

Reducing the Risk of HIV Infection among South African Sex Workers: Socioeconomic and Gender Barriers

ABSTRACT

Objectives. The social context within which women engaged in sex work at a popular truck stop in South Africa are placed at risk of human immunodeficiency virus (HIV) infection and the factors that influence their ability to reduce their risk were assessed.

Methods. Using qualitative and quantitative techniques, an elected sex worker from within the group collected all data.

Results. Given the various pressing needs for basic survival, the risk of HIV infection is viewed as one more burden imposed on these women by their lack of social, legal, and economic power. Violence, or the threat thereof, plays an important role in their disempowerment. In the few instances in which sex workers were able to insist on condom use, it resulted in a decrease in earnings, loss of clients, and physical abuse.

Conclusions. Recommendations to reduce the sex workers' risk for HIV infection include negotiation and communication skills to enable them to persuade their clients to use condoms; development of strategies through which they can maximally use their group strength to facilitate unified action; and accessibility of protective methods they can use and control, such as intravaginal microbicides. (*Am J Public Health.* 1995;85:1521-1525)

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Introduction

In countries where transmission of the human immunodeficiency virus (HIV) is predominantly sexual, having multiple sexual partners is a key risk behavior. Sex workers, by virtue of the nature of their work, which is characterized by multiple sex partners and frequent coitus, have a higher risk of acquiring and transmitting HIV than the general population. The high prevalence of HIV infection observed among female sex workers in Kenya,¹ Uganda,² and Somalia³ is attributed not only to high-risk sexual behavior but also to common background characteristics such as poor social conditions, poor knowledge about HIV infection, and a high prevalence of other sexually transmitted diseases.⁴

Although sex work is illegal in South Africa, it is nevertheless common. Sex workers of higher socioeconomic status work out of escort agencies and massage parlors, while those of a lower socioeconomic status work on the street or at harbors, mines, bars, and various working-class haunts. Just as the "migrant labour system has created a market for prostitution in mining towns,"^{5(p 157)} the trucking industry has created a similar market at certain gasoline and diesel filling stations known as truck stops. Women working at truck stops are typically at the upper end of the scale for risk of HIV infection.⁶ Efforts to educate them as to HIV protective strategies have been impeded by frequent police harassment, which has made them a "hard-to-reach" group.

While health education and risk-reduction strategies that go beyond mere information dissemination targeted at sex workers and their clients are obviously required, the success of these interventions depends on an understanding of the

social context within which these behavioral changes must occur. This context is defined by the social, economic, and medical needs of sex workers, particularly in settings where negotiation for safer sex methods is difficult.

This study of a group of women engaged in sex work at a popular truck stop in South Africa was undertaken to explore the social context that places them at high risk for HIV infection, and to assess how this context influences their ability to reduce their risk.

Methods

Study Site and Study Population

The study population comprised a small community of women selling beers and sex to truck drivers and local men at a major truck stop almost midway between Durban and Johannesburg. There are usually 12 women living and working at this truck stop, but the composition of this group changes constantly. Each month, about two new women join the group while a similar number leave. This mobile group usually moves along the truck route or to other sex worker sites, usually hostels; some women return to this stop

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over variable lengths of time. A stable group of eight sex workers was present at the truck stop throughout the study period. Their mobility usually relates to family visits. Contact was made with them through a local health official (MZ), who, through his health promotion efforts, had developed a relationship of trust with them over time. All sex workers present at the truck stop during the study period were included in the study.

Study Procedure

Fieldwork for the study was conducted over 6 months, from December 1991 to May 1992, using a combination of qualitative and quantitative techniques. In November 1991, following a consultative meeting with the group at the study site, the women agreed to participate on the precondition that all data be collected by a sex worker elected from within the group. At the end of the consultative meeting, the sex workers held their own meeting to elect an individual for that purpose. She was subsequently remunerated as a part-time field-worker for the study but continued, by her own choice, with sex work during the study period.

In preparation for the study, the field-worker was briefed about its objectives and given extensive training in qualitative and survey methods, including ethical issues in HIV. The training, which took place in Durban, included conducting mock interviews, conducting and recording informal and in-depth interviews, administering questionnaires, and receiving basic information about HIV and acquired immunodeficiency syndrome (AIDS). Subsequently, the field-worker returned weekly to Durban, where regular contact with the research staff enabled them to follow up and build on her initial training as well as to debrief her on her progress.

