

HIV counselling and testing utilisation and attitudes of male inmates in a South African prison

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Abstract

The Department of Correctional Services Policy on the management of HIV and AIDS for offenders include voluntary counselling and testing (VCT) for HIV as one of the priorities in the rehabilitation of inmates. The aim of this study was to determine factors associated with the utilisation of VCT services in the correctional centres in terms of level of satisfaction, their experiences and expectations, and motivating factors and barriers for VCT utilisation at Losperfontein Correctional Centre, South Africa. This was a case control study (cases being those who underwent testing and controls those who did not) examining predictors of HIV VCT utilisation among 200 male adult sentenced inmates serving medium and maximum sentences. Results indicate that a poor health system (OR=0.34, 95%CI: 0.23 - 0.50) was inversely associated with HIV testing acceptance in prison, while age, educational level, population group, marital status, length of incarceration and access to HIV testing in prison were not associated with HIV testing acceptance in prison. Half of the participants (50%) agreed that VCT services are accessible and are promoted at their correctional centre. Most were satisfied with different components of VCT services, ranging from 79% (fair to very good) for 'the way he/she received you' to 62% 'clarified all your concerns.' This study demonstrated some challenges and benefits to the field of health promotion and HIV prevention in the correctional centres especially with regard to VCT services.

Keywords: Voluntary HIV counselling and testing, utilisation, attitudes, satisfaction, prison inmates, South Africa.

Résumé

Les directives du Département des Services Correctionnels en matière de gestion du VIH et du Sida pour les contrevenants incluent des services de conseil et de dépistage volontaire du VIH (CDV) au nombre des priorités pour la réhabilitation des détenus. L'objectif de cette étude était de déterminer les facteurs associés à l'utilisation de services de conseil et de dépistage volontaire (CDV) dans les centres correctionnels en termes de niveau de satisfaction, des expériences et attentes, et des facteurs de motivation et des barrières associés à l'utilisation du CDV dans le centre correctionnel de Losperfontein, en Afrique du Sud. Cette étude constituait une étude cas-témoin (les cas étant ceux qui avaient eu recours au dépistage et les témoins ce qui n'en avaient pas fait usage) qui se penchait sur les indicateurs prévisionnels de l'utilisation des services de conseil et de dépistage volontaire du VIH parmi 200 détenus adultes condamnés, de sexe masculin, servant des peines moyennes et maximales. Les résultats indiquaient qu'un mauvais système de santé (RC=0.34, CI à 95%: 0.23 - 0.50) était inversement associé à l'acceptation du dépistage du VIH en prison, et l'âge, le niveau d'éducation, le groupe de population, la situation de famille, la durée d'incarcération et l'accès au dépistage du VIH en prison n'étaient pas associés à l'acceptation du VIH en prison. La moitié des participants (50%) indiquaient que les services de CDV étaient accessibles et étaient promus dans leur centre correctionnel. La plupart des participants étaient satisfaits des différentes composantes des services de CDV, allant de 79% (de correct à très bon) pour 'la manière dont il/elle vous a reçu' à 62% pour 'à clarifié toutes vos préoccupations'. Cette étude a mis en avant certains défis et avantages dans le domaine de la promotion sanitaire et de la prévention du VIH en centre correctionnel concernant les services de CDV.

Mots clés: Services de conseil et de dépistage du VIH, utilisation, attitudes, satisfaction, détenus en centre carcéral, Afrique du Sud.

Introduction

According to the HIV and AIDS and STI National Strategic Plan (2007 -2011), the challenge of HIV and AIDS in South Africa requires an intensified comprehensive multisectoral national response and this response should address the social and economic realities that make certain segments of society most vulnerable

(Department of Health, South Africa (DoH), 2007). Voluntary counselling and testing (VCT) has been recommended in the literature as one of the many strategies that can prevent, detect and reduce HIV/AIDS and other sexually transmitted infections (STIs). VCT has also been shown to have a critical effect on HIV disease management from a national, regional and worldwide perspective

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(WHO, 2003). Moore *et al.* (2008) refer to VCT as the process whereby an individual undergoes counselling to enable him or her to make an informed choice about being tested for HIV. The Department of Correctional Services Policy on the management of HIV and AIDS for offenders include VCT for HIV as one of the priorities in the rehabilitation of inmates (Department of Correctional Services, 2005a, 2000b). The importance of routine HIV testing in the incarcerated population has been shown in the Rhode Island experience (Desai *et al.*, 2002).

