

# SEXUAL BEHAVIOURS OF HIV POSITIVE PERSONS

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## SUMMARY

HIV/AIDS continues to spread throughout the world with Africa remaining the worst affected continent. While much has been written about the prevention of HIV/AIDS by practising safe sex at the individual level, less attention seems to have been devoted to the actual sexual behaviours of persons who know that they are HIV-positive. This article attempts to summarise research results as outlined in literature studies that investigated the sexual behaviours of HIV-positive persons, both those on antiretroviral therapy (ART) as well as those who are not on ART.

## RESULTS

The introduction of antiretroviral (ARVs) has introduced new risk factors in sexual practices, whereupon HIV positive people have wrong perceptions and expectations regarding ARVs.

There is also a widespread belief that people with an undetectable viral load cannot transmit HIV through sexual intercourse.

## CONCLUSION

Sexual behaviours of HIV positive persons require continued health education on the effects of ARVs to emphasise that these medications do not necessary cure the diseases but keep the viral load low. ARVs are not curative. Similarly education on the use of condoms as a preventive measure must be emphasised while having sex with a virgin or an elderly woman is no option to cure HIV infection

**KEYWORDS:** AIDS, antiretroviral therapy (ART), HIV-positive persons' sexual behaviours, risky behaviours, unprotected sex, unsafe sex.

## **INTRODUCTION**

Unless HIV-positive persons, whether on antiretroviral therapy (ART) or not, adhere to safe sex practices, the transmission of HIV/AIDS to their sex partners continue unabated. The reason for conducting this literature survey was to identify whether or not HIV-positive persons adhere to “safe sex” practices. Relevant sources were searched from the bibliographies of journal articles and books on AIDS. The following search engines were used to identify some relevant websites:

- [www.google.com](http://www.google.com)
- [www.ncbi.nlm.nih.gov/PubMed](http://www.ncbi.nlm.nih.gov/PubMed)
- [www.bmj.com](http://www.bmj.com)
- [www.thelancet.com](http://www.thelancet.com)
- [www.sciencedirect.com/science/journals](http://www.sciencedirect.com/science/journals)
- [www.unaids.org](http://www.unaids.org), [www.who.int](http://www.who.int)

In 2004, an estimated 3.1 million people died of HIV/AIDS, whilst an estimated 4.9 million people acquired the infection in that same year. Globally, the Joint United Nations Programmes on HIV/AIDS (UNAIDS) reported that an estimated 39.4 million people were living with HIV/AIDS (UNAIDS 2004:1). Unless these 39.4 million HIV-positive persons practise safe sex, HIV-negative persons will continue to become infected through sexual intercourse with HIV-positive persons.

## **SEXUAL BEHAVIOURS OF HIV POSITIVE PERSONS**

HIV continues to spread through unsafe sexual behaviours by persons who know they are infected with HIV (Crepaz & Marks 2002:135). According to Schiltz and Sandfort (2000:1571), for a long time, the sexual behaviours of HIV-positive persons did not receive any serious attention from researchers. Initially, the diagnosis of HIV appeared to imply a death sentence. As such, the sex lives of HIV-positive persons seemed to be a secondary issue thus compromising transmission and prevention. Furthermore, the belief that stigmatisation should be avoided also prohibited an interest in the sexual behaviours of the HIV-positive persons. The early reports about sexual behaviours of HIV-infected persons revealed various adverse effects (Schiltz and Sandfort 2000:1577). For a minority, sex life decreased sharply or simply stopped. Among those who remained sexually active, protection was reported to have increased even though many complained of having trouble using condoms regularly.