From December 1991 through February 1992, the field-worker, through in-depth interviews with women at the stop, obtained qualitative descriptions of the group (herself included), which covered social conditions at the truck stop, sex work, family history, and attitudes and practices with regard to HIV/AIDS and other sexually transmitted diseases. She then prepared detailed notes at the end of each interview.

During March and April, that same field-worker administered questionnaires to each sex worker at the truck stop. The questionnaires, which were developed to quantify the findings from the in-depth interviews, contained both open- and

close-ended questions on such items as sociodemography; social support systems; types and frequency of sexual encounters; prices charged for sex work; knowledge, attitudes, and practices with regard to HIV; issues regarding condom use; and contraceptive and sexually transmitted disease history.

In May, in-depth interviews were conducted with a select group of truck drivers, and data were obtained on sociodemography, AIDS knowledge, perception of risk, sexual behavior, and condom use.

In addition to the group consent obtained at the beginning of the study, informed consent was obtained from each individual prior to the in-depth interviews and administration of the questionnaire. All field notes and records were collected without names. Linkage of interview notes and questionnaires was not possible.

Data Analysis

The field notes compiled at the end of the in-depth interviews were scrutinized by one of us (QAK) for completeness during the field-worker's visit to Durban. Content analysis of the notes was undertaken, and the final report is the result of consensus between the authors following their independent analysis of the data.

Questionnaire data were recorded on a standardized form. Responses to open-ended questions were categorized in terms of their content and then treated as categorical variables. Data were analyzed using *Epi Info, Version 5*.⁷

Results

Ten in-depth interviews and 12 questionnaires were completed with women at the truck stop. The respondents, all of whom were Black, ranged in age from 17 to 34 years (mean = 25.9 years; SD = 3.8) and had been based at the truck stop for an average of 3.6 years (range = 1 month to 8 years). Nine more in-depth interviews were conducted with truck drivers.

Sex Work

Questionnaire data indicate that the 12 respondents had a total of 266 clients per week (mean = 22; range = 4 to 40). Ten of the 12 respondents worked a 7-day week selling beers and sex. One of the respondents who worked a 5-day week used the remaining 2 days to work in single-sex hostels in Durban. Because women did not work while menstruating,

they used this time to seek medical attention or visit family.

Sex work could be divided into short jobs and overnight sessions. In a 7-day week, an average of three out of four nights were worked as overnight sessions, during which one client would spend the entire night with a sex worker and two to four coital acts would be performed. In addition, each woman performed an average of 17 short jobs (range = 0 to 35) each week. Although these were performed during the day or night, they were seldom performed in the night when an all-night session was in progress. Coitus among the group occurred from 2 to 10 times in a 24-hour period. Ten of the respondents had one to three regular clients, but the frequency of these client visits was not determined quantitatively. The woman with the lowest activity was also the lowest earner and did not have any dependents.

Peno-vaginal sex was the only type of sex reportedly performed. There are strong cultural taboos against oral and anal sex; the sex workers felt that these practices were totally unacceptable to them. Thus, requests for anal and oral sex, sex during menstruation, and manual stimulation were refused.

Sexually Transmitted Diseases and Contraception

Of the 12 respondents, 7—including the two youngest and, as yet, childless women—indicated that they were not using any form of contraception. Of the remaining respondents, two used condoms, one used oral contraceptives, and two used intrauterine devices.

All respondents who were not on any form of contraception reported postcoital douching with antiseptics such as Dettol, Savlon, Jik, or *imbiza*, an herbal poultice, to prevent conception and sexually transmitted diseases. Postcoital douching for hygienic reasons, either with soap and water or with water only, was also reported by the women who were on contraceptives.

Knowledge of HIV etiology, modes of transmission, prognosis, and methods of prevention was high among the sex workers, reflecting the earlier educational activity conducted by one of us (MZ).

Six respondents reported a past episode of a sexually transmitted disease. In the 3 months preceding the interview, two respondents had had such a disease but only one had sought treatment. Respondents who reported a sexually transmitted disease episode in the past

had sought medical treatment from both traditional healers and the formal health service. Traditional healers usually dispensed an herbal remedy. At the public clinics and hospitals or at the offices of private general practitioners, the sex workers received both tablets and injections. There was no reported self-dosing with antibiotics to prevent or treat sexually transmitted diseases, but self-medication with analgesics and antifungal pessaries for suspected sexually transmitted diseases was reported.

