



## HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES AND PRACTICES AMONG SOUTH AFRICAN MILITARY RECRUITS

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**Objectives.** To assess the level of HIV-related knowledge, as well as high-risk behaviour and attitudes towards HIV, in a group of South African National Defence Force (SANDF) recruits.

**Design.** Cross-sectional study.

**Setting.** Tempe military base in Bloemfontein.

**Subjects.** Three hundred and thirty-nine recruits from one company.

**Outcome measures.** HIV-related knowledge, attitudes and practices based on a self-administered questionnaire.

**Results.** All of the recruits were male, and most of them (81.4%) were black. The majority of recruits (98.5%) were between 18 and 24 years old. They had a good level of knowledge regarding HIV and AIDS, with more than 80% giving a correct response in most cases. However, several important misconceptions regarding HIV/AIDS and its transmission still exist. Furthermore, several recruits still practised high-risk behaviour, such as not using condoms with casual or new partners. Most obtained their knowledge regarding HIV/AIDS from schools (34.8%), health and social services (27.1%) and the printed media (17.7%), while only 5.2% stated that they learnt about HIV/AIDS from the SANDF education programmes.

**Conclusion.** Efforts towards initiating behaviour changes in military recruits should be intensified, and if necessary education programmes should be adapted to facilitate achievement of this goal.

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The HIV epidemic in South Africa shows no signs of abating, as is clearly demonstrated by the fact that the seroprevalence of anti-HIV antibodies in pregnant women attending antenatal clinics in the public sector was found to be 16.01% (95% confidence interval (CI) 15.37 - 16.67) at the end of 1997, with figures as high as 26.92% (KwaZulu-Natal) and 22.55% (Mpumalanga) obtained in certain provinces. This is a significant rise from the 14.17% (95% CI 13.45 - 14.89) reported in 1996.<sup>1</sup> Certain higher-risk groups for HIV infection, such as commercial sex workers,<sup>2</sup> migrant labourers<sup>3</sup> and sexually transmitted disease (STD) clinic attendees,<sup>4</sup> usually have an even higher seroprevalence.

As there are currently no preventive vaccines available, education and behaviour modification remain the mainstays of controlling the spread of HIV/AIDS. The use of condoms during sexual intercourse has a central position in HIV prevention programmes.<sup>5,7</sup> Research on the factors influencing condom use or non-use may provide information for the development of measures to increase their use, especially in high-risk populations. Furthermore, factual knowledge of risk factors for STDs plays an important role in perceptions regarding a person's susceptibility to infection, and perceived self-efficacy with regard to active prevention.<sup>8</sup> Ignorance regarding STDs could lead to pessimistic resignation and/or relapse into unsafe behaviour; increasing factual knowledge, therefore, should form an essential part of HIV prevention programmes.

Military recruits may be at high risk for contracting HIV as they are young, with active physiological drive states, and possibly still in an experimental phase of their sexual development. Other factors that could result in unsafe sexual behaviour in this group are fear of rejection, peer pressure, and being on leave only over occasional or infrequent weekends. However, in a study of HIV risk among Ugandan military recruits, it was found that they are at no greater risk than other segments of the population.<sup>9</sup> The sexual behaviour, AIDS-related knowledge and attitudes of military recruits in South Africa have not been studied before.

This paper reports on a survey conducted among a sample of military recruits in South Africa to determine their AIDS-related knowledge, attitudes and behaviour. The purpose of the survey was to provide information that could be used to develop or adapt strategies and programmes to prevent the spread of HIV among recruits in the South African National Defence Force (SANDF).

## METHODS

A once-off survey was conducted among recruits attending a SANDF training camp in the Northern Cape. The recruits are usually based at the military base at Tempe, Bloemfontein. The method used was a self-administered questionnaire completed by respondents under controlled circumstances. A convenience





sample was used in that one particular unit was involved in the survey. Training logistics and the fact that other units were deployed over a large area meant that more than one unit could not be involved. Nevertheless, the chosen unit can be considered to be representative of the current make-up of new recruits in the SANDF.

