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Alcohol, cannabis, and methamphetamine use and other risk behaviours among Black and Coloured South African women: A small randomized trial in the Western Cape

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Abstract

Background—There is a pressing need for brief behavioural interventions to address the intersection of high HIV prevalence, increasing substance use, and high-risk sex practices among South African women. The primary aim of this pilot, randomized trial was to examine whether an adapted evidence-based intervention would be equally, more, or less effective at reducing HIV risk behaviours when delivered using an individual or group format. The secondary aim was to examine differences between Black and Coloured South African women across pre- and post-intervention measures of alcohol and illicit drug use and sex risk behaviours.

Methods—The Cape Town Women's Health CoOp was adapted from an evidence-based intervention known as the Women's CoOp._Study participants included Black (*n*=60) and Coloured (*n*=52) women living in the township communities of Cape Town, South Africa, who reported using illicit drugs and alcohol.

Results—Coloured women reported greater methamphetamine use (13 days in the past 30 days) and Black women reported mostly cannabis use (27days in the past 30 days). Although both groups reported having unprotected sex under the influence of alcohol and/or other drugs, Black women reported greater condom use and having one partner; Coloured women reported having more than one sex partner. One-month post-intervention assessments indicated significant reductions in substance use and sex risk behaviours. After controlling for baseline measures, there were no significant differences between the two intervention conditions.

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Conclusion—Significant differences in risk behaviours were observed between Black and Coloured South African women. However, both ethnic groups were responsive to the adapted intervention and no differences were found by intervention assignment. These findings support the assertion that group interventions may be more cost-effective in reaching at-risk women in resource-scarce environments. Larger studies are needed to show efficacy and effectiveness of woman-focused group prevention interventions.

Keywords

alcohol; illicit drugs; HIV risk; woman-focused intervention; South Africa

Introduction

A 2005 Human Sciences Research Council report estimated the overall HIV prevalence in South Africa among persons aged 15 to 49 years to be 16.2%, with prevalence among females (20.2%) almost twice that among males (11.7%) (Shisana et al., 2005). The report also indicated that Black Africans have a significantly higher HIV prevalence (19.9%) compared with Coloureds (3.2%). The terms "Black/African" or "Coloured" are products of the apartheid era that refer to demographic markers. They do not signify inherent characteristics. Furthermore, most South Africans still use this terminology. Coloured refers to people of European, African, and mixed [Black/African, European, and/or Asian] ancestry, respectively. The continued use of these terms in South Africa is important for monitoring improvements in health and socioeconomic disparities, identifying vulnerable sections of the population, and planning effective prevention and intervention programs (Parry, Morojele, Saban & Flisher, 2004). Prevalence of HIV among Asians and Whites was estimated to be 1% or lower Thus, the public health priority is to focus HIV prevention on Black Africans and Coloureds, the two segments of the population at greatest risk.

The Western Cape Province is the most recent region of concern for the spread of HIV. According to the 2001 national census, Coloureds constitute approximately 54% of the total population, while Blacks and Whites each constitute 21%. Results from a 2005 antenatal survey conducted in all nine South African provinces indicate that the Western Cape Province had the highest rate of increase of HIV infection among all provinces: from 13.1% in 2003 to 15.7% in 2005 (Department of Health, 2006). Past district-level HIV surveys conducted between 2001 and 2004 involving all 25 health districts within the Western Cape reveal wide variation in HIV prevalence at the district level, suggesting that there are subepidemics at various stages of development within the province (Shaikh, Abdullah, Lombard, Smit, Bradshaw & Makubalo, 2006; Department of Health, 2002). While HIV prevalence and incidence in the predominantly Black/African Khayelitsha and Guguletu health districts are consistently high, the second highest rate of increase of HIV infection in the province was observed in the predominantly Coloured Mitchells Plain between 2001 and 2004 (0.7% in 2001 and 12.9% in 2004) (Shaikh et al., 2006; Department of Health, 2002).

