



AWARENESS OF HIV INFECTION AMONG PREGNANT WOMEN ATTENDING THE ELSIES RIVER ANTENATAL CLINIC

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To date South Africa has failed to stem the rising tide of HIV infection. Voices are increasingly raised about the grim spectre of HIV and AIDS, which is no longer just a health problem, but is also threatening to cripple the economy. At an AIDS summit held on 11 September 1998, it was reported that one in every seven civil servants is HIV-positive and that there are already up to 100 000 AIDS orphans in KwaZulu-Natal.¹ The situation described in the press is already an exacerbation of the seroprevalence reported in the Western Cape in October 1997, which was 6.3%.² This in turn is a dramatic increase when compared with the 1.16% reported for 1994.²

In order to design information and educational campaigns on a local level, knowledge of the attitudes and benefits of intended target groups are needed. By adapting an educational campaign to the specific group, better results are achieved. We chose a target group of women attending the Elsie's River Antenatal Clinic. This survey aimed to investigate the extent of their understanding of the disease and its spread. It was aimed specifically at identifying gaps in their understanding that could be addressed by means of an educational campaign, such as a series of informative posters at the clinic.

WHAT WE DID

This study was undertaken as part of the training of the first four authors and was carried out under the ethical and scientific supervision and requirements of the Department of Community Health of the Medical Faculty of the University of Stellenbosch. Strict anonymity of participants was preserved.

This study was carried out by four MB ChB students at the University of Stellenbosch as part of their practical work for Community Health. The aim of this task was to give medical students a chance to observe and record aspects of health and disease in the community. They were set the additional goal of developing the skills to investigate a health-related issue and to produce a professional and responsible report. According to them, they learnt a good deal!

All women attending the Elsie's River Clinic, Bellville, for antenatal care during June 1998 were eligible for inclusion in the study. Elsie's River Clinic provides primary health care for people of the surrounding area and is within the substructure of tertiary care supplied by Tygerberg Hospital. The clinic does not test routinely for HIV infection.

Permission to interview patients was formally obtained from the clinic. Expectant mothers were approached while they were waiting to be examined by the sisters at the clinic. The nature of the study was explained and informed consent was obtained.

Interviews

Structured interviews were conducted on a one-to-one basis with the aid of a specifically designed questionnaire in the participant's preferred language, namely English or Afrikaans.

Questions were either closed with yes/no/uncertain options, or open-ended, in which case spontaneous responses were noted down and categorised according to content. Participants could suggest more than one answer to the open-ended questions. Referral was always made to HIV/AIDS as a single concept, with no distinction between HIV positivity and AIDS.

Exposure to syphilis, as measured by Venereal Disease Research Laboratory (VDRL) status, was used to indicate the risk of sexually transmitted diseases (STDs) in the study group. Information on VDRL status was only available for 69% of participants, of whom 3% were VDRL-positive.

Participants were asked about the number of persons per sleeping area in their homes. Only 18% reported 3 persons per sleeping area, and 11% reported 4 or more. This question was asked in an attempt to obtain an indication of the socio-economic status of participants.

Background information on the study group

Of the 128 women approached, 28 declined to participate.

The participants represented in this study were almost exclusively Afrikaans-speaking women from the coloured community in Elsie's River. The vast majority of the participants (83%) had a level of education beyond Standard 6 (Grade 8). All of those interviewed were younger than 35 years of age, and 17% were younger than 20. For 44% of the women this was their first pregnancy and for 27% it was their second pregnancy.

Most of the participants (69%) were unmarried, and 8% admitted to having multiple current sexual partners.

In the analysis, the results were stratified according to age, level of education, and socio-economic status to determine if any of the above parameters influenced the responses.

WHAT THE MOTHERS SAID

Only 70% of the expectant mothers who visited the clinic thought that they knew what HIV/AIDS was.



When asked if HIV / AIDS could lead to death, 94% thought that it would. In order to judge the participants' understanding of the course of the disease, they were asked about the timespan from infection to death. Most (63%) knew that it usually takes more than 6 months from the time of infection to death, while 1% thought that it would take less than 6 months to die.