The reason for the study was explained to the recruits, and they were informed that participation was voluntary, and that the questionnaires would be completely anonymous. A total of 343 respondents participated in the survey. Four questionnaires were very incomplete and were not included in the analysis. If single knowledge sub-questions on HIV/AIDS-related knowledge were omitted, the answer was considered to be 'uncertain'; if the entire question was unanswered, the response was recorded as 'missing'. For behaviour-related questions, missing or contradictory information was recorded if subsequent answers clearly indicated what the response should have been. Results were summarised using frequencies and percentages.

## RESULTS

The 339 respondents included in the analysis ranged from 18 to 31 years of age, with the majority of respondents (98.5%) aged between 18 and 24 years. All of them were male. Three-quarters (74.8%) of the respondents had spent most of their lives in urban areas (towns/cities/townships), and one-quarter (25.2%) in rural areas. The recruits came from all nine provinces in South Africa, with the largest percentages coming from North West (22.4%), the Free State (17.7%), Gauteng (15.6%), the Western Cape (11.8%) and the Eastern Cape (10.6%). Most respondents were black (81.4%), followed by 17.8% coloured respondents. Only 3 white respondents (0.9%) participated in the survey. The survey, therefore, to a large extent offers a snapshot of the AIDS-related knowledge, attitudes and behaviour of young South African males from a predominantly black, and to a lesser extent coloured, population. All of the recruits had at least 10 years of school education.

### Knowledge of HIV/AIDS

The questionnaire set out firstly to determine if the respondents were familiar with the definition of HIV and AIDS and whether they believed that AIDS existed. The second objective was to assess their knowledge about the ways in which HIV can be contracted and transmitted.

The majority of respondents ( $N = 307$ , 90.8%) claimed to know what AIDS is, while 11 respondents (3.3%) stated that they did not know and 20 respondents (5.9%) said that they were uncertain. With regard to HIV, again the majority ( $N = 314$ , 92.6%) claimed to know what it is, compared with only 8 respondents (2.4%) who indicated that they did not

know and the remaining 17 respondents (5%) indicating uncertainty on the issue. When asked whether they believed that AIDS actually exists, the majority of respondents ( $N = 310$ , 92.0%) confirmed its existence, while 13 respondents (3.9%) indicated that they did not believe that it exists, and a further 14 respondents (4.2%) were uncertain.

Table I. General knowledge regarding HIV/AIDS ( $N = 334$ )

Statement	True (%)	Uncertain (%)	False (%)
Healthy young people do not get AIDS	9.0	8.1	82.9
Contraceptive pill can prevent AIDS	3.3	11.7	85.0
AIDS can be prevented by using a condom during intercourse	85.3	8.7	6.0
AIDS can be cured	11.7	27.6	60.8
A man cannot get AIDS from a woman	2.1	3.9	94.0

The results of questions testing general knowledge on HIV/AIDS and transmission of HIV are summarised in Table I. The most prevalent misconception was that AIDS could be cured; 11.7% of respondents thought that this was possible, while a further 27.6% were unsure. Importantly, 6% of respondents felt that AIDS could not be prevented by condom use. Respondents were also asked whether they agreed, disagreed, or felt uncertain about specific issues regarding the transmission of HIV. As shown in Table II, some misconceptions about the ways in which HIV can be transmitted still existed in the sample population. The most prominent of these were the facts that 41.8% and 38.6%, respectively, indicated that HIV could be transmitted by blood-sucking insects or transfusions using tested blood. Several respondents (13.9%) indicated that they believed that HIV could not be transmitted by the sharing of syringes and needles during intravenous drug use.