## **WAYS IN WHICH A POSITIVE HIV STATUS AFFECTS A PERSONS' SEXUAL BEHAVIOUR**

Schiltz and Sandfort (2000:1577) mentioned that, although HIV-positive persons continue to be sexually active, the expression of their sexuality is affected by their HIV-

positive status. Several authors, listed by Shiltz and Sandfort (2000:1577), presented some potential problematic situations, with which HIV-positive people are confronted. Some observe a high occurrence of relationships and sexual problems, such as erectile dysfunction and premature orgasm. HIV infection can also diminish sexual desire and satisfaction. In addition, seropositive persons may be faced with the absence of a willing sex partner, especially if they disclose that they are HIV-positive. Their sexual expression might be disillusioned by feelings of guilt and fears about the possibility of infecting their sex partners (Schiltz & Sandfort 2000:1577). Risk factors that related to unsafe sexual practices have been identified among HIV-positive persons. These determinants seem to be similar to those found among people with a negative or unknown HIV status.

It has been estimated that out of 800,000 to 900,000 people living with HIV in the United States of America (USA), about two thirds are aware of their HIV-positive status and over 70% were sexually active (Crepaz & Marks 2002:135) after they had learned that they were HIV-positive. However, a considerable percentage of HIV-positive individuals (ranging from 10% to 60%) continue to engage in unprotected sexual behaviours that place others at risk, as well as themselves for contracting secondary infections such as syphilis, gonorrhoea and herpes that may accelerate the progress of HIV/AIDS and re-infections with different strains of HIV. As more and more individuals live longer because of an increasing number of sexual transmissions of HIV stem from those who know that they are infected and engage in unprotected sex (Crepaz & Marks 2002:135).

In 2002, Crepez and Marks (2002:136;144–146) examined psychological, social, interpersonal and medical variables as correlates of sexual risks in persons who knew that they were HIV-positive. Their results showed that in both genders, unprotected sex was associated with having HIV-positive (versus HIV-negative) partners, believing that safer sex decreases sexual pleasure, having less intention to use condoms. The report further stated that 9 out of 11 HIV-positive men and women were significantly more likely to engage in unprotected sex with partners reported to be HIV-positive than with uninfected partners. This finding might indicate that some HIV-positive individuals attempt to prevent HIV transmission. However, HIV-positive individuals who have unprotected sex with HIV-concordant partners place themselves at risk for contracting secondary infections that may accelerate the progress of HIV/AIDS (Crepaz & Marks 2002:136;144–146).

## **THE INFLUENCE OF ART ON HIV-POSITIVE PERSONS' SEXUAL BEHAVIOURS IN WESTERN COUNTRIES**

The introduction of ARVs has introduced new risk factors for unsafe sex (Schiltz & Sandfort 2000:1578), by enabling HIV-positive persons to live longer, and to enjoy a better status of well-being, increasing their likelihood to engage in continued sexual

behaviours. Since 1996, highly active antiretroviral therapy (HAART) was introduced in the industrialised countries (WHO 2003:1). HAART regimens do not cure AIDS and may not always be effective because of drug-resistant strains of HIV and some unmanageable adverse effects. However, many HIV-positive persons receiving HAART have substantially lowered their viral loads and increased CD4 cell counts. Consequently, AIDS morbidity and mortality rates have been reduced in those countries where HAART has been available (Crepaz, Hart & Mark 2004:224). From an epidemiological perspective, and within the context of HAART, it is important to be aware of the sexual behaviours of HIV-positive persons (Schiltz & Sandfort 2000:1571).

According to Aidsmap (2005:5), research in the United Kingdom (UK) indicated that HIV is still almost universally considered to be a very serious condition, even though perceptions of it being a death sentence no longer holds since the introduction of ART. (Crepaz et al 2004:234).

The introduction of HAART has raised mixed effects on sexual behaviours in Europe and the United States of America (USA). Apart from ART's beneficial clinical effects; treatment advances may have unintended effects on sexual behaviours. Some patients who have just started using HAART may be experiencing symptomatic illness that may decrease their interest in sex (Crepaz et al 2004:224). Furthermore, HAART may produce adverse effects that reduce sexual desires. However, it is possible that patients who are receiving HAART and are feeling well may tend to engage in unprotected sex. Crepaz et al (2004:224) mentioned that since HAART became available, the prevalence of unprotected sex and the incidence of sexually transmitted infections (STIs), including HIV, have increased. Some HIV-positive people receiving HAART, especially those with low viral loads, might wrongly feel protected from transmitting HIV sexually. This has led to unsafe sexual practices resulting in HIV positive people transmitting HIV and re-infecting themselves (Crepaz et al 2004:224).