According to the White Paper on Corrections in South Africa: 'Incarceration can have damaging effect on both the physical and the mental wellbeing of inmates and the Department is thus obliged to provide for these special needs of these inmates in its institutions. This also requires that those providing this health care be trained in the specific health needs and health problems encountered in the in a correctional centre environment. The responsibility of the Department is not just to provide health care, but to also provide conditions that promote the wellbeing of inmates and correctional officials.' (Department of Correctional Services, 2005b, p.3). The White Paper on Corrections further reported that HIV/AIDS and other communicable diseases like TB and STIs should be treated as an integral part of comprehensive health care services and health education to inmates. The Department of Correctional Services is obliged by this policy to focus on programmes that reduce the impact of HIV/AIDS and other communicable diseases to allow people under correction to leave the system as healthy as possible (Department of Correctional Services, 2005b). According to the guidelines for the prevention of and treatment of HIV in arrested, detained and sentenced persons (Department of Correctional Services, 2008, p.12): 'With already high HIV prevalence rates, issues related to imprisonment – including overcrowding, poor nutrition, disempowerment of the individual, dehumanizing prison cultures, unprotected forced and consensual sex, stigmatization, discrimination and poor access to health care – have a serious impact on rates of HIV infection, the rate of progression of HIV to AIDS and the incidence of opportunistic diseases.' These guidelines further reflect that some people come into the correctional system having compromised immune systems. This is reflected in the fact that 63% of all natural deaths in correctional centres occur within 36 months after admission to a detention facility, thus incarceration itself may give rise to severe health consequences. It is further stated here that South Africa's correctional centres are currently running at 142% of capacity (over 160 000 inmates were detained in 2007 in a system designed for just over 115 000). The HIV/AIDS Society in South Africa (Department of Correctional Services, 2008) emphasises that according to the UNAIDS 2006 Report on the Global AIDS Epidemic, the prevalence of HIV in prisons is higher than that in the general population. The estimated prison HIV prevalence was 41 - 43.5% compared with the national figure of 24% in South Africa in 2002 (Bateman, 2003; Goyer, 2003). HIV is a serious problem for many countries (Dolan *et al.* 2007). Overseas studies suggest that the characteristics of prisoners place them at much greater risk of HIV infection. Factors which contribute to increased levels of HIV infection include poor health care facilities, lack of condoms and lack of disinfectants (Goyer & Gow, 2002). A few studies have investigated HIV risk in prison populations in South Africa (Essuon *et al.*, 2009; Sifunda *et al.*, 2007; Stephens *et al.*, 2009).

Goyer (2003) reported that in South Africa VCT for HIV in prisons is performed at the prison hospitals as a component of health care services rendered to the inmates or prisoners. Most of the literature stresses that VCT among inmates provides an opportunity for HIV/AIDS management and as part of primary health care it enables prisoners to know their HIV status. This is an indication for inmates to be encouraged to undergo VCT as they have access to health care and this will assist in reducing the prevalence of HIV/AIDS in prisons as those who test negative for HIV will be given health education on issues of healthy sex practices so that they maintain their negative HIV status, and those who test positive for HIV have access to other related services like antiretroviral therapy, sexually transmitted infections (STIs) clinics and TB prevention programmes in time. A review of the literature demonstrates the reasons prisoners opt to undergo or not undergo VCT include being injecting drug users, fear of HIV infection while in prison through blood contact such as during fights, recent risky sexual behaviours or previous contact with an HI- positive person, previous HIV-positive test, low-risk lifestyle, negative HIV test 2 - 12 months previously, no prior HIV test mentioned, concern over confidentiality of results, dislike of venipuncture, and release within six month (Behrendt *et al.*, 1994; Burchell *et al.*, 2003). Haggerty and Nesselroth (2000) also report that 'Stigmatization, the potential threat of violence, poor HIV education, and lack of confidentiality may cause many prisoners to avoid voluntary testing even when they know that they are at risk of infection. If a prisoner knows that he is HIV positive before entering prison and does not need HIV specific medical care during the course of the sentence, he can escape identification as HIV positive.'