### Influence of AIDS on attitudes towards sex

More than three-quarters of the respondents ( $N = 266$ , 78.9%) indicated that the AIDS issue had influenced their attitudes towards sex, compared with less than one-fifth ( $N = 60$ , 17.8%) who stated that it had had no influence on their attitudes. Eleven respondents (3.3%) noted that they were uncertain of any influence of AIDS on their attitudes towards sex. Of those (78.9%) who indicated that the AIDS issue had had an influence, 233 (87.6%) gave details in this regard. The main answers were that they now used condoms ( $N = 82$ , 35.2%), that they were scared of AIDS ( $N = 81$ , 34.8%), that they now had only one partner ( $N = 65$ , 27.9%), and that they were more cautious about sex ( $N = 39$ , 16.7%). Of those (17.8%) who said that the AIDS issue had had no influence, 43 (71.7%) gave



**Table II. Knowledge about the ways in which HIV can be transmitted (N = 337)**

HIV can be transmitted through:	Yes (%)	Uncertain (%)	No (%)
Sexual intercourse without a condom	90.2	5.1	4.7
Sexual intercourse using a condom	11.3	14.3	74.5
Oral sex	32.9	33.2	33.8
Blood transfers involving blood that has been tested	38.6	27.0	34.4
Blood-sucking insects such as mosquitoes or lice	41.8	17.5	40.7
Sharing of syringes when using drugs	72.1	14.0	13.9
Intimate kissing	19.0	12.8	68.2
Homosexual intercourse	53.4	29.4	17.2
Heterosexual intercourse	44.5	41.8	13.6
Sitting on a toilet seat used by an HIV-positive person	3.6	8.3	88.1
Swimming with an HIV-positive person	8.0	8.0	84.0
Contact sport with an HIV-positive person	19.9	9.2	70.9
Touching a person who is HIV-positive	2.1	3.3	94.7
Eating food prepared by an HIV-positive person	5.0	9.2	85.8
Sharing razor blades with an HIV-positive person	85.5	6.8	7.7
Using eating utensils previously used by an HIV-positive person	10.7	16.0	73.3

further details. The majority ( $N = 28$ , 65.1%) stated that they were already using condoms or had only one partner. Fourteen (32.6%) stated that it had had no influence at all.

### Sexual practices

The majority of respondents (80.8%) reportedly had sexual intercourse in the 6 months before the survey ( $N = 274$ ). Only 47 respondents (13.8%) stated that they had not had sexual intercourse, while 18 (5.3%) refrained from answering. However, by considering subsequent information provided, it was clear that all 18 who had not answered had in fact had sexual intercourse in the 6 months before the study, as had 10 of those who had answered no. Therefore, 89.1% were considered to have had sexual intercourse in the preceding 6 months. On the question regarding the number of sexual partners and the type of partner (steady, casual or new), 19.5% of those who had had sexual intercourse did not give an answer, or gave contradictory answers. Of those who did answer, 71.6% reported one partner (reducing their likelihood of contracting the virus), 15.2% two, and 13.2% three or more. The majority of those who gave information on partners reported one steady partner (77.4%), while 75.7% reported no casual partners and 73.3% no new partners.

### Use of preventive methods

Nearly three-quarters of the respondents who had had sex in the previous 6 months ( $N = 216$ , 72.5%) stated that they had used condoms during the past 6 months. As indicated in Table III, the main reason given for using condoms was for the prevention of AIDS and STDs ( $N = 118$ , 54.6%). Only 21.8% ( $N = 47$ ) of the respondents using condoms stated that they used condoms to prevent pregnancy. A relatively small percentage of non-users ( $N = 9$ , 10.8%) stated that they had had problems with the use of condoms.

**Table III. Main reasons for using/not using condoms**

Reason	Number of respondents	%*
For using condoms ( $N = 216$ )		
To prevent AIDS/STDs	118	54.6
I don't trust my partner	49	22.7
To prevent unwanted pregnancy	47	21.8
For not using condoms ( $N = 83$ )		
I trust my partner	37	44.6
I only have one partner	18	21.7
I experience problems with the use of condoms	9	10.8

\* Percentages can add up to more than 100%, since more than one reason can be given.

The response to a question regarding regular condom use with their partner(s) was as follows: half of the respondents with steady partners who answered the question stated that they used condoms (56.6%), whereas 80.2% noted that they used condoms with their casual partner(s), and 83.2% with their new partners. The majority of sexually active respondents ( $N = 254$ , 86.1%) noted that they had no difficulties in obtaining condoms, compared with 23 respondents (7.8%) who had had problems in obtaining condoms. Eighteen respondents (6.1%) indicated that the question did not apply to them, as they did not use condoms.

