

General Knowledge and Misconceptions about HIV/AIDS among the University Students in Malaysia

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ABSTRACT

This study was aimed to determine the general knowledge and misconceptions among the undergraduate students in a private university in Malaysia. Data was collected from a stratified random sample of 180 students using a validated questionnaire survey to assess the general knowledge and misconceptions about HIV/AIDS. The data was analysed by using the SPSS software and Chi-square test was used to find the *p*-value for each of the questions. The average mean score assessing the general knowledge of the students in was 82.32%, where the Health Science students scored 45.11% with a standard deviation of 0.017 and the Non-Health Science students scored 36.15% with a standard deviation of 0.026. When comparing each question using the Chi-square test, most of the answers of the Health Science students and Non-Health Science students showed a significant difference where the *p*-value was <0.05. From the results of this study it is clear that the Health Science students had better knowledge and fewer misconceptions than the Non-Health Science students.

Keywords: General knowledge, Misconception, HIV/AIDS, students, Malaysia.

INTRODUCTION

Human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) is a spectrum of conditions caused by infection with the human immunodeficiency virus (HIV). The human immunodeficiency virus is a lentivirus that causes HIV infection and over time acquired immunodeficiency syndrome. HIV infection is one of the largest threat in the world. With only 5 percent of the Eastern and Southern African, it is home to half of the world's population living with HIV. In recent decades, HIV/AIDS has been working its magic up into society,

spreading like an unstoppable cancer, almost to the point of it being immortal. The cumulative number of HIV cases in Malaysia went up to 101,672 cases by the end of 2013 [1]. Due to lack of adequate information, youths are more exposed to infection as they engage in risky sexual practices [2].

There are few studies that have examined potential differences in knowledge and misconception towards HIV/AIDS. In Malaysia, talks and awareness programs about HIV/AIDS are held at secondary schools regularly. However, there are new cases of HIV/AIDS arising among people every year. This could be caused by low level of knowledge regarding HIV/AIDS. This shows that the awareness programs held at school levels alone is not enough to prevent this disease from spreading. However, these studies have been limited to compare integrated knowledge and misconceptions of the Health Science and Non-Health Science students. Health Science students may have a better exposure to gaining knowledge about

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this disease since it is a part of their curriculum whereas it is not the case for Non-Health Science students. It is of utter importance that both Health Science and Non- Health Science undergrads are equipped with the knowledge of HIV/AIDS. Thus, the knowledge and misconceptions about this disease among university

students should also be assessed. Therefore, the aim of this study was to determine the general knowledge and misconceptions among the Health Science students and Non-Health Science students about HIV/AIDS in Lincoln University, Petaling Jaya, Selangor, Malaysia.

MATERIALS AND METHOD

| | |
|----------------------------------|---|
| Study design | Descriptive, cross sectional study |
| Study population | Undergraduate students from Lincoln University, Petaling Jaya, Selangor, Malaysia. |
| Sample Size | Total 180 among which 90 are Health Science students and 90 are Non- Health Science students |
| Inclusion and exclusion criteria | Malaysian students aged between 18-25 years old were included. The students under 18 and above 25 years old were excluded. |
| Study survey instrument | Self-administered validated questionnaire |
| Data Collection | The self-administered questionnaire was distributed and collected personally |
| Statistical analysis plan | All statistical analyses were performed using SPSS |

RESULTS

The Table 1 shows the demographic characteristics of the total participants. The evaluation was conducted with 180 students of both Health Science and Non-Health Science.

Table 1: Demographic characteristics of the total participants (n=180)

| Characteristics | Total (n=180) | Health Science (n=90) | Non-Health Science (n=90) |
|---------------------------|----------------------|-----------------------|---------------------------|
| Age (y), mean (\pm SD) | 21.65 (\pm 1.655) | 21.18 (\pm 1.481) | 21.08 (\pm 1.892) |
| Gender, n (%) | | | |
| Male | 52 (29.2%) | 26 (28.9%) | 26 (28.9%) |
| Female | 128 (70.8%) | 64 (71.1%) | 64 (71.1%) |
| Marital status | | | |
| Single | 180(100%) | 90 (100%) | 90 (100%) |
| Married | 0 (0%) | 0 (0%) | 0 (0%) |
| Widowed | 0 (0%) | 0 (0%) | 0 (0%) |
| Divorced | 0 (0%) | 0 (0%) | 0 (0%) |
| Separated | 0 (0%) | 0 (0%) | 0 (0%) |
| Religion | | | |
| Muslim | 66 (36.2%) | 36 (38.9) | 30 (33.3%) |
| Christian | 28 (15.6%) | 15 (16.7) | 13 (14.4%) |
| Buddhist | 42 (23.8%) | 16 (18.9) | 26 (28.9%) |
| Hindu | 40 (22.2%) | 21 (23.3) | 19 (21.1%) |
| Others | 4 (2.2%) | 2 (2.2) | 2 (2.2%) |
| Race | | | |
| Malay | 60 (33.3%) | 30 (33.3%) | 30 (33.3%) |
| Chinese | 60 (33.3%) | 30 (33.3%) | 30 (33.3%) |
| Indian | 60 (33.3%) | 30 (33.3%) | 30 (33.3%) |

SD denotes standard deviation, n denotes number of participants, y denotes years

From Table 1, we can see that the mean age of the total participants was 21.65 years and its standard deviation is 1.655 years. Among the participants, 90 of them were Health Science students (50%) and 90 of them were Non- Health Science students (50%). The participants were composed of 52 (29.2%) males and 127 (70.8%) females. The participants were all

Malaysians from the three major races in Malaysia (Malay n=60, Chinese n=60 and Indian n=60). The marital status of all participants is single. Among all the 180 participants, majority were Muslims 66 (36.2%) followed by Buddhists 43 (23.8%), Hindus 40 (22.2%), Christians 28 (15.6%) and others (2.2%).

