

Risk behaviours for HIV/AIDS infection among men who have sex with men in Cairo, Egypt

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السلوكيات المحفوفة بمخاطر العدوى بفيروس العوز المناعي البشري ومرض الإيدز بين اللواطيين في القاهرة، مصر

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الخلاصة: أجرى الباحثون مقابلات مع عينة تتألف من 73 من اللواطيين في القاهرة، بمصر، مع تحري العدوى بفيروس العوز المناعي البشري لديهم، لدراسة سلوكياتهم المحفوفة بمخاطر العدوى بذلك الفيروس. واتضح أن معظم أفراد العينة المدروسة (65.8%) قد شرعوا في نشاطهم الجنسي قبل سن 15 عاماً، وأن 65.8% منهم يتناوبون دور الفاعل والمفعول فيه في اللواط. وقد بلغ معدل تكرار ممارسة اللواط أقل من مرة أسبوعياً لدى 73.3% ممن هم في سن 25 عاماً أو أكثر، ولكنها قد تزيد على مرة واحدة يومياً لدى 25.9% ممن تقل أعمارهم عن 25 عاماً. وقد وصل معدل الإبلاغ عن العلاقات بين الجنسين في هؤلاء اللواطيين إلى 73.3% في المجموعة العمرية المتقدمة في حين كان 70.7% من المجموعة العمرية الأصغر يقتصرون على اللواط. ولم يزد الاستخدام الدائم للعازل الذكري على 19.2% من العينة.

ABSTRACT A sample of 73 men who have sex with men (MSM) in Cairo, Egypt, were screened for HIV infection and were interviewed to study their risk behaviours for HIV/AIDS. Most (65.8%) had initiated sexual activity before 15 years; 65.8% took both active and passive roles in sexual acts. The frequency of sexual acts was < 1 per week for 73.3% of those aged 25+ years, but > 1 daily for 25.9% of those aged < 25 years. Heterosexual relations were reported by 73.3% of the older age group, while 70.7% of the younger age group were exclusively MSM. Condoms were always used by only 19.2% of the sample.

Comportements à risque en matière d'infection par le VIH/sida chez les hommes ayant des rapports sexuels avec des hommes au Caire (Égypte)

RÉSUMÉ Un échantillon de 73 hommes ayant des rapports sexuels avec des hommes au Caire en Égypte a fait l'objet d'un test de dépistage de l'infection à VIH et d'un interrogatoire destiné à permettre l'étude de leurs comportements à risque liés à l'infection par le VIH/sida. La plupart d'entre eux (65,8 %) avaient eu leurs premiers rapports sexuels avant l'âge de 15 ans ; 65,8 % avaient à la fois un rôle actif et passif lors des actes sexuels. La fréquence des actes sexuels était inférieure à 1 par semaine pour 73,3 % des sujets âgés de 25 ans et plus, mais supérieure à 1 par jour pour 25,9 % de ceux âgés de moins de 25 ans. Dans le groupe plus âgé, 73,3 % ont déclaré avoir des relations hétérosexuelles alors que 70,7 % du groupe des plus jeunes étaient des hommes ayant des rapports sexuels avec des hommes exclusivement. Seuls 19,2 % de l'échantillon utilisaient systématiquement un préservatif.

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Introduction

It is clear that the HIV/AIDS epidemic is becoming a threat to development in many parts of the world, and in some places is rapidly becoming a security crisis too [1]. The HIV/AIDS epidemic continues to spread in the countries of the Eastern Mediterranean Region (EMR) of the World Health Organization, including Egypt. The number of HIV infected cases in the EMR is estimated at 540 000, a little less than 1% of the estimated total number of cases worldwide. One significant route of HIV transmission is sex between men. The issues associated with this type of transmission are frequently difficult to address because in many countries men who have sex with men (MSM) do not view themselves as nonheterosexual and because of social stigmatization may not wish to be identified as such to others [3]. It has been estimated that 89% of all cases of HIV infection in the EMR are transmitted via sexual relations, and that 2% of that figure is due to MSM [2,3].

