognized sharing needles or syringes as a means of transmission. 85% agreed that a blood test prior to a transfusion helped prevent HIV. 77% of respondents concurred that an individual may still have HIV even if they seem healthy. Antiretroviral treatment for HIV management was known to 68% of respondents. Preventive along with behavioural actions 79% said they would be willing to get tested for HIV if it were free along with private in high-risk scenarios 71% of respondents said they regularly used condoms or other preventive measures. **Conclusion:** There are still knowledge gaps regarding antiretroviral medication along with silent infection even though most medical students showed a strong grasp of HIV transmission along with prevention strategies. The majority of respondents were willing to be tested along with the majority acknowledged that sharing needles along with having intercourse are important ways of transmission. Continued education along with awareness campaigns are necessary to lower the risk along with impact of HIV/AIDS among young adults in the medical community by promoting early identification ensuring access to treatment along with reinforcing preventative practices.

Keywords: HIV/AIDS, Medical Students, Knowledge Gaps, Antiretroviral Therapy (ART).

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INTRODUCTION

Among young individuals including medical students who may be more exposed to along with responsible for patient care HIV/AIDS continues to be a serious global public health concern. Healthcare trainees continue to have gaps along with misconceptions despite the availability of information on transmission prevention along with treatment. Since medical students will be the future frontline educators along with caregivers it is essential to understand their awareness of HIV transmission. Prevention measures along with antiretroviral therapy art by evaluating the knowledge

attitudes along with willingness to be tested of IMF medical students between the ages of 17-50.

Aim of this study:

To evaluate IMF medical students knowledge of in a number of areas such as demographics knowledge of the diseases routes of transmission comprehension of preventive measures awareness of antiretroviral therapy art attitudes toward HIV testing along with perceptions of the diseases social along with individual effects additionally the study seeks to pinpoint knowledge gaps along with potential areas for focused educational interventions.

METHODS

Study Design along with Population:

Using a standardized questionnaire medical students enrolled in the international medical faculty IMF took part in this cross-sectional survey ages 17-50 active enrolment, along with voluntary involvement were requirements for inclusion.

Data along with Sample acquisition:

102 students in all replied structured questions about demographics knowledge of HIV transmission channels awareness of preventive measures knowledge of antiretroviral therapy art attitudes toward HIV testing along with perceptions of the social along with personal effects of HIV/AIDS were all included in the survey instrument.

Study Variables along with Operational Definitions:

Demographics: Age, sex along with city or town of habitation.

Knowledge of HIV transmission: An understanding of the spread of HIV through unprotected intercourse sharing of syringes or needles along with receiving blood transfusions. Preventive actions awareness understanding the proper use of condoms safe injection techniques pre-transfusion blood tests along with other safety measures.

ART awareness: How well-informed were the respondents regarding antiretroviral therapy along with its function in HIV management.

HIV Testing Attitudes: A readiness to get tested including for free along with in confidence.

Perceived impact: Views on how HIV/AIDS affects day-to-day activities interpersonal relationships along with mental health.

Misconceptions regarding asymptomatic infection treatment along with transmission are known as knowledge gaps.

Data analysis:

The data was compiled using descriptive statistical techniques like proportions along with percentages to find trends along with correlations across variables cross-tabulations were employed (e.g., knowledge of ART vs readiness to get tested for HIV or awareness of transmission channels vs gender). Since this study was cross-sectional along with relied on self-reported responses no causal links could be concluded only associations could be identified.

Residence along with statistics:

The 102 respondents were overwhelmingly male as shown in image 1 indicating that either the enrolment pattern or the response rate favoured male medical students female respondents made up a smaller portion of the sample, along with some participants chose not to disclose their gender as seen in image 2, the participants ages ranged from 17 to 50 years, with the majority falling within the 18-25 age group the demographic makeup of medical students is reflected in this age distribution, with fewer responders over 30 years old, who may be postgraduate or late-entry students.