The aim of this study was to determine factors associated with the utilisation of VCT services in the correctional centres in terms of level of satisfaction, their experiences and expectations, and motivating factors and barriers for VCT utilisation at Losperfontein Correctional Centre, South Africa.

Method

Study setting

The study was conducted at Losperfontein Correctional Centre, which is located outside Brits and falls under the Rustenburg Management Area in the North West. This site was chosen because it houses male inmates who are serving medium and maximum sentences and it is one of the largest correctional centre in the area. Its approved capacity by the Department of Correctional Services is for 808 male inmates but this number may be exceeded due to overcrowding experienced in most South African prisons. Categories of inmates in detention at this centre are male sentenced inmates who serve maximum sentences (>10 years sentences and / life sentences) and medium sentences (< 10 years sentences).

In compliance with the Department of Correctional Services' policies, the inmates have access to primary health care and 24-hour health care services at the Losperfontein Correctional Centre hospital that is rendered by professional nurses. These professional nurses, as well as social workers, inmates who have been trained as HIV/AIDS peer counsellors and external service providers like NGOs render HIV counselling services which include

among others programmes like pre-test counselling and post-test counselling to the inmates in this centre.

Sample and procedure

Male adult sentenced inmates serving medium and maximum sentences at Losperfontein Correctional Centre whose ages ranged from 22 years of age and above and were willing to participate in the research were recruited for this study. Quota sampling as a convenience sample was used to ensure that demographic variables like age and population were ensured, and that the sample population includes inmates who have tested and those who have not. A total of 200 respondents were recruited and each half consisted of the inmates who have tested for HIV while in the correctional centre and the other half were those who had not taken the test in the correctional centre. The response rate was 100%.

Data collection was done in two days, i.e. on 7 and 13 October 2009. On 7 October 2009 data collection was done at Losperfontein Correctional Centre's two large sections. A section accommodates inmates who are serving maximum sentences and B section accommodates inmates who are serving medium sentences. At A section 90 respondents participated and at B section 80 respondents participated. On 13 October 2009 data were collected from C section, which is the smallest and it also accommodates inmates serving medium sentences and 30 respondents participated in the research.

Informed consents were obtained before the questionnaires were issued and interviews were conducted. Approval of the research was obtained from the Research Ethics and Publications Committee (REPC) of the National School of Public Health (NSPH) at the University of Limpopo and also from the Department of Correctional Services.

Measure

- A structured questionnaire prepared in both English and Tswana was used to collect data composing of the following parts:
- Demographic data: 5 items (age, education, race, marital status and duration in prison).
- HIV testing attitudes: 18 items (what makes people to decide to have an HIV test, what makes people not to have an HIV test, the main benefits having an HIV test while still in prison, main fears for people not to have an HIV test whilst in prison, barriers for inmates not to avail themselves for VCT in prison). Cronbach alpha for the overall scale was .76. For factors 1 - 4 coefficient alphas were .84, .71, .67, and .61.
- Access to VCT for HIV in the prison: 4 items (prison clinic being convenient for inmates to access VCT, opening and closing times of the clinic being convenient for inmates who want to undergo VCT, VCT services being promoted and being given the necessary information about HIV/AIDS).
- Level of satisfaction and quality of service: 7 items (during the pre-counselling session did the counsellor give information, satisfaction with the counselling session on HIV testing, rating of experience with the counsellor, satisfaction with privacy received during counselling, finding the pre test counselling being helpful in assisting to make a decision for HIV testing, being given any material to read about HIV VCT and having a choice of a preferred counsellor).

- Post-test counselling: 3 items (being able to see the same counsellor before and after the HIV test, finding the post-test counselling helpful, and being given information about safer sex practices).

Data analysis

Data coding was done in Excel and analysis was performed by using SPSS version 17 statistical software packages. Descriptive statistics were used to describe the proportions. Product-moment correlation coefficients were computed between each pair of the Attitudes about HIV-antibody testing scale, and the correlational matrix thus obtained was inspected to ensure that it contained a fair proportion of elements that were significantly different from zero, and subjected to a principal component analysis. Logistic regressions were used to investigate associations between the outcome (HIV testing acceptance in prison) and possible predictive factors. Associations were considered significant at $p < 0.05$.

