

HIV and Youths in Singapore – Knowledge, Attitudes and Willingness to Work with HIV-Infected Persons

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ABSTRACT

Aim of Study: This study examines the level of knowledge among youths in Singapore regarding HIV transmission and their attitudes towards working with a HIV-infected person at the workplace.

Method: Respondents consist of 413 youths from three educational institutions in Singapore. The survey was administered to classes which were randomly selected by the liaison persons of these three educational institutions.

Results: Findings of this study suggest that youths in Singapore are generally clear that HIV can be transmitted through sexual contact, blood transfusion and from a woman to her unborn child. However, our data also suggest that a sizeable number of respondents still possess a number of misconceptions about how HIV can be transmitted.

While available scientific data suggest that HIV cannot be transmitted through casual contact at the workplace, results of this study suggest that some elements of uncertainty and fear still prevail. This is an interesting finding as it suggests that while AIDS education and campaigns may increase knowledge and awareness about HIV transmission, they do not really reduce personal concern about the possibility of infection and the potential stigma associated with working with HIV-infected persons.

Conclusion: The implications of our findings on AIDS education are discussed.

Keywords: HIV, youths, Singapore

INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS), also frequently known as the Human Immunodeficiency Virus (HIV) disease, has reached pandemic proportions world-wide. Recent figures suggest that a staggering 30.6 million people are living with HIV (PWHIVs)⁽¹⁾. To date, there are about 6.4 million PWHIVs in Asia and the Pacific and this figure is expected to rise to between ten and fourteen million cases by the year 2000⁽²⁾. Although there has been significant progress in the medical battle against AIDS, no cure or vaccine is yet available. The emergence of new strains of HIV also makes identification, treatment and prevention of this disease extremely difficult.

AIDS poses a major problem to organisations around the world and the fear associated with this disease is becoming more prevalent. Studies conducted in the United States (US) have noted the panic companies frequently experience when an inhouse case of AIDS is reported⁽³⁾. Fear, compounded by misconceptions about AIDS transmission, has often ignited customer boycotts, disruptions in the workplace and threats of violence.

National surveys and public opinion polls conducted in the West as well as locally have suggested that a large percentage of the general population is often misinformed about how HIV can be transmitted. Negative attitudes toward people with AIDS have often been associated with a lack of knowledge about HIV transmission. Given the potential detrimental effects of misconceptions about AIDS transmission in the workplace, a systematic effort to examine the individual's knowledge about AIDS transmission and their attitudes towards working with people with AIDS is warranted.

While there exists a considerable amount of literature on the impact of AIDS on individuals and organisations in the West, to date, there is a limited amount of research focusing on this issue in a non-western context, particularly in Singapore. Typically, extant research conducted in Singapore consists of descriptive studies examining people's beliefs about AIDS and the ways in which HIV can be contracted⁽⁴⁾, the epidemiology of AIDS in Singapore and knowledge of and attitudes towards AIDS⁽⁵⁾. Much of these research focus on a variety of professional groups such as nurses, doctors, dentists and human resource managers⁽⁵⁾. To date however, relatively little attention has been devoted to the investigation of AIDS among youths in Singapore. This study represents an initial attempt to fill this void in the literature.

The objective of this study was to examine the level of knowledge among youths in Singapore regarding HIV transmission and their attitudes towards working with a HIV-infected person at the workplace. Available statistical evidence suggest that youths form a high-risk group for HIV infection, with teenagers and young adults accounting for three out of five new HIV-infections around the world. Additionally, current statistics reveal that about two-thirds of those who acquire HIV are likely to be

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infected before they reach 25 years of age⁽⁶⁾. Youths are a critical group to target if educational efforts to convey information about transmission and prevention of HIV infection are to be effective as they may be developing new beliefs, forming new relationships and engaging in high risk activities. Extant research suggests that youths form a high-risk group for AIDS as they are at a stage of exploration where risks are often taken with regard to sexuality and drug abuse^(7,8). Compared to other age groups, sexual activity levels and the potential for multiple sexual partners among youths are higher⁽⁹⁾. To the extent that youths represent a rather vulnerable group for HIV infection, an investigation of their level of knowledge regarding HIV transmission and their attitudes towards working with HIV-infected persons at the workplace would contribute significantly in the design and implementation of educational efforts to convey information about the disease targeted at this group.