In developing countries, there are an estimated 100 million homeless children and youth in the streets of large cities. Prostitution is one way for them to earn money for survival. They may also have sexual relations with each other for enjoyment. Such a group is considered to be one of the high-risk groups for HIV/AIDS transmission in the community [4]. The aim of this study was to identify risky behaviours for HIV/AIDS and determine the prevalence of infection among a group of MSM in Cairo, the capital city of Egypt.

Methods

This study was conducted during the year 2003. The theme for the study was identified through observations of groups of homeless male children and youth who

gather in the main squares of Cairo, often sleeping under bridges and in parks. They offer their services for any available jobs, for example washing cars in the street or working in the homes of those who may request their services. It was hypothesized that this group of homeless males may be willing to offer sex for money, shelter or food.

The research team used 2 volunteer MSM who used to work with the national HIV/AIDS control programme as peer educators for MSM groups and were therefore already trained in counselling skills. Their help was crucial for the research team to gain access to this group who are regularly threatened by police and are suspicious of people in positions of authority. By personal persuasion, building up confidence and trust and sometimes giving financial incentives, the 2 MSM volunteers succeeded in bringing groups of MSM to be interviewed individually by the researchers in private confidential meetings held at the building of the HIV/AIDS control programme hotline.

A predesigned and pretested questionnaire sheet was used for data collection. The questionnaire included the following data:

- Sociodemographic data (age, marital status, educational level and occupation);
- MSM behaviour (age at first sexual experience, type of sexual practices, number of partners/week, frequency of sexual acts and whether with single or multiple partners, and heterosexuality);
- Knowledge about HIV/AIDS;
- Use of alcohol and illicit drugs;
- Past and present history of any manifestations related to sexually transmitted infections (STIs).

The questionnaire content was revised by 3 experts and MSM peers to ensure its validity.

All participants ($n = 73$) were recruited by the snowball technique during a period of 8 months of fieldwork. They were all screened for HIV infection using enzyme-linked immunoassay (ELISA) methods, and positive cases were confirmed by western blot test. Written consent was obtained before data collection and testing for HIV infection. The interviewees were informed about their test results after receiving proper pre- and post-test counselling services.

The data collected was organized, tabulated and statistically analysed using the test of significance between 2 proportions (Z-test) and chi-squared tests. The 5% level of significance was adopted for interpretation of results of tests of significance.

Results

The total number of MSM studied was 73. Their age range was 15–47 years. The majority of them were aged 15–25 years (79.5%), not married (84.9%) and working in manual work (71.2%), while 23.3% were jobless. Most (79.5%) had received primary or secondary education; only 1.4% had had higher education and 19.2% were illiterate (Table 1).

Sexual practices

The age at which homosexual relations was initiated was < 15 years among 65.8% of respondents. Most of them (65.8%) were both active and passive partners in their sexual relations. However, this percentage was higher (80.0%) among older persons (25+ years) as compared to persons < 25 years (62.1%). Those acting only as passive partners were 27.6% among younger persons, twice the rate among older respondents (13.3%) (Table 2).

Respondents aged < 25 years were found to be more sexually active; 25.9% had sex more than once per day compared with only

Table 1 Characteristics of the study sample of men who have sex with men

Characteristics	No. ($n = 73$)	%
<i>Age (years)</i>		
15–24	58	79.5
25–39	13	17.8
40+	2	2.7
<i>Marital status</i>		
Single	62	84.9
Married	9	12.3
Divorced	2	2.7
<i>Educational level</i>		
Illiterate	14	19.2
Primary	35	47.9
Secondary	23	31.5
Higher	1	1.4
<i>Occupation</i>		
Manual worker	52	71.2
Jobless	17	23.3
Military or police	2	2.7
Administrative	1	1.4
Driver	1	1.4

$n =$ total number of respondents.

6.7% among those 25+ years. Infrequent sexual relations (less than once per week) were reported among 73.3% of the 25+ group compared to 51.7% among the < 25 years group. The number of sexual partners per week was < 3 among 48.3% of younger persons and among 40.0% of the older ones. On the other hand 5.2% of younger persons had > 8 sexual partners per week compared to 0% of the older group. One-third of older MSM (33.3%) had only 1 sexual partner per sex act compared with 15.5% among the younger group. However, the majority reported having both single and multiple partners in their sexual relations (79.3% for younger group and 66.7% for older ones).