In the USA, Kalichman, Benotsch, Suarez, Catz, Miller and Rompa (2000:329) reported misperceptions about ARV drugs among the lower health literacy group. This group was significantly more likely to believe that people who are taking ART are less likely to transmit HIV to their sex partners and that it is safe to have unprotected sex if an HIV-positive person has an undetected viral load.

Kozal, Amica, Chiarella, Schreibman, Cornman, Fisher, Fisher and Friedman (2004:2187–2188) studied 333 HIV-positive patients in the USA. Their findings revealed that as many as 75 people had unprotected sex during the preceding 3 months, resulting in 1126 unprotected sexual events with 191 partners of whom 155 were believed to be HIV-negative or of unknown status. Of the 75 people who engaged in unprotected sex, 18 developed resistance to ARVs. With regard to partner HIV status during a 3 month period, 48 patients reportedly engaged in 103 high risk sexual events with a total of 155 HIV-negative or status unknown partners. In this study, there were no differences by gender, ethnicity, residential area, years of being HIV positive, mean CD4 cell or viral load counts.

Ten studies done in the Western world reflected the association of unprotected sex with beliefs about ARVs and viral loads in people living with HIV/AIDS, HIV negative people and persons of unknown status. The likelihood of unprotected sexual behaviour was higher in people who believed that HAART reduces HIV transmission, or who were less concerned about engaging in unsafe sex given the availability of HAART. Regardless of their HIV serostatus, the likelihood of unprotected sex was higher in people who agreed that receiving HAART or having undetectable viral loads protected them against transmitting HIV or that the availability of HAART reduced their concerns about having unsafe sex (Crepaz et al 2004:233). For example, Crepaz et al (2004:230) mentioned that in Elford et al's study (2002), that was conducted in London, England, a respondent stated: *"I believe that new drug therapies make people with HIV less infectious. I am less worried about HIV than I used to be."* Furthermore, Crepaz et al (2004:230) stated that in Huebner and Gerend's survey (2001) in Phoenix, Arizona in the USA, a respondent maintained: *"Sex with someone who has AIDS and is taking the new antiviral drugs is a safer partner than someone who has HIV/AIDS and is not taking the drugs"*. A survey, conducted by the International Collaboration on HIV Optimism in 2003 in England, France, Australia and Canada reported that their respondents stated that: *"New HIV treatments will take the worry out of sex. People with undetectable viral loads do not need to worry so much about infecting others with HIV and HIV is a less threat than it used to be because of new treatment"* (Crepaz et al 2004:230).

A study in Amsterdam, in the Netherlands, investigated the association between HAART-related beliefs and the change from protected to unprotected anal intercourse with casual partners on an individual level. The findings showed that the majority of men disagreed with the following treatment beliefs: perceiving reduced HIV/AIDS threats since HAART, perceiving less need for safer sex since HAART and perceiving high effectiveness of HAART in curing HIV/AIDS. Multivariate analyses revealed that the more men were inclined to agree with the belief *"perceiving less HIV/AIDS threat"* the more likely they were to change to unprotected receptive anal intercourse. It was concluded that this finding supports the hypothesis of a causal relationship between decreased perceived threat since HAART and a change to unprotected receptive anal intercourse (Stolte, Dukers, Geskus, Coutinho & De Wit 2004:304, 307).

## **THE INFLUENCE OF ART ON PERSONS' SEXUAL BEHAVIOURS IN AFRICA**

The overall impact of ART on HIV transmission in Africa is unknown. However, risky perceptions on HIV/AIDS and ART might differ in certain contexts, for example, in the first world and the African context.

