



Introducing the female condom to drug users in Brazil

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Abstract. Brazil is currently the number two country in the world for reported cases of AIDS, and the rate of heterosexually acquired cases is on the rise. Moreover, because of the changing focus of the epidemic, the ratio of male to female cases dropped from 28 : 1 in 1984 to 2.7 : 1 in 1997. While women's risk of infection continues to grow, there is evidence to suggest that traditional approaches to HIV risk reduction have not effectively addressed women's special needs. Within such a setting this study sought to introduce drug-involved women to the female condom – a *female-controlled* method of protection from HIV. As part of a larger HIV/AIDS intervention study targeting low-income, cocaine users, the primary aim of this initiative was to assess the level of acceptability of this new device among women at high-risk for HIV infection in Rio de Janeiro, Brazil. In conjunction with individual pre-test HIV prevention counseling, clients participated in a detailed education/demonstration session with the female condom. Women were asked to try the female condom with their partners and to report their experiences at two points of contact. Outcome data indicate that a sizable proportion (71.1%) of the sexually active women used the female condom during vaginal sex on one or more occasions. In addition, many women continued to use the female condom as a method of risk reduction over the three-month follow-up period. These data suggest that the female condom can have an important role in HIV prevention efforts in Brazil.

Keywords: Brazil, Cocaine, Female condom, HIV

Introduction

Over one million people in Latin America are currently living with HIV/AIDS, and since the late 1980s this region has experienced dramatic increases in the number of HIV infections acquired through heterosexual contact (World Health Organization 1997; Berkley 1993). Given that male to female transmission of HIV is reported to be 24 times more efficient than female to male (World Health Organization 1995), the rise in heterosexual transmission in Latin America has greatly impacted seroprevalence rates among women. Nowhere has this impact been greater than in Brazil, the number two country in the world for reported cases of AIDS. Heterosexual contact is the major mode of transmission for women in Brazil (46.1%), and the ratio of male to female cases dropped from 28 : 1 in 1984 to 2.7 : 1 in 1997 (Brazilian Ministry of Health 1997).

Despite the alarming increase in AIDS, the Brazilian government has not focused prevention efforts directly on women. The information, education, and counseling campaigns of Brazil's National Program on STDs/AIDS have generally targeted health professionals and those considered to be engaging in high-risk behaviors: gay men, bisexuals, injection drug users, commercial sex workers, and adolescents (Center for Reproductive Law and Policy 1995). As a result, many women who do not engage in injection drug use or prostitution do not perceive themselves to be at risk and may do little to change their behaviors (Campbell 1990). Despite the low perception of risk among the general population of women in Brazil, heterosexual contact with a seropositive sex partner continues to present a significant risk for infection. In fact, the greatest need for AIDS education and prevention efforts may be among monogamous married and cohabiting women. For example, a study conducted in São Paulo – Brazil's largest city – found that just under half of all new AIDS cases among women were reported among those who were both married and monogamous (Heise & Elias 1995).

Brazilian cultural norms support notions of male dominance and control in sexual encounters, and as such, many women feel that discussing or negotiating safe sex with their partners is not permissible (Gupta & Weiss 1993). In fact, an extremely large number of Brazilian women have reported choosing sterilization as their method of birth control in order to avoid discussions of contraception with their partners (Gupta & Weiss 1993). For example, the proportion of married women of childbearing age in Brazil reporting the use of condoms was only 2% at the close of the 1980s (Goldberg et al. 1989). Similarly, in a study of Brazilian women of childbearing age, it was found that 71% used some method of birth control, and of these, 44% had been sterilized, 41% took oral contraceptives, but less than 2% used condoms (Goldstein 1994). In subsequent focus groups with married women, none had broached the subject of condoms with their spouses (Goldstein 1994).

The implications of these data for the spread of HIV among women in Brazil are evident. Although the consistent use of male condoms is demonstrably effective in preventing the spread of HIV, condom use requires a high degree of motivation and cooperation by male partners (Stein 1995; Stein 1990). Oftentimes, women who attempt to negotiate condom use are viewed as unfaithful or too 'prepared' for sex (Carovano 1991). These beliefs are most likely a reflection of negative attitudes about condoms in general. Male condoms have long been associated with the prevention of sexually transmitted diseases (STDs) acquired during illicit extramarital relationships (Potts & Short 1989). Other studies have documented equally negative attitudes about condoms, including an adverse effect on sexual enjoyment, discomfort, interference with sex, embarrassment, irritation of the genitalia, less connec-

tion to the partner, and perceived lack of trust. Such attitudes are strongly associated with non-use of condoms (Hetherington et al. 1996; Sacco et al. 1991; Valdiserri et al. 1988).