Although studies in the United States have indicated that racial differences in individual risk behaviours may contribute to disparities in HIV infection (Hallfors, Iritani, Miller & Bauer, 2007; Halpern, Hallfors, Bauer, Iritani, Waller & Cho, 2004; Adimora & Schoenbach, 2002), a review of published literature found no studies in South Africa addressing racial differences in sex risk and substance use behaviours among women. Explicating this gap in the literature and the demonstrated need for gender-based HIV interventions that intersect other well known risk behaviours (e.g., cannabis and alcohol use) may provide a key to this vexing public health problem in South Africa.

With alcohol consumption levels among the highest in the world, problem drinking in South Africa is a major public health burden (Rataemane & Rataemane, 2006; Parry, 2005). A 1998 national household survey conducted with more than 13,000 individuals in South Africa found that one-third of both male and female respondents reported risky drinking on weekends (i.e., 5 or more drinks per day for men and 3 or more drinks per day for women) (Parry et al., 2005). Compounding the problem of heavy alcohol consumption is the continually increasing demand for and use of illicit drugs in some South African subpopulations (Parry et al., 2006). Currently, South Africa is a primary marketing venue for methamphetamine, cocaine, and other illicit drugs (United Nations Office for Drug Control and Crime Prevention [UNODCCP], 1999; Leggett, 2001; Siegfried, Parry & Morojele, 2001; Parry et al., 2005). During the apartheid era, South Africa was isolated from the rest of the world and illicit drug trade was indirectly controlled. However, with the collapse of apartheid, South Africa's borders were opened and drug use flourished, with foreigners bringing new and harder drugs into the country (Higgs, 2004; Maiden, 2001).

Alcohol and illicit drug use may impair judgement and decision making and lead to risky sexl behaviour (Leigh & Stall, 1993; George, Rogers & Duka, 2005). Several studies in sub-Saharan Africa suggest strong links between substance use (alcohol and illicit drugs) and risky sex behaviour, such as having multiple sex partners, having unprotected sex, and engaging in sex for money and/or gifts (Morojele et al., 2006; Wechsberg et al., 2006; Fritz et al., 2002; Mataure et al., 2002; Mnyika, Klepp, Kvale & Ole, 1997). Substance use has also been found to be associated with HIV seroposivity and sexually transmitted infections (STIs) (Zablotska et al., 2006; Fritz et al., 2002; Morrison, Sunkutu, Musaba & Glover, 1997; Kalichman et al., 2005). In general, women in South Africa are disproportionately at risk because of power imbalances in relationships with men and cultural expectations with male partners (Wechsberg, Luseno, Riehman, & Karg, In Press)

Because of South Africa's relatively high overall HIV prevalence among women, increasing HIV infection in certain regions and subpopulations, and the increasing substance use problem, brief behavioural interventions are urgently needed to address the intersection of these issues and in particular to help women learn how to reduce their risks. Investigators have recommended that interventions be grounded in social psychological theory; include multiple, women-only sessions led by peers; be culturally sensitive; and include both behavioural modeling and skill-based approaches (Exner, Seal & Ehrhardt, 1997; Mize, Robinson, Bockting & Scheltema, 2002; Sterk, 2002; Wingood & DiClemente, 1996; Cottler et al., 1998; Dushay, Singer, Weeks, Rohena & Gruber, 2001; St. Lawrence, Wilson, Eldridge, Brasfield & O'Bannon, 2001). However, only a small number of randomized trials have shown that brief, empowerment theory–based, individual interventions can be adapted to reduce HIV risk behaviours among substance-using South African women (Wechsberg, Luseno, & Lam, 2005; Wechsberg et al., 2006). Preliminary data from an ongoing study in Pretoria, South Africa, also suggest that such interventions can address contextual issues, such as experiences with victimization and communication about condom use with partners (Wechsberg et al., 2006). However, all of these studies are based on interventions that are delivered via an individual format.

Recent research indicates that group behavioural risk-reduction interventions that combine HIV education with condom use and relational skills training can result in reductions in sex risk behaviour (Kelly et al., 1994; Ashery, Wild, Zhao, Rosenshine, & Young, 1997; McCoy, McCoy, & Lai, 1998), including among individuals with HIV/AIDS (Kalichman et al., 2001; Kalichman, Rompa, & Cage, 2005; Heckman et al., 2001). Social support from peers is an important factor for group intervention durability and sustainability (Shain et al., 1999; Kelly et al., 1994; van Empelen, Kok, van Kesteren, van den Borne, Bos, & Schaalma, 2003). If effective, a group format is also a more cost-effective intervention than an individual format.