The Table 2 shows the frequency and percentage of correct answers and wrong answers among the participants based on faculty of the students.

Table2: Questions on general knowledge on HIV/AIDS

| Variables | Correct Answers | | Wrong Answers | | p-value |
|--|-----------------|--------------------|----------------|--------------------|---------|
| | Health Science | Non-Health Science | Health Science | Non-Health Science | |
| General Knowledge | | | | | |
| 1. AIDS abbreviation | 85 (47.2%) | 55 (31.2%) | 6 (3.3%) | 33 (18.3%) | 0.000 |
| 2. AIDS a transmittable disease | 82 (45.6%) | 75 (41.7%) | 5 (2.8%) | 15 (8.3%) | 0.018 |
| 3. AIDS a hereditary disease | 64 (35.6%) | 36 (20.0%) | 27 (15.0%) | 54 (30.0%) | 0.000 |
| 4. AIDS cured at this moment | 82 (45.6%) | 74 (41.1%) | 8 (4.4%) | 16 (8.9%) | 0.079 |
| 5. There is a vaccine for AIDS Attitudes | 64 (35.6%) | 47 (26.1%) | 26 (14.4%) | 43 (23.9%) | 0.009 |

The table 2 showed that among the 5 questions regarding the general knowledge for HIV/AIDS, all the frequency and also the percentage of correct answers was higher in Health Science students (30.0%-50.0%) as compared to Non-Health Science students (20.0%-45.0%). In other words, the frequency and percentage of wrong answers was higher in Non-Health Science students (5.0%-30.0%) than in Health Science students (4.4%-15.0%). Significant differences were observed

between the answers given by Health-Science students and also Non-Health Science students.

In Table 3, the frequency and percentage of correct and wrong answers among the participants based on their experience in science are reported (Health Science and Non Health Science Students). The table showed 5 questions related to the misconceptions about HIV/AIDS.

Table 3: Questions on misconceptions about HIV/AIDS

| Variables | Correct answers | | Wrong answers | | p-value |
|---|-----------------|--------------------|----------------|--------------------|---------|
| | Health Science | Non-Health Science | Health Science | Non-Health Science | |
| Misconceptions | | | | | |
| 1. Love is a reason for HIV/AIDS | 85 (47.2%) | 71 (39.4%) | 9 (5.0%) | 14 (7.8%) | 0.264 |
| 2. AIDS is a punishment of God | 80 (44.4%) | 65 (36.1%) | 10 (5.6%) | 25 (13.9%) | 0.005 |
| 3. AIDS can treat by holy water | 81 (45.1%) | 82 (45.6%) | 5 (2.8%) | 8 (4.4%) | 0.388 |
| 4. AIDS do not come after marriage | 79 (43.9%) | 71 (39.4%) | 11 (6.1%) | 19 (10.6%) | 0.110 |
| 5. AIDS can be transmitted by the cough | 81 (45.0%) | 70 (38.9%) | 9 (5.0%) | 20 (11.1%) | 0.026 |

From this Table 3, we can see that the frequency and percentage of correct answers was higher in Health Science Students compared to Non-Health Science Students and vice versa for the wrong answers. The majority of Health Science respondents had less misconception about HIV/AIDS, with 75-85%

correctly answering the five statements. However, many misconceptions were still noted relating to HIV/AIDS, such as "AIDS is a punishment of God", "AIDS can be transmitted by cough" and "AIDS do not come after marriage" which at least of more than 10% of Non-Health Sciences Students had answered incorrectly.

The Table 4. represented the mean and standard deviation of all the other tables (Table 1, 2 and 3).

Table 4: Total Average of All Variables

| Variables | Correct answers | | Wrong answers | |
|-------------------|------------------------|------------------------|-----------------------|------------------------|
| | Health Science | Non-Health Science | Health Science | Non-Health Science |
| General Knowledge | 44.12% (± 0.062) | 32.12% (± 0.094) | 8.90% (± 0.062) | 17.88% (± 0.094) |
| Misconceptions | 46.10% (± 0.013) | 40.44% (± 0.036) | 4.70% (± 0.013) | 9.56% (± 0.036) |
| Mean (\pm SD) | 45.11% (± 0.017) | 36.15% (± 0.026) | 6.80% (± 0.018) | 12.83% (± 0.036) |

SD denotes standard deviation

DISCUSSION

As far our knowledge, this is the first descriptive, cross-sectional study conducted to determine the general knowledge and misconceptions of HIV/AIDS among the Health-Science students and Non-Health Science students in Lincoln University. Since HIV is a very common infection, it is important that people should have ample knowledge and awareness about HIV/AIDS. This study could have a positive impact on raising awareness of HIV/AIDS knowledge and misconceptions among undergraduate students in Malaysian Universities. Educational awareness programs about HIV/AIDS have been one of the key measures in controlling the infection, as they promote the healthy life style of the general public [3, 4]. The study reveals several findings about the general knowledge and misconceptions among Health Science students and also Non-Health Students in Lincoln University.

