An Assessment of the Level of Awareness, Attitudes, and Opinions of the Medical Students Concerning HIV and AIDS in Malaysia

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ABSTRACT

Introduction: Human Immunodeficiency virus infection (HIV) and Acquired Immunodeficiency Syndrome (AIDS) has become one of the most serious health problems in the world. Medical students awareness, attitudes and opinions must be assessed as they are leading health care professionals who provide treatment and care to the HIV and AIDS individuals. This survey was conducted to assess the level of awareness, attitudes and opinions of third year till fifth year medical students concerning HIV and AIDS from universities around Klang Valley area, Malaysia.

Materials and Methods: A total of 327 medical students of third to fifth been took part in the survey. Self prepared and self validated questionnaire was used to assess the study outcomes. Students were asked to fill the consent forms before filling the questionnaires. The results were analyzed by using SPSS version 17. A cross-sectional study among medical students was performed. Data was analyzed with non-parametric spearman’s correlation test to find the difference at p-value < 0.05.

Results: A great majority knew that HIV can be spread via tattoo or body piercing (89.3%), from mother to child (97.9%), being a homosexual (93.3%) and even having circumcision for protection (71.9%). Also, they were aware that HIV cannot be transferred via sneezing and cough (95.1%), swimming pools (89.0%), and toilet seats (89.6%). However, only a few were aware of other modes of transmission, such as visiting the barbers (41.3%), and having blood splashed on outer body surface including mouth and eyes (49.2%). Only a few negative attitudes were shown such as being unsure about keeping close vicinity to HIV patients and being unsure of whether HIV negative people should be allowed to marry HIV positive patients (median=3).

Conclusion: An optimal plan of education with awareness campaign and preclinical experiences should be made in the future curriculum to increase the knowledge, confidence and minimize phobia among students.

INTRODUCTION

Human immunodeficiency virus (HIV) is one of the world’s leading killer infections with more than 25 million lives taken over the past three decades [1]. According to Global HIV/AIDS response progress report 2011, estimates of 34 million people were living with HIV in the end of year 2010 [2].

In Malaysia, from 1986 to 2011, the total number of people living with HIV (PLHIV) is approximately 81,001. There were 3,479 new cases reported to the Minister of Health in 2011, with an average of 9 new cases daily. Also, the reported number of AID-related deaths has been reduced annually due to the introduction of more affordable and accessible first and second line Antiretroviral (ARV) treatment. It is predicted that there will be 81,317 people living with HIV by the end of 2015 [3].

It had been suggested in a study done by Hentegen et al., poor knowledge of routes of transmission and negative attitudes among health professionals towards HIV were found [4]. Similarly, negative attitudes were reported in the study done by Szadkowsai et al., [5]. Also, findings of incomplete knowledge of routes of transmission and unwillingness to provide care were shown in a study done by Moshim et al., [6]. Besides, a study done by Ni et al., revealed a weak knowledge of mother to child transmission through breast feeding [7]. Another study which was done by David et al., reported that students feel it is hazardous to treat AIDS patients and they have the right to reject treating AIDS patients [8].

Medical students are one of the leading health care professionals who provide treatment and care to the HIV individuals. It is believed that the findings of deficiency in knowledge and negative attitudes towards HIV in some studies could become a barrier for the medical students to provide treatment to HIV individual in the future. Therefore, it is important to access their current level of awareness, attitudes and opinions towards HIV/AIDS. Based on the findings, it will be useful as a guide for us to see what should be implemented in the future curriculum.
MATERIAL AND METHODS

The main objective of the survey was to assess the level of awareness, attitudes, and opinions concerning HIV/AIDS among the third to fifth year medical students. The data collection was done between the months of August and September 2012. The study was a descriptive, cross-sectional study design and was conducted in a form of survey. Convenience sampling design with non-probability process was used in the survey. The study was conducted within Klang Valley area (Selangor & Kuala Lumpur) [Table/Fig-1]. Participants from two medical universities were selected as the target subjects for the study. The calculated sample size was 288, using RAOSOFT calculator with 95% confidence interval and 5% error margins. Ethical approval had been obtained from International Medical University (IMU) Joint Research and Ethics Committee (4.26/JCM-57 II/2012). Informed consent letters were obtained from the respondents who voluntarily participated the survey. Questionnaire items were developed from literature reviews and consultation with experts from different related fields. To validate and check the reliability of the questionnaires, a pilot study was carried out on 50 students for feedback. A good reliability index (cronbach alpha) of 0.75 was shown as the result of the pilot study. The questionnaire comprised of three sections: [A] Awareness, [B] attitudes, and [C] opinions. Awareness part is subdivided into: (1) modes of transmission (10 questions) and (2) prevention (5 questions). It was assessed on ‘Yes’, ‘No’ and ‘Don’t Know’ basis. Each right response scored 2 and incorrect response scored 1. Attitudes and opinions parts consisted of 6 and 5 questions separately. The scores for the responses ranged from 1-5 for the answers from strongly disagree to strongly agree. Only 91% (327 out of 359 participants) of the survey questionnaires were taken and the other 9% was discarded due to incomplete information and answers. Statistical Package for Social Sciences (SPSS) version 17 was used for data management and analyses. To give general descriptions of the data, descriptive statistics including frequencies, means, standard errors of mean, medians, and standard deviations were performed. Non-parametric Correlations (spearman’s correlation) was performed to measure the correlation of any two questions. P-value < 0.05 was considered statistically significant.