Research has demonstrated that women have more positive attitudes about condom use than men, but are no more likely to use condoms because of male resistance (Sacco et al. 1991). With the female condom, however, women are not as dependent on the cooperation of their sex partners to protect themselves from HIV and other STDs (Gollub & Stein 1993; Shervington 1993). The female condom, moreover, is the only woman-controlled device that has been approved by the U.S. Food and Drug Administration specifically for the prevention of sexually transmitted diseases, including HIV/AIDS (Gollub & Stein 1993). The device consists of a polyurethane sheath with a flexible inner ring that secures the condom against the cervix and an outer ring that prevents the condom from entering the vaginal canal.

When the female condom first became available in the United States in 1994, the media response was less than enthusiastic. Many articles focused on the reactions of middle-class women who were not at particularly high risk for HIV. The condom was compared to a plastic sock, a vacuum cleaner bag, a parched jellyfish, a 'Trojan' on steroids, a 'Hefty' bag, an elephant's trunk, and a windsock (Blumenfeld 1992; Jackson 1994). It was also reported to make crude noises, cause a loss of sensation, feel strange, and prevent women from feeling 'what's going on' (Jackson 1994).

On the other hand, the initial reactions from women at a significant risk for HIV infection were far more positive. One 1991 examination of 57 women in a methadone maintenance program revealed that three-quarters were favorable to the idea of the female condom, and nearly two-thirds believed that their partners would be similarly disposed (Schilling et al. 1991). A more recent study of 37 injection drug users and crack cocaine users reported at least one-time use of the female condom by 80% of the participants (Ashery et al. 1995). Moreover, in a study of 231 women recruited from STD and public health clinics, those who had no prior knowledge of the condom were more likely to try it than those who had already heard of it (Sly et al. 1997), suggesting that the initial negative commentary may have discouraged some women from using it. Given the traditionally low rates of male condom usage in both general and high-risk populations in the US and abroad (Calsyn et al. 1992; Goldberg et al. 1989), it is important to assess Brazilian women's attitudes and reactions to this new HIV risk reduction device.

Methods

During the closing months of 1995, the authors of this paper conducted the first public conference forum in Brazil on the use of the female condom (Inciardi & Surratt 1995). Sample female condoms were provided to the members of the audience, and the response was highly positive. At the time, the female condom was not commercially available, and generally unknown, in Brazil. Several months later, the authors initiated a pilot project in Rio de Janeiro to systematically examine the acceptability of the female condom among drug-involved women.

Established with the approval of the Brazilian Ministry of Health, the study was conducted in conjunction with an on-going HIV/AIDS prevention effort in Rio de Janeiro funded by the U.S. National Institute on Drug Abuse (NIDA). Known as the Cooperative Agreement for Community Based AIDS Research, the NIDA initiative in Rio de Janeiro was one of 23 projects using similar protocols (see Auerbach et al. 1994). Respondents were recruited by indigenous outreach workers through 'targeted sampling' (Watters & Bier-nacki 1989) and 'chain referral' strategies (Inciardi 1986) in specific geographic locales where drug use rates were known to be high. The vast majority of clients were recruited from Rio de Janeiro's numerous *favelas* (hillside shantytowns) which are well-known for epidemic violence, drug-trafficking, and poverty. Outreach workers screened potential clients in the field, offered preliminary AIDS prevention information, and distributed hygiene kits containing condoms, bleach, AIDS prevention literature, and referral sources for STD testing and drug abuse treatment.

To meet project eligibility criteria, clients had to be current cocaine users, not in treatment, and at least 18 years of age. Project intake included informed consent, drug testing, and administration of a standardized 'Risk Behavior Assessment' (RBA) interview instrument. Individual pre-test HIV prevention counseling was provided, covering such topics as HIV disease, transmission routes, risky behaviors, rehearsal of condom use, stopping unsafe sex practices, communication with partners, cleaning and disinfection of injection equipment, rehearsal of needle and syringe cleaning, disposal of hazardous waste material, stopping unsafe drug use, and the benefits of drug treatment. HIV testing, dissemination of relevant literature and referrals, and distribution of the hygiene kit were also conducted at intake.

