

ORIGINAL ARTICLE

KNOWLEDGE, ATTITUDES AND PERSONAL BELIEFS ABOUT HIV AND AIDS AMONG MENTALLY ILL PATIENTS IN SOWETO, JOHANNESBURG

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Aim. The aim of the study was to determine knowledge, attitudes and personal beliefs regarding HIV and AIDS in a group of mentally ill patients attending outpatient clinics in Soweto, Johannesburg.

Method. All patients attending four randomly chosen clinics in Soweto were invited to complete a self-administered questionnaire after obtaining informed written consent. The 63-item questionnaire, developed from others specifically for this study, included questions on socio-demographic and clinical characteristics; knowledge on how HIV is acquired and spread; attitudes and beliefs regarding HIV and AIDS; and condom usage. The statements in the knowledge sections were used to calculate a composite score, which if greater than or equal to 75% was defined as 'adequate knowledge'.

Results. A total of 1 151 patients with mental illness participated in the study. The mean age was 41.9 years (standard deviation 11.6) and the majority were males (50%); single (55%), and had achieved only a secondary level of education (53.3%). Overall, most of the study population did not believe in the myths surrounding the spread and acquisition of HIV and AIDS. There were however, significant associations between a low level of education and the belief that HIV is acquired from mosquito bites (odds ratio (OR) 1.61; 95% CI 1.19 - 2.18; $p=0.002$) and through masturbation or body rubbing (OR 1.76; 95% CI 1.34 - 2.33; $p=0.000$). Although more than 90% of the patients were aware of the facts regarding the spread of HIV, approximately 40% did not believe that one could acquire HIV through a single sexual encounter. The composite scoring for knowledge showed that less than half the patients had adequate knowledge of HIV/AIDS. This was significantly associated with gender and level of education: females were 1.6 times ($p<0.0004$) and patients with Grade 8 or higher education 1.5 times more knowledgeable ($p=0.002$).

Conclusion. Among mentally ill patients there is both a lack of knowledge about most aspects of HIV and AIDS and a belief in some of the myths associated with the acquisition and spread of the disease, especially among older, less educated patients. It is imperative that a targeted strategy be developed for this vulnerable group, taking into cognisance their inherent lower level of education and the cognitive impairment associated with mental illness, to educate them on all aspects of HIV and AIDS and to improve access to services.

The prevalence of HIV in developed countries is higher among patients with mental illness than among those without.¹ In the USA it is estimated to be 13 - 76 times that of the general population.² In southern Africa the prevalence ranges from 0% to 59% (0 - 22.9% before 1996 and 2.6 - 59% after 1996, suggesting an upward trend).³ The prevalence also varies according to where the study was performed, the highest being in Zimbabwe.⁴ Collins *et al.* more recently reported that in South Africa, despite the supposition that people with mental illness may engage in high-risk sexual behaviours more than the general population, the prevalence largely matches that of the general population.⁵ They suggest that as there is little injection drug use, the high prevalence of HIV in the general population is probably due to acquisition of the virus shortly after sexual initiation.⁵ Nonetheless, there is sufficient evidence that mental illness increases the individual's vulnerability to HIV infection.^{6,7} HIV risk among people with mental illness has been associated with lack of condom use, multiple sexual partners and injection drug use.^{8,9} The social exclusion that often accompanies life with mental illness may also increase vulnerability to infection. It may lead to exchange of sex for money or goods and an increase in coercive sexual encounters. In addition, cognitive deficits

associated with certain mental disorders may impair judgement and the ability to negotiate safe sexual encounters.¹⁰