Results

Sample characteristics

A total of 200 male sentenced inmates whose ages range from 22 to 73 years (mean=38.5 years, SD=10.6) participated in this study. The majority of the inmates were Black African (85.5%), were between 22 and 44 years old (62.0%), had secondary or tertiary education (59.3%), two-thirds (65.5%) had never been married, and 48% had been incarcerated for more than three years (see Table 1).

Table 1. Sample characteristics of respondents (N=200)

	N	%
Age		
22 - 40 years	124	62.0
41 - 60 years	69	34.5
>60 years	7	3.5
Education		
No education	2	1.0
Primary	79	39.5
Secondary	93	46.5
Tertiary and higher	26	13.0
Race		
Black	171	85.5
White	11	5.5
Coloured	14	7.0
Indian/ Asian	4	2.0
Marital status		
Never married	131	65.5
Married	50	25.0
Widowed	12	6.0
Divorced	7	3.5
Duration in the correctional centre		
0 - 3 years	104	52.0
4 - 6 years	67	33.5
7 - 9 years	18	9.0
10 and above	11	5.5

Sample characteristics in terms of age, education, marital status, population group and duration of incarceration do not differ between case and control group (see Table 3).

HIV testing attitudes

Based on the Kaiser-Guttman criterion, factors with an eigenvalue greater than one were retained for subsequent varimax rotation (Kim & Mueller, 1978). The Data-Text Primer considers a factor loading with an absolute value of .4 or more to load high enough to be considered part of the scale (Bailey, 1982). Only those questionnaire items loading .4 and higher were recorded for discussion. The principal component analysis with varimax rotation yielded four components accounting for 54% of the total variance. The first factor (eigenvalue: 4.4) accounted for 26.0% of the variance in the responses and contained items concerned with perceptions on own conditionality about HIV antibody testing. Items such as 'wanting to start a new sexual relationship' and 'wanting a baby' loaded highly on this factor. The second factor (eigenvalue: 2.0) accounted for 11.7% of the variance in responses and included items that were largely related to fear and social context about HIV antibody testing such as 'Afraid of testing', 'Not wanting to know HIV status', and 'Fear of stigma and discrimination'. The third factor (eigenvalue: 1.5) accounted for 8.6% of the variance in responses and included items related to concerns about the health care system in relation to HIV antibody testing such as 'Lack of trust of health care providers', and 'Poor/bad attitude of health care providers'. The fourth factor (eigenvalue: 1.3) explaining 7.5% of the variance in responses contained items about general prevention of HIV antibody testing. Items such as 'It is necessary to know one's HIV status' and 'Being able to plan for the future' loaded on this factor (see Table 2).

Accessibility of VCT services to inmates at Losperfontein Correctional Centre

With regard to the variable on **prison clinic is convenient for inmates to access VCT services**, for those who had tested in the correctional centre, the majority of them agreed 43 (53.0%), while 35.0% disagreed and 13.0% were uncertain. On the other hand with regard to those who had not tested in the correctional centre

also the majority were those who agreed (47.0%), while 34.0 % disagreed and 13.0% were uncertain. With regard to the variable **on the opening and closing times of the clinic are convenient for inmates who want to undergo VCT**, for those who had tested in the correctional centre, the majority of them agreed (46.0%), while 34.0% disagreed and 11.0% were uncertain. On the other hand with regard to those who had not tested, the majority were those disagreed, while 39.0% agreed and 13.0% were uncertain. With regard to the variable on **inmates are given the necessary information about HIV/AIDS**, for those who had tested the majority of them agreed (51.0%), while 33.0% disagreed and 16.0% were uncertain. Concerning those who had not tested it was found that 46.0% of them agreed, while 45.0% of them disagreed and 9.0% of them were uncertain.

Promotion of VCT services at Losperfontein Correctional Centre

Health talks are being promoted: Out of the inmates who had tested for HIV in the correctional centre, 53.0% of them agreed, while 38.0% of them disagreed and 9.0% of them did not respond. From those who had not tested for HIV in the correctional centre, both of those who agreed and disagreed were 48.0% each, while those who were did not respond were 4.0%.

