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# The relationship between attending alcohol serving venues nearby versus distant to one's residence and sexual risk taking in a South African township

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### **Abstract**

**BACKGROUND**—South Africa remains a country with one of the highest prevalence rates of HIV/AIDS at 18% among 15–49 year olds. Underdeveloped urban areas, or townships, are particularly hard hit by the HIV/AIDS epidemic. Alcohol use in these townships has been established as an important risk factor for HIV transmission. Likewise, alcohol serving venues (shebeens) have been identified as sites where substance abuse and sexual risk taking occur. However, little is known about how proximity of alcohol serving establishments (shebeens) to one's residence may be related to sexual risk-taking.

**METHODS**—We surveyed 3,261 men and women attending shebeens in a township located in Cape Town, South Africa. We investigated the relationships between attending nearby (< 15 minute walk) versus distant (>15 minute walk) shebeens, and sex and substance abuse related risk-taking.

**RESULTS**—Women who attended distant shebeens versus nearby shebeens relative to their residence were approximately twice as likely to report HIV positive status. Bivariate analyses demonstrated that these women were also more likely to report other sexually transmitted infections, greater numbers of sex partners, higher rates of alcohol and drug use, and seeking out new sex partners at shebeen. No differences in sex behavior, substance use or HIV/STI were identified among men.

**DISCUSSION**—Proximity of shebeens appears to be an important contextual factor in explaining HIV/STI transmission risk-taking. Future studies should focus on how anonymity may be related to sexual risk and substance use behaviors among women in South African townships.

# Keywords

South Afric	ca; Alcohol; S	Sexual Risk B	ehavior; HIV/	STI; Shebeens	
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## INTRODUCTION

Sub-Saharan Africa is far and above the most affected region in the world by the HIV/AIDS epidemic; 10% of the world's population lives in this region, yet 68% of people infected with HIV reside here. South Africa, in particular, has the largest number of people living with HIV; an estimated 5.6 million people are HIV infected (UNAIDS, 2010). HIV prevalence in South Africa is approximately 18% among persons aged 15–49.

Given the high HIV prevalence rates in South Africa, multiple epidemiological and behavioral assessments have been employed to gain a better understanding of sexual risks for HIV transmission among men and women. Through this work, alcohol use has been identified as a critical factor in HIV transmission. In particular the environment wherein men and women socialize and consume alcohol has been demonstrated as a significant factor in understanding HIV transmission risk. Prior research has found that informal alcohol serving venues or *shebeens* in urban and peri-urban townships hold an important role in understanding sexual mixing patterns (Goldenberg et al., 2011; Kalichman, Simbayi, Vermaak, Jooste, & Cain, 2008; Morojele et al., 2006; Wojcicki, 2002; Woolf-King & Maisto, 2011).

Using the priorities for local AIDS control efforts (PLACE) method, Weir et al (Weir, Morroni, Coetzee, Spencer, & Boerma, 2002) investigated sites within South African townships where sexual networks intersect and, therefore, identified sites where HIV/STI prevention outreach should be focused. Weir et al.'s research demonstrated that shebeens accounted for 78% of all the venues that were identified as places to meet sex partners in townships and, thus, shebeens offer substantial opportunities for HIV/STI prevention efforts. Studies of individuals surveyed at these venues have shown elevated rates of risk-taking behavior including: 40–50% never having used a condom, 8% having engaged in recent unprotected anal intercourse and less than a third reporting condom use at most recent sex act (Kalichman et al., 2011; Weir et al., 2003; Weir, Tate, Zhusupov, & Boerma, 2004). Findings from these studies are also consistent with research identifying important relationships between sexual behaviors and alcohol use, in general, in townships within South Africa (Kalichman et al., 2008; Morojele et al., 2006; Sikkema et al., 2011; Townsend et al., 2010). Among men and women patronizing shebeens, elevated alcohol use, greater numbers of sex partners and unprotected sex acts have been found to be highly correlated.

Although shebeens are important environments for understanding alcohol use and its relationship to sexual risk-taking, little is known about how sexual risk taking may be related to proximity of shebeens. In particular, we have a limited understanding of how structural factors such as location of shebeens relative to one's residence might be associated with sexual risk taking. Prior work has found that women were more likely than men to patronize shebeens that were located outside of the township where they lived (18.2% vs. 8.4%), yet men (50.4% vs. 57.0%) were more likely than women to go to any area within a township to meet new sexual partners and report that they would leave their township to find new sex partners (53.8% vs. 60.3%) (Weir et al., 2002). As such, it appears that shebeens are environments where sexual partners meet, but patterns of seeking out sex partners at

shebeens are less understood and may have implications for the spread of HIV/STI. Moreover, these patterns are further complicated as they appear to vary by gender.