In the general population, education and providing information about HIV and AIDS is one of the important ways of reducing risky sexual behaviour and the spread of the disease.¹¹ Yet studies have shown that levels of knowledge about HIV and AIDS are sub-optimal among patients with mental illness, and that levels differ among inpatients and outpatients and are influenced by psychiatric diagnosis.¹² Patients with mental illness tend to engage in risky sexual behaviour because of these lower levels of knowledge, which places them at risk of contracting or transmitting HIV.^{13,14} Melo *et al.* found in their study that high HIV and AIDS knowledge scores were associated with a past history of sexually transmitted infections, previous HIV testing and consistent condom use and that low knowledge scores were associated with mental illness.¹¹ Similarly, a study in a psychiatric hospital in Rio de Janeiro also showed knowledge to be lower in patients with mental illness compared with the general population.¹⁵ The authors used a 17-item AIDS knowledge test and found the average correct score to be only 61.2%. Chandra *et al.*, who assessed HIV knowledge among a group of Indian patients with

mental illness at baseline and 5 days later after an HIV risk reduction programme, showed that brief HIV-focused educational intervention can improve knowledge.¹⁶ However, different methodologies employed in the various studies make it difficult to ascertain accurate knowledge among psychiatric patients.

In spite of evidence showing poor knowledge of HIV and AIDS among mentally ill patients and the risks thereof, very few mental health services routinely assess knowledge of HIV transmission and risk behaviour,^{1,13} let alone attempt to educate this vulnerable group of individuals. HIV risk reduction interventions targeting South Africans with psychiatric illness remain few and far between. Collins examined the attitudes of 46 mental health care providers in four provinces of South Africa and reported that 'personal, contextual and political factors in the clinic and the hospital create barriers to integrating prevention activities. In particular, providers face at least three challenges to intervening in the epidemic among their patients: their own views of psychiatric illness, the transitions occurring in the mental health care system, and shifting social attitudes toward sexuality.'¹⁷ Although barriers exist in implementing such education programmes, the Mental Health Care Act No. 17 of 2002 requires the integration of all prevention and promotion programmes into psychiatric services.¹⁸ This is supported by research that shows it to be implementable.^{1,19}

Hodgson stated that: 'HIV for many South Africans defies precise classification: it does not fit the profile of a 'normal' disease. It affects the developed and the developing world in different ways and has a long period of apparent inactivity, and any of a large number of symptoms can present as the immune system weakens. This is further complicated by the association of HIV with sex, death, taboo and youth. It is therefore not surprising that people depend upon cultural models of illness, constructed from existing mythical frameworks and illness narratives, to provide meaning and to guide behaviour.'²⁰ Some prevalent cultural norms and beliefs include negative attitudes towards condoms ('flesh-to-flesh' sex is equated with masculinity and is necessary for male health); engaging in dry sex (the vagina is expected to be small and dry); the importance of fertility (which may hinder the practice of safer sex); polygamy (males are biologically programmed to need sex with more than one woman); misconceptions regarding the virus (that it can be contracted by sharing food, or mosquito bites; that sex with a virgin can cure the disease); that circumcised men cannot contract HIV; that alcohol kills HIV in the blood; and that you cannot contract HIV if you have one unprotected sexual encounter.²¹

The assessment of knowledge deficits will help in determining which patients need knowledge interventions as opposed to which need skills development or motivational behaviour change,¹¹ hence the need for this study, the aim of which was to determine baseline knowledge about prevention and acquisition of HIV among mentally ill patients in Soweto. It was hoped that the information obtained from this study would assist in developing protocols, guidelines and focused interventions to improve the level of knowledge and reduce the risk of spread of HIV among people with mental illness.

METHOD

The study design was cross-sectional in nature and undertaken to determine the knowledge, attitudes and personal beliefs among patients attending specialist psychiatric clinics in Soweto, Gauteng, from April 2009 to June 2009. There are 8 specialist psychiatry clinics in Soweto, of which 4 were randomly selected from a hat containing the names of all the clinics. Patients (18 years and older) from these four randomly chosen psychiatric clinics were approached to participate in the study in the waiting room while they were waiting to see the

psychiatrist. Informed consent was obtained after the contents of the form had been explained to the patients. Although the questionnaire was self-administered, a trained facilitator assisted patients where translation or explanation of the questions was necessary. The study was approved by the Human Research Ethics Committee of the University of the Witwatersrand.