Posters: From those who had tested in the correctional centre the majority agreed on posters (41.0%), while 35.0% disagreed, and 24.0% did not respond. With regard to those who had not tested in the correctional centre, the majority disagreed (57.0%), while 34.0% agreed and 9.0% did not respond.

Leaflets: From those who had tested the majority of them agreed on leaflets (41.0%), while 35.0% of them disagreed and 24.0% did not respond. With regard to those who did not test at the correctional centre, the majority were those who did not respond, while those who disagreed were 45.0% and those who agreed were 9.0%.

Table 2. HIV testing attitudes

	Factor 1	Factor 2	Factor 3	Factor 4
Own conditionality				
Start a new sexual relationship	.71			
Not feeling well	.70			
Want to have a baby	.88			
Want to get married	.86			
Fear and social context				
High risk for infection		.54		
Being advised to go for HIV test		.61		
Afraid of testing		.65		
Not wanting to know one's HIV status		.60		
Fear of stigma and discrimination		.70		
Unsure of confidentiality		.55		
Poor health system				
Concern with confidentiality and privacy			.73	
Lack of trust of health care providers			.72	
Poor/ bad attitude of health care providers			.82	
General prevention				
Good behaviour				.44
It is necessary to know one's HIV Status				.73
Being able to plan for future				.70

Determinants of HIV testing acceptance

Logistic regression of sample characteristics and HIV testing attitudes with HIV testing acceptance found that a good health system was associated with HIV testing acceptance in prison, while age, educational level, population group, marital status, length of incarceration and access to HIV testing in prison were not associated with HIV testing acceptance in prison (see Table 3).

Table 3. Determinants of HIV testing acceptance in prison

	Crude OR (95% CI)	p
Age	1.09 (0.98-1.04)	.510
Education		
Primary or less	Ref. 1.00	
Secondary	1.67 (0.91-3.04)	.095
Tertiary	1.31 (0.54-3.19)	.545
Black v. others	0.78 (0.36-1.73)	.547
Marital status		
Never married	Ref. 1.00	
Married	0.96 (0.50-1.83)	.890
Widowed/divorced	0.70 (0.26-1.84)	.463
Duration of incarceration		
0 - 3 years	Ref. 1.00	
4 - 6	0.83 (0.45-1.54)	.557
7 or more years	0.52 (0.23-1.22)	.133
Access to HIV testing in prison (score 0 - 9)	1.03 (0.90-1.17)	.685
Attitudes towards HIV testing		
Own conditionality	0.90 (0.75-1.10)	.306
Fear and social context	0.82 (0.65-1.05)	.114
Poor health system	0.34 (0.23-0.50)	.000
General prevention	0.92 (0.64-1.32)	.647

Level of satisfaction of VCT services to inmates at Losperfontein Correctional Centre

On this part the responses to the questionnaire were only from the 100 inmates who had tested for HIV in the correctional centre and those who had not tested for HIV did not respond as they would have not been able to respond to questions about the procedure they had not undergone in the correctional centre. Table 4 depicts the level of satisfaction of the respondents with their experience with the counsellors.

With regard to satisfaction with the counselling session on HIV testing the highest response was unsatisfied (46.0%), followed by very satisfied (37.0%), satisfied (30.0%), uncertain (17.0%) and very unsatisfied was (nil). With regard to satisfaction with the privacy the highest response was very satisfied (35.0%), followed by satisfied (25.0%), unsatisfied (19.0%), very satisfied (17.0%) and the lowest response was (uncertain).

On the variable of the pre-test being helpful in assisting the respondents to make a decision for VCT training, the majority of the respondents agreed (58.0%), while 22.0% of them were uncertain and 20.0% disagreed. With regard to the variable of being given any material to read about HIV counselling, 47.0%

of respondents agreed, 47.0% also disagreed and 6.0% of the respondents were uncertain.

With regard to the variable on finding the post test being helpful, the majority of respondents agreed (58.0%), while 29.0% of them disagreed and 5.0% of them were unsure. On the variable of being given information about safer sex practices, the majority of the respondents, agreed (66.0%), while 29.0% of them disagreed and 5.0% were unsure.

Discussion

This study has demonstrated some challenges and benefits to the field of health promotion and HIV prevention in the correctional centres especially with regard to VCT services. These challenges are evident in a sense that most of the respondents irrespective of having tested for HIV in the correctional centre or while still outside the correctional centre had identified poor health care providers' attitudes as the most dominant reason for inmates not to utilize VCT services even though these services are available to them.

