

ATTITUDES TO AIDS AND SEXUAL BEHAVIOUR AMONG A COHORT OF MEDICAL STUDENTS IN SINGAPORE

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ABSTRACT

A survey conducted in 1990 among final year medical students found that most respondents had a good knowledge about AIDS and its routes of transmission. Among the 13.7% of respondents that were sexually active, it was noted that only 35% had used the condom before and that only 20% had used it in the most recent occasion of sexual intercourse. It was noted that only 30% of the sexually active had intention using the condom when they next have sexual intercourse despite the fact that 40% of them were having sexual intercourse with casual partners.

Despite having a high knowledge of AIDS, medical students at the National University of Singapore have a low use of condoms.

Keywords: AIDS, transmission, condom use, KABP

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INTRODUCTION

Acquired Immunodeficiency Syndrome (AIDS) is a deadly disease spreading rapidly all over the world. WHO estimated the actual number of AIDS cases worldwide to be over 6,000,000⁽¹⁾. In Singapore, the incidence of AIDS and Human Immunodeficiency Virus (HIV) positive cases have also been increasing. As at December 1990, total number of Singaporeans reported to be infected with the HIV virus is 57. They include 22 cases of AIDS, and the remaining 35 comprise one with AIDS-related complex and 34 who are HIV carriers. Of the 22 cases of AIDS 13 have died⁽²⁾.

Adolescence is a crucial phase of life, not only for health education and promotion but also for HIV prevention and AIDS education specifically. Young men and women are faced with various developmental tasks with which they must come to terms in order to achieve necessary biological and psychological progress. As a developmental task, sexuality entails a potential risk of HIV infection since young men and women usually change sexual partners before they establish long-term intimate relationships. Therefore an important goal of AIDS prevention should be to influence the sexual behaviour of these young men and women in the context of their life-styles taking different cultural, economic and family backgrounds into consideration.

Thus the objective of this study was to determine the attitudes to AIDS and sexual behaviour among a cohort of final year medical students at the National University of Singapore.

METHODOLOGY

The study was carried out between May and October 1990. A self-administered questionnaire was administered to the whole

class of 181 final year medical students at the National University of Singapore. The respondents were requested to return the completed questionnaire in the self-addressed envelope provided. The questions asked about:

- (1) the respondent's personal, family and home life
- (2) their views to life in general
- (3) respondent's sexual and personal relationships and
- (4) their knowledge and attitudes towards AIDS.

The data was analyzed by the Computer Section, Department of Obstetrics and Gynaecology, National University of Singapore.

RESULTS

Of the 181 students, 146 students responded and this gives a response rate of 81%. Of the 146 who responded, 96 were male and 50 were female. This correlates well with the class sex ratio of 69% male and 31% female.

Socio-demographic characteristics

The mean age of the respondents was 22.9 years. They were all single and a vast majority (78.8%) stayed with their parents. Furthermore, only a small minority (7.5%) came from single parent homes. A majority (61.6%) of the medical students claimed to be Christians while about 22% had no religious preference (Table I).

Home and family life

Most of the respondents felt close to their mother (84.9%), 60.3% felt they were close to their father. This was not statistically significant. Again the general feeling (56.8%) was that their parents were strict with their upbringing. However, despite this, the majority (78.0%) were satisfied with the way they were brought up. Furthermore, the majority (72.6%) felt that they have free choice and control over their life and were satisfied with life as a whole. Close to 59% never felt that life was hopeless and only 40.4% sometimes felt that life was hopeless.

Life in general

All the respondents rated education as the most important thing in their life. Their career, love and friendship were all rated as highly important. The least important was sexual experience (Table II).

Sexual and Personal Relationships

A majority of the respondents (93.2%) did not hold the view that marriage was an outdated institution. In fact only 8.9% felt that individuals should have the chance to enjoy complete sexual freedom without being restricted. Despite this less than half (45.2%) felt that there should be rules for everyone to

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follow and that sex cannot entirely be left to an individual's choice.