The Cape Town Women's Health CoOp (CT-WHC) was introduced as a brief, gender-based, HIV prevention intervention with drug-using women. CT-WHC was adapted from an evidence-based intervention known as the Women's CoOp (Wechsberg, Lam, Zule & Bobashev, 2004; Lyles et al., 2007). This intervention was developed for substance-abusing African-American women in the United States and adapted for Black African women in Pretoria (Wechsberg et al., 2006; Wechsberg et al., 2005). CT-WHC further adapted the intervention for both Black African and Coloured South African women in the Western Cape of South Africa using both individual and group formats. The primary aim of the present, pilot, randomized trial was to examine whether the adapted Women's CoOp intervention—the CT-WHC—would be equally, more, or less effective at reducing substance use, HIV risk, and violence when delivered using an individual or group format. The secondary aim was to examine differences between Black and Coloured South African women across pre- and post-intervention measures of alcohol and illicit drug use and sex risk behaviours. This study describes differences in both groups of women (Coloured and Black) in drug use and sex risk, post-intervention changes, and model assignment effects.

Methods

Outreach and Recruitment

Recruitment for study participation involved street outreach conducted in targeted Black townships and Coloured communities by staff of a similar demographic. The Black women recruited for the pilot study came from the following townships: Langa, Guguletu, and Khayelitsha. The Coloured women were recruited from the Mitchells Plain community, which includes the East Ridge, Tafelsig, Beacon Valley, and Lentegeur communities. Study staff canvassed areas known for illicit drug activity as well as other venues frequented by substance-abusing women. Staff also posted fliers and distributed leaflets to market the study. A targeted sampling plan was used to balance recruitment from the townships and communities. The staff approached and engaged women and verbally requested permission to conduct a brief screener to determine whether they were eligible to participate in the study. All staff were required to pass RTI International's human subjects course. In addition, this study was approved by RTI's Office of Research Protection and the University of Witwatersrand's Human Research Ethics Committee.

Eligibility Criteria and Study Sample

Eligible participants needed to be female, aged 18 or older, self-identify as Black (Xhosa speaking) or Coloured (Afrikaans speaking), report alcohol or illicit drug use on at least 13 of the past 90 days, and report low income (i.e., less than approximately $167 US/month). Eligibility was also contingent on providing verifiable locator information for the Cape Town area. Appointments and transportation arrangements to the field site were made for potential participants who met preliminary eligibility criteria. Implementation of the study started in June 2005 and concluded in November 2005, resulting in 179 women screened, 115 eligible, and 114 randomized into the experiment. This analysis uses a subset of the women who completed the follow-up assessment (N=112; 98%).

Data Collection and Assessment

On arrival at the field site for their appointment, women were invited to a private office and screened again to confirm eligibility before informed consent was obtained for study participation. Intake data collection began with a locator form to enable outreach staff to contact participants for subsequent assessments. All screenings were conducted in English, Xhosa, or Afrikaans, depending on the participant's primary language. Field staff then conducted rapid onsite urine screens with Redwood Biotech drug screens panels for cocaine/crack cocaine, cannabis, methamphetamine, opiates, and ecstasy. Urine samples were collected and sent to a

local laboratory to assess the presence of methaqualone. Study participants were then assessed at baseline by self-report using paper and pencil face-to-face interviews. These procedures were repeated for the 1-month post-intervention assessment. Data from the intake and follow-up interviews were analyzed. To compensate participants for their time, gift vouchers to local supermarkets valued at South African Rand (ZAR) 40 (approximately $6) were given to study participants on completion of the baseline and follow-up assessments. To facilitate continued behaviour change, participants also received a risk reduction kit on completion of the follow-up assessment. The kit included male and female condoms, oral dams, lubricants, and toiletries. Participants who attended at least one intervention session and returned for their follow-up assessment also received a certificate of completion and a T-shirt.