GENERAL KNOWLEDGE

About 78% of the respondents of both branches (Health Science students and Non-Health Science students) had a clear understanding about the abbreviation used for HIV/AIDS. The Health Science students had answered more correctly and possess a better knowledge of HIV/AIDS than the Non-Health Science students. Both the groups had good knowledge about AIDS which

cannot be cured having a high percentage of correct answer.

About the concept of "AIDS is a hereditary disease" and "there is a vaccine for AIDS", the Health Science percentage of answering correctly was higher as compared to Non-Health Science percentage. In our study, however about 20%-35% of the respondents thought that AIDS is not a hereditary disease whereas about 26%-36% of the respondents thought there was no vaccine available for AIDS. Thus, overall the respondents had good knowledge about the abbreviation of AIDS, AIDS transmission and its curing except they lack knowledge of AIDS being a hereditary disease and whether there is a vaccine available for AIDS. A similar study was conducted in Tanzania; it spoke about three quarters of the respondents demonstrating comprehensive knowledge about HIV/AIDS [5, 6]. In contrast, a study conducted in Saudi Arabia showed the overall mean knowledge score of the respondents was 5.2 correct answers out of 9. However, in this study a low knowledge level of HIV/AIDS was found among the medical and non-medical students [7]. Another study that was conducted among Sudanese University students stated that the participants had poor knowledge about HIV/AIDS [8]. Therefore, it is important to consider taking initiative in setting up various centres in order to instil a basic knowledge about the disease all around the world so that as to eliminate the stigma surrounding this

disease.

Misconceptions

It is very common to have some misconception about HIV/AIDS in any population. Misconception about HIV may cause a negative attitude towards people suffering from this serious disease that could lead to serious harm on their physical and emotional state. Misconception is a major barrier to control and prevent the spread of AIDS^[9, 10].

Since Malaysia is a conservative country where it is not encouraged to talk about sexual issues, the expected rate of misconceptions is very high. This is also the same with other conservative countries like Sudan for example where it is rare for parents to discuss sensitive topics such as STDs with family members^[11]. But our study revealed that most of the respondents didn't have a lot of misconceptions about HIV/AIDS. However, our findings showed that the Non-Health Science respondents had a higher percentage of misconceptions than the Health Science respondents.

The highest misconceptions from both populations were with the statements "AIDS is a punishment of God", "AIDS do not come after marriage" and "AIDS can be transmitted by the cough". Even though Malaysia is a religious country, for the statement "AIDS is a punishment of God" only few participants 10 (5.6%) from Health Science and 25 (13.9%) from Non-Health Science had incorrect answers. Other studies however, have shown that there was a higher percentage of people who believe that AIDS is a divine punishment from God^[4, 8]. Also comparing to a study done in Sudan for the statement "AIDS do not come after marriage", 11 (6.1%) participants of Health Science and 19 (10.6%) participants of Non-Health Science answered incorrectly. Finally, for the statement "AIDS can be transmitted by the cough", 9 (5.0%) participants of health science and 20 (11.1%) of non-health science answered incorrectly. A study conducted earlier in Japan showed that fear, lack of knowledge, or religious beliefs, negative attitudes towards HIV/AIDS patients can lead to stigmatization of the disease^[12]. It is very important to take action in order to get rid of these misconceptions that people have towards HIV and AIDS. South Africa has set an interesting example in implementing HIV/AIDS prevention programs including community-based HIV awareness programs and education campaigns, research

on HIV prevention together with the introduction of anti-retroviral therapy (ART). This comprehensive approach has led to increased knowledge within the community which reduced the social stigma and led again to better uptake of voluntary counselling and HIV testing^[13]. The Malaysian government could take up few of these above examples so as to create better awareness and knowledge among the population of the country.

CONCLUSION

The major findings of this study were that the Health Science students had better knowledge and fewer misconceptions when compared to Non-Health Science students. This study draws a general picture of student population's knowledge and misconceptions towards HIV/AIDS. Though the SEGi student population had a good knowledge background, there were few misconceptions that need to be addressed. However, Furthermore, from the study we come to a conclusion that despite the knowledge that the students possess it is important to raise awareness about this disease, and this can be done by taking initiative in conducting campaigns, awareness programs, educational speeches, hosting fundraising events, produce information pamphlets and through social media awareness.

Ethical Clearance- Taken from ethical committee of Faculty of Science, Lincoln University, Petaling Jaya, Selangor Malaysia. All the respondents were given a consent letter to read, accept and sign before they fill the questionnaire.

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Conflict of Interest - Nil

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