Although condoms were obtained from government clinics, the field-worker, or the health official (MZ), they were used infrequently. Three respondents with an average of approximately 84 clients per week never asked clients to use condoms. Of the remaining nine respondents who routinely requested condom use, seven reported that most clients refused to accept their use. Of those seven, only three respondents refused to have sex with the client; the remaining four agreed to have sex anyway. The two respondents who reported using condoms for fertility control and disease prevention did not use them at every sexual encounter. None of the eight respondents with regular, non-commercial sexual partners used condoms in these relationships as they trusted their regular partner.

The respondents reported that condom use was responsible for client loss and more frequent nonpayment. Importantly, they complained that condom use led to physical abuse by clients as it was felt that condoms left the clients sexually unsatisfied. Additionally, four respondents cited personal sexual dissatisfaction as a reason for objecting to and not insisting on condom use; their dissatisfaction stemmed not from vaginal irritation relating to the condom but from their felt need to have sexual pleasure with certain clients. Other problems experienced with the use of condoms included fear of them remaining in the vagina, which commonly occurs because the penis is not withdrawn immediately after ejaculation but only after it becomes limp, so condoms are sometimes left behind. There were also complaints that condoms break during intercourse.

Clients insisted on paying less for sex when a condom was used. The women who insisted on condom use charged only one quarter the average price of a short job; the standard fee with a condom was R5, while the fee without a condom was R20 (R3.50=\$1).

Violence

The women were often physically abused and raped by clients. Several women testified that clients were more likely to behave aggressively when condoms were used or suggested, which made the women fearful of suggesting their use. The police offer no protection in these cases. According to five independent accounts from the respondents, police occasionally help themselves to beers and seek free sexual favors from the sex workers. "The police who come here usually come here to take the beers,"* complained the respondents.

Sociodemography

"We abide all kinds of problems because there is no place else we can go to."

The women complained of being treated badly as tenants of the truck stop with poor sleeping, ablution, and cooking facilities. They relied on each other for help and support when they were beaten by clients, arrested by police, or taken ill.

Six of the 12 respondents had been at the stop for 5 years or more. With the exception of two women who were born in the Transvaal, all were born in the Natal Midlands, which is within a 100-km radius of the truck stop. One respondent was married, one was divorced, and the remainder were single. The married respondent saw her husband at least once a month. Of the single respondents, seven had a regular, noncommercial sexual partner. Eight respondents were mothers; one had four children, two had three children, three had two children and two had one child each. The children, who ranged in age from 1 to 15 years, were all cared for by their relatives. One of the respondents, a 25-year-old single mother with one child, was 5 months pregnant at the time of the study and remained actively engaged in sex work at the stop.

All respondents had at least one living relative, and all respondents visited their relatives at least once in 3 months. Except for the two women with no dependents, the respondents described themselves as financial supporters of their dependent children or relatives. Yet their families were told only of beer-selling activities at the truck stop; sex work was kept secret, and some women expressed shame and fear of their family finding out about it.

With the exception of one woman who had attended school for 9 years, the respondents had an average school attendance of 5 years, which they saw as a

barrier to obtaining other employment. Some had previously worked as shop assistants or domestic workers but had either lost their jobs or found the income insufficient to support their families.

Interviews with Clients

The field-worker encountered resistance when she tried to interview the clients. This resistance stemmed from clients' fear of prosecution or loss of employment, as well as from their reluctance to discuss their lives or AIDS. Some of the resistance also came from the sex workers, who feared that the interviewing might result in lost clients. Thus, although nine truck drivers did agree to be interviewed, their responses may not be representative of the truck drivers or clients visiting the truck stop.

The average age of the clients was 39 years (range = 25 to 52). Five were married, two were divorced, and two were single, but all had children. The men had been working as truck drivers for an average of 10 years (range = 3 to 19 years) and had traveled widely within South Africa and the neighboring countries. Visits to sex workers varied in frequency from four times per day to once every fortnight; visits to their home base and family ranged from once a month to once a year.

