SINGAPOREAN BELIEFS ABOUT HIV AND AIDS

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ABSTRACT

As part of an in-home survey, 429 Singaporeans responded to questions concerning beliefs about AIDS as a disease and the ways in which one can contract HIV. The results indicated that, although many held realistic beliefs, identifiable biases and misconceptions were present. Virtually all respondents were aware that HIV is contracted through sexual contact as well as the sharing of needles during IV drug use. However, many respondents believed that it is either somewhat or very likely for HIV to be transmitted through casual contact, by giving blood, or from mosquitoes and other insects. Also, many expressed the belief that persons with AIDS are identifiable through visible symptoms or membership in high risk groups and a significant percentage indicated a lack of concern about the disease. Implications for understanding AIDS beliefs and for health education are discussed.

Keywords: human immunodeficiency virus (HIV), Acquired Immunodeficiency Syndrome (AIDS), attitude to disease, Singapore

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INTRODUCTION

Since the first cases were encountered in Los Angeles in 1981, Acquired Immunodeficiency Syndrome (AIDS) has grown to epidemic proportions with an estimated 4.5 million people worldwide having AIDS and 20 million people infected with the Human Immunodeficiency Virus (HIV), the cause of AIDS[1]. There is every reason to believe that these numbers will continue to grow with particularly explosive growth occurring in South and Southeast Asia[2]. Although Singapore has thus far been spared the brunt of this epidemic, by the end of March 1995 the number of HIV cases had grown to 328, with 138 having full blown AIDS, of which 93 had died[3].

The battle against AIDS is being fought on two broad fronts. Medical efforts at combatting this disease have focused on its cause, prevention through such medical means as vaccine, and the development of therapies to treat the disease and the opportunistic infections that accompany it. The second front is concerned with people's attitudes and behaviours. The lack of a vaccine or cure for AIDS and the fact that HIV is spread through specific types of behaviour, such as sexual intercourse and the sharing of hypodermic needles during IV drug use, underline the urgency of changing behaviours to minimise the spread of HIV[4-8]. In addition, persons living with HIV/AIDS are heavily stigmatised. It is not uncommon for persons with HIV/AIDS to be shunned, lose their employment, and generally be the object of discrimination once their infection status is known[5,9,10].

The key role played by attitudes and behaviour in the AIDS epidemic has prompted intensive campaigns to educate people concerning AIDS as a disease and the ways in which HIV is transmitted. In Singapore, national programmes for AIDS education, designed to raise awareness of AIDS, its modes of transmission and means of prevention, were launched in 1985 and have since been conducted on an annual basis[11]. Despite these campaigns, however, there is evidence that misconceptions about AIDS/HIV continue to be prevalent. For example, in a survey conducted in late 1987, 69% of a random sample of Singaporeans believed that it is somewhat or very likely for a person to get AIDS through sharing plates, forks, chopsticks or glasses with someone who has AIDS. Similarly, 56% believed a person could get AIDS by being coughed or sneezed on by someone with AIDS and 53% believed that AIDS could be contracted through donating blood[12]. At the time that survey was done, only 52 cases of HIV infection had been reported in Singapore compared with 328 by the end of March 1995. The study reported here was conducted to examine the state of beliefs and attitudes toward HIV/AIDS among Singaporeans as of 1993-94.

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METHODS

Sample

The sample for this survey consisted of 429 Singaporeans selected through a random selection of households, stratified by ethnicity. The Singapore telephone directory, including both the English and Chinese language versions, was used as the sampling frame with entries considered to represent households rather than individuals. A computer-generated list of random numbers was used to select the page, column, and entry within column for inclusion in the survey. Since the original purpose of the survey was the examination of ethnic differences in health beliefs and behaviours, an equal number of households from each of the three major ethnic groups, Chinese, Indian, and Malay, was selected. The samples for each ethnic group were selected separately with name used as a preliminary indicator of ethnicity. Lists of addresses for each ethnic group were compiled and then half of the addresses on each list were randomly assigned for interviews with females and the other half of interviews with males. Between May 1993 and May 1994, 568 households were contacted to obtain interviews. Of these, interviews were obtained from 429 for a total response rate of 75.5%. Comparison of the demographic characteristics of this sample with data from the 1990 Singapore Census of Population[13] indicated that the characteristics of the sample bore a close resemblance to the general adult population except in the areas of ethnicity, education and working status. Equal numbers of Chinese, Malay, and Indian respondents were specified in the design of the survey in distinction to their distribution in the population of 78% Chinese, 14% Malay and 7% Indian. In addition, the sample appeared to under-represent individuals with a primary education or less and to over-represent those not currently in the workforce.[a]

Procedures

All interviews were conducted by interviewers of the same sex as the respondents and, to the extent possible, of the same ethnicity. However, concordance with respect to ethnicity was not always possible and in cases where an interviewer from a

[a] Detailed demographics are available from the author.

different ethnic group was used, that interviewer was required to be fluent in the language of that group. All interviewers were at least bilingual, speaking English and at least one of the following languages: Mandarin, one or more dialects of Chinese, Malay or Tamil. Respondents were contacted at their homes and invited to participate in a survey of health attitudes and behaviours. As an inducement, all respondents were offered a token payment of S$8. Interviews generally lasted between one and one and a half hours.