Intervention

The Women's CoOp is an empowerment-based HIV intervention designed to reduce sexual risk, substance use, and victimization among at-risk and underserved women by equipping them with knowledge and skills to encourage personal power and independence (Wechsberg et al., 2003; Wechsberg, Lam, Zule & Bobashev, 2004). This evidence-based intervention has been adapted for poor, substance-using women in the Gauteng Province of South Africa to address the unique economic hardships, social contexts, and struggles of Black South African women (Wechsberg et al., 2006). The CT-WHC further adapted the intervention for substance-using Black and Coloured women in the Western Cape Province through a formative phase that involved conducting in-depth interviews and focus groups (Sawyer, Wechsberg & Myers, 2006).

All CT-WHC participants received two 1-hour intervention sessions that emphasized women's risk for HIV/STIs, substance use, and violence (see Table 1). Session One included information on substance abuse, HIV/STIs and ways of reducing HIV risk, and behavioural skills training with male and female condoms. Session Two, which was conducted 2 to 3 days after the first session, emphasized violence prevention and negotiation with sex partners and included role-playing to improve participants' communication and negotiating skills. The second session ended with each participant creating an action plan for herself with realistic and achievable goals to reduce sexual risk, substance use, and victimization.

Participants were randomly assigned to receive the adapted Women's CoOp intervention in either individual or group format based on a computer randomization program. The computer program was designed to randomize 60% to the group format and 40% to the individual format. This unequal randomization ratio was used to increase statistical power given the fixed total sample size. Additionally, given that the effects of the Women's CoOp individual format are well known, more participants were randomized to the group format to garner information about the relative effectiveness of this intervention format (Shadish, Cook & Campbell, 2002). Random assignment was also stratified by race because of cultural differences and attitudes toward sex and risk behaviours.

Women who received the individual format of the intervention were presented the intervention cue cards by a trained interventionist and given ample time to discuss this information in a one-on-one conversation with the interventionist. Women who received the group format of the intervention received the intervention in small groups of 2 to 4 women and discussed this information in these groups. Women in the group intervention sessions were placed with participants of the same race, and these sessions were led by an interventionist of a similar demographic to facilitate the participants' comfort level while discussing sensitive topics, such as sex, drug use, and violence. The intervention sessions were conducted in English, Xhosa, or Afrikaans depending on participants' language preference. Intervention fidelity was not assessed.

Measures

Trained interviewers administered a revised and brief version of the Risk Behaviour Assessment (RBA-R) (Wechsberg, 1998; Wechsberg, Lam, Zule, Hall, Middlesteadt-Ellerson & Edwards, 2003). The demographic variables examined were age, level of education, marital status, and ever given birth. Substance use was measured as the number of days the participant used alcohol, cannabis, crack, cocaine, heroin, ecstasy, methaqualone, and/or methamphetamine in the past 30 days. Sex risk was measured as the number of times the participant had unprotected sex in the past 30 days; number of different partners in the past 30 days; number of male sex partners in the past 30 days; number of times used alcohol and/or other drugs before or during sex in the past 30 days; used protection during last vaginal sex; and traded sex with main partner for money, drugs, or other goods.

Analysis

Descriptive frequencies and means for all variables of interest are presented. Bivariate analyses were conducted to assess relations between race and baseline measures of substance use. Paired samples *t*-tests were used to examine differences between pre- and post-intervention self-report and biological measures of substance use. Analysis of covariance (ANCOVA) was used to examine the relationship between racial group (Black or Coloured) and intervention format (individual or group administration) on changes in risk behaviours while controlling for baseline risk values. Analyses were conducted using SPSS 13.0.

Sample Characteristics

The women recruited for the study (N=112) were Black (54%, n=60) and Coloured (46%, n=52). They ranged in age from 18 to 48 years old (mode 19 years; mean 26 years). The majority of women did not finish high school (81%); Coloured women were as likely as Black women to have matriculated from high school. Nearly a quarter of the women were single (i.e., never married and not currently in a relationship); with Coloured women (44%) significantly more likely to be single than Black women (5%). Nearly two-thirds of the sample had given birth at least once (63%), with Coloured women (75%) being significantly more likely to have given birth than Black women (53%).