Participants who believed themselves to be at high risk for HIV were most likely to undergo testing. This finding is consistent with earlier findings by Burchell *et al.* (2003) that suggest previous sexual contact or sharing needles with a known HIV positive person prior to incarceration increase the likelihood of VCT utilisation. This finding may be due to inmate's knowledge of HIV risk factors and awareness of their own risk while in the community. Fear of stigmatisation and discrimination were identified as one of the barriers for people not to undergo VCT and this finding correlates with the previous results suggesting that stigmatisation and discrimination have negative impacts on the decision for people to attend VCT (Department of Health, 2002; Haggerty & Nesselroth, 2000). Fear of discrimination was the main reason for participants opt not to have an HIV test while still in the correctional centre. This result is consistent with the statement from the HIV and AIDS and STI National Strategic Plan (2007-2011) (Department of Health, 2008) that suggests that; one of the consequences of the problem of stigma, exclusion and discrimination of people living with HIV and AIDS are both lethal since they prevent people from accurately assessing their own personal infection risk as well as assessing the broad range of available services in this regard.

This study's findings regarding discrimination also correlate with those of Haggerty and Nesselroth (2008) who found that stigmatisation, the potential threat of violence, poor HIV education, and lack of confidentiality may cause inmates to avoid voluntary testing even when they know that they are at risk for infection. These results may be explained by the environment in the correctional centres where discrimination and stigmatisation associated with HIV may be rife, resulting in inmates refusing HIV testing due to fear of being identified by other inmates and correctional officials as being infected with HIV.

Poor or bad attitude of health care professionals and lack of trust for health care professionals are the two most prominent barriers identified in this study for why inmates opt out of VCT. This statement correlates with the findings by Meiberg *et al.* (2008)

Table 4: Rating experiences with the counsellor

Area of competence	Very bad	Bad	Fair	Good	Very good
	%	%	%	%	%
The way he/she received you	8	13	35	25	19
The way he/she listened to you	6	15	36	18	25
Talking frankly to you	6	23	36	12	23
Answered all your questions	4	25	29	18	24
Clarified all your concerns	7	32	26	14	21
Understanding your situation	5	24	27	18	26
Reassuring you about confidentiality	6	20	31	19	23
Giving you an option to choose to be tested	2	22	24	22	26
Respecting your opinions	14	16	32	16	22
Offering information and advice	11	27	28	12	22

that participants have no trust in health care workers and they fear those health care workers may inform others about their HIV status. Haggerty and Nesselroth (2008) also report that correctional centres are not meant to be health care facilities as their main job is care, custody and control of prisoners, and that control comes first as this mandate directly conflicts with proper medical care. They further indicate that since prisons are mostly concerned with security, limiting prisoner movements and maintaining tight control on where and when prisoners are in specified locations, security concerns are of paramount importance over any other matter within the prison environment.

On methods of promotion of VCT services health talks are identified as the most popular method while posters and leaflets are mentioned to a lesser extent. This finding is supported by the White Paper on Corrections (Department of Correctional Services, 2005b) as it recommends that HIV/AIDS and other communicable diseases like TB and sexually transmitted infections must be treated as integral part of comprehensive health care services and health education to the inmates. Health talks may generally be feasible and available to inmates who avail themselves for health care consultations at the correctional centre clinics even though it may not be comprehensive and is on a limited time due to the high demand for these services, therefore inmates may be able to obtain health information at the same time during medical consultations.

The accessibility of VCT services to inmates at Losperfontein Correctional Centre was found to be a positive factor as most of the respondents indicated that the correctional centre clinic is convenient for inmates to access VCT services and that inmates are given the necessary information about HIV/AIDS. This is contrary to the findings reported earlier on this study about the most dominant barriers for VCT in the correctional centres as being not getting enough information about VCT services, not knowing about availability of VCT services, poor/bad attitudes of healthcare professionals and lack of trust for health care professionals.