Additionally, youths constitute a potential pool of the workforce. As temporary and potential members of the workforce, and as individuals developing new beliefs, new relationships and experimenting with high-risk activities, youths will likely encounter situations which necessitate their working with PWHIVs both at present and in the future. In line with this, the present study utilised a youth sample poised to enter the workforce and likely to have had some previous work experience.

METHOD

Three educational institutions in Singapore (National

University of Singapore, Temasek Polytechnic, and SHATEC) agreed to participate in the study. Permission was obtained from the respective liaison persons at the educational institutions. Thereafter, the liaison persons of the three institutions, for purpose of the survey administration, randomly selected classes. The typical survey session took the following pattern: respondents in the respective institutions were given a ten-minute briefing on the aims of the study, its motivation, as well as instructions for the survey. The researcher was present during the survey administration to answer any queries raised by the respondents. Each administration lasted an average of one hour. Consistent with previous studies on AIDS, our questionnaire did not differentiate the virus (HIV) from the disease (AIDS). This was to avoid confusing respondents who may not be aware of the difference⁽¹⁰⁾.

A total of 413 respondents participated in the survey (males = 141; females = 272). The average age of respondents was 20 years. Chinese comprised the majority of respondents (89%); while the remaining 11% comprised ethnic minorities (Malays; Indians; and Eurasians).

RESULTS

Level of AIDS knowledge

Table I summarises the distribution of responses for items pertaining to respondents' knowledge of AIDS. Generally, respondents were realistic in their beliefs about the disease and indicated a high level of awareness regarding HIV transmission.

Table I – Knowledge about HIV transmission*

Items	Disagree (%)	Don't know (%)	Agree (%)
HIV can spread by:			
1. a drug addict sharing needles with other addicts	1.0	0.7	98.3
2. a woman to a man during sex	1.5	0.2	98.3
3. a man to a woman during sex	1.5	0.2	98.3
4. receiving blood transfusions that have not been tested for HIV	2.7	2.2	95.1
5. a woman to her unborn child	1.9	3.4	94.7
6. a man to another man during sex	1.3	5.8	92.9
7. using the same telephone	95.9	3.2	0.9
8. ordinary office contact	95.4	4.1	1.5
9. shaking hands with or touching a HIV-infected person	93.2	4.6	2.2
10. using the same toilet seat	84.3	9.7	6.0
11. cleaning the spoons, forks, plates and drinking glasses used by a HIV-infected person	83.0	12.1	4.9
12. changing bed linens of a HIV-infected person	78.6	17.2	4.2
13. sharing spoons, forks, plates and drinking glasses	74.6	11.3	14.1
14. eating food prepared by a HIV-infected person	67.7	21.6	10.7
15. eating food handled by a HIV-infected person	67.5	22.8	9.7
16. Being coughed or sneezed on by a HIV-infected person	60.3	27.7	12.0
17. mosquitoes or other insects	44.0	25.0	31.0
18. Anyone who is heterosexual is less likely to be infected with HIV than someone who is homosexual	71.3	14.4	14.3
19. Anyone with multiple sexual partners is more likely to be infected with HIV than someone with a single sexual partner	15.0	4.4	80.6

* N = 413 and missing values have been excluded

Findings of this study suggest that respondents surveyed were clear about the main ways through which AIDS can be transmitted: through sexual contact (items 2, 3 and 6); sharing contaminated needles (item 1); blood transfusions (item 4); and pregnancy (item 5). About 81% also agreed that a person with multiple sexual partners is more likely to be infected with HIV than someone with a single sexual partner (item 19).