Results

Overall, the sample achieved 98% follow-up. Of the 60 Black participants, 36 (60%) were assigned to the group intervention format and 24 (40%) were assigned to the individual format. Of the 52 Coloured participants, 32 (62%) were assigned to the group intervention format and 20 (38%) were assigned to the individual format.

Baseline Alcohol and Illicit Drug Use

Patterns of recent substance use were revealed through self-report measures and biological testing. Alcohol, cannabis, and methamphetamine were the most frequently reported substances used in the past 30 days. Biological testing conducted at baseline supported the recent use of a variety of illicit drugs. However, significant differences were found between Black and Coloured women's self-reported use of alcohol, $t(109)=4.85$, $p < .001$; cannabis $t(110)=9.74$, $p<.001$; and methamphetamine, $t(107)=-9.18$, $p< .001$, as reported for the past 30 days. Less frequently used substances for both Black and Coloured women were methaqualone, crack cocaine (known as "rock"), ecstasy, cocaine, and heroin. No significant differences were found between Coloured and Black women for these substances. All of these drugs, apart from alcohol and ecstasy, are often smoked in combination with tobacco and cannabis.

Alcohol and Illicit Drug Use: One-Month Post-Intervention Follow-up

Both the Black and Coloured samples demonstrated reductions in recent substance use from baseline to 1-month follow-up. Overall, there were large and significant decreases in the mean number of days of self-reported use of alcohol and all other illicit substances in the past 30 days for both Black and Coloured women. Mean days of alcohol use in the past month was reduced by 6.23 days for the Black sample and 3.14 days for the Coloured sample. Although cannabis use was reduced by 9.17 days in the past month in the Black sample, self-reports of the Coloured sample's cannabis use remained stable. In contrast, methamphetamine use was reduced by 13.16 days per month in the Coloured sample but did not change significantly in the Black sample (from 0.23 to 0.44 mean days per month). Similarly, crack cocaine use was significantly reduced in the Coloured sample (from 0.79 to 0.00 mean days per month) but remained stable in the Black sample (from 2.64 to 1.24 mean days per month). Past month use of methaqualone was significantly reduced in both the Coloured sample (3.43 mean days per month) and the Black sample (4.07 mean days per month). The Coloured sample reported increases in ecstasy use in the past month (from 1.30 to 4.30 mean days per month); however, the Black sample reported significant reductions in the number of days using ecstasy in the past month (from 1.84 to 0.00 mean days per month). The results from self-reports of substance use across the Black and Coloured subsamples are presented in Table 2.

However, because Black and Coloured women demonstrated different patterns of substance use at baseline, ANCOVA was used to examine the relations between race and intervention while controlling for baseline substance use. ANCOVA statistics revealed no significant main effects for intervention delivery (group versus individual formats). The interactions between race and intervention format were also not significant. The reductions in substance use varied by baseline patterns of substance use. The results are shown in Table 2.

Baseline Sexual Risk

There were significant racial differences in the baseline data of sex risk behaviours and characteristics: Black women reported more frequent sex in the past month but were significantly more likely than Coloured women to use condoms during their most recent vaginal sex act and had fewer symptoms of STIs in the past 90 days ($p<.009$). Black women were also more likely than Coloured women to report having a main partner ($p=.000$) and to have had sex most recently with a main partner ($p=.056$). In contrast, Coloured women were less likely to trade sex for goods ($p=.000$) but were more likely to report at least one STI symptom in the past 90 days compared with Black women ($p=.000$).

Sexual Risk Variables and Characteristics: One-Month Post-Intervention Follow-up

Results from the 1-month post-intervention follow-up indicate positive changes in the participants' sex risk behaviours. The Coloured sample demonstrated significant reductions in the number of times they had unprotected sex in the past month and the number of times they used alcohol or other drugs before or during sex in the past month. The Black sample demonstrated increases in the percentage of time they used protection with a main partner, whereas the Coloured women's use of protection with a main partner remained stable. However, there was also a significant decrease in the number of Coloured women who had a main sex partner, from 68% at baseline to 49% at follow-up. Results of these analyses are reported in Table 3. Again, because Black and Coloured women demonstrated different patterns of sexual risk at baseline, ANCOVA was used to examine the relationship between race and intervention while controlling for baseline sex risk behaviours. ANCOVA statistics revealed no significant main effects for race or intervention delivery (individual versus group format). The results are shown in Table 4.