There is no specific questionnaire that is validated to assess knowledge, attitude and personal beliefs in mentally ill patients in South Africa. For the purpose of this study, questions from other validated questionnaires for the general population were used to construct our 63-item questionnaire.²² We included questions on knowledge, attitudes and beliefs that were commonly recurring. Although not performed on mentally ill patients, the questions were general and appeared appropriate to be used in our study on mentally ill patients. The final questionnaire comprised of nine sub-sections; however the sub-sections analysed in this report were those on socio-demographic and clinical characteristics; knowledge on the acquisition and spread of HIV and AIDS; attitudes and beliefs regarding HIV and AIDS; and condom usage. The questions were rephrased where they might have been confusing, were not positively or negatively worded so as to prevent a set response bias, and attempted to take into consideration the cultural beliefs and norms of the participants so as not to appear offensive. The questions were in English and not translated into any of the official African languages. Reliability was ensured by having one facilitator and one interviewer, who was a nurse mental health practitioner with 30 years' experience.

Knowledge scores for the various categories were coded as 1 for a correct response and 0 for an incorrect or unknown response. A composite score was derived for each of the categories. A patient who achieved a composite score greater than or equal to 75% was defined as having 'adequate knowledge'. Nachega *et al.* used a similar technique in their study to determine average knowledge scores.²³ Kuder Richardson (KR20) reliability coefficients were calculated for the questions pertaining to knowledge of HIV and AIDS (0.6591), prevention of acquiring HIV (0.0464), mental illness and HIV association (0.5832), and all questions (0.7428).²⁴ Descriptive statistics, frequency distribution tables and chi-square tests for categorical data were produced using Stata (Stata Statistical Software, Release 10).²⁵

RESULTS

A total of 1 151 patients (50% males, 43.1% females, 6.9% unknown) with mental illness completed the self-administered questionnaire. Typical diagnoses seen at the community clinics comprise mood disorders (both unipolar and bipolar disorders), psychotic disorders, anxiety disorders, personality disorders and disorders due to general medical conditions. The numbers of patients approached and those refusing to participate in the study were unfortunately not recorded. Approximately 79% of patients were in the age group 25 - 54 years. Patients between the ages of 15 and 24 years and those over 55 years accounted for 6.1% and 15.4%, respectively. The mean age of the entire study population was 41.9 years (standard deviation 11.6), while that for males was 39.5 years and that for females 44.1 years. Female patients were significantly older ($p < 0.001$, two-sample Wilcoxon rank-sum test). Marital status was as follows: single (55.2%), married or living together (21.6%), divorced or separated (13.1%), and widowed (8.1%). Most of the patients had some formal education: Grades 1 - 7 in 38.8%, Grades 8 - 12 in 55.3%, and tertiary education in 3.2%. Only 80 patients (7%) were employed and 918 (79.7%) were receiving a grant (disability or pension); 499 patients (43.4%) had a positive family history of mental illness. More than half the patients (54.6%) were unaware of the details of their own current psychiatric illness.

Common psychiatric diagnoses included depression (8.2%), bipolar disorder (17.3) and schizophrenia (18.9%).

Ninety-three per cent of the study population was aware that AIDS is caused by the human immunodeficiency virus (HIV). Although only 2.26% responded that HIV and AIDS was a result of being bewitched, the majority (87%) were unsure, as they did not complete this question. Overall, most of the study population did not believe in the myths surrounding the spread and acquisition of HIV and AIDS. However, a significantly large number believed that sharing utensils (86.7%), masturbation or body rubbing (65.4%), and a bite from a mosquito that has bitten someone with HIV (72.3%) leads to the spread of HIV (Table I). Although more than 90% of the patients were aware of facts relating to the spread of HIV, approximately 40% did not believe that one could acquire HIV through a single sexual encounter.