Heterosexual relations were reported far more by older persons (73.3%) than younger persons (29.3%); 70.7% of the younger groups were exclusively MSM.

Table 2 Patterns of sexual practices among men who have sex with men by age

Pattern of sexual practices	< 25 (n = 58)		Age (years) 25+ (n = 15)		Total (n = 73)		Significance
	No.	%	No.	%	No.	%	
<i>Age at first experience</i>							
(years)							
< 15	42	72.4	6	40.0	48	65.8	$\chi^2 = 5.56; P = 0.018$
15–25	16	27.6	9	60.0	25	34.3	
<i>Role in sexual act</i>							
Active	5	8.6	1	6.7	6	8.2	$\chi^2 = 1.70^a; P = 0.192$
Passive	16	27.6	2	13.3	18	24.7	
Active + passive	36	62.1	12	80.0	48	65.8	
Face to face	1	1.7	0	0.0	1	1.4	
<i>Frequency of sexual act</i>							
> 1/day	15	25.9	1	6.7	16	21.9	$\chi^2 = 3.03^b; P = 0.220$
1/day	9	15.5	3	20.0	12	16.4	
1/week	4	6.9	0	0.0	4	5.5	
< 1/week	30	51.7	11	73.3	41	56.2	
<i>Number of sexual partners/week</i>							
< 3	28	48.3	6	40.0	34	46.6	$\chi^2 = 0.33^c; P = 0.567$
3–4	19	32.8	7	46.7	26	35.6	
5–8	8	13.8	2	13.3	10	13.7	
> 8	3	5.2	0	0.0	3	4.1	
<i>Number of sexual partners/act</i>							
Single	9	15.5	5	33.3	14	19.2	$\chi^2 = 1.35^d; P = 0.245$
Multiple	3	5.2	0	0.0	3	4.1	
Both	46	79.3	10	66.7	56	76.7	
<i>Heterosexual relations</i>							
Yes	17	29.3	11	73.3	28	38.4	$\chi^2 = 9.77; P = 0.002$
No	41	70.7	4	25.7	45	61.6	

^aActive and passive versus other groups in relation to age.

^b1/daily and 1/week were grouped together.

^c< 3 versus other groups in relation to age.

^dBoth versus other groups in relation to age.

n = total number of respondents.

This difference was statistically significant ($\chi^2 = 9.77; P = 0.002$) (Table 2).

Concerning knowledge about HIV/AIDS, it was found to improve with improved level of education. Knowing about HIV was reported by 91.7% of those with secondary or higher education as compared to 50.0% among illiterates.

The possibility of acquiring HIV infection and the perception of the protective value of condoms was reported by 62.5% of individuals with higher levels of education compared to only 14.3% among illiterate persons and slightly more than one half (54.3%) of those with primary education. On the other hand, history of symptoms

suggestive of STIs was reported by 64.3% of illiterate MSM, almost twice as many as those with secondary and higher education (37.5%) (Table 3).

Use of illicit drugs

Use of illicit drugs was reported by 31.5% of the study group with no statistically significant difference in relation to age. The most commonly used drugs were cannabis herb (bango) (21.9%), followed by oral drugs (unspecified types) (13.7%). Cannabis herb was used by more of the younger age group (24.1%) than the older age group (13.3%) (Table 4). The highest percentage of those who used drugs was among those with secondary and higher education (45.8%), followed by those with primary education (25.7%) (Table 5).

Condom use

Condoms were never used by just over half of the studied sample (52.1%); 28.8% sometimes used them, while only 19.2%

reported always using condoms during sexual relations. Always-use condoms was reported by significantly more of those aged 25+ years (40.0%) than those < 25 years (13.8%) ($\chi^2 = 5.28, P = 0.022$). The reasons for not using condoms were: never having hearing about them (21.9% in total, 27.6% of younger persons), decreased sense of pleasure (13.7%) and partner refusal (9.6%) (Table 6).