In order to judge the community's exposure to HIV / AIDS, participants were asked if they knew anyone infected with HIV / AIDS. Only 14% of the participants responded in the affirmative.

Only 18% of the women had been tested previously for HIV infection. Of those 18 women, 15 (83.3%) were prepared to divulge their results. Only 1 was seropositive. Most of the untested women (85.7%) said they would have liked to have been tested, and 80% of the study sample indicated that they would have liked their sexual partner(s) to have been tested.

The vast majority of the women (92%) thought they knew how HIV was transmitted, but 6% said that they did not. Those who said they knew how HIV is transmitted volunteered methods of transmission (Table I) in response to open-ended questions.

Table I. Methods of HIV transmission spontaneously mentioned by participants (N = 92)

Suggested methods of transmission	N	%
High-risk sexual intercourse	89	96.7
Blood contact (including using the same toothbrush or razor as HIV-positive person, and open sores in the mouth)	30	32
Shared or dirty needles among drug abusers	25	27
Vertical transmission	2	2.2

No participant mentioned transmission of HIV via breast-feeding. The following misconceptions about transmission were also mentioned: 21 women (22.8%) said that HIV was transmitted primarily through blood transfusions. Five (5.4%) mentioned kissing / saliva, and 2 (2.2%) mentioned dirty seats or toilets, while 1 (1%) mentioned rusty needles or knives.

The majority of women (79%) thought they knew how to prevent HIV transmission, but 18% said they had no idea. Table II gives the personal preventive measures suggested by the participants.

Table II. Measures to prevent HIV transmission spontaneously mentioned by participants (N = 79)

Suggested preventive measures	N	%
Safer sexual practices, e.g. condom usage	75	94.9
Sterile injection needles	15	19
An 'injection' against HIV	5	6.3
Knowledge of partner's HIV status	3	3.8
Avoidance of blood contact	3	3.8

Only 3% of the participants admitted to having had a sexually transmitted disease (STD) in the past; 72% knew that there was an increased risk of HIV infection in the presence of other STDs.

When asked if they knew what HIV did to the body, only 60% of the women said that they did. A wide variety of answers was obtained (Table III).

Table III. Responses on what HIV does to the human body (N = 60)

Response	N	%
Weight loss	31	51.7
Weakens immune response	26	43.3
Loss of energy	24	40
Causes death	16	26.7
Can have long asymptomatic period before AIDS develops	10	16.7
Skin manifestations	10	16.7

Signs and symptoms mentioned by fewer than 10 participants included sweating, loss of appetite, contracting of tuberculosis, hair loss, and diarrhoea. Among the various other symptoms and signs mentioned by some participants were sleepiness, pallor, white nails, hormonal imbalances and loss of consciousness.

Only 29% of the participants said that their sexual partners had used a condom during sexual intercourse with them, 55% thought that their partners would be willing to use condoms if asked, 14% were uncertain as to their partners' response, and 31% thought that their partner would refuse (Fig. 1).

Participants were asked about transmission from an HIV-positive mother to her baby. Eighty-five per cent thought that transmission could take place during pregnancy, while 15% did not think so or were uncertain. In the same vein, 57% thought that transmission could take place during birth / delivery, while only 39% thought that transmission could take place during breast-feeding. In contrast to this, however, 79% said that they

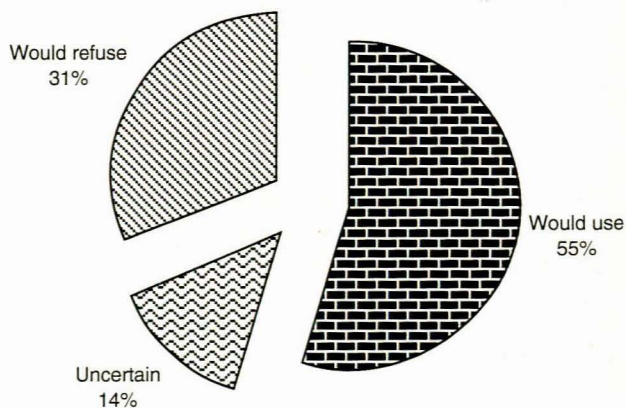


Fig. 1. Response to whether partner would use condom if requested.



would not breast-feed their babies if they were HIV-positive.