There were significant associations between having a Grade 8 or higher level of education and the belief that HIV is acquired from mosquito bites (odds ratio (OR) 1.61; 95% confidence interval (CI) 1.19 - 2.18; $p=0.002$) or through masturbation or body rubbing (OR 1.76; 95% CI 1.34 - 2.33; $p=0.000$), and that there is no hope for people with HIV

and mental illness (OR 4.133; 95% CI 2.00 - 8.50; $p=0.000$). Similarly, there were significant associations between advancing age and the belief that HIV is acquired through masturbation or body rubbing (OR 1.12; 95% CI 0.85 - 1.46; $p=0.001$) and that there is no hope for people with HIV and mental illness (OR 0.961; 95% CI=0.93 - 0.98; $p=0.002$).

With regard to attitudes towards condom use, only half of the patients believed that the condom completely protects one from contracting HIV. Despite more than 90% of the patients reporting that they did not experience difficulty in obtaining condoms at clinics and believed that condoms did not decrease the full enjoyment of sex, only 70% of the patients reported that they used condoms with every partner they had sexual intercourse with (Table II). The majority of the patients reported that they engaged in safe sex practices.

Ten per cent ($N=197$) of the patients reported risky sexual behaviour, the reasons cited being lack of information about safe sex ($N=112$), lack of skills in dealing with provocative situations ($N=77$), because they were in hospital ($N=1$), no social support ($N=2$), actively using drugs and alcohol ($N=3$), and exchange sex, i.e. for cigarettes, a place to live or drugs ($N=2$).

TABLE I. MYTHS AND FACTS RELATING TO SPREAD OF HIV AND PROTECTION AGAINST ACQUIRING HIV (% OF QUESTIONS ANSWERED AS 'YES', 'NO' OR 'UNKNOWN')

	Yes	No	Unknown
Myths relating to spread of HIV			
Living in the same house as someone who has HIV	8.6	88.6	2.8
Sharing utensils	86.7	10.9	2.3
Sharing cigarettes, food or drinks	7.7	89.0	2.6
Hugging someone who has HIV	7.3	89.4	2.4
Kissing	25.1	72.8	1.9
Masturbation or body rubbing	65.4	31.5	2.5
Coughing	17.9	78.9	2.9
Mosquito that has bitten someone with HIV	72.3	24.5	2.6
Myths relating to protection against acquiring HIV			
A shower after sex reduces the risk of getting HIV	17.7	80.2	2
Oral sex is safe when partners don't swallow	80.5	16.1	2.9
Additional protective measures from traditional healers	24.2	71.8	3.9
Facts relating to spread of HIV			
In one sexual contact	57.0	40.2	2.8
Having sex with multiple partners	92.2	5.7	1.7
During anal sex	92.3	5.2	2.4
Having sex without a condom	82.3	5.1	1.9
Through broken skin, e.g. cuts or grazes	94.6	3.4	1.9
Through injection drug use	89.9	6.6	2.5
An HIV-infected pregnant woman infecting her baby	92.7	5.1	2

TABLE II. FREQUENCY DISTRIBUTION OF ATTITUDE TOWARDS CONDOMS AND SAFE SEX PRACTICES (% OF QUESTIONS ANSWERED AS 'YES', 'NO' OR 'UNKNOWN')

	Yes	No	Unknown
Attitude toward condoms			
Do you use condoms with every partner you have sex with intercourse with?	70.2	14.6	14.9
Condoms decrease my full enjoyment of sex so it is not necessary to use it	5.8	91.2	2.9
Have you ever had problems obtaining male/female condoms?	5.9	91.7	2.4
Safe sex practices			
I should have as many sexual partners as possible as it will prove that I am a real man	1.5	95.7	2.9
Are you faithful to a single partner?	76.7	8.3	14.9
Have you had more than one partner with whom you have had unprotected sex?	6.4	78.9	14.6

Using the composite scoring for knowledge described in the methodology, the results showed that 49% of the patients had adequate knowledge of HIV/AIDS and that 42% had adequate knowledge pertaining to the prevention of acquiring HIV (Table III). The patients' limited knowledge of HIV and AIDS was largely obtained from radio and television (12.7%), friends and relatives (6.2%), health care workers (5.5%), public speeches (0.4%), newspapers or magazines (0.5%), church (0.9%) and school (1.7%). However, a large majority of patients did not respond to this question.