Condom use increased with increased educational level. Among illiterate respondents, 85.7% reported never using condoms compared with 42.9% and 45.8% among those with primary education and with secondary/higher education, respectively. Always using condoms was reported by 25.7% of those with primary education and 20.8% of those with secondary/higher education compared to 0% of illiterates. These differences were statistically significant ($\chi^2 = 7.91, P = 0.019$). For illiterate respondents the main reason for not using

Table 3 Knowledge, attitude and practices of men who have sex with men towards sexually transmitted infections (STIs) including HIV/AIDS and past history of manifestations of STIs

Knowledge, attitude and practices and past history of STI manifestations	Educational level					
	Illiterate (n = 14)		Primary (n = 35)		Secondary/higher (n = 24)	
	No.	%	No.	%	No.	%
Know about HIV/AIDS	7	50.0	31	88.6	22	91.7
Realize possibility of HIV risk of infection	4	8.6	15	42.9	15	62.5
Perception of protective value of condoms against HIV infection	2	14.3	19	54.3	15	62.5
Ever used condom or asked partner to use it during last 3 months	2	14.3	20	57.3	13	54.2
Ever complained of discharge, painful micturition or defecation or ulcers on sexual organs during last 6 months	9	64.3	17	48.6	9	37.5
Ever complained of discharge from urethral or anal canal or ulcers on sexual organs during last 6 months	4	28.4	20	57.1	8	33.3

n = total number of respondents.

Table 4 Use of drugs among men who have sex with men by age

Use of drugs	< 25 (n = 58)		Age (years) 25+ (n = 15)		Total (n = 73)	
	No.	%	No.	%	No.	%
Don't use drugs	39	62.2	11	73.3	50	68.5
Use drugs	19	32.8	4	26.7	23	31.5
Cannabis resin	1	1.7	0	0.0	1	1.4
Opium	1	1.7	0	0.0	1	1.4
Alcohol	1	1.7	0	0.0	1	1.4
Oral drugs	8	13.8	2	13.3	10	13.7
Cannabis herb	14	21.1	2	13.3	16	21.9

$\chi^2 = 0.20$; $P = 0.651$ (comparing nonusers versus all users).
n = total number of respondents.

Table 5 Use of drugs among men who have sex with men by educational level

Use of drugs	Illiterate (n = 14)		Educational level Primary (n = 35)		Secondary/higher (n = 24)	
	No.	%	No.	%	No.	%
Don't use drugs	11	78.6	26	74.3	13	54.2
Use drugs	3	21.4	9	25.7	11	45.8
Cannabis resin	0	0.0	0	0.0	1	4.2
Opium	0	0.0	1	2.9	0	0.0
Alcohol	1	9.1	0	0.0	1	4.2
Oral drugs	0	0.0	5	14.3	5	20.8
Cannabis herb	2	18.1	5	14.3	9	37.5

$\chi^2 = 3.49$; $P = 0.175$.
n = total number of respondents.

condoms was never having heard about them (64.3%), compared with 8.6% among primary educated and 12.5% among those with secondary/higher education. Among primary educated men, the main reason for not using condoms was decreased sense of pleasure (22.9%), while among those with secondary/higher education, the main reasons were partner refusal (16.7%), followed by decreased sense of pleasure and never having heard about them (12.5% each) (Table 7).

HIV screening

HIV screening of this group of MSM revealed only 1 positive case representing

1.4% of the sample. The HIV infected person discovered was a 28-year-old male working as a cook. He was also found to work as a male prostitute. He reported having multiple partners and usually indulging in receptive anal sexual relations.

Discussion

HIV/AIDS is today a major threat to the world's population, to its overall social, economic and political wellbeing, as well as to the individual health of hundreds of millions of people. There are millions of people worldwide living with HIV

Table 6 Use of condoms among men who have sex with men by age

Variable	< 25 (n = 58)		Age (years) 25+ (n = 15)		Total (n = 73)	
	No.	%	No.	%	No.	%
<i>Use of condoms</i>						
Never	33	56.9	5	33.3	38	52.1
Sometimes	17	29.3	4	26.7	21	28.8
Always	8	13.8	6	40.0	14	19.2
<i>Reasons for not using condom</i>						
Unavailable	3	5.2	1	6.7	4	5.5
Decreased sense of pleasure	8	13.8	2	13.3	10	13.7
Partner refusal	5	8.6	2	13.3	7	9.6
Never heard about them	16	27.6	0	0.0	16	21.9

$\chi^2 = 5.52$; $P = 0.022$ (never versus other groups).

n = total number of respondents.