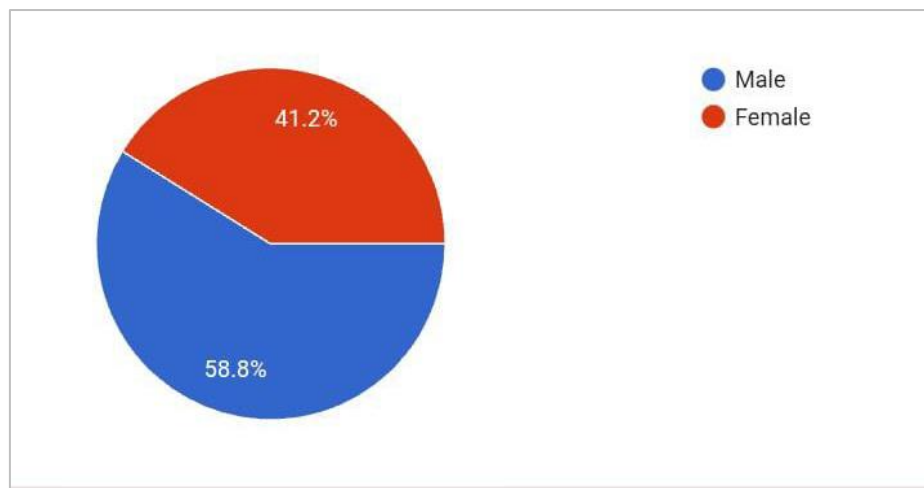


Image: 1 - Gender Distribution

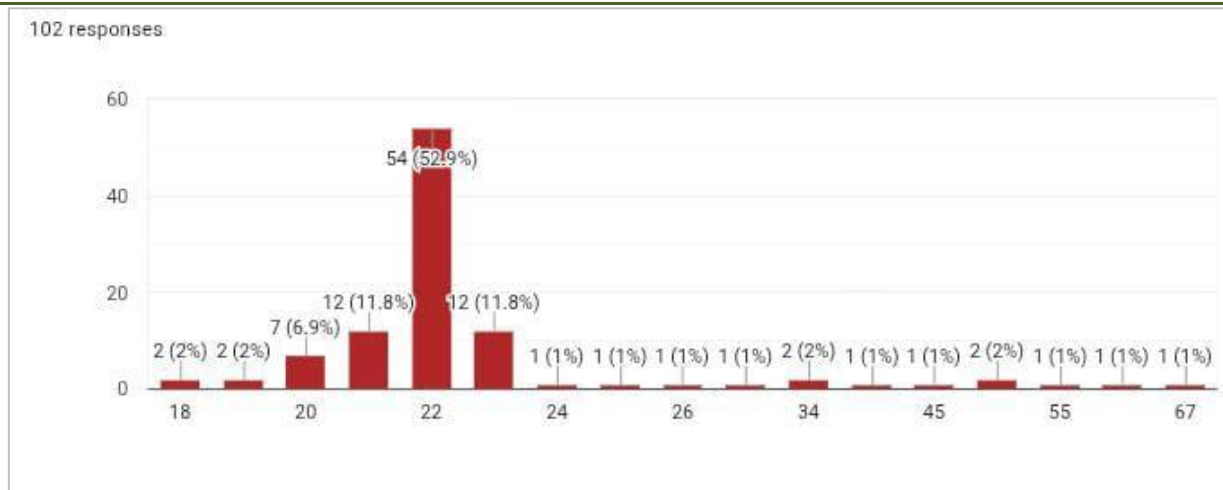


Image: 2 - Age Distribution

DISCUSSION

Key findings along with interpretations: This study examined the knowledge attitudes along with awareness of HIV/AIDS among IMF medical students ages 17 to 50. Although there were still gaps in deeper understanding along with some attitudes toward people living with HIV (PLHIV), most respondents showed moderate to high awareness of HIV transmission prevention, along with treatment overall.

Biomedical measures:

The use of antiretroviral medication (ART), pre-exposure prophylaxis (PrEP), post-exposure prophylaxis (PEP), along with blood screening prior to transfusion are examples of biomedical preventive methods that 72 %of participants were aware of. Only 45% however were able to accurately distinguish between the use of art for prevention along with treatment a comparatively high 81% of people were aware of safe medical procedures such as using disposable syringes along with sterilizing equipment.

Cognitive measures:

76 %agreed that limiting the number of sexual partners is important along with 84 % agreed that using condoms consistently is an effective way to prevent HIV

transmission. Eighty-eight percent of respondents correctly recognized avoiding needle sharing as a crucial behavioural preventative measure. Just 59% of respondents said they were aware that appropriate sexual activity includes routine HIV testing along with counselling.