Ninety-four per cent of the women said they would not want to become pregnant again if they were HIV-positive. When asked if an HIV-positive mother could in any way help to prevent transmission to her baby, only 26% of the participants said 'yes'.

Twenty-four respondents felt that transmission could be prevented. Twenty-two of them (91.7%) said they would go to the doctor for an injection, 8 (33.3%) mentioned abortion, while 1 (4.2%) volunteered a healthy diet.

When asked if there was anything an HIV-positive mother could do after the birth to help prevent transmission to the baby, only 16 of the participants (16%) thought that something could be done. Of these, 11 (68.8%) said they would go for 'an injection' for mother and child, 6 (37.5%) mentioned that the mother must not breast-feed, and 3 (18.8%) said that there must be less contact between mother and baby.

When the study group was stratified according to age, an increased knowledge about HIV transmission via breast-feeding was noted with increasing age. The younger the participants, the more acceptable condom usage was found to be, and the greater the desire to be tested for HIV.

When stratified according to highest educational level attained, condom usage was found to be more acceptable with increasing level of education. Knowledge about HIV also increased with increased educational level.

DISCUSSION AND CONCLUSIONS

Most of the expectant mothers had heard of HIV/AIDS, but apart from knowing that it is an STD eventually resulting in death, they knew relatively little about the disease itself. One-third of the women interviewed thought they knew what HIV was, but could not say what it did to the body. This could be a result of the low prevalence of persons known to be infected with HIV in their community. This low prevalence stems as much from infrequent testing as from a true low prevalence in the community. Seventy-seven per cent of mainly unmarried, sexually active young women in our sample had never been tested for HIV, but 90% of those never tested indicated that they would have liked to have been tested. Therefore, if HIV testing became more routine, the consciousness of the community, and with it the women's desire to protect themselves and their children from infection, would increase.

Despite the fact that nearly all the participants knew that HIV is an STD and that 75% said they could protect themselves from being infected by practising safer sex, two-thirds had never used a condom during sexual intercourse. Only half of the women said that their partners would agree to use one. In a similar study done in Durban,³ nearly all expectant mothers indicated the use of condoms to be a method of transmission prevention, yet none of them had experienced sexual

intercourse with a partner using a condom. This seems to indicate a lack of female empowerment. A report on trends in sexual behaviour among the youth in Botswana⁴ revealed that young women had little power to decide if condoms should be used, and that they had to accept their partners' refusal to use condoms.

There is an obvious increase in knowledge about HIV/AIDS with higher level of education, suggesting that schools can play a major role in AIDS awareness. There is also an increased prevalence of condom usage and apparent male willingness to use them with each high school standard passed by the female partner. This might be the result of increased persuasion exerted by the woman as her level of education rises, and with it her knowledge of HIV transmission and prevention and condom usage. Schools should therefore maximise their important role in promoting AIDS awareness by beginning AIDS education in younger standards (ideally at primary school level), and by not neglecting to emphasise to male students the dangers of HIV infection and the essential role of the condom as a preventive measure.

When the participants were categorised according to age groups, an increased desire to be tested for HIV was noted in the younger age groups. The same pattern was found with regard to the prevalence of condom usage — the younger the group, the more prevalent and acceptable condom usage was found to be. This may be because the younger women were more concerned about their sexual habits, with the older women more likely to be in established relationships or marriages.

Nearly all the women interviewed knew that HIV could be transmitted sexually, but only 2 of a study group of 100 expectant mothers suggested that vertical transmission through pregnancy could occur. However, when asked directly if transmission could occur during pregnancy, most mothers thought that this was possible.