Table I - Sociodemographic Characteristics of Final Year Medical Students (n = 146)

Characteristics	Percentage (%)
Age (Years)	
22	36.3
23	42.5
24	17.8
25	3.4
Mean	22.9 years
Marital status	
single	100.0
Residence	
Living with parents	78.8
Living alone	19.2
Living with friends	2.0
Religion	
Protestant	46.6
Roman Catholic	15.0
Buddhism	11.0
Hinduism	2.7
Islam	2.7
None	11.0
Undecided	11.0

Table II - Things Most Important In People's Life

	Percentage (%)
Education	100.0
Current/Future careers	98.6
Love	97.9
Friends of same sex	96.6
Friends of opposite sex	95.8
Marriage	78.8
Religion	78.8
Hobbies/Sports	78.8
Sexual experience	58.2

The main reasons given for people wanting to have premarital sex were sexual pleasure and wanting to establish a closer relationship with the partner. The next three important reasons given were being in love, to please one's partner and to help a relationship move towards marriage (Table III).

Table III - Reasons for Having Premarital Sex*

	Percentage (%)
Sexual pleasure	54.1
Have closer personal relationship with partner	53.4
Being in love	41.8
Please one's partner	34.2
Help a relationship move towards marriage	28.8
To find out what it is like	25.3
Normal thing for someone of my age to do	16.4
To become independent and more of an adult	13.0
Have a child	13.0

* This represents all the respondents and not only those who had premarital sexual experience

The main reason given for people not having premarital

sex is that it was against one's personal standards of what is right or wrong. That sexual intercourse should be saved for the marriage partner was the second most important reason.

Other important reasons given were that it might disappoint one's parents, it was against one's religious teaching/beliefs and to avoid becoming pregnant (Table IV).

Table IV - Reasons for Not Having Premarital Sex*

	Percentage (%)
Against personal standards of what is right or wrong	95.2
Believe that sexual intercourse should be saved for marriage partners	91.8
Would hurt/disappoint my parents	83.6
Against my religious beliefs	78.7
Against my religious teachings	74.7
To avoid becoming pregnant	68.5
Danger of catching other sexually transmitted diseases	61.0
Danger of catching AIDS	59.6
Might lower my reputation	54.8
Partner might think less of me	54.1
My close friends would not approve	23.3

* This represents all the respondents and not only those who had no premarital sexual experience

From Table V, it can be seen that 90.4% felt that it was important to go out with members of the opposite sex with no sexual involvement. Similarly an almost equal number (83.6%) felt that a steady relationship with a member of the opposite sex was important. Activities like light and heavy petting were less important while sexual intercourse was perceived to be the least important. This correlates well with the fact that 75.4% of the respondents felt that sexual intercourse should only take place within a marriage. In fact, 69.9% disagreed with the view that sexual intercourse may take place within a steady relationship when there is a commitment to marriage (Table V).

Table V - Relative Importance of Certain Activities In One's Personal Life

	Percentage (%)
1. Going out with members of the opposite sex with no sexual involvement	90.4
2. Having a steady relationship with a member of opposite sex	83.6
3. Sexual intercourse should only take place within a marriage	75.4
4. Sexual intercourse may take place within a steady relationship where there is a commitment to marriage	30.1
5. Light petting	58.9
6. Heavy petting	31.5
7. Sexual Intercourse	15.8

Knowledge of AIDS

It was encouraging to note that 94.5% of the medical students in the survey were aware that there are basically 3 ways in which one can contract HIV infection: (i) unprotected sexual intercourse with an infected person, (ii) infected blood passing into your blood stream, (iii) from infected mother to baby during pregnancy, delivery or through breastfeeding. Casual contact with persons with AIDS or persons who carry HIV

does not place one at risk of infection. HIV is not spread by hugging, shaking hands, sneezing, coughing or spitting, sharing toilets, sinks or bathrooms, swimming pools, dishes, utensils or food (Table VI).