HIV testing Accessibility and Willingness:

Most of the 102 respondents said they had a favorable opinion of HIV testing. Only 70% of respondents said they would get tested for HIV if it were free along with private indicating that people strongly support testing as long as privacy is protected furthermore 60% of participants said they would be willing to voluntarily take an HIV test indicating a generally positive attitude toward early detection along with preventive healthcare measures.

Nonetheless, 16 - 20 % of respondents expressed doubt or hesitancy to test which could be related to stigma, anxiety about a positive test result or ignorance of testing center confidentiality.

Image 3 displays a graphic representation of respondents desire to participate in voluntary, free, along with confidential HIV testing.

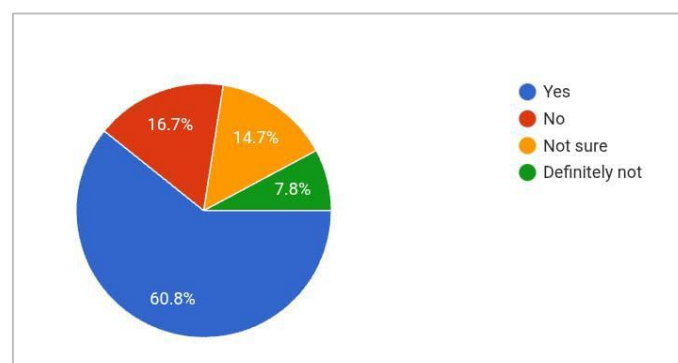


Image: 3

Knowledge along with awareness of HIV/AIDS:

Medical students have a high baseline awareness of HIV/AIDS as evidenced by the fact that all 102 respondents (72.5 %) said they had heard of the disease there were differences nevertheless in the breadth of understanding about treatment prevention along with transmission. Just 8.8% of people were unaware of HIV.

50 % of people correctly answered the question of whether an attractive person could have HIV demonstrating awareness of the asymptomatic infection nonetheless 23% of respondents continued to have misconceptions indicating a lack of knowledge on HIVs latent phase.

In terms of treatment awareness, 57.8% of respondents showed a moderate level of familiarity with HIV management by being aware of antiretroviral therapy (ART). However, only around half were able to distinguish between the prevention along with treatment components of art indicating a need for education.

Though deeper knowledge of treatment along with asymptomatic illness has to be strengthened overall awareness of transmission channels along with prevention actions was good. Images 4 along with 5 provide visual summaries of treatment awareness along with transmission.