Knowledge and attitudes with regard to HIV/AIDS varied. Six of the nine clients interviewed were aware that HIV was sexually transmitted and that AIDS was incurable and fatal. This knowledge generated some fear among the clients, particularly of infecting their families. One respondent described his need to visit sex workers as a consequence of his rejection by other women who knew he was a truck driver and were therefore scared of being infected by him. Of note is that three clients "did not believe in AIDS." Reasons cited for this belief included successful recovery from sexually transmitted diseases in the past, not knowing anyone with AIDS, and denial that unprotected sex with multiple sexual partners was avoidable. Misconceptions about transmission of HIV included the belief that infection resulted from casual contact or eye contact with an infected person, or from walking over urine from an infected person.

*All quotes have been translated from Zulu.

Discussion

"When you are a prostitute, you do not think of tomorrow; you just think of now."

The ability of women generally to negotiate safer sex practices within the current paradigm of HIV risk reduction strategies is low.^{8,9} The ability of sex workers to negotiate in sexual contracts is expected to be lower, especially where sex work is illegal and carries with it few social or legal rights. The sex workers at this truck stop are at high risk of heterosexually transmitted HIV but have little power to negotiate safer sexual practices, particularly in their commercial sexual relationships. Violence, or the threat thereof, plays an important role in their disempowerment.

For these women who are living in overcrowded conditions, in poverty, with poor health, and with many dependents, the risk of an infection that may not materialize for many years is perhaps not so alarming a spectre. A high risk of HIV infection is just one more vulnerability to be faced, one more consequence of their lack of social and economic power.

Because sex with condoms brings a lower price, sustaining earnings while using condoms requires having more clients. However, time constraints and competition for clients limit the feasibility of this option. Older women in particular are already experiencing difficulty attracting clients. Thus, to maintain prices while insisting on condom use would require a cooperative approach, with the women standing together as suppliers in the market place. But although the women have demonstrated group support and strength during times of crises such as client assaults or police raids, competition for clients has prevented them from using this strength to promote condom use with clients.

All the women in this study were able to insist on only peno-vaginal sex with their clients. While this implies that they do have some ability to negotiate and exercise control over the type of sexual encounter, it is not known to what extent this then weakens their leverage to negotiate on HIV protective issues, such as condom use or other lower-risk sexual practices such as oral or intercrural sex.

The role of alcohol consumption by clients as an impediment to the promotion of safer sex practices among sex workers has been previously documented.¹⁰ This study found that clients frequently consumed beers purchased

from the sex workers. It is likely that negotiating for safer sex practices with a client under the influence of alcohol not only reduces the sex worker's chances to succeed but also increases the possibility of a client reacting irresponsibly and perhaps violently.

A few women were able to insist on condom use with their clients. Yet these same women also testified to being powerless with clients who refused to pay or who beat them up after having sex. And while the violent consequences of condom use are sufficiently severe to explain their low usage and undermine the promotion of safer sex practices, there are even further constraints to their use—notably, the limited AIDS knowledge of truck drivers.

Long-distance truck drivers have been identified as a group at high risk for acquiring and transmitting HIV,⁶ owing to their mobility and multiple sexual partners. Preventing and controlling HIV transmission at truck stops may therefore have a significant impact on efforts to reduce HIV incidence.

Sex with regular partners and husbands is unprotected. Because these relationships are of unknown stability and fidelity, they may also constitute a considerable HIV risk. Introducing condoms into these relationships involves different communication and negotiation skills from those required for clients.

While the focus thus far has been on issues relating to the sexual transmission of HIV, the extensive practice of douching and the wide array of vaginal insertions used by the women are also sources of concern. Several studies undertaken recently among women in the general US population have demonstrated an association between douching at least once a week and ascending genital tract infection.^{11,12} Further research with this group is currently under way to investigate whether frequent douching and the type of douche used on the genital tract facilitate the transmission of pathogenic organisms.

Undertaking research in situations where respondents are wary of sharing intimate and sensitive information with strangers for fear of victimization, prosecution, or discrimination poses many challenges. The participatory processes used in this study have enabled us to obtain important insights into this community that would not otherwise have been obtainable. The field-worker provided an important link between the respondents and the research team, enabling us to go beyond mere data collection to the initia-

tion of critical examination and group dialogue about the women's risk of HIV infection and the steps they can take to reduce that risk.