Table 7 Use of condoms among men who have sex with men by educational level

Variable	Illiterate (n = 14)		Educational level Primary (n = 35)		Secondary/higher (n = 24)	
	No.	%	No.	%	No.	%
<i>Use of condoms</i>						
Never	12	85.7	15	42.9	11	45.8
Sometimes	2	14.3	11	31.4	8	33.3
Always	0	0.0	9	25.7	5	20.8
<i>Reasons for not using condom</i>						
Unavailable	1	7.1	2	5.7	1	4.2
Decreased sense of pleasure	1	7.1	8	22.9	3	12.5
Partner refusal	1	7.1	2	5.7	4	16.7
Never heard about them	9	64.3	3	8.6	3	12.5

$\chi^2 = 7.91$; $P = 0.019$ (never versus other groups).

n = total number of respondents.

and/or AIDS—more than 90% of them in developing countries—and their numbers continue to rise sharply each year. Around 16 000 people around the world become infected with HIV each day [5].

Sex between men frequently involves anal intercourse, which carries a very high risk of HIV transmission for the receptive partner and a significant risk, though a lesser one, for the penetrative partner. At least 5%–10% of all HIV cases worldwide are due to sexual transmission between men,

although this figure varies considerably from one region to another [6]. Among the world's young people, some are more exposed to HIV than others. Some of the most vulnerable are young people who are out of school, who live on the streets or engage in commercial sex [7].

The present study was conducted on a group of MSM in Cairo city. Groups of people who live on the margins of society exist in every country, although their number and composition differ from place

to place. What marginalized groups have in common is an increased vulnerability to HIV [1]. Sex, generally unprotected, can represent not just a source of pleasure but a means of survival, or of dominating girls or other boys [8]. Youth living in the streets sometimes engage in an informal trade of sex for money, protection, a meal or a place to sleep. HIV has now been added to the panoply of risks and dangers such youth face daily, including violence and abuse at the hands of other older street kids, adults and authority figures [7].

The studied group was predominantly of younger age (79.5% aged 15–25 years), not married (84.9%) and working as manual workers (71.2%) or jobless (32.3%). Other studies of MSM show that a number of identifiable groups of men are at continuing risk of HIV infection. These are men less than 25 years and men with low educational and literacy levels. Age is clearly one of the most important of these factors, because it relates to several of the others. Many younger people are likely to use alcohol and drugs while having sex and many young gay men have low incomes. Young people of all sexual orientations are prone to the opinion that nothing bad can happen to them, which frequently further aggravates the risk of HIV infection [9].

The age of initiation of sexual activity was found to be less than 15 years among 65.8% of our sample. Worldwide, many studies showed that the majority of young people have begun to have sexual intercourse before they leave their teens and at least half of them by the age of 16 years [10–16].

Little is known about the pattern of sexual relations between MSM, whether they practise safe or protected sexual relations or not. However, studies conducted all over the world indicated that 30%–80% of MSM usually have unprotected anal sex [4].

The majority of our group of MSM indulged in both penetrative and receptive anal sex (65.8%) and in each act there may be more than 1 partner (76.7%). Again, more than half of them (53.4%) had more than 3 partners per week. During interviews, the motives for these sexual acts were reported to be both commercial as well as for pleasure. This pattern of sexual practice indicated that they are highly liable to risk of HIV infection. Younger MSM were found to have more partners compared to older ones. This observation was documented by other studies, which indicated greater partner turnover during adolescence and the early 20s than in later years [11,17].

Worldwide, a high percentage of MSM are married or have sex with women as well. [6]. This was also observed in our research, especially among the older age group, where 73.3% were bisexual. On the other hand, 70.7% of MSM < 25 years were exclusively MSM. This pattern may denote that with advancing age MSM are more likely to indulge in sexual relations with partners of the opposite sex. A study in Brazil of MSM indicated that among those reporting unprotected sex with a woman, two-thirds had also had unprotected anal sex with a man. This overlap of risk behaviour provides a classic bridge for HIV, allowing it to pass from a population with high prevalence rates to a heterosexual population with typically lower infection rates [1].