Adequate knowledge about HIV and AIDS was significantly associated with gender, females being 1.6 times more knowledgeable than males ($p < 0.0004$), and a higher level of education, patients with grade 8 or higher of education being 1.5 times more knowledgeable than those with less education ($p = 0.002$). After controlling for age, gender and educational level, the results from multivariate logistic regression analysis showed similar associations to the unadjusted ORs.

DISCUSSION

Various studies have shown that a large proportion of patients with mental illness engage in behaviours that place them at high risk of contracting HIV, e.g. promiscuity, intravenous drug use with shared needles, and unprotected sex.^{2,14,26} Although clinical factors such as poor reality perception, affective instability and impulsiveness play a major role in such behaviours, lack of knowledge and/or inaccurate information about HIV infection is also a significant variable.²⁶

Published studies in developed countries conclude that knowledge about HIV and AIDS is poorer in mentally ill patients than the general population.²⁷⁻²⁹ Yet other studies, in a variety of psychiatric patient groups, reported higher proportions of correct responses to AIDS knowledge questionnaires, ranging from 63% to 80%³⁰⁻³² (comparable to that of the general US population).³³ Chuang and Atkinson at the Calgary Community Mental Health Clinic utilised a 10-item instrument to assess knowledge about HIV and AIDS.³⁰ Chandra *et al.* in India reported a low 34% accuracy in responses to questions on HIV and AIDS.¹⁶ We utilised a 63-item questionnaire and found that approximately 50% of the mentally ill patients surveyed had adequate knowledge of HIV and AIDS. While this level of knowledge is not the lowest reported among mentally ill patients, it is significantly lower than that of the general population, and specifically the Soweto population. Nachega *et al.* in their cross-sectional study of 105 HIV-infected adults attending an HIV clinic in Soweto reported that 89% had good knowledge about the cause of HIV infection and 83% knew about modes of transmission.²³ Similarly, the 2003 South African Demographic and Health Survey (SADHS), conducted on the general population, showed that 93 - 95% had heard of AIDS, 71 - 85% agreed that condoms reduce the risk of HIV infection, and 78% agreed with the statement that a healthy-looking person could be carrying HIV.³⁴ These studies support a better level of knowledge than that of mentally ill patients.

The most likely reason for low levels of knowledge is the very few education programmes specifically designed for patients with mental illness and conducted in mental health clinics, where the targeted group would be most accessible. Kloos *et al.* found that only a little more than half of their enrolled patients reported receiving HIV-related education, which was limited to brief one-time group overviews of HIV/AIDS.³⁵ Further, they report that education in groups is difficult because needs and levels of functioning vary widely within the different sub-groups of mental illness.³⁵ Other factors that influence levels of knowledge include age, gender and level of education. These individual factors are more significantly associated with improved knowledge rather than treatment setting factors and condom distribution.¹¹ Our study found that female patients and patients with higher level of education (Grade 8 and higher) were relatively more knowledgeable about HIV and AIDS. This is in contrast to Chandra *et al.*'s finding¹⁶ that men demonstrated better knowledge, and the Katz study,³⁶ which reported no gender difference in knowledge, either for total knowledge scores or for scores on individual items. It is likely that the bias towards females in this study may be because in general females tend to be better utilisers of health facilities (including antenatal clinics), where they access education and improve knowledge, while men are notoriously known to shy away from and avoid health facilities.^{37,38} With regard to education, several studies have also reported that higher levels of education lower the risk of being HIV-positive and that educated individuals are more responsive to the HIV/AIDS information campaigns and condom use.^{11,39,40} Koen *et al.* reported that negative symptoms associated with mental illness also impact on acquisition of knowledge.⁴¹