A cross-sectional survey in Cote d'Ivoire compared sexual behaviour of ARV-treated respondents as opposed to ARV non-treated respondents (Stein 2005:3). This study's findings did not support the hypothesis that ARV treatment results in increased risk behav-

ious. The study indicated that people on ART in the African context may use condoms (with all sexual partners) more frequently than untreated HIV positive people. The report further stated that, a lack of ARV therapy was significantly associated with a higher likelihood of risky sexual behaviours among HIV-positive people (Stein 2005:3).

In Uganda, a study on “*changes in sexual behaviour and risk of HIV transmission after antiretroviral therapy*” revealed that, although sexual activity increased for both men and women six months after initiating ART, occasions of unprotected sexual intercourse showed a declining trend over two years. Unprotected sex with partners of negative or unknown HIV status also declined. Risky sexual behaviours were reduced by 70%. Over 85% of risky sexual acts occurred among married couples. The study concluded that the use of ART, accompanied by HIV testing of sexual partners and individualised counselling was associated with a significant reduction in the estimated risk of HIV transmission (Bunnell, Ekwaru, Solberg, Wamai, Bikaako-Kajura, Were, Coutinho, Lietchy, Madraa, Rutherford and Mermin 2006:88).

In Kenya, a cross-sectional study was conducted on 179 HIV-infected persons six months after initiating HAART and 143 HIV-infected persons who were receiving opportunistic infection prophylaxis or preventive therapy for at least five months. The findings showed that patients on HAART were less likely to report sex with a casual partner and multiple partners compared to those on preventive therapy. Additionally, those on HAART were significantly more likely to report condom use at last sexual encounter and used condoms consistently with their regular partners during the study period compared to those on preventive therapy. Furthermore, patients receiving preventive therapy were four times more likely to report unprotected sex with a regular partner compared to patients receiving HAART. Married or cohabiting couples were three times more likely to have had unprotected sex compared to single (never married, widowed, or separated) respondents. This study found lower risk behaviour among patients receiving HAART compared to those receiving preventive therapy. Thus, it was concluded that the study provides no evidence to suggest that sexual risk behaviour may actually increase with the initiation of HAART (Sarna, Luchters, Kaai, Munyao, Geibel, Shikely, Mandaliya, Hawken, Van Dam, & Temmerman 2005:2).

According to Stein’s experience (2005:3-4), patients on ART around Lusikisiki, a rural area in the Eastern Cape province, South Africa, knew that a decreased viral load did not avert the risk of spreading HIV implying that condoms had to be used consistently. All 13 patients who were interviewed maintained that people on ART are more compelled to practise safer sex than persons who are not on ART. This report also suggested that access to ART was considered by these patients to be a privilege which increased the patients’ responsibilities to practise safer sex.

Furthermore, Stein (2005:4) suggested that additional research in this regard, especially in the African context, is required before conclusions can be drawn. In particular, cau-

tion should be exercised regarding the interpretation of all the above-mentioned studies, in so far as they rely on self-reported behaviour.

However, Stein (2005:6) also mentions that in some African communities, including Botswana, Zimbabwe, Swaziland and South Africa, there is a growing obsession with virginity and the belief that sex with a virgin prevents and/or cures AIDS. Thus, many people still believe the myth that sex with a virgin or a young girl can cure men of HIV/AIDS. A survey conducted in the urban area of the Gauteng-Province of South Africa, revealed that 18% of workers believed that sex with a virgin could cure AIDS and a similar survey with a sample of 9000 youth found that 13% believed that virgin cleansing (implying that an HIV infected man had sex with a virgin) could cure and/or prevent AIDS (Stein 2005:6). In places where it is believed that sex with a virgin “cleanses” or “cures” men of HIV/AIDS, young girls are at particular risk of rape and sexual coercion. Thus, this paradigm puts young girls, especially virgins at special risk for rape.

In Botswana this myth of sex with a virgin is particularly widespread, and some men may deliberately seek out young girls for intercourse as a way of avoiding HIV infections. Another lesser known perception is that sex with older women (grand mothers) can cleanse men of HIV/AIDS. This belief is said to result from the perception that when women stop menstruating, they become clean again. Women who are grand mothers are also regarded as being without HIV/AIDS because they managed to live long enough to become grand mothers, implying that sexual intercourse with these elderly women might cure and/or prevent HIV/AIDS. This perception also places all grand mothers at increased risk of being raped, exposing them to risks of becoming infected with HIV. The burden on many rural grand mothers in African countries is extremely heavy; having to toil their fields, sell their products, care for their children dying from AIDS, and raise their grand children. The additional threat of being raped could make their lives unbearable (Stein 2005:6).