Discussion

With the number of HIV/AIDS cases escalating among women in sub-Saharan Africa, there is a pressing need for gender-based HIV prevention interventions to reduce risk. The primary aim of this small randomized pilot study was to determine the feasibility of a woman-focused intervention when implemented in either a group or an individual format. A secondary aim was to understand differences in patterns of substance abuse and sexual behaviour between the two racial groups of women found in poor townships and communities of Cape Town.

The findings show that regardless of intervention format (i.e., group or individual), women changed their behaviour, at least within the short follow-up period. They also responded well to the intervention and came to the follow-up, with a 98% completion rate. The findings also reveal differences in the patterns of the high rates of alcohol and illicit drug use in this sample of Black and Coloured women. Most notably, with regard to methamphetamine use, while baseline measures show high levels of use among Coloured women, an increasing trend in use was observed among Black women at follow-up. These data lend credence to the widely publicized emerging methamphetamine problem in the Cape Town area. Additionally, at baseline, significantly higher rates of alcohol and cannabis use were reported by Black than by Coloured women.

Women's sexual practices differed by race in ways that cannot be explained within this study. However, in the formative adaptation process, Coloured women reported relationships with men who belong to gangs, that they often traded sex for drugs, and frequently felt that they were not in control of their sexual relationships (Sawyer, Wechsberg & Myers, 2006). Nonetheless, sex risk reduction is an important outcome because HIV is primarily transmitted heterosexually in South Africa. Further, Black and Coloured women in both intervention groups demonstrated not only greater competence in using male condoms, but they reported less impaired sex and greater male condom use.

The interaction between substance use and sexual risk appears to be fueling the HIV epidemic in South Africa. Both Black and Coloured women indicated that alcohol and other drugs are methods for coping with interpersonal conflicts and physical, sexual, and emotional abuse. They did not feel that treatment is available to them (Sawyers, Wechsberg, & Myers, 2006). Women also reported marked sexual disinhibition when using alcohol and other drugs, and they were more likely to have unprotected sex when under the influence. Under these conditions, HIV prevention interventions that can be adapted and conducted in the community will be required to meet women's complex needs.

The CT–WHC study findings indicate that both intervention modalities facilitated reduced risk behaviours in Black and Coloured women, supporting the assertion that group interventions may be more cost-effective in reaching underserved and at-risk women in resource-scarce economies. Furthermore, anecdotal feedback since follow-up assessment has shown the group intervention effect long after the study ended, such as the evolution of social support groups and a sports team.

Taken together, these findings underscore the need for and promise of a gender-based HIV community-based prevention intervention that addresses risk behaviour with women. Because they lack skills, education, and the opportunity for legal employment, women sometimes do not have options for independence. Therefore, they may be in compromised relationships with men. However, it has been demonstrated that women can learn to have safer relationships without incurring further risk.

The environment in South Africa is primed for helping women to empower themselves through gender-specific, community-based HIV prevention interventions. In addition, because access

to health care, including antiretroviral therapy, is limited in South Africa, prevention is the best policy.

Limitations of the findings are important to consider. First, the sample size was small and participants were selected through targeted outreach in their communities; thus, the findings may have limited generalizability beyond this study sample comprising substance-abusing Black and Coloured women who engaged in unprotected sex. Second, limitations also arise from the use of self-report data, which are subject to demand characteristics. Participants may have modified their responses based on the belief that it may help or hinder them through the social welfare, health, or criminal justice systems. Third, there is the risk of Hawthorne effects and competing history with media efforts.

To combat these threats, the study design incorporated methods to enhance data validity. First, self-reports were validated with biological drug testing and with behavioural assessments (i.e., condom use mastery tasks). Second, previous studies with these instruments have demonstrated good reliability and validity (Wechsberg et al., 2003). Third, staff members who screened and recruited participants were of the same racial group as the women who participated in the study, as were the data collectors and interventionists.