Materials

As part of the survey, respondents were asked to respond to two sets of items tapping beliefs about HIV/AIDS. The first set consisted of 15 statements examining misconceptions about AIDS as a disease. These statements were derived from statements made by members of the public and found in newspaper articles published in the Straits Times[b], between 1985 and 1992. All articles on AIDS published in the Straits Times during this period were collected and perused. The statements used were deemed to be representative of the range of beliefs expressed by members of the lay public. These statements are listed in Table I. For each of these statements, respondents were asked to indicate their level of agreement or disagreement on a five-point scale ranging from strongly disagree to strongly agree.

The second set of items tapped beliefs about ways in which HIV is spread and were taken from a protocol used in the National Health Interview Survey[14]. Respondents were presented with 16 potential routes of transmission and, for each, were asked to indicate on a five-point scale how likely it was that a person could contract the AIDS virus in that way. Possible responses were "definitely not possible," "very unlikely," "somewhat unlikely," "somewhat likely," and "very likely". The routes of transmission queried are listed in Table II.

Table I – Beliefs about AIDS as a disease (responses weighted to reflect the Singapore population)

Item	Percent strongly or moderately agreeing
AIDS is more likely to be contracted from foreigners rather than from locals.	56.4
AIDS can only affect homosexuals, drug addicts, prostitutes and others like them who belong to the high risk groups.	48.5
I am not worried about the spread of AIDS as it has little to do with me.	47.2
AIDS is a homosexual disease	44.3
AIDS infected persons usually have visible symptoms.	41.5
AIDS is mainly confined to the Western countries and Africa.	31.3
It is actually quite difficult to contract AIDS.	31.2
AIDS is God's punishment for immoral behaviour.	25.1
AIDS cannot be transmitted via heterosexual relationships.	22.2
The AIDS virus is like the flu virus.	20.8
A person can get AIDS by swimming in the same swimming pool as an AIDS victim.	16.5
One can get protection from AIDS by getting once-a-week shots of penicillin.	9.4
One way to prevent AIDS is to drink a mixture of snake blood with Johnny Walker.	1.9

Note: N = 429

Table II – Beliefs about HIV transmission (responses weighted to reflect the Singapore population)

Item	Percent responding somewhat or very likely
How likely do you think it is that a person will get the AIDS virus from:	
Having sex with a person who has AIDS	93.6
Sharing needles for drug use with someone who has AIDS	93.4
Receiving a blood transfusion	78.8
Kissing-with exchange of saliva-a person who has AIDS	64.0
Donating or giving blood	52.0
Mosquitoes or other insects	44.9
Sharing plates, forks, or glasses with someone who has AIDS	40.8
Being coughed or sneezed on by someone who has AIDS	39.7
Eating in a restaurant where the cook has AIDS	35.3
Pets or animals	30.9
Using public toilets	29.6
Working near someone with AIDS	25.9
Kissing on the cheek a person who has AIDS	20.0
Attending school with a child who has AIDS	17.9
Shaking hands with or touching someone who has AIDS	15.1
Living near a hospital or home for AIDS patients	14.3

Note: N = 429

The interview questionnaire for all parts of the study was first formulated in English and then translated into Chinese (Mandarin), Malay and Tamil for use with respondents who either did not speak English or felt more comfortable responding in their native language. These translations were then carefully checked for accuracy by a second translator fluent in both English and the language in question. Discrepancies in the translations were then rectified.

RESULTS

Since an equal number of Chinese, Malay, and Indian respondents were interviewed for this study, the raw distributions of responses to the survey items cannot be considered to represent the distribution in the general population. To obtain estimates of the prevalence of the various beliefs in the general population, responses to the different items were computed for each race by sex group. Estimates for the general population were then computed by multiplying the results for each race-sex group by the proportion of that group in the population as reported in the 1990 population census[13].[c]

Beliefs about AIDS

The resulting distribution of responses for items concerning beliefs about AIDS as a disease are shown in Table I. Due to problems with translation or difficulties in understanding the items, two items, "Prostitutes who work in areas less frequented

b. The Straits Times is Singapore's largest circulation English-language newspaper.