Table VI - Knowledge of AIDS Among Medical Students*

Knowledge	Correct responses	Percentage (%)
Good	16 and above	56.8
Medium	11-15	37.7
Low	10 and below	5.5

* Measured on 20 item test comprising the activities and mode of transmission of AIDS. This stated that you can catch AIDS from an infected person by:

1. Touching bare skin
2. Holding or shaking hands
3. Using the same lavatory
4. Using the toothbrush
5. Using the same unwashed cutlery
6. Saliva/sputum
7. Sweat
8. Wearing the same clothes
9. Sharing a comb
10. Light kissing (lips only)
11. Deep kissing (inside mouth)
12. Splashes of blood
13. Tears
14. Being in the same room
15. Sleeping in the same bed
16. Sharing a needle in drug use
17. Having sexual intercourse with homosexuals only
18. Not using the condom always
19. If you do not have regular vaccination
20. Having sexual intercourse with heterosexuals only

58.2% of the students feel that they had no chance of contracting HIV infection in the next 2 years while 39.7% felt that there was a slight chance of contracting HIV infection in the next 2 years. Only 2.1% felt that there was an even chance of getting infected.

Health Education

The respondents had discussed AIDS most often with friends of their own sex, colleagues, friends of the opposite sex and teachers. They rarely discussed AIDS with their family members, religious or youth group leaders. Similarly from Table VII, it can be seen that they were most comfortable in discussing AIDS and sexual matters with friends of their own sex, colleagues and their family doctors. They felt less comfortable in discussing such personal matters with their family, religious or youth group leaders.

As regards accuracy of the information about AIDS, all felt most confident of receiving such information from their doctors.

The newsmedia, teachers, colleagues and friends were the next most confident sources of information about AIDS. They were generally least confident of receiving information about AIDS from their family members, religious and youth group leaders (Table VIII).

Most preferred to receive information about AIDS in an impersonal setting like printed material, medical consultation, large lecture, television, radio or private video. They were less keen on receiving such information in small group discussions, one-to-one talks or in a home family setting (Table IX).

Sexual Experience

The vast majority (95.9%) of the respondents were heterosexual and only 20 or 13.7% had sexual intercourse before.

Table VII - Discussion of AIDS with Various People

Person	Discussion of AIDS with various people	Comfortable in Discussing AIDS and Sexual Matters with person
1. Friends of own sex	58.9	95.2
2. Friends of opposite sex	44.5	59.0
3. Colleagues	48.6	88.3
4. Teachers	42.5	67.1
5. Siblings	15.8	72.6
6. Mother	9.5	57.5
7. Father	6.9	47.9
8. Family doctor	7.9	85.6
9. Religious leader	4.8	56.9
10. Youth Group leader	0.0	56.2

Table VIII - Degree of Confidence of Accuracy of Information Received About AIDS

Source	Percentage (%)
Doctors	100.0
TV/Radio programmes	96.2
Newspapers	95.2
Teachers	93.8
Colleagues	80.8
Friends of own sex	74.6
Friends of opposite sex	63.7
Siblings	51.4
Religious leaders	40.4
Youth group leaders	36.3
Father	34.2
Mother	32.8

Table IX - Preference for Setting In Which to Receive Information About AIDS

Setting	Percentage (%)
1. Printed Material, pamphlets, newspapers	61.6
2. Medical setting	58.9
3. Television	47.3
4. Large lecture	40.4
5. Radio	35.6
6. Private Video	32.2
7. Small group setting - own age and both sexes	26.0
8. Small group setting - own age and same sex	21.2
9. One to one talk with trusted adult	15.8
10. Home and family context	10.3

The age of first sexual intercourse ranged from 18-23 years. The vast majority (70%) of the sexually active students had 1 or 2 sexual partners only. In 60% of the cases, the most recent sexual partner was a steady boyfriend or girlfriend with whom there is intention to marry. About 40% had sex with casual friends or commercial sex workers (Table X).