HIV testing was provided to all respondents on a voluntary basis and post-test counseling and HIV test results were available one to three weeks later. An effort was made to reassess all participants at a follow-up session 3–5 months later, with a standardized 'Risk Behavior Follow-Up Assessment' (RBFA) interview instrument, followed by HIV re-testing and counseling for previously seronegative clients.

During the pre-test counseling phase of the intervention, both male and female clients were introduced to the female condom. Interventionists discussed the advantages of the female condom, including its importance as a woman-controlled device and its utility in the prevention of HIV and other STDs. Differences between the male and female condom were explained, as were instructions for its proper insertion and use and techniques for negotiating condom use with sex partners. Both male and female clients were included in this phase of the intervention, and all were asked to perform the insertion technique on an anatomically correct vaginal model. In order to reduce the anxiety of some respondents, a pelvic model was used to demonstrate precisely how the female condom fit and conformed to the woman's reproductive tract. The participants practiced the insertion on the model until they were comfortable with the procedure and with handling the condom. At the close of this session, each client received two female condom 'starter packs' containing three condoms, a tube of lubricant, literature, and illustrated instructions. Women and men alike were asked to try the female condom with their partners.

During the second intervention session one to three weeks later, respondents were asked about their experiences with the female condom – whether they used it and in what situations, and how they and their sex partners felt about it. In addition, all female respondents were given a booster session on the insertion and use of the female condom, and were asked to participate in the follow-up study (if they intended to be sexually active during the study period). Those who agreed were given an adequate supply of female condoms and were asked to return for a follow-up interview three months later. A brief follow-up instrument focused on such issues as frequency of female condom use, ease/problems of use, likes and dislikes, partner reactions, aesthetic issues, and potential use in the future.

Descriptive statistics were compiled on demographic characteristics, drug use, and sexual behaviors, and multivariate logistic regression analyses were conducted to examine the associations between the outcome variable of interest, using the female condom, and its predictors. Independent variables included age, race/ethnicity, marital status, income, level of education, household composition, *favela* residence, perception of risk for HIV/AIDS, number of sexual partners in the past thirty days, occasions of vaginal sex in the past thirty days, male condom use in the past thirty days, STD history, sex trading history, and frequency of drug use in the past thirty days.

Table 1. Selected demographic characteristics of 122 female respondents

Median age	28.0
Marital status	
Single	52.5%
Married/living w/ptr.	35.2%
Separated	9.8%
Widowed	2.5%
Race/ethnicity	
Black	34.4%
White	18.9%
Multi-racial	46.7%
Education	
8th grade or less	93.5%
More than 8th grade	6.5%

Results

Table 1 illustrates the background characteristics of the 122 women who received the female condom intervention and subsequently returned for post-test counseling. Their median age was 28 years, and the majority (52.5%) were single. Participants identified themselves most often as multi-racial (46.7%), followed by black (34.4%), and white (18.9%). Because most of the women were recruited from Rio de Janeiro's *favelas* (79.5%) and other impoverished communities, educational levels were low, with almost 94% completing fewer than eight years of school. Furthermore, the majority (51.6%) earned less than one 'minimum salary', which currently is equivalent to about US \$120 per month

As illustrated in Table 2, almost a fourth of the respondents mentioned a history of sex trading. In addition, 11.4% had multiple sexual partners during the previous thirty days. Moreover, almost all (87.7%) reported no use of male condoms in the thirty days prior to interview. Although many of the women were engaging in unprotected sex, nearly two-thirds believed that they had *no* chance of becoming infected with HIV. And in fact, the HIV infection rate was a relatively low 2.5%.

When asked whether they had used the female condom for vaginal sex, 56.6% of the women reported having done so. When examining only those 97 women who reported sexual activity, the percentage who tried the condom

Table 2. Sexual behavior, HIV risk and serostatus of 122 female respondents

Number of sex partners ¹	
0	23.0%
1	65.6%
2 or more	11.4%
Sex trading	
% Yes	24.6%
Any male condom use ^a	
% Yes	12.3%
Perceived AIDS risk	
No change	66.4%
Some chance	33.6%
HIV status	
Negative	97.5%
Positive	2.5%

^a Time period referenced is the 30 days prior to interview.