c. The raw distribution of responses is reported in Bishop GD (1995) Responding to AIDS in Singapore: Beliefs about HIV/AIDS. Working Paper no. 35, Department of Social Work and Psychology, National University of Singapore.

by tourists are less likely to have AIDS " and "If one uses condoms during sex, it is not possible to get AIDS", were eliminated from the analyses. As can be seen in Table I, the items receiving the greatest endorsement were "AIDS is more likely to be contracted from foreigners than from locals" (56.4% strongly or moderately agree), "AIDS only affects homosexuals, drug addicts, prostitutes and others like them from high risk groups" (48.5%), "I am not worried about the spread of AIDS as it has little to do with me" (47.2%), "AIDS is a homosexual disease" (44.3%) and "AIDS-infected people usually have visible symptoms" (41.5%). On the other hand, the items receiving the least endorsement were "One can get protection from AIDS by getting once-a-week shots of penicillin" (9.4%) and "One way to prevent AIDS is to drink a mixture of snake blood with Johnny Walker" (1.9%). The latter has been referred to by some members of the public as being the "secret weapon" for preventing HIV infection[15].

Beliefs about HIV transmission

Responses to the items concerning beliefs about the transmission of HIV are shown in Table II. As can be seen in this table, respondents were realistic in their beliefs about the likelihood of a person getting HIV through sexual contact (93.6% somewhat or very likely) and sharing of needles during IV drug use (93.4%). Also, given that some countries in the general region of Singapore do not routinely screen blood for HIV, perceptions about the likelihood of getting HIV through a blood transfusion (78.8%) can be seen as realistic. However, the data also revealed a number of fairly widespread misconceptions about HIV transmission. In particular, 64.0% of the respondents indicated that they thought it was somewhat or very likely for a person to contract HIV from kissing with exchange of saliva ("French kissing") while 52.0% gave these responses for donating blood, 44.9% for transmission from mosquitoes or insects, 40.8% for sharing plates, forks or glasses, 39.7% for being coughed or sneezed on, and 35.3% for eating in a restaurant where the cook has AIDS. In addition, 30.9% believed it somewhat or very likely that a person could get HIV from pets or animals, 29.9% of respondents believed it somewhat or very likely that a person could contract HIV from using public toilets, and 25.9% stated this about working in close proximity with someone with AIDS.

DISCUSSION

The results of this study indicate that although many Singaporeans have realistic views of AIDS and the ways in which HIV is transmitted, a number of biases and misconceptions can be identified. Very few respondents endorsed such clearly erroneous beliefs as the use of penicillin or a combination of Johnny Walker whisky and snake blood to prevent AIDS, but roughly half strongly or moderately agreed that AIDS only affects people from high risk groups, AIDS is more likely to be contracted from foreigners than locals and that it is a homosexual disease. In addition, approximately half of the respondents denied being concerned about AIDS believing that it had little to do with them. With respect to HIV transmission, respondents were almost unanimous in stating that a person is somewhat or very likely to contract the AIDS virus from having sex or sharing needles during drug use with a person having AIDS. Despite these realistic views, however, a substantial number of respondents indicated that they believed it somewhat or very likely that a person would contract HIV from French kissing, donating blood or from mosquitoes and insects as well as such casual contact as eating in a restaurant where the cook has AIDS, being coughed or sneezed on or sharing eating and drinking utensils with someone having AIDS. Further, more than one-fourth of respondents believed it somewhat or very likely that a person could contract HIV from public toilets, working closely with someone with AIDS, or from pets or animals.

Overall, these results are in line with previous studies in the general population[12,16,17] as well as among members of risk groups[18] in showing that Singaporeans clearly have received the message that one can get AIDS from sexual contact and the sharing of needles during IV drug use, knowledge that may or may not be reflected in behaviour[16-20]. Just as clearly, the data presented here indicate that the message about HIV not being transmitted through casual contact or via insects and animals has not gotten through. Despite efforts to educate people otherwise, many still believe that such routes of transmission are possible and even likely. Comparison of responses to similar items in a survey done in 1987[12] suggests changes in these beliefs over time but only for certain ones. In that survey, 69% of respondents believed that it is somewhat or very likely for a person to contract HIV by sharing eating and drinking utensils with a person infected with HIV as compared with the figure of approximately 41% in the present study. Belief in the spread of HIV through being coughed or sneezed on also showed a drop from 56% to 40%. Concerns about contracting HIV through donating blood, however, remained steady (53% in 1987 vs 52% in the present study) and those about transmission through public toilets showed a relatively small decrease (37% vs 30%). These comparisons indicate that, although there have been gains in eradicating misconceptions about the spread of HIV, much remains to be done. The importance of getting across the message that HIV is not spread through casual contact is underlined by the stigma suffered by persons living with HIV/AIDS. Evidence from a number of sources indicates that persons with HIV/AIDS are often avoided and discriminated against due, at least in part, to concerns about the possibility of contracting HIV from them[5,12,21,22]. Beliefs of the type found in this study are an important foundation of these unfounded fears.