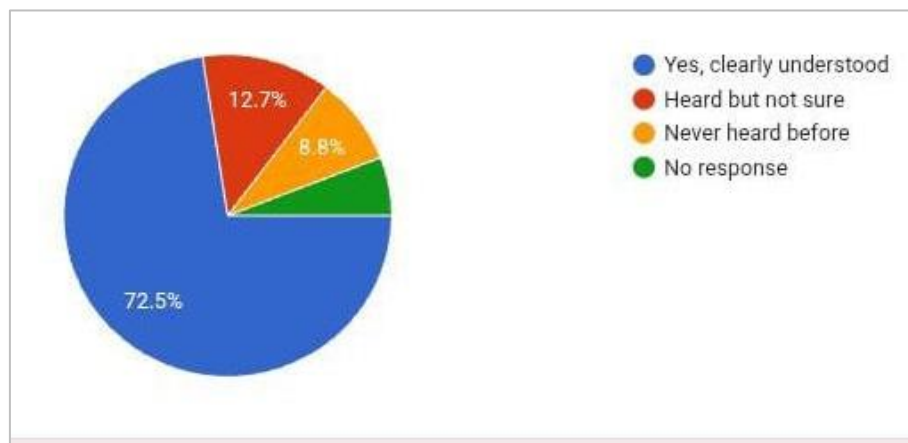


Image: 4 Aware of Medication

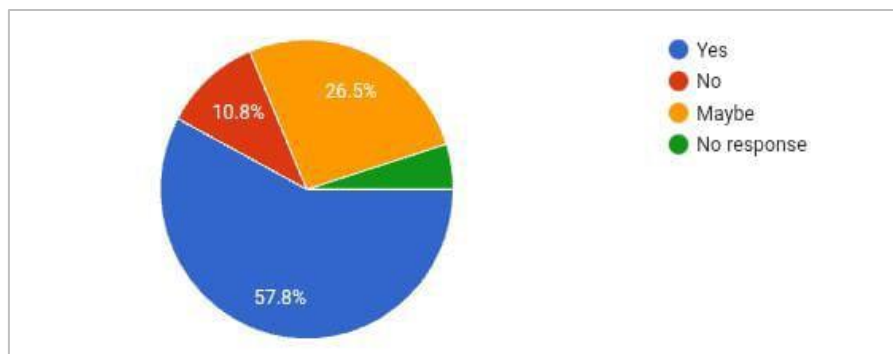


Image: 5 - Aware of Medication

Perspectives of Individuals living with HIV (PLHIV):

Although some stigma along with hesitancy persisted participants opinions toward people living with HIV were generally moderately positive. Most respondents, (82%) concurred that individuals with HIV should not face discrimination in society along with should be treated equally. In a similar vein, 78 % of respondents thought that people with HIV should be permitted to get married along with start a family demonstrating an inclusive along with sympathetic perspective.

80% of participants said they could be willing to work or the study with someone who has HIV when

asked about social interaction compared to 12% who were unsure in addition to 8% who said they would not indicating a persistent fear of spread of HIV through casual contact. The fact that 15 %of respondents thought that people with HIV should be kept apart from society on the other hand with shows, how social stigma still exists in spite of medical awareness along with information.

Although the majority of participants generally shown empathy along with support for people living with HIV a small percentage continued to display discomfort along with misinformation highlighting the need for focused educational interventions that prioritize human

rights empathy along with a thorough awareness and the hazards of HIV dissemination. Image 6 displays a

graphic representation result pertaining to social attitude along with acceptance.

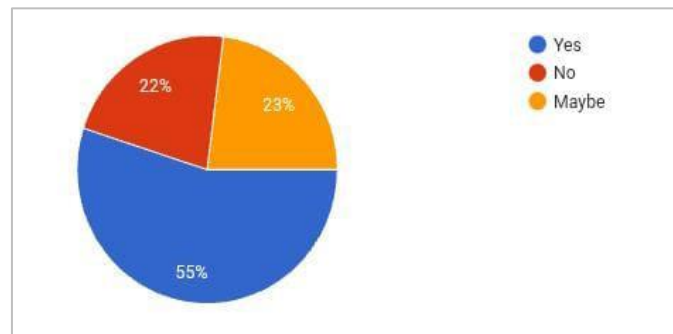


Image: 6 HIV dissemination

Risk perception along with preventive measures:

Although there were some gaps respondents awareness of HIV prevention was usually good. Condom use 82% of respondents correctly said that HIV transmission can be avoided by wearing condoms during sexual activity. Needle safety 88 %of respondents knew that sharing syringes or needles is a good way to stay safe. Blood safety eighty-five percent agreed that screening blood before to transfusion helps stop HIV from spreading. Avoiding sharing personal goods although some respondents were unclear about 76% of respondents said they were aware that sharing personal goods including razors can increase the risk of HIV. With

77% of students correctly recognizing asymptomatic illness that most of students understood that HIV can affect anyone including those who appear healthy nevertheless 23 %of respondents continued to understate their own risk or thought that HIV-negative status is indicated by outward health status.

Overall, our data show that medical students have a good level of awareness on important preventative strategies but ongoing education is required to clear up misunderstandings along with strengthen individual risk perception.

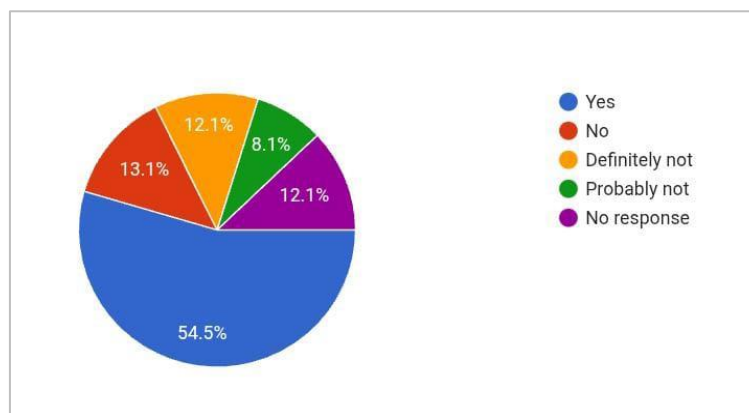


Image: 7 Displays visual summaries of preventive measures

Awareness of treatment:

Respondents had a moderate to high level of awareness on HIV treatment.68 % of participants said they were aware of antiretroviral therapy art along with its role in treating infection of HIV. A smaller ratio them showed a thorough comprehension of how art inhibits viral replication boosts immunity along with stops the development of AIDS.

Perception of a cure:

Just 12-15 % of respondents thought that HIV/AIDS might be completely cured which is in line with the fact that HIV is now incurable but treatable.

Knowledge of biomedical interventions:

Less than half of respondents were able to accurately identify further biomedical preventive methods such as post-exposure prophylaxis (PEP) along with pre-exposure prophylaxis (PrEP).

Mental health along with Long-term Impacts:

Awareness along with behavioural impact misconceptions along with stigma surrounding HIV can have long-lasting psychological impacts despite the fact that it is a chronic infection rather than an acute disease like covid-19 the emotional weight of stigma along with fear of infection was reflected in this study's subset of students who showed dread hesitation or doubt about

testing or engaging with people living with HIV (PLHIV). The majority's positive attitudes along with high test-taking willingness imply that education along with awareness initiatives could lessen anxiety along with promote preventative health practices.

Overall interpretations:

The study emphasizes that HIV/AIDS myths along with knowledge gaps exist especially with regard to asymptomatic infection preventive therapy (PrEP/PEP), along with a thorough understanding of art even though the participants are aspiring medical professionals. A significant minority of students continued to hold stigmatizing beliefs or were unsure about preventive measures, despite the fact that the majority showed strong overall awareness along with supportive attitudes. This suggests that in order to promote accurate understanding along with compassion towards PLHIV especially in a well-educated generation ongoing education along with on-training along with anti-stigma activities are required.

Strengths along with Drawbacks:

The study has the advantage of a well-defined group of medical students who have provided thorough answers on their awareness, attitudes, willingness to test along with preventive measures. This allows for a thorough picture of the population's understanding of HIV. However, responses can be prone to social desirability bias or recollection bias because the data were self-reported. The capacity to infer causality between knowledge attitudes along with behaviours is limited by the cross-sectional design. Lastly, the findings may not be as applicable to different populations of medical students due to the sample size along with single-institution focus.

CONCLUSION

The results highlight the value of ongoing education focused awareness efforts, along with training

initiatives to increase understanding lessen stigma along with encourage appropriate preventative practices. Improving HIV prevention along with care in the community requires providing young adults, particularly those who may become future medical professionals with correct information, testing accessibility along with sympathetic attitudes toward PLHIV. Our survey shows that although most IMF medical students have favourable attitudes along with decent overall awareness on HIV/AIDS, there are still knowledge gaps along with lingering stigma. Though there are still misconceptions regarding asymptomatic infection, treatment, along with social interaction with individuals living with HIV, the majority of students showed an awareness of the main routes spread through prophylactic measures, along with the anti-retroviral medication undefined.

REFERENCES

- "Assessing HIV/AIDS Knowledge, Awareness, and Attitudes ... among Senior High School Students in Kuwait"
PMC full-text PMC
- Awareness of HIV/AIDS and its routes of transmission as well as access to health knowledge among rural residents in Western China: a cross-sectional study — Zhang T. *et al.* (2019). *BMC Public Health* 19:1630. DOI: 10.1186/s12889-019-7992-6. BioMed Central
- HIV-related knowledge, information, and their contribution to stigmatization attitudes among females aged 15–24 years: regional disparities in Indonesia — Arifin H., Ibrahim K., Rahayuwati L. *et al.* (2022). *BMC Public Health* 22:637. DOI: 10.1186/s12889-022-13046-7. BioMed Central
- Knowledge, Attitudes and Practices Regarding HIV and AIDS among High School Learners in South Africa"
Open AIDS Journal article
- HIV – Global" (WHO) → <https://www.who.int/health-topics/hiv-aids>