There are also numerous beliefs about condoms spreading HIV, causing many people to refuse using condoms for fear of becoming HIV-positive in this way (Stein 2005:6). According to Stein (2005:50) as well as Van Rensburg, Friedman, Ngwena, Perlser, Steyn, Booysen and Adendorf (2002:30), a qualitative study by Leclerc-Madadla (1997) in South Africa, revealed that HIV positive men would choose to spread HIV deliberately. The majority of informants (N=100) from the KwaZulu-Natal Province, argued that if they knew they were infected, they would take no precautions against infecting others. One participant said: *“By giving it to others, I won't be going down alone. That's my only hope. That's my comfort. It's as simple as that.”* (Stein 2005:5). Additionally, the participants had a tendency of saying *“If I am already infected, I can sleep around because I cannot get infected again”*. They had a slogan: *“infect one, infect all.”* (Van Rensburg et al 2002:30).

## CONCLUSIONS

HIV-positive persons' sexual behaviours change, but this does not imply that the global estimate of 39.4 million HIV-positive people (UNAIDS 2004:1) use condoms. ART has made some people believe erroneously that HIV/AIDS can be cured and that persons using ART would not spread HIV (Crepaz & Marks 2002:147; Crepaz et al 2004:235). The availability of ART necessitates ongoing research into the sexual behaviours of HIV-positive persons, because they are likely to live longer and to enjoy better health than prior to the introduction of ART and HAART.

HIV-positive patients using ART, but not adhere strictly to the treatment regimen, may transmit ARV-resistant strains of HIV (Kozal et al 2004:2185-2186). Inconsistent findings were reported about HIV-positive persons' sexual behaviours with some using condoms consistently while others did so inconsistently and reportedly tried to infect their sex partners on purpose.

In African countries the reported erroneous beliefs include that condoms cause HIV infections; HIV/AIDS can be cured or even prevented by having sex with a virgin or with an elderly woman (grand mother).

## RECOMMENDATIONS

Based on the conclusions, the following recommendations are proposed to enhance the sustained practice of using condoms by HIV-positive persons:

- counteracting unfounded beliefs may help to reduce HIV infections in the age of HAART and to help remind HIV-positive persons about their lifelong obligation to use condoms consistently for their own and for their sex partners' benefit
- persons using ART should be encouraged, during every visit to the pharmacy and/or clinic, to use condoms for the protection of their partners and themselves from re-infections which could substantially reduce the HIV-positive person's lifespan, despite the use of ART
- sustained and effective health education must emphasise that condoms do not cause HIV infections; and that HIV/AIDS cannot be cured nor prevented by having sex with a virgin or with an elderly woman (grand mother)
- every clinic providing ART should conduct its own research about HIV-positive persons' sexual behaviours and provide appropriate health education.

These recommendations can however be implemented successfully only if, as Strasberg (2003:172) points out that *moral competency* is acquired by all involved and that *moral competence* stems from *moral literacy* constructed on an ever-changing and challenged body of knowledge of culture (cultural literacy) including knowledge of religion (religioliteracy), the social context (socioliteracy) of the environment (ecoliteracy) and the universe (cosmoliteracy).



## FINAL CONCLUDING REMARKS

The advent of ART and HAART promised a new lease on life for many HIV-positive persons. As a consequence of ART and HAART many HIV-positive persons live longer, and enjoy better health than they could have done without ART. This implies that these HIV-positive persons can engage in sexual activities for longer periods and to a greater extent than would have been possible without ART. Unless HIV-positive persons use condoms consistently, the spread of HIV/AIDS will not decrease. HIV-positive persons who do not adhere to their ART regimens might spread ARV-resistant, or even HAART-resistant strains of HIV. This implies that newly infected HIV patients might derive limited or no benefit from ART – rendering them as vulnerable as all HIV-positive persons were prior to the introduction of ART. Unless HIV-positive persons assume responsibility for practising safer sex at every occasion, the available ART drugs might be rendered useless within the foreseeable future. This necessitates ongoing research about HIV-positive persons' sexual behaviours at every site providing ART.