Use of Condom

Only 35% of the sexually active respondents claimed to have used the condom before and only 20% had used it in the most recent occasion of sexual intercourse. Moreover only 30% had intention of using it when they next have sexual intercourse (Table XI).

Table X - Summary of Sexual Experiences of Medical Students in Survey

Sexual Preference	Male Students (No)	Female Students (No)	Total No	Total Percentage
Heterosexual	84	56	140	95.9
Bisexual	4	0	4	2.7
Homosexual	2	0	0	1.4

Engaged in sexual intercourse

	Males (No)	Females (No)	Total No	Total Percentage
Yes	14	6	20	13.7
No	76	50	126	86.3

Age of first sexual intercourse

Years	No.	%
18	6	30.0
19	2	10.0
20	4	20.0
21	2	10.0
22	4	20.0
23	2	10.0

Estimated number of sexual partners in lifetime

No. of partners	No.	%
1	8	40.0
2	6	30.0
3	2	10.0
4	2	10.0
5	0	0.0
6	2	10.0

Estimated number of sexual partners in last one year

No. of partners	No.	%
1	6	30.0
2	8	40.0
3	4	20.0
4	2	10.0

Frequency of sexual intercourse during past one month

Frequency	No.	%
1	4	20.0
2	8	40.0
3	2	10.0
4	4	20.0
5	2	10.0

Relationship with most recent sexual partner

	No.	%
Steady boyfriend/girlfriend	12	60.0
Casual Partner	8	40.0

Age of most recent sexual partner

Age	No.	%
Younger by 1-4 years	8	40.0
Older by 1-4 years	6	30.0
Same age	2	10.0
Older by 5 years	2	10.0
Don't know	2	10.0

DISCUSSION

Studies done worldwide in several Asian and African countries have revealed varying views on the knowledge, attitudes and beliefs of adolescents and teenagers towards AIDS^(3,6). In fact a study conducted in Singapore among doctors and dental surgeons also revealed that misconceptions about AIDS existed among professional groups⁽⁵⁾.

Table XI - Use of Condom Among Sexually Active Medical Students

Ever used Condom	Percentage (%)
Yes	35.0
No	65.0

Used condom on recent occasion of sexual intercourse	Percentage (%)
Yes	20.0
No	80.0

Intention of using condom when next having sexual intercourse	Percentage (%)
Yes	30.0
No	50.0
Not sure	20.0

In this survey among medical students, certain interesting observations were made. The students came from stable homes and with a certain amount of religious influence. They had definite goals in life and held fairly strong views on marriage, sexuality and premarital sex.

As regards knowledge and transmission of HIV, it is noted that the majority of the students (94.5%) in the survey were aware of the basic three ways in which one can contract the infection.

It is noted that only 20 or 13.7% of the respondents had engaged in sexual intercourse. Among these sexually active students, it is noted that the relationship with the most recent sexual partner is a steady boyfriend or girlfriend in about 60% of cases. In 40%, the relationship was with casual partners. It was noted that only 35% of the sexually active respondents used the condom before and only 20% had used it in the most recent occasion of sexual intercourse and this was mainly in the group who were having intercourse with a regular partner. A study done in Zimbabwe showed that 35.7% of university students had used the condom before and only 4.9% reported current use⁽⁷⁾. It is important to note that only 30% had intention of using the condom when they next have sexual intercourse, despite the fact that 40% of them were having sexual intercourse with casual partners. This practice seems to be at variance to the respondents' high score on the knowledge and transmission of HIV.

From this study one can see that there is a need to educate our future doctors on the transmission of sexually transmitted diseases and how one can protect oneself from such infections. Since HIV is transmitted from one person to another through the exchange of semen, vaginal fluids or blood, they should be taught the practice of 'safer sex' using a condom. This is especially so when they are having sex with persons who may have other sexual partners. Condoms if used consistently and cor-

rectly serve two purposes - the prevention of pregnancy and the reduction of the risk of disease transmission. Thus health and sex education in these aspects should then be carried out in the most conducive settings preferred by the target groups.

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