Level of satisfaction of VCT services to the inmates of Losperfontein Correctional Centre was found to be generally satisfactory with regard to information given to inmates before the HIV test. However, satisfaction with ongoing counselling was found to be low. This illustrates that most of the information given about the pre-counselling issues could also be of benefit to those inmates who had not tested for HIV to enable them to make informed decisions about VCT participation. According to the UNAIDS (2000), VCT provides people with an opportunity to learn and accept their HIV status in a confidential environment, counselling and referral for ongoing emotional and medical care. Ongoing counselling appears to be lacking for inmates who had tested for HIV in the correctional centre and this may be linked to the already strained human resources that may be experienced in most of the correctional centres.

The participants' rating on their experience with the counsellors is mostly fair and this appears ideal as it correlates with the recommendations from the White Paper on Corrections (Department of Correctional Services, 2005b) which state that specific skills associated with HIV counselling can be improved and that people providing health care should be trained in the specific health needs and health problems encountered in the correctional centre environment. This statement is also supported by the earlier finding that among respondents who did not undergo HIV testing, in the correctional centre, most of them cited poor/ bad attitudes of health care professionals and lack of trust for health care professionals as the most prominent barriers for inmates not to avail themselves for HIV testing while in the correctional centres. These results may be related to the fact that HIV counsellors employed by the Department of Correctional Services like nurses and social workers wear the same uniform as the disciplinary members and this may not be associated with health care delivery in a humane manner and lack of trust to these health care professionals may arise. With regard to post-test counselling most of the respondents who had tested for HIV in the Correctional centre reported that they were able to see the same

counsellor before and after testing, they also reported post test counselling to be helpful and were given information about safer sex practices like the use of condoms. This correlates well with the recommendations from the National Report on the Assessment of the Public Sectors' Voluntary Counselling and Testing programme which advocates for the use of the same counsellor for subsequent visits as recommended by VCT experts and this promotes trust, enhances confidentiality and may even influence return visits in future.

Conclusion

Given the high prevalence of HIV among prisoners, there is a dire need for promoting HIV VCT services in correctional centres. Inmates need to be encouraged to participate in these programmes so that further infections can be prevented and inmates infected with HIV have prompt access to antiretroviral therapy. VCT information should be given to inmates on admission when they are being orientated about health care services available in the correctional centres. Health care providers' attitudes on HIV towards their clients should be improved.

Most of the inmates in this study were found to be knowledgeable about the risk factors for HIV infection however significant personal barriers prevent any from seeking testing and counselling. Fear of being stigmatised and discriminated, lack of trust to health care professionals, poor or bad attitudes of health care professionals, not knowing about availability of VCT services and not getting enough information about VCT services were identified as the main barriers for inmates to not seek VCT services. These barriers need to be addressed urgently so that inmates can access VCT services in correctional centres. It is recommended that education and training as a tool to decrease HIV-related stigma is promoted in health care providers (Barss *et al.*, 2009; Uys *et al.*, 2009).

Acceptance of inmates living with HIV/AIDS should be encouraged as this will encourage most inmates to know their HIV status by undergoing VCT without fear of being discriminated or stigmatised. This will lead to the majority of the inmates not having a problem of accepting those who are infected and being in the same vicinity as them. Accessibility of VCT services to the inmates at the correctional centre in terms of convenience, clinic working hours and information giving about HIV/AIDS issues were found to be good by most respondents, this should be commended as it shows that even if some barriers to VCT services have been mentioned, inmates are given an abundant time to go to the correctional centre clinic for their different health care needs.

This study indicates that VCT services have been successfully promoted and health care providers should be commended for offering health talks despite their other workload issues. Level of satisfaction on VCT services to the inmates appears to be satisfactory in general even though there is some dissatisfaction with ongoing counselling.

Finally, though the level of knowledge about HIV/AIDS issues among the study population appears to be high, there are still misconceptions associated with this pandemic which needs to be addressed especially with the issues related to testing for HIV, and

this will increase the uptake of VCT services in the correctional centres.

Study limitations

The study had several limitations. First, it was not possible to include all inmates ($N=808$) nor to randomly sample the final sample and the sample included only inmates from one particular correctional facility. Therefore, findings cannot be generalised to other correctional facilities in South Africa. Second, data collection was by self-report from the inmates, and therefore subjective bias in responding to the study questions is possible. Thirdly, the religious denomination was not assessed in this study. It is possible that depending on their religious background social stigma attached to HIV/AIDS may differ.

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