Interestingly, about 71% disagreed that anyone who is heterosexual is less likely to be infected with HIV than someone who is homosexual (item 18). Clearly, majority of the respondents was aware that AIDS is not solely confined to individuals with certain sexual orientations. This is a noteworthy finding as it suggests that we have come a long way since the 1980s and early 1990s when AIDS was predominantly associated with homosexuality⁽¹¹⁾.

It is also heartening to note from the descriptive statistics that respondents were relatively informed regarding the possibilities of HIV transmission through casual contact. Specifically, about 96% disagreed that HIV can be transmitted through using the same telephone (item 7), while 94% did not agree on the likelihood that HIV can be transmitted through ordinary office contact (item 8). In addition, about 93% disagreed that HIV can be transmitted through shaking hands with or touching a HIV-infected person (item 9). Another 84% reported that one cannot contract HIV using the same toilet seat (item 10), while 83% disagreed that cleaning the spoons, forks, plates and drinking glasses used by a HIV-infected person can result in HIV transmission (item 11).

There is, however, uncertainty over whether HIV can be transmitted by consuming food prepared or handled by HIV-infected people (items 14 and 15). About 10% of respondents agreed that one can be infected with HIV by eating food prepared or handled by a PWHIV while approximately 22% expressed uncertainty over this mode of transmission.

While available scientific data suggest that HIV cannot be transmitted by being coughed or sneezed

on by a PWHIV (item 16) or through mosquitoes or other insects (item 17), 12% of respondents reported that it is possible to be infected with HIV if coughed or sneezed on by PWHIVs, while nearly 28% expressed uncertainty on this transmission mode. Another 31% of respondents agreed that a person could contract the disease through mosquitoes or other insects. Twenty-five percent were uncertain about this route of transmission.

Generally, results of this study suggest that while the majority of respondents surveyed showed a relatively high level of awareness regarding HIV transmission, a sizeable number of them still held a number of biases and misconceptions about how the disease is transmitted. Despite public assurances by health agencies that AIDS cannot be transmitted through casual contact, respondents may still feel unsure about the accuracy of such information. They may worry that some messages are simply attempts to allay public fears.

Such findings are consistent with those obtained in research on AIDS conducted in the West. Generally, extant research on AIDS predicated upon samples of youths in the West reveals that misunderstandings about the possibility of HIV infection still prevailed despite efforts to generate awareness of this disease⁽¹²⁾.

Attitude towards working with PWHIVs

Table II summarises the attitudes and responses respondents had towards working with PWHIVs. While majority of respondents surveyed showed a rather positive attitude towards working with PWHIVs, a substantial number of them still harboured ambivalent attitudes towards the possibility of working with PWHIVs.

For instance, a sizeable portion (about 33%) of respondents reported being "unsure" on the statement: 'It is embarrassing to me to be caught working with HIV-infected people' (item 3). Approximately 31% were uncertain whether they wanted others to know if they worked with HIV-infected people (item 4). Another 36% were not sure if having a HIV-infected colleague would bother them (item 8).

Table II – Attitudes towards working with PWHIVs*

Items	Disagree (%)	Unsure (%)	Agree (%)
1. Working around HIV-infected people will negatively affect my prestige and status	65.3	25.2	9.5
2. Working with HIV-infected people places a person in a life-threatening situation	64.5	17.3	18.2
3. It is embarrassing to me to be caught working with HIV-infected people	60.7	33.4	5.9
4. If I work with HIV-infected people, I do not want others to know about it	57.9	30.8	11.3
5. It may be dangerous for individuals to work around HIV-infected people	47.7	22.3	30.0
6. HIV-infected people do not pose a threat to their co-workers	31.6	28.9	39.5
7. There is no reason to fear working together with HIV-infected persons	23.1	22.8	54.1
8. Having a HIV-infected colleague would not bother me	21.2	35.6	43.2
9. There is no reason to single out HIV-infected workers	12.7	23.5	63.8

* N = 413 and missing values have been excluded

On the other hand, 30% feared the disease as they felt that it might be dangerous to work around PWHIVs (item 5). Approximately 32% also disagreed with the statement: "HIV-infected people do not pose a threat to their co-workers" (item 6), while nearly 23% disagreed that there was no reason to fear working with PWHIVs (item 7).