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Table 1

Woman-Focused Intervention

Duration	Format	Content Woman-Focused Intervention
Session 1, 45–60 min	Individual & Group	Cue Cards • Why is Reaching Women So Important? • Substance Abuse Issues in South Africa • Facts about Specific Drugs (“Dagga”—Marijuana, “Rock”—Cocaine, “Tik”—Methamphetamine, “Buttons”—Mandrax, and “E”—Ecstasy) • Why is it Risky to Use Any Type of Drug? • Alcohol and Other Drugs Affect Your Unborn Babies • Reducing Alcohol and Other Drug Risks • The Benefits of Substance Abuse Rehab • Sexual Risks and Women in South Africa • How Do Women Get Infected with HIV? • What We Want You to Know About HIV • Facts You Need to Know About HIV • Do You Know the Symptoms of HIV? • If You Are Infected With HIV • HIV Control Measures If You Are HIV Positive • Do You Know STI Symptoms? • Keeping You Private Parts (Vagina) Healthy • Other Risks • Reducing Sex Risks • The Male Condom • How To Use a Male Condom • Demonstration of Male Condom Use on Penis Model and Behavioral Skills Training • The Female Condom: Something Women Can Control • More About the Female Condom • How to Use a Female Condom • Demonstration of Female Condom Use on Vagina Model and Behavioral Skills Training • Cleaning a Female Condom for Re-Use • Getting Down and Giving Head (Blow Job) • Glad Wrap or Oral Dams • Demonstration of Oral Dams on Vagina Model • What You Learned Today Referrals Health Knowledge Questionnaire
Session 2, 45–60 min	Individual & Group	Cue Cards • Gender Roles • How To Talk With Your Partner About Safer Sex • Role-play a conversation with partner about Safer Sex • Personal Safety—Condom Use and Other Barrier Protection • Demonstration of “Cbeeking” and Behavioral Skills Training • Concerns About Women Abuse • Myths and Truths about Abuse • Rape • Other Myths and Truths about Rape • Violence Prevention With Partners • Safety Tips for Going Out • Response to Danger With Men • Role-play a dangerous situation • Reduce the “Chance”--Negotiate • Violence Prevention With Others • Stay Alert, Stay Powerful • Benefits of Support: Sister to Sister • Summary: Women Can Become Powerful • Individual risk assessment plan/Action Plan • Personalized risk and lifestyle review • Short- and long-term goal setting Referrals Health Knowledge Questionnaire

Table 2

Pre-Post Intervention Change in Mean Days Used Substances Past 30 Days by Race

Substance	Black Mean (SD) (n=60)	Coloured Mean (SD)(n=52)
Alcohol		
Baseline	13.55 (9.10)	5.82 (7.13)
Follow-up	7.32 (8.4)	2.67 (4.63)
Change[^]	↓ 6.23***	↓ 3.14***
Cannabis		
Baseline	27.25 (6.75)	8.66 (12.01)
Follow-up	18.08 (13.43)	7.40 (11.41)
Change	↓ 9.17***	↓ 1.26
Rock		
Baseline	2.64 (6.87)	0.79 (2.33)
Follow-up	1.24 (4.89)	0.00 (0.00)
Change	↓1.40	↓ 0.79**
Cocaine		
Baseline	1.36 (5.31)	0.04 (0.29)
Follow-up	0.00 (0.00)	0.00 (0.00)
Change	↓ 1.36*	↓ 0.04
Heroin		
Baseline	0.78 (4.23)	0.28 (1.12)
Follow-up	0.52 (3.94)	0.00 (0.00)
Change	↓ 2.59	↓ 0.28*
Ecstasy		
Baseline	1.84 (4.87)	1.30 (3.84)
Follow-up	0.00 (0.00)	4.30 (5.85)
Change	↓1.84***	↑ 3.00***
Methaqualone		
Baseline	4.07 (9.75)	3.45 (7.41)
Follow-up	0.00	0.02 (0.15)
Change	↓ 4.07***	↓ 3.43***
Methamphetamine		
Baseline	0.23 (1.59)	13.16 (9.85)
Follow-up	.44 (3.31)	0.00 (0.00)
Change	↑ 0.21	↓ 13.16***

[^] ↑ = increase, ↓ = reduction, and ↔ = no change

*** $p < .01$

** $p < .05$

* $p < .10$

Note: This data is from a matched data set.