Table 3. Logistic regression model of female condom use

	Regression coefficient	Odds ratio	95% C.I.
Occasions of vaginal sex	0.023	1.024	(0.998, 1.049)
<i>Favela</i> residence ^a	0.911	2.487	(0.913, 6.773)
Perceived risk for AIDS ^{a,b}	0.993	2.700	(1.115, 6.534)
Living with adult family ^a	-0.778	0.459	(0.207, 1.016)

^a Reference category is 'no'.

^b Significant at $p = 0.05$.

Note: Model chi-square = 18.56 ($p = 0.001$).

increased to 71.1%. Multivariate logistic regression analyses were used to investigate the relationship between use of the female condom and its possible correlates. As Table 3 illustrates, occasions of vaginal sex, residence in a *favela*, having adult family in the household, and perceived risk for AIDS comprised the model predicting female condom use in the Rio de Janeiro pilot study. Of these factors, however, only 'perceived risk for AIDS' was statistically significant ($p = 0.027$).

Regardless of their reported use or non-use of the female condom at the first data collection point, sexually-active women who expressed a desire to participate were enrolled into the follow-up study, and 53 women ultimately

Table 4. Logistic regression model of *continued* female condom use

	Regression coefficient	Odds ratio	95% C.I.
<i>Favela</i> residence ^{a,b}	-2.242	0.106	(0.02, 0.48)
Any male condom use ^{a,b}	1.713	5.55	(1.34, 23.01)

^a Reference category is 'no'.

^b Significant at $p = 0.05$.

Note: Model chi-square = 12.2 ($p = 0.002$).

returned for the three-month follow-up interview. Of these, 33 (62.3%) used the female condom at least once over the three-month period. All of the women using the condom tried it with their main sexual partner (husband or boyfriend) and very few felt that the condom would provoke violent or emotionally abusive reactions in their partners. Of those not using the condom on some occasions, four reported male partners objecting, but otherwise the women indicated that it was *their* choice not to use it.

Examining continued use of the female condom as a measure of acceptability, 23 women (43.4%) reported using it for vaginal sex on four or more occasions. When contrasted against women who tried the female condom only once or not at all, two significant associations were found. Users of male condoms at follow-up were 5.5 times more likely than non-users to adopt the female condom as well ($p = 0.018$). By contrast, women living in *favelas* were much less likely to continue using the female condom than were non-residents ($p = 0.004$). No other factors included in the model were found to be associated with continued use of the female condom (see Table 4).

Discussion

Because of problems with attrition in the Rio de Janeiro study combined with its exploratory nature, sample sizes were small at both data collection points. Therefore, the data presented here should not be considered exhaustive. Nevertheless, the findings point to three issues which may help to explain why the female condom received positive responses from some women, and not others, and why many women in the study were quite willing to try this new condom, but not continue using it. The first issue is associated with public perceptions of the female condom, the second involves perceptions of risk for HIV/AIDS, and the third may be directly related to the culture of the Brazilian *favela*.

With respect to public perceptions, the introduction of the female condom in the U.S. received considerable attention from the media, much of which

focused on negative judgments and opinions of its aesthetic features and the belief that it was yet another device that placed the burden of pregnancy and disease prevention on women (Blumenfeld 1992; Jackson 1994). Because the female condom was not commercially available in Brazil, however, it had received almost no publicity. In fact, perhaps the first article to appear in a major Brazilian scientific journal was prepared by the authors of this paper. It was a brief column which described the history of the female condom, its initial use in several parts of the world, and its role in STD prevention (Inciardi & Surratt 1997). In mid-1997, a second article appeared, reporting on the experiences of 115 middle-class women in a pilot study conducted by the Secretary of Health for the State of São Paulo and Family Health International (Affonso 1997). The study found that 75% of the women liked the female condom. One of the most important reasons cited was that it is woman-controlled, thus making the negotiation of its use easier. The report also indicated that many women from other cities in Brazil had contacted the program because they had learned of its success and were eager to participate. Importantly, negative commentary about the female condom had not appeared in the media prior to the study, and the participants were allowed to draw their own conclusions.

While the research in São Paulo introduced the female condom to a sample of middle-class women, the pilot work described in this paper targeted indigent women drug users in Rio de Janeiro. As in São Paulo, despite the socio-economic differences, the levels of acceptance were similar. By contrast, in companion studies with indigent drug-using women in the United States, there was only minimal approval of the female condom (Surratt et al. 1998).