The participants in our study obtained their limited knowledge of HIV and AIDS mainly from radio and television, friends and relatives, and to a much lesser extent from health care workers. This is similar to Nigerian studies, which also found that the main source of information on HIV was electronic media (radio and television).^{22,42} Health care providers/institutions are significantly lacking as a source of information despite having the opportunity and having most contact with mentally ill patients. Education of the mentally ill must utilise all available modalities. The Vision Project, although not directed at patients with mental illness, showed that individuals with high programme exposure were one and a half times more likely than those with no exposure to have discussed AIDS with their partner and over twice as likely to know that condom use can reduce the risk of HIV infection.⁴³ Similar outcomes were reported in India by Chandra *et al.*, whose patients received an HIV educational programme and were then re-assessed for their knowledge 1 and 5 days later. The results indicated a poor level of baseline knowledge, which improved after education; knowledge gains were sustained at 5 days.¹⁶ There is strong evidence to support the recommendation that mental health practitioners should develop specific training programmes aimed at increasing knowledge among the mentally ill. These programmes must take into cognisance the lower level of education and cognitive impairment among mentally

TABLE III. KNOWLEDGE OF HIV/AIDS AND PREVENTION OF ACQUIRING HIV

	N	%
Adequate knowledge of HIV/AIDS		
No	592	51.4
Yes	559	48.6
Adequate knowledge pertaining to prevention of acquiring HIV		
No	665	57.8
Yes	486	42.2

OR = 1.55 (95% CI 1.21 - 1.99); chi-square test: $p < 0.0004$.

ill patients and should be incorporated not only in health facilities but also in the print media and the radio.

While education is important, misinformation, myths and urban legends have been found to be associated with higher rates of HIV risk behaviours (impulsivity, increased sexual activity, poor skills at negotiating safe sex and drug abuse) among mentally ill patients.¹⁹ Approximately 1 in 10 patients in our study engaged in risky sexual behaviour, largely because of lack of information or misinformation. One in 5 of our participants believed that a shower after sex prevented one from contracting HIV. This was similar to figures in studies by Koen *et al.*⁴¹ and Chandra *et al.*¹⁶ Katz *et al.* reported that 42% of their subjects were unaware that they could be infected by injection drug use.³⁶ Otto-Salaj *et al.* reported that 48% of their subjects believed that careful cleansing after sex would provide protection from the virus,³² and Kalichman *et al.* that 37% of their patients believed that showering after sex would prevent HIV infection.¹⁹ In the study by Chuang and Atkinson, a significant number of subjects believed that one could acquire AIDS by donating blood and 25% did not think that having only one unsafe sexual contact would make them vulnerable to HIV infection.³⁰ In our study, a much higher proportion (40%) of respondents believed that one could not acquire HIV after just one sexual contact. The majority also believed that sharing utensils (86.7%) and masturbation or body rubbing (65.4%) leads to the acquisition of HIV. More than two-thirds of the respondents held the belief that HIV can be acquired from the bite of a mosquito. In a Nigerian study, only 23.5% of patients held this belief,⁴² while only 57% in the SADHS rejected the statement that HIV cannot be transmitted by mosquito bites.³⁴ Our study also found significant associations between the frequency of some of these beliefs and a Grade 8 or lower level of education and advancing age.

Only half of our patients believed that condoms completely protect one from contracting HIV, and 90% believed that condoms do not decrease the full enjoyment of sex. Despite this, 14.6% of the participants did not use condoms with every partner they had sexual intercourse with and would not insist that either they or their partners wear condoms. This compares favourably with the SADHS study, in which 76% of men knew that using condoms and having sex with one uninfected partner prevents HIV, while only 68% of women knew this.³⁴

Bonhert *et al.* reported that while misinformation and myths may be associated with negative attitudes towards condoms and a greater number of sex partners, holding these beliefs was not an impediment to HIV testing or increased risk behaviour.⁴⁴