It should be noted that Singaporeans are certainly not alone in endorsing some of the misconceptions examined in this research. Surveys of attitudes and beliefs concerning HIV/AIDS in the United States, for example, have found that a significant number of Americans continue to believe that HIV can be transmitted through casual contact. For example, surveys of AIDS beliefs among Americans have found that between 10% and 31% of respondents believe that HIV can be transmitted by being coughed or sneezed on, between 15% and 44% believe that it can be contracted by giving blood and from 5% to 26% believe that one can get HIV by working near an infected person[23].

At this point, the question arises as to why such beliefs continue to persist in the face of intensive education programmes to inform the public as to how HIV is and is not transmitted. One possibility is that not enough emphasis has been placed on the fact that HIV is not transmitted through casual contact. Educational campaigns in Singapore have generally placed the greatest emphasis on reducing HIV transmission through responsible sexual behaviour with less emphasis on countering erroneous beliefs about HIV transmission through casual contact[11]. Elimination of such beliefs may well require more emphasis in educational campaigns.

Another set of reasons for persistence of erroneous beliefs about HIV transmission may be found in work on cognition and lay illness representations. First, it is very difficult to convince people that something cannot or is extremely unlikely to happen[24,25]. Although there is no evidence to date that HIV can be contracted through casual contact, this does not logically rule out the possibility that it could happen at some point. Because of this, experts are careful to couch their conclusions in such terms as "highly unlikely" or "virtually impossible." Such hedging, however, does not rule out the possibility and may serve to

exacerbate people's fears.

Another important factor relates to how people think about diseases, particularly contagious diseases. Recent research by the author and his co-workers has found evidence that people organise disease information into broad categories according to specific disease features and view certain diseases as being prototypical of particular categories of diseases[26]. For example, studies in both the United States and Singapore have found that two key categories for organising disease information are perceived contagion and the extent to which a disease is believed to be life-threatening[27-29]. Further, people appear to have only a rudimentary understanding of contagion and to view specific diseases as being highly typical of contagious disease. In one study[26], when asked to give a definition of contagious disease, participants defined it simply as a disease that is passed from one person to another, often citing casual means of contact. Diseases cited most often as being prototypical of contagious diseases were flu, cold, and chicken pox. However, when asked to name contagious diseases, 77% of participants cited AIDS and, on average, AIDS was rated as highly typical of contagious diseases. This suggests that people have a relatively undifferentiated concept of contagious disease which is closely associated with casual contact. When encountering a disease like AIDS that is communicable but not through casual contact, people apparently misapply their generic concept of contagious disease, tending to assume that, since AIDS is caused by a virus, as are prototypical contagious diseases, AIDS too can be transmitted through casual contact. This argues that convincing people that HIV is not transmitted through casual contact requires overcoming what appears to be a strong tendency to identify contagion with casual contact and also getting the message across that AIDS, while communicable, is not a typical contagious disease. This suggests that health education programmes would do well to specifically address distinctions between different routes by which communicable diseases can be passed so as to help people to better recognise that AIDS, as a blood-borne disease, is communicated only through intimate and not casual contact.

Another area where misconceptions appear prevalent and that needs to be addressed more strongly in educational campaigns concerns the identifiability of persons with HIV/AIDS. Roughly 4 in 10 respondents either strongly or moderately agreed that persons with HIV/AIDS have visible symptoms. Also a strong tendency was observed for respondents to identify HIV/AIDS with specific high risk groups, such as homosexuals, prostitutes and drug users and to see it as a problem of foreigners. Such beliefs provide people with a false sense of security about HIV/AIDS and the likelihood that either they or others close to them are at risk for contracting it. Beliefs such as these appear to be a key reason for the large number of respondents who indicated that they were not concerned about AIDS. These findings underscore the importance of emphasizing in educational campaigns that AIDS is not just a problem of high risk groups but that it can affect anyone and should be a concern to all.

CONCLUSION

Overall, this research found that the vast majority of respondents were well aware that HIV is contracted through sexual contact as well as the sharing of needles during IV drug use. However, many believed that HIV can be contracted through various forms of casual contact as well as through giving blood or from insects or animals. In addition, a significant number of respondents expressed the belief that persons with AIDS are identifiable either because of visible symptoms or their membership in high risk groups and expressed a lack of concern about AIDS. These results indicate the continued need to address these misconceptions through public education campaigns.

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