Gaps in knowledge

It is now accepted that transmission of HIV can occur through breast-feeding.⁵ Not one participant, however, suggested that breast-feeding could be a mode of transmission, and when asked directly if transmission could occur during breast-feeding, 61% of the women were unaware that it could. This obvious gap in AIDS education is reflected in the confusion existing among the participants in that only 39% thought that HIV transmission could occur through breast-feeding, but 79% said that they would not breast-feed if they were HIV-positive. Twenty-three of the 61 women who denied that HIV could be transmitted by breast-feeding said they would not breast-feed if they themselves were HIV-positive. All the campaigns promoting AIDS awareness seem to have been effective in labelling it as an STD, but the message of the mother's role transmitting it to her baby has not been absorbed by this group. It is estimated that 5 - 10 million children will be



infected with HIV by the year 2000, with three-quarters of these cases occurring in the developing world, especially sub-Saharan Africa.⁶ This is very disturbing because in a community with an average socio-economic level such as represented by our study group, infant milk formula could definitely be an option for infected mothers.

When the participants were categorised according to age, there was greater awareness in the older age groups that HIV can be transmitted via breast-feeding. It was thought that this might be because the older women were more likely to have had children already and to have breast-fed before, and would therefore be more aware of various issues involving breast-feeding. However, when the responses of the primigravidas and multigravidas were analysed, there was no significant indication that expectant mothers with children had more knowledge concerning HIV transmission via breast-feeding than mothers expecting their first baby.

There was a disturbing lack of knowledge regarding any interventions that could be used to help prevent vertical transmission. Only 20% of the expectant mothers thought that anything at all could be done. These mothers were unaware of any of the preventive measures currently in use to minimise transmission.

Only 10 women (10%) thought that anything at all could be done during the birth, with only 1 mentioning an elective caesarean section. Only 16 women (16%) thought that something could be done after the birth, with only 6 mentioning avoidance of breast-feeding. Without knowledge of the options available, these expectant mothers cannot make informed decisions about the future of their children, nor can they exert any pressure to bring about a change in government hospitals regarding the prevalent attitude towards vertical transmission prevention.

A strong belief in the power of medical services to reverse any health problem and an almost blind faith in the mythical powers of an 'injection' were encountered. Ninety-two per cent of those who thought something could be done said that if they were HIV-positive an injection would prevent transmission to their baby. Those who thought that something could be done to help prevent transmission during and after the birth made the same suggestion. In the Durban study,³ two-thirds of the expectant mothers interviewed believed that AIDS could be cured by treatment from a doctor. Expectant mothers, as indeed all members of the community, should be made aware that at present there is no cure for HIV/AIDS and that they should not rely on the false hope of an injection by the doctor.

A serious misconception among the participants in our study was that HIV transmitted via blood transfusion is a major source of infection. Twenty per cent of the women mentioned transfusions as a major method of transmission. This is cause for concern; blood transfusions are medical procedures involving minimal risk of transmission as all blood transfusion

services began screening all blood donations for HIV in 1985.⁷ This misconception might contribute to resistance and mistrust in emergency situations where transfusions are required.

WE RECOMMEND

While the participants represented only a relatively narrow band of the South African population, they are representative of the attendees at many clinics and hospitals in the Western Cape. The gaps in their knowledge and the misconceptions they hold could be rectified by means of posters aimed at such clinics.

Posters would be an appropriate way of disseminating information and correcting misconceptions. Patients have to sit in queues for long periods of time, and if posters were bright and easily legible, boredom could easily persuade them to read the posters while waiting. Television is a popular and powerful medium of communication and therefore videos could have a great impact, but the high cost may not be feasible in all locations.

Educational campaigns should not be confined to patients visiting the clinics. Colourful posters encouraging staff to inform their patients of the correct facts should also be considered. Educational campaigns at primary school level about the dangers of HIV, including the dangers of breast-feeding while HIV-positive, will of course also improve the situation. Care must be taken to educate schoolboys as well, to emphasise their role in the prevention of HIV/AIDS transmission, and to educate them as to the benefits of condom use.

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