The ambivalence in these findings suggests what seems to be a discrepancy between the level of AIDS knowledge and responses towards PWHIVs in the work setting. Afterall, if our respondents possess relatively high levels of AIDS knowledge, why would they still be uncomfortable or fearful about the possibility of working with PWHIVs? This apparent inconsistency may be explained by the roles that misconceptions and social stigma play in driving the fear of AIDS.

First, it appears that AIDS education in Singapore has not placed enough emphasis on relaying the message that HIV is not transmitted through casual contact, leading to misunderstandings about the disease. Current efforts to generate awareness about transmission of the disease have focused mainly on reducing the probability of contracting HIV through responsible sexual practices with less emphasis placed on alleviating unfounded fears associated with misconceptions and erroneous beliefs about HIV transmission through casual contact⁽¹⁾. AIDS is thus perceived to be more dangerous to a person's health than it actually is in the work environment⁽¹²⁾.

Second, local AIDS education also does not focus on another source of AIDS fear – one that is not solely dependent on the amount of instrumental AIDS knowledge an individual possesses, but which arises from an individual's fear of associating himself or herself with all that the disease symbolises (homosexuality; moral wrong-doing)⁽¹³⁾. Hence, a person's homophobic sentiment or his desire to dissociate himself from a disease that is associated with deviance and moral decadence results in him or her adopting negative attitudes towards working with PWHIVs^(11,13).

Knowledge of PWHIVs and willingness to accept job

Respondents in this study were asked to indicate if they knew any PWHIV. Majority of respondents (about 95%) reported that they did not know any PWHIVs. This finding is not at all surprising, as the strong stigma attached to AIDS often precludes PWHIVs from admitting their condition. This result is consistent with findings obtained from other studies conducted locally. For example, in a survey of human resource managers in Singapore, Wan⁽¹⁴⁾ found that only 4% of respondents reported knowing a PWHIV.

This finding also lends further corroboration to earlier findings pertaining to respondents' reported ambivalence and fear towards working with PWHIVs. According to the contact hypothesis, people who do not have personal relationships with PWHIVs are likely to possess higher levels of AIDS stigma compared to those who do⁽¹⁵⁾. Therefore, it is not surprising that our respondents were apprehensive towards the idea of working with PWHIVs since the majority indicated that they did not know any AIDS victims.

When asked whether they would be willing to accept a job offer if it involved working with PWHIVs, almost 70% of respondents indicated that they would be willing to do so while about 26% indicated otherwise. Approximately 5% reported that they were not sure.

Some of the main reasons provided by respondents for their decision to either accept or not accept such a job offer are presented in Table III.

The reasons shown in section A of Table III suggest that being well-informed about AIDS transmission, particularly that there is a low risk of infection through casual contact, is essential in reducing fear of working with PWHIVs. For instance, knowing that AIDS is unlikely to be transmitted through casual contact that typically occurs at work was a common reason given by respondents who would accept a job if it entailed working with PWHIVs (items 1 and 2).

Table III – Reasons for accepting or not accepting a job offer if it requires working with PWHIVs

(A) Reasons for accepting job offer

1. Low risk of being infected by merely working with a PWHIV.
2. Awareness of how AIDS is transmitted.
3. Strong interest in the job.
4. As long as the job does not require me to work closely with PWHIV.

(B) Reasons for not accepting job offer

1. Fear of being infected with AIDS.
2. Absence of a cure for AIDS.
3. Do not feel comfortable about working with PWHIVs.
4. Would not be able to provide PWHIV colleagues with the emotional support and medical attention which they require.