RESULT

A summary of the demographic characteristics of the respondents was presented in [Table/Fig-2]. The range of age for all 327 respondents was between 20-28 years; the median age was 23.42.2% were male and 57.8% were female. More than half of the respondents were Malay, followed by 34.4% of Chinese, 9.5% of Indian and 2.1% of other races.

AWARENESS ABOUT HIV AND AIDS

Estimated Modes of Transmission

The study revealed that most of the respondents knew that HIV can be spread via tattoo or body piercing; from mother to child, being a homosexual and even having circumcision for protection. Majority of the respondents were also aware that HIV infection cannot be transferred through sneezing and cough, swimming pools, and toilet seats. However, a smaller majority were aware of other modes of transmission, such as visiting the barbers, and having blood splashes on outer body surface including mouth or eyes. Only a small amount of respondents knew that there is no occupational risk of getting HIV by having contact with HIV infected patients [Table/Fig-3].

Awareness of HIV Prevention

[Table/Fig-4] shows that, on questions about ways of HIV prevention, most of the respondents were aware that HIV infection can be prevented by using a condom correctly for every sexual intercourse, by avoiding previously used needles and cannot be prevented by vaccination. A minor amount of the respondents were not aware that HIV infection cannot be prevented by abstinence from sex only, and by staying faithful to one partner.

Attitudes Towards HIV/AIDS

[Table/Fig-5] summarizes the descriptive statistic data of the students’ attitudes concerning HIV/AIDS. For question A1, the data indicated that the medical students were unsure about keeping HIV patients in close vicinity to them. The data also revealed that the students agreed that receiving blood transfusion puts them at HIV risk.
risk. Referring to the question A3, A4, and A5, whether the students will provide care/counseling to the HIV patient, whether they will take initiative to educate others and whether they would continue their friendship/respect with HIV/AIDS friends, the response was towards the agreeing side. On the other hand, in question A6, data showed the students strongly disagreed to keep HIV patients out of school/university/family.

Opinions about HIV/AIDS

[Table/Fig-6] summarizes the descriptive statistic data of the students’ opinions concerning HIV/AIDS. Based on the data shown, for question O1 and O3, most students strongly agreed that a law should be enacted on pre-marriage HIV testing and parents should be the first educating initiators for their children. Also, they think that cartooning is a way of message delivery about risk factors of HIV to the children in question O3. For question O4, Most students indicated that they were opposed to quarantine HIV patients. Majority of respondents were unsure whether HIV-positive patient should be allowed to marry many HIV-negative patients.

Non-parametric Correlations – Spearman’s Rho correlation

[Table/Fig-7] summarized the correlation between awareness, attitudes and opinions towards HIV. Spearman’s correlation suggested a significant weak negative linear relationship between the question of O1 and O5, A3 and O4, A5 and A4. While for question A6 and O4, A4 and O2, and A4 and O3, a significant weak positive linear relationship was shown.

DISCUSSION

The level of overall awareness regarding HIV/AIDS transmission was encouraging with 71.9–97.7% correctly answering most of the questions. However few questions showed unsatisfactory level of awareness. Only 41.3% of the respondents were aware that HIV can be transmitted through visiting the barbers, a finding which differs from a study conducted by Tavoosi et al., (91% of the students were aware that HIV can be transmitted through shaver blade) [9]. The transmission of virus through shaver blade was due to unsatisfied frequency and quality of decontaminating the instruments [10]. This finding is similar to some previous studies on barbers’ practices [11-13]. Also, skin damage occurs during barbering will expose the circulatory system to infection [10].

Students were less aware that HIV can be transmitted by having blood splashes on outer body surface including mouth or eyes. Likewise, a study which was done by Silva et al., demonstrated that the risk of blood splashes to the eyes is underestimated and not fully appreciated by health care workers in general. Such splashes are unlikely to cause a reflex blink when hitting the eyes, and eventually unlikely to cause an infection to occur [14].

The misconception regarding the belief of having occupational risk of getting HIV infection by having contact with HIV patients was still held. Similarly, a study done by Lal P et al., reported that majority of the medical interns (68.3%) perceived themselves to be at high risk of acquiring HIV infection during their medical career [15]. This finding indicated that the students still lack confidence in dealing with HIV patients. In a study by Hu et al., it reported that although the risk for HIV transmission and other blood borne pathogens in health care settings is certainly real, it can be largely preventable [16].
CONCLUSION

Students have lack of awareness that HIV can be transmitted through visiting the barber and having blood splashes on outer body surface. Knowledge regarding other minor routes besides sexual transmission was still insufficient. Also, negative attitudes such as misconception about occupational risk of getting HIV through having contact with patients and phobia of receiving blood transfusion and staying close with HIV patients were still held. Therefore, an optimal plan of education with more awareness campaigns and preclinical experiences should be made in the future curriculum to increase the knowledge, confidence and minimize phobia among the students.

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REFERENCES


LIMITATIONS

The findings may only be generalizable to similar populations of students but may not applicable to all university students in Malaysia. Secondly, the use of English language only in the questionnaire.

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