Educational level was found to have its effect on the knowledge of this group about risks and protective measures for HIV/AIDS. The majority of the study group were illiterate or of only primary education which means that they are at high risk for HIV infection. Many MSM have limited educational level and poor literacy skills [9]. Even when there are high levels of basic knowledge, however, millions of people

around the world are still vulnerable to HIV because they do not know the basic facts. The right to information about HIV transmission and prevention has sometimes been denied to young people on the grounds that they are, or should be, sexually abstinent. In general, people with more education lead healthier and more productive lives. There are several reasons for this: better educated people generally have greater access to information than those who are illiterate or uneducated, and they are more likely to make well-informed choices and decisions based on that information [1].

Among the study group, 48.0% (35/73) reported a history of manifestations of STIs during the previous 6 months. This increased to 64.3% among illiterate persons, who also had greater lack of knowledge about HIV/AIDS. An important indicator of the scale of unprotected sex and hence of potential exposure to HIV is the incidence of other STIs. It has been reported that around half of the 333 million new STI cases per year were found among young people less than 25 years old [7].

There is a direct connection between drug and substance use and HIV infection transmission. Injecting drug use is estimated to be directly responsible for over 5% of HIV infections worldwide. Of the estimated 6–7 million persons around the world who inject drugs, four-fifths are men. Men who inject drugs have a higher risk of HIV propagation to others than women; they are more likely to have noninjecting partners to whom they may transmit the infection. They are more likely to share needles than women, and tend to be the first to share injecting equipment, thus increasing the probabilities of transmitting the infection to the subsequent injectors. In a major 13-city study, the majority of injecting drug users with regular sex partners reported never using condoms [6].

Drug use was reported by about one-third of our studied sample (31.5%) with no significant differences in relation to age or educational level, although the percentage of drug use increased with increased level of education. The drugs most commonly abused were cannabis herb and oral drugs of various types. Apart from the HIV risk connected with needle-sharing, it is known that alcohol and other drugs can affect sexual behaviour and increase young people's vulnerability to HIV. Excessive drinking, for example, diminishes inhibitions; it also impairs the ability to use important information that has been learnt regarding AIDS prevention and how to make decisions about protection [7].

Used properly and consistently, condoms are one of the most effective methods of protection against HIV infection. They are relatively cheap and generally have no side-effects. They can readily be made available on a mass scale through regular commercial sales. At the present time, the number of condom users as a proportion of those who are sexually active remains low in many countries. In addition, those who use condoms often do so irregularly or only with selected partners. In many places, it is difficult to obtain condoms for a variety of reasons [18]. In the present study only 19.2% of the sample reported regular use of condoms. The rest of the study group never used them or infrequently so. The percentage of regular use of condoms was found to increase significantly with increased age and level of education.

In many countries, condom use was not part of the culture before the HIV/AIDS epidemic, and acceptance of the use of condoms in these places has been slow. People may not be adequately informed about the protective effects of condoms against STIs and HIV [19]. Among illiterate participants in this study 64.3% repor-

ted never hearing about condoms as a protective method for HIV/AIDS.

Recommendations

- The presence of MSM communities in our society should not be ignored.
- Encouraging better religious and moral behaviour of youth is crucial to avoid sexual practices not accepted by our community that also expose our youth to high risk for HIV/AIDS and other STIs.
- Outreach programmes should be established for better understanding the risk behaviours of MSM in our community, and for raising the awareness of this group about HIV/AIDS and methods of protection, with special emphasis on building the skills of condom use.
- The problem of street children and young adults should be tackled in an integrated approach by all ministries concerned and nongovernmental organizations.

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National AIDS programmes: a guide to monitoring and evaluation

In the early years of the HIV/AIDS epidemic, programme managers had little information about what interventions were likely to work in reducing the spread of the virus, and little idea of how they might measure the success of their interventions. It was widely believed that sensitive behaviours such as sex and drug injection—known to spread the virus—could not be reliably measured at all. There was an urgent need to respond in any way possible; measuring the success of the response was not high on the list of priorities for most programme managers.

Over the last decade, this thinking has changed. Much more is known about how HIV spreads, and what changes are needed to slow the spread. It has been amply demonstrated that people will answer questions about their sex lives, and there is growing evidence that their answers give a fairly reliable picture of trends in behaviour over time. This guide can be accessed at: <http://www.emro.who.int/GFATM/guide/guide.html>