While the majority of our patients were aware that AIDS was caused by HIV, 1 out of 10 patients believed that it was caused by bewitchment. In comparison, in the SADHS 76% of women surveyed agreed that HIV could not be transmitted by witchcraft.³⁴ Witchcraft or invisible forces have long been thought of in Africa as causing untimely death or illness. In the South African context this is often seen as malicious individuals using spiritual entities or 'muti' to effect harm on another person. Jealousy is thought to be the main reason why a malicious lover, neighbour or relative would want to harm a particular individual. Of equal concern is the fact that 24% of our patients responded that they used additional protective measures from traditional healers to guard themselves against the acquisition of HIV. In a study among inmates (not reported as having mental illness) of Quthiing Prison in Lesotho, 2.1% of respondents interviewed thought that HIV was caused by bewitchment and 23% believed that traditional protective measures against witchcraft may prevent the transmission of HIV/AIDS.²²

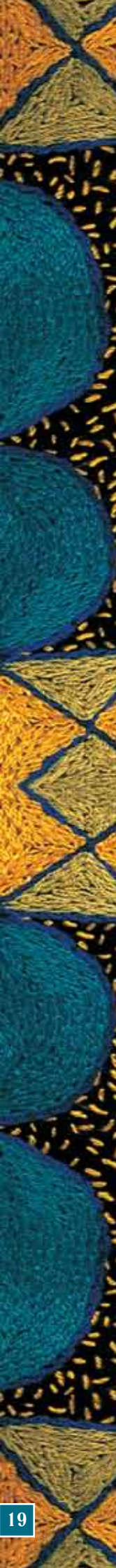
Efforts to combat HIV/AIDS in prevention campaigns need to include tackling cultural beliefs and not just provide information on cause and transmission. Understanding these cultural beliefs is important, as they influence decision making concerning choice of therapy. In these cases, hospitals or clinics are only approached for help as a last resort when traditional therapies have failed. It is then often too late for biomedical treatments to be effective. We also need to extend this information to what symptoms suggest infection and how to respond to those symptoms.⁴⁵ It is these gaps in our prevention programmes that continue to facilitate infection, as misinformation about AIDS leads to high-risk behaviours.³⁶

A few limitations to this study are worth noting. Although diagnosis was not correlated with clinical records and no measure of level of severity of psychiatric illness at the time of the interview was made, reliability was ensured by having one facilitator and one interviewer who was a nurse mental health practitioner with 30 years' experience. Our sample was also predominantly urban and hence may not be generalisable to other study populations. The self-report nature, although facilitated, might have caused bias that might have led to over- or under-estimation of certain variables. Similarly, a minimum level of literacy was required that may have biased the sample towards higher functioning and more literate respondents. Our questionnaire has not been validated in mentally ill patients or in a developing country and may have been too lengthy. Further work is required to explore and improve the psychometric properties of this questionnaire, and to develop preventive programmes and means to assess whether such programmes work in terms of retained knowledge and behavioural change. Sexual risk behaviour was not analysed in this research study, but is the basis of a future report.

CONCLUSION

Given the relatively high prevalence of both mental illness and HIV/AIDS in our general population, there is a proportion of patients with mental illness who lack knowledge about HIV and AIDS. Comprehensive basic information and medical facts concerning the acquisition, prevention and further transmission of HIV are needed. Promotion of HIV testing and counselling of psychiatric patients and their families is needed and should further enable this group to receive appropriate psychological support. The uninfected segment of the mentally ill population should have adequate knowledge about how to protect themselves against this devastating disease. Knowledge of HIV status, with appropriate counselling, may mean that these individuals can change risk behaviour to protect their quality of life and that of their families. Prevention activities should include peer programmes, leadership seminars, and development and distribution of adaptable programmes that target high-risk groups such as patients with severe mental illness.

Innovative ways of targeting messages and delivering focused prevention education packages to patients with psychiatric illness are needed in developing countries. We need to dispel myths about condoms and improve distribution of condoms (especially female condoms) in our clinics and psychiatric institutions. Although most mental health clinics in our area do not provide any sexual health orientation, it is vital that this situation is improved upon and that policies are developed towards implementing prevention packages among mentally ill patients, as prevention programmes based on research on group-specific needs are most likely to be successful.³⁶ Clinicians need to address basic HIV knowledge and risk reduction interventions with all patients they see on a daily basis.



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