On the issue of risk perceptions, the finding that initial use of the female condom was related to perceived risk for AIDS has an important implication for the design of other prevention/intervention programs. Although there was denial of any AIDS risk by nearly two-thirds of the women studied, those who perceived at least some risk were more likely to use the female condom. This is consistent with other studies that have documented a strong relationship between perceived AIDS risk and changes in sexual behaviors (McBride et al. 1997). Based on these findings, interventions that address denial and attempt to personalize risk for AIDS appear to be warranted.

The three-month follow-up interviews indicated high rates of female condom use for women who returned: 62.3% reported trying the condom during at least one occasion of vaginal sex, and 43.4% reported continuous use. Although perceived risk for AIDS appeared to influence initial use of the female condom among many women, it did not appear sufficient to sustain this use. Continued use was more likely among users of male condoms. Importantly, however, these women were not users of male condoms at the baseline

contact. In other words, it appears that male condom use increased between baseline and follow-up, in conjunction with the use of female condoms. That is, women who adopted one method of risk reduction seemed more likely to use the other as well. This, too, is important for HIV prevention considering that none of the women had ever used female condoms prior to the study and only 12.3% had recent experiences with male condoms.

Moving on to the final issue, women living in *favelas* were much less likely to continue using the female condom than were non-residents, and this is most likely related to the culture of the *favela* and the inferior and subservient roles that women occupy in *favela* life.

Brazil's Municipal Planning Institute has estimated Rio's *favelas* to number 545 and house more than 1 million persons (Loveman 1991). Only a small portion of households have electricity, running water, or sewage facilities. In the absence of public medical facilities and unemployment benefits for the more than 50% of the out-of-work *favelados*, disease and social problems multiply. There is prostitution and drug use, and a key feature of most *favelas* is cocaine trafficking (Gay 1994; Guillermprieto 1990).

Field work during the course of the project found that because daily life in the *favelas* is virtually controlled by drug traffickers, the so-called '*lei do mais forte*' (the law of the strongest) operates. The *chefão* or 'big boss' is the man who defeats his enemies by violence. Conflicts are driven by competition for power, for the profits from illegal sales of drugs and weapons, and from kidnappings and robberies. The defeated have their assets and 'harem' confiscated. Within this context, women in the *favelas* are seen as objects rather than as actual persons; they are commodities that are fought over, and they are seduced and displayed as trophies (Scholl 1997).

Among the *favelados*, even if women have some financial autonomy and assume household responsibilities, all decisions are still made by men. Furthermore, women's sexual behavior tends to be strictly and forcefully monitored by family and bystanders alike, but this is rarely the case for men. To avoid being harassed by men, be it bandits or police, poor women choose to find a 'protector'. In this regard, some women establish relationships with members of the local drug markets. Others may be selected by the traffickers against their will. Whatever the scenario, as wives, girl-friends, or lovers of these men, they acquire a degree of respect from the community.

Such sexual inequality tends to be inversely related to opportunities for sexual negotiation and to socioeconomic status in many parts of the world (Worth 1989; Stein 1990; Gupta & Weiss 1993; Ulin 1992). This is also the case for Brazilian women living in the *favela's* culture of poverty. They face a way of life which encompasses sexual domination by men. In fact, it is well known in Brazil that some police officers routinely raid the *favelas*, humiliate

its residents, and sexually brutalize a number of its women. To some police, poor women are *putas* (whores) who 'are there to serve us' (Scholl 1997).

It is within the context of these social, cultural, and economic conditions that appropriate HIV/AIDS intervention programs for Brazilian women need to be implemented. Perhaps because the female condom is somewhat of a novelty in Brazil, many women were eager to try it. For the women in Rio de Janeiro's *favela* communities, however, the prospect of permanent adoption of this device as a method of risk reduction remains doubtful. Although the female condom provides some women with another option for disease protection, those women involved in sexually exploitive relationships still do not have the power to exercise protection independently of their partners. Nevertheless, programs to both promote and distribute female condoms need to be implemented for women at risk throughout Brazil. Although the initiative conducted by the authors of this paper tended to be labor intensive, that was an outgrowth of the project's wider focus on research and follow up. More cost effective approaches are feasible, by attaching female condom instruction and distribution to on-going HIV/STD prevention and other health promotion programs.

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