## REFERENCES

- Aidsmap Treatment and care report. 2005. Predicting the non-adherent patient: <http://www.aids-map.com/en/docs/6DBF799A-2318-4895-9951-F67A0A6B94E2.asp> (Accessed 17/03/05).
- Bunnell, R, Ekwaru, JP, Solberg, P, Wamai, N, Bikaako-Kajura, W, Were, W, Coutinho, A, Liechty, C, Madraa, E, Rutherford, G & Mermin, J. 2006. Changes in sexual behaviour and risk of HIV transmission after antiretroviral therapy and prevention interventions in rural Uganda. *AIDS* 20 (1):85–92.
- Crepaz, N & Marks, G. 2002. Towards an understanding of sexual risk behaviour in people living with HIV: a review of social, psychological, and medical findings. *AIDS* 16(2):135–149.
- Crepaz, N, Hart, TA & Marks. 2004. Highly active antiretroviral therapy and sexual risk behaviour. A meta-analytic review. *Journal of the American Medical Association (JAMA)* 292(2):224–236.
- Kalichman, S, Benotsch, E, Suarez, T, Catz, S, Miller, J & Rompa D. 2000. Health literacy and health-related knowledge among persons living with HIV/AIDS. *American Journal of Preventive Medicine* 18(4):325–331.
- Kozal, MJ, Amica, KR, Chiarella, J, Schreiber, T, Cornman, D, Fisher, W, Fisher, J & Friedland, G. 2004. Antiretroviral resistance and high-risk transmission behaviour among HIV-positive patients in clinic care. *AIDS* 18(16):2185–2189.
- Sarna, AS, Luchters, S, Kaai, P, Munyao, S, Geibel, K, Shikely, K, Mandaliya, M, Hawken, J, Van Dam, J & Temmerman, M. 2005. Does being treated with HAART affect the sexual risk behaviour of people living with HIV/AIDS? Insights from Mombasa. Kenya. *Horizons Research update*. Nairobi: Population Council.
- Schiltz, MA & Sandfort, GM. 2000. HIV-Positive people, risk and sexual behaviour. *Social Science & Medicine* 50:1571–1588.
- Stein, J. 2005. The impact of antiretroviral (ARV) provision on HIV/AIDS prevention. *AIDS Bulletin* 14(1):1–13 <http://www.mrc.ac.za/aids/march2005/impact.htm>
- Stolte, GI, Dukers, NHTM, Geskus, RB, Coutinho, RA & De Wit, JBF. Homosexual men change to risky sex when perceiving less threat of HIV/AIDS since the availability of highly active antiretroviral therapy: A longitudinal study. *AIDS* 18(2):303–309.
- Strassberg BA. 2003. "The plague of bood": HIV/AIDS and the ethics of the global health-care challenge. *Zygon*, 38(1):169–183.

- UNAIDS. 2004. Fact Sheet. Sub-Saharan Africa, regional HIV and AIDS estimates end 2004. <http://www.unaids.org/en/geographical+area/by+region/sub-saharan+africa.asp>. Accessed on 29/05/05.
- Van Rensburg, D, Friedman, I, Ngwena, C, Pelsers, A, Steyn, F, Booysen, F & Adendorf, E. 2002. *Strengthening local government and civic response to the HIV/AIDS epidemic in South Africa*. Bloemfontein: Centre for Health Systems Research & Development.
- WHO. 2003. World Health Organization-ARV toolkit. A public health approach for scaling up antiretroviral (ARV) treatment <http://www.who.int/hiv/toolkit/arv/en/index.jsp> (Accessed on 07/06/05).