Table 3

Sexual Risk by Race: Pre-Post Intervention Measures

Characteristics	Black (n=60)	Coloured (n=52)
Times had sex in the past month		
Baseline mean (SD)	9.72 (7.24)	5.75 (6.26)
Follow-up mean (SD)	8.48 (8.41)	2.08 (2.23)
Change[^]	↓ 1.24	↓ 3.67***
Times of unprotected sex		
Baseline mean (SD)	5.50 (7.24)	3.79 (6.51)
Follow-up mean (SD)	3.80 (7.76)	0.73 (2.07)
Change	↓ 1.70	↓ 3.06***
Number of different partners in the past 30 days		
Baseline mean (SD)	0.98 (0.33)	1.53 (2.08)
Follow-up mean (SD)	1.02 (0.25)	1.60 (1.96)
Change	↑ 0.04	↑ 0.07
Number of male sex partners in the past 30 days		
Baseline mean (SD)	1.00 (0.20)	1.18 (0.67)
Follow-up mean (SD)	0.98 (0.25)	1.07 (0.26)
Change	↓ 0.02	↓ 0.11
Times used AOD before/during sex in the past 30 days		
Baseline mean (SD)	7.70 (7.78)	1.47 (3.43)
Follow-up mean (SD)	6.50 (8.74)	0.12 (0.52)
Change	↓ 1.20	↓ 1.35***
Have a main sexual partner		
Baseline %	98%	68%
Follow-up %	86%	49%
Change	↓ 12%**	
↓ 19%***		
Had sex with a main partner in the past 30 days		
Baseline %	98%	90%
Follow-up %	93%	100%
Change	↓ 5%*	↑ 10%*
Used protection during last vaginal sex		
Baseline %	50%	15%
Followup %	66%	27%
Change	↑ 16%**	↑ 12%
Traded sex w/main for money, drugs, or other goods		
Baseline %	0%	3.9%
Followup %	0%	0%
Change	↔ 0%	↓ 3.9%

[^] ↑ = increase, ↓ = reduction, and ↔ = no change

*** p < .01

** p <.05

* p < .10

Note: This data is from a matched data set.

Table 4

Analysis of covariance for treatment assignment and race group

			df	MS	F
Alcohol Use in the Past 30 Days					
	Source	Treatment	1	1.915	0.043
		Race	1	151.090	3.378*
		Treatment x Race	1	4.897	0.109
		Error	104	44.726	
Dagga Use in Past 30 Days					
	Source	Treatment	1	325.350	2.619
		Race	1	14.098	0.113
		Treatment x Race	1	169.758	1.366
		Error	105	124.247	
Heroin Use in Past 30 Days					
	Source	Treatment	1	4.294	2.614
		Race	1	0.502	0.306
		Treatment x Race	1	0.818	0.498
		Error	100	1.642	
Rock Use in Past 30 Days					
	Source	Treatment	1	9.258	0.748
		Race	1	17.006	1.375
		Treatment x Race	1	6.644	0.537
		Error	101	12.371	
Cocaine Use in Past 30 Days					
	Source	Treatment	1	0.000	-
		Race	1	0.000	-
		Treatment x Race	1	0.000	-
		Error	100	0.000	
Ecstasy Use in Past 30 Days					
	Source	Treatment	1	0.158	0.010
		Race	1	473.744	30.880****
		Treatment x Race	1	0.434	0.028
		Error	100	15.342	
Mandrax Use in Past 30 Days					
	Source	Treatment	1	0.017	1.836
		Race	1	0.017	1.806
		Treatment x Race	1	0.018	1.957
		Error	100	0.009	
Tik Use in Past 30 Days					
	Source	Treatment	1	1.840	0.319
		Race	1	17.629	3.053*
		Treatment x Race	1	4.891	0.847

Alcohol Use in the Past 30 Days			df	MS	F
		Error	102	5.775	
Unprotected Sex					
	Source	Treatment	1	6045.421	1.824
		Race	1	6970.731	2.103
		Treatment x Race	1	13718.289	4.138**
		Error	59	3315.233	

* Note: p < .10

** p < .05

**** p < .001