However, some reservations towards working with PWHIVs still prevailed among our respondents. This was evident in the qualification expressed in item 4, section A of Table III, where respondents were willing to accept such a job offer only if it did not require them to work closely with PWHIVs.

Any reservations respondents may have had towards working with PWHIVs were articulated more strongly in the list of reasons cited for the decision not to accept such a job offer (Section B, Table III). It appears that people's fears and doubts towards AIDS have, to an extent, manifested themselves in behavioural intentions. For instance, the reasons in section B of Table III suggest that the intention not to accept a job which necessitated working with PWHIVs stemmed from fears of contracting AIDS (items 1 and 2) and the perceived inability to handle PWHIVs (items 3 and 4).

Therefore, the reasons expressed in Table III suggest that developing accurate AIDS knowledge and reducing the stigma attached to this disease are especially important in dealing with apprehensions individuals may have towards the prospect of working with PWHIVs.

Conclusion and implications

In summary, findings of this study suggest that young adults in Singapore are generally clear that HIV can be transmitted through sexual contact, blood transfusion and from a woman to her unborn child. However, our data also suggest that a sizeable number of respondents still possess a number of misconceptions about how HIV can be transmitted. Generally, young adults in our study indicated that they were unclear whether one could be infected with HIV by eating food prepared/handled by HIV-infected persons (items 16, 17), being sneezed or coughed on by a HIV-infected person (item 18) and through mosquitoes and other insect bites (item 19).

While available scientific data suggest that HIV cannot be transmitted through casual contact at the workplace, results of this study suggest that some element of uncertainty and fear still prevail. This is an interesting finding as it suggests that while AIDS education and campaigns may increase knowledge and awareness about HIV transmission, they do not really reduce personal concern about the possibility of infection and the potential stigma associated with working with HIV-infected persons.

Generally, our findings suggest that more needs to be done to change public attitudes about risk of HIV-infection and their attitudes towards HIV-infected people. Programs designed to increase awareness about HIV infection and AIDS could be targeted at young people in schools and other educational institutions. Previous studies suggest that educational institutions have to date, been slow to respond to the AIDS crisis⁽⁷⁾. Even in the local context, respondents reported that generally, they received AIDS information from sources other than the educational institutions they attended. Yet, educational institutions may arguably be one

of the best channels for AIDS education programme since youths spend most of their years in schools. It is during these years that youths are most impressionable, and as they enter sexual maturity, educational institutions are in a prime position to provide guidance on AIDS issues.

Young people are a particularly important group to target as they may be developing new beliefs, forming new relationships and may engage in high-risk activities. For instance, business schools and other tertiary institutions should seriously consider including the topic of managing AIDS at the workplace in their curriculum. This will ensure that future managers and employees are sufficiently equipped to deal with this issue. AIDS task forces should also be a permanent and active feature of student health departments in educational institutions. Extant studies in the West suggest that AIDS task forces have been regarded as one of the most believable and most likely utilised sources of information for AIDS issues⁽⁸⁾.

At the organisational level, companies can play a more active role in promoting educational programs to promote, inform and educate employees about HIV transmission. This may help to dispel misconceptions and allay fear among employees about the possibility of HIV-infection through casual contact in the context of the workplace.

Even though the current AIDS situation in Singapore has not reached the epidemic proportion of some of its Asian neighbours, there is little guarantee that such a scenario will not eventually occur here. The growth rates of new HIV cases have escalated over the years and are set to rise even further with the lack of an AIDS vaccine, more global travel and a new generation of youths entering sexual maturity and prone to high-risk AIDS behaviours. To the extent that AIDS predominantly affects youths as well as those in the prime of their working lives, research efforts directed towards the investigation of youths' knowledge, attitudes and fear of the disease will enhance our understanding of this phenomenon and can contribute significantly towards the design and implementation of efforts to alleviate misconceptions and prejudices about the disease.

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