As regards other forms of contraception, 21 respondents (7.0%) who had had sex in the preceding 6 months indicated that they regularly used a spermicide as a form of contraception. Ten (3.3%) noted that their partners used oral contraception (the 'pill') as a means of contraception, and 17 (5.6%) indicated that their partners made use of injectable contraceptives. Only 6 respondents (2.0%) stated that their partners used an intra-uterine device as a contraceptive method. Other forms of contraception mentioned were 'water'





( $N = 1$ ), 'traditional herbs' ( $N = 1$ ) and 'some pills' ( $N = 1$ ).

### Use of commercial sex workers

Only 11 respondents (3.3%) indicated that they had had sexual intercourse with a commercial sex worker (CSW) in the 6 months before the survey, and 7 (2.1%) gave no response. Only 5 respondents indicated the number of times they had had sex with a CSW; 4 indicated once, and 1 twice. Of the 11 who had used a CSW, 5 always used condoms, 1 mostly, 2 seldom and 3 never.

### Attitudes and beliefs with regard to AIDS

Certain statements were provided to test the respondents' attitudes and beliefs towards AIDS, as indicated in Table IV. Fifty-nine per cent of the respondents were prepared to live in the same house as someone with AIDS, and the majority (81.0%) stated that people with AIDS should not be kept in isolation. However, 57.1% of the respondents felt that people with AIDS should not have the right to normal sex lives. A relatively low percentage of the respondents (7.3%) indicated that they would feel angry if their partners insisted on using condoms during intercourse, and 8.7% felt uncertain on the subject.

### Drug use

Only 7 respondents (2.1%) indicated that they used a drug which they inject into the body, but 26 respondents (7.7%) did not answer this section (the last section of the questionnaire). Only 1 of the 7 indicated that they shared needles with other persons.

### Sources of knowledge on AIDS

Table V gives the different sources of information that respondents indicated as the source from which they learnt most of what they know about AIDS. Of interest is the fact that a relatively small number (13.3%) named television as the most important source of AIDS-related knowledge. The most important sources were schools (34.8%) and health and social services (27.1%). The latter includes Defence Force medical facilities. Only 6 respondents (1.8%) stated that they learnt

Table V. Sources of knowledge regarding AIDS ( $N = 339$ )

Educators	Number of respondents	%
Printed media (newspapers, magazines, books)	60	17.7
Health and social services (clinics, hospitals, nurses, social workers)	92	27.1
School	118	34.8
Radio	24	7.1
Television	45	13.3
SANDF	18	5.3
AIDS workshops/classes	12	3.5
Friends and family	6	1.8
Community	7	2.1
Unspecified media and press	6	1.8
Cultural centre and church	3	0.9
Other	21	6.2

most of what they know about HIV/AIDS from friends and family, indicating perhaps that this is not a freely discussed topic in the social/family setting.

### DISCUSSION

Knowledge on prevention of HIV infection is usually insufficient to prevent infection, and other factors influencing individual behaviour need to be taken into account when deciding on preventive measures. The majority of respondents in the present study indicated that they know what HIV/AIDS is, which explains the majority's indication that AIDS has influenced their attitudes towards sex and has led to behaviour change. Fear of AIDS is an important factor in changing attitudes towards sex. Such fear is an automatic response and is in direct relation to the perceived threat of contracting the virus, as was demonstrated by Geringer *et al.*<sup>7</sup> who found that teenagers who reported behavioural changes, i.e. practising safer sex, tended to have a greater perceived risk of HIV. Behavioural changes, therefore, correlate with a better knowledge and understanding of how HIV is transmitted,<sup>10</sup> as well as with a greater perceived risk of contracting HIV. In accordance with this, 82/233 of the recruits (35.2%) in the

Table IV. Attitudes and beliefs with regard to AIDS ( $N = 332$ )

Statement	Yes (%)	Uncertain (%)	No (%)
I am prepared to live in the same house as a person who has AIDS	59.3	16.3	24.4
Too much fuss is being made of AIDS	19.3	56.3	24.4
People with AIDS should be kept in isolation	11.4	7.5	81.0
AIDS is God's way of punishing people for their immorality	22.9	26.2	50.9
People with AIDS should have the right to have normal sex lives	22.7	20.2	57.1
I will feel angry if my partner wants to use a condom	7.3	8.7	84.0
If I plan to have sex with a person I don't know well, I will suggest that we use a condom	83.7	7.2	9.1
People with AIDS have been bewitched	4.2	22.3	73.4





present study who stated that AIDS had influenced their attitudes towards sex, gave fear of AIDS as the reason.