To address the issues central to the disempowerment of sex workers, long-term programs that redress the workers' lack of social and legal rights are required. However, in the shorter term, enabling sex workers to get their clients to use condoms and expanding the availability of methods that women can control⁹ will increase their options to protect themselves from HIV infection. While the social processes to build group identity and strength are under way, the sex workers in this study have been emphasizing their need for a protective method that does not require client cooperation. Research with intravaginal microbicides is now being planned with this group. □

To empower women such as those in this study in their relationships with their clients would be a step toward developing their ability to reduce the threats to their health and might have far-reaching effects on the reduction of HIV incidence. Negotiation and communication skills, information and access to barrier methods they can use and control, and improved access to health care services could start this process. Specifically, increasing the technical capacity of key, respected individuals within the group through education and training could be crucial in providing peer support and leadership to enable the women to explore ways to use their group strength to facilitate unified action in negotiating safer sexual practices with their clients and thereby acquire more power to protect themselves within the commercial sex contract. □

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References

1. Simonsen JN, Plummer FA, Ngugi EN, et al. HIV infection among lower socioeconomic strata prostitutes in Nairobi. *AIDS*. 1990;4:139.
2. Nzila N, Laga M, Thaim MA, et al. HIV and other sexually transmitted diseases among female prostitutes in Kinshasa. *AIDS*. 1991;5:715-721.
3. Corwin AL, Olson JG, Omar MA, Razaki A, Watts DM. HIV-1 in Somalia: prevalence and knowledge among prostitutes. *AIDS*. 1991;5:902-904.

4. Sanders D, Sambo A. AIDS in Africa: the implications of economic recession and structural adjustment. *Health Policy Plann.* 1991;6:157-165.
5. Jochelson K, Mothibeli M, Leger JP. Human immunodeficiency virus and migrant labor in South Africa. *Int J Health Serv.* 1991;21:157-173.
6. Carswell JW, Lloyd G, Howells J. Prevalence of HIV-1 in East African lorry drivers. *AIDS.* 1989;3:759-761.
7. *Epi Info, Version 5.* Atlanta, Ga: Centers for Disease Control, Epidemiology Program Office; 1988.
8. Worth D. Sexual decision making and AIDS: why condom promotion among vulnerable women is likely to fail. *Stud Family Plann.* 1990;20:297-307.
9. Stein ZA. HIV prevention: the need for methods women can use. *Am J Public Health.* 1990;80:460-462.
10. Plant ML, Plant MA, Thomas RM. Alcohol, AIDS risks and commercial sex: some preliminary results from a Scottish study. *Drug Alcohol Depend.* 1990;25:51-55.
11. Wolner-Hanssen P, Eschenbach DA, Paavonen J, et al. Association between vaginal douching and acute pelvic inflammatory disease. *JAMA.* 1990;263:1936-1941.
12. Gardner JW, Schuman KL, Slattery ML, Sanborn JS, Abbott TM, Overall JC. Is vaginal douching related to cervical carcinoma? *Am J Epidemiol.* 1991;133:368-375.

Social Science Research Council Announces Sexuality Research Fellowships

The Social Science Research Council is sponsoring a 2-year dissertation and postdoctoral fellowship program for social and behavioral research on sexuality conducted in the United States, funded by the Ford Foundation. The Council expects to award approximately six dissertation and four postdoctoral fellowships in 1996. Designed to provide training experience, only joint fellowship applications will be considered from the applicant and a research adviser or associate who will act as a mentor. Women and members of minority groups are especially encouraged to apply.

The program welcomes applications that: contribute to a more thorough understanding of human sexuality in order to inform social and health-related community efforts and public policy; develop interdisciplinary approaches, both theoretical and applied; and propose research that generates new theories and tests new methodology.

The competition is open to researchers in the social

and behavioral sciences and in the humanities; applications are invited from a wide range of disciplines, including but not limited to, anthropology, demography, economics, education, ethics, history, cultural and women's studies, political science, psychology, and sociology. Applications from other fields, such as nursing, law, and social work, are welcome as long as they are grounded in social science theory and methodology. While an academic affiliation is required of either the applicant or the research adviser/associate, persons conducting their research in nonacademic settings are welcome to apply. Projects must be domestic in focus.

Applications must be received at the SSRC by *December 1, 1995*. For further information and application materials, contact the Social Science Research Council, Sexuality Research Fellowship Program, 605 Third Ave, New York, NY 10158; tel (212) 661-0280; fax (212) 379-7896; e-mail BITNET: DIMAURO@NYUACF.BITNET.