An individual is at greater risk of contracting HIV when engaging in sexual intercourse with various partners.<sup>4</sup> In the current study more than two-thirds of the respondents had only 1 partner during the 6 months before the survey, thus reducing their likelihood of contracting the virus. Although condom use remains one of the most important preventive measures, many negative perceptions about the use of condoms, especially among males, still exist.<sup>11</sup> Factors such as inadequate promotion of condoms, the stigma of association with promiscuity, and cultural conditioning further hamper the use of condoms,<sup>6</sup> as well as general fears with regard to performance, experience of discomfort, ignorance and inadequate information on condom use.<sup>5</sup> It has, furthermore, been indicated that attitudes towards condoms and risk activities influence their practical use.<sup>10</sup> In the present study, 72.5% of respondents who had had sex in the preceding 6 months indicated that they had used condoms during this period, with the main reasons for condom use given as prevention of HIV/AIDS, followed by the prevention of pregnancies. Only 11 respondents stated that they did not use condoms as they experienced problems with them; this is lower than the 44% reported by Geringer *et al.*<sup>7</sup> in a study of factors influencing condom use in a population of high-risk teenagers. If a high-risk group is not adequately educated regarding the advantages and usage of condoms, these problems could be reinforced, thus placing an individual at higher risk for contracting HIV. An important finding of this survey was that a high frequency of condom use occurred when individuals engaged in sexual intercourse with higher-risk partners (casual and new partners). This was also found in the survey by Geringer *et al.*<sup>7</sup> Another problem with condom use, which was highlighted by Frame *et al.*,<sup>12</sup> is that by insisting on condom use a person might imply that a partner has an STD, thus putting strain on the relationship. Indeed, 7% of the respondents in the current survey indicated that they would feel angry if a partner insisted on using a condom.

Large amounts of financing are employed to create a greater awareness of AIDS, but some attitudes and beliefs of the respondents are still based on ignorance and possibly fear. Although media campaigns have created greater awareness of HIV and AIDS, attitudes have not changed much as a result, and it is especially the infected person who suffers the consequences of ungrounded fears and stigmatisation.<sup>11</sup> Nearly one-quarter of the respondents stated that they were not willing to live in the same house as a person who has AIDS, while a lower percentage indicated that people with AIDS should be kept in isolation. A high percentage of the respondents (57.1%) stated that people with AIDS should not have the right to normal sex lives.

The findings of this survey suggest that schools, health and social services (clinics, hospitals, nurses and social workers)

and the printed media (newspapers, magazines and books) provided more HIV/AIDS information to the respondents than other information agencies. It is therefore proposed that funds be directed to these agencies, since they could target most of the country's young population, who are still in developmental stages and therefore more likely to implement preventive measures. It might also be important to place greater emphasis on AIDS education by means of television, as a relatively small number of individuals indicated television as the main source of knowledge regarding HIV/AIDS. Interestingly, very few recruits indicated churches and cultural centres as main sources of HIV/AIDS-related knowledge. As only a small number of respondents indicated the SANDF as the main educator on AIDS, efforts to inform new recruits on the active prevention of HIV should be increased. Although an information strategy was implemented in the SANDF in 1995,<sup>13</sup> this seems to be inadequate and has not reached all recruits.

While the factors pertaining to HIV/AIDS health behaviour are intricate, complex and affected by various external influences, it would be possible to implement strategies that aim at creating greater awareness of the AIDS epidemic and educating SANDF recruits as to preventive measures. Since no cure for HIV/AIDS is in sight and effective prevention is imperative, health care providers in the SANDF should focus interventions on the elimination of risky behaviour through the supply of factual knowledge on HIV/AIDS and the advantages of regular condom use.

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