Furthermore, we do not know how far men and women travel to patronize shebeens and seek out new sex partners. Proximity of shebeens to residence is important to understand as it could influence linkages across sexual networks and accelerate disease transmission (Liljeros, Edling, & Nunes Amaral, 2003; Lurie, Harrison, Wilkinson, & Abdool Karim, 1997). Furthermore, prior research has documented a relationship between sexual risktaking and anonymity (Chang, 2008; Guerin, 1999; Pessar, 1999; Postmes & Spears, 1998; Reicher, Spears, & Postmes, 1995). Under conditions of anonymity there are fewer consequences for risk-taking as social pressures to conform are reduced. More specifically, anonymity is also associated with deindividuation; a psychological state wherein concerns about being evaluated and judged are decreased (Chang, 2008; Reicher et al., 1995). Therefore, traveling further to shebeens may allow for greater anonymity and sexual risktaking. Gender is also an important consideration in this context as it is inextricably linked to factors affecting HIV infection, such as power inequality, violence, sexual negotiation, and transactional sex (R. Jewkes, Sikweyiya, Morrell, & Dunkle, 2011; R. K. Jewkes, Dunkle, Nduna, & Shai, 2010; Mah & Halperin, 2010; Townsend et al., 2011). Although gender is well-established as a critical component in HIV transmission dynamics, little is known about the relationships between gender, attending shebeens near or distant to one's residence, seeking out new sexual partners, and sexual risk behavior. In sum, it is possible that a relationship exists between the distance men and women travel to consume alcohol and the likelihood that they will engage in sexual risk taking, including transactional sex.

For the current study we used cross sectional surveys to assess recent sexual risk-taking, sexual risk histories, substance use, HIV/STI results and testing, and time spent walking to shebeens among men and women in a township in Cape Town, South Africa. Time spent walking to shebeens was used as a proxy variable to estimate the distance between one's residence and the shebeen the participant was surveyed at. To examine these relationships we looked for similarities and differences between sexual and substance use behaviors by distance from one's home residence to the shebeen (nearby - <15 minute walk versus distant - >15 minute walk), separately for men and women.

We hypothesized that attending distant shebeens would be associated with reporting greater sexual risk-taking (*i.e.*, higher rates of sex partners and unprotected sex acts) greater likelihood of reporting HIV/STI, and increased substance use. Likewise, we hypothesized that there would be a relationship between men and women attending distant shebeens and reporting seeking out new sexual partners; traveling further would be associated with greater likelihood of seeking out new partners. Finally, we hypothesized that women would be more likely than men to report attending distal shebeens.

## **METHODS**

#### Participants and Setting

Participants were men and women attending shebeens in a peri-urban township in Cape Town, South Africa. The township is located approximately 20 kilometers from Cape

Town's central business district and consists of both people of mixed race (i.e., Coloureds) and Black Africans. A relatively new township, the community was established in 1990 and is one of the first townships in South Africa to racially integrate. Large numbers of indigenous Black Africans started settling in and around the township during the 1990's after government policies of racial segregation during Apartheid ended. The township sampled for this study, therefore, offers the opportunity to survey men and women of varying cultures residing within one South African community. All men and women present at the shebeens were eligible to participate in the study with the exception of individuals who were intoxicated.

#### **Contextual Considerations**

It is important to note that although the precise number of shebeens in the area we surveyed is unknown, there are likely several hundred shebeens in this township (Weir et al., 2002). Both legal and illegal shebeens operate here and frequently close and reopen, therefore, tracking a precise number of shebeens is challenging. However, similar and adjacent township shebeen estimates are around 460 shebeens in an area of approximately 10 km<sup>2</sup> (De Vries, 2010), representing a high density of shebeens in this general community. The high density of shebeens in the areas we surveyed gives patrons many options for attending either nearby or distant shebeens. Individuals attending distant shebeens likely pass multiple closer shebeens en route.

#### Venue selection

Using an adaptation of the PLACE community mapping methodology (Weir et al., 2003), we located and defined twelve shebeens within a South African township for the current study. The process of identifying a broad range of shebeens in the township surveyed began with collecting formative individual-level information on these venues. Field staff approached a total of 210 members of the community at public places such as bus stands and markets and asked them to identify places where people go to drink alcohol. From information collected from community members, field staff visited 88 venues to assess venues for eligibility. Venues were eligible if they had space for patrons to sit and drink, reported >50 unique patrons per week, had >10% female patrons, and were willing to have the research team visit on multiple occasions. Twenty-four venues were identified as eligible and twelve were selected on the basis of (1) size - both small and large shebeens were targeted, (2) culture – both shebeens primarily attracting Coloureds or Black Africans were targeted, and (3) township geography-shebeens were geographically dispersed. One venue declined to participate in study activities.

## Study procedures

Anonymous surveys were collected between October 2009 and October 2011. Individuals inside the venue were approached by field workers to complete the 10-page survey questionnaire, which took an average of 10–15 minutes to complete (Miller, Wilder, Stillman, & Becker, 1997). Almost all surveys were completed without any assistance from field workers, and field workers took precautions to ensure privacy of participants. Black African field workers spoke Xhosa and English, and Coloured field workers spoke Afrikaans and English. Surveys were administered in participants' preferred language.

Participants were given a small token of appreciation for completing surveys, such as a keychain or coffee mug. A total of 4,534 individuals were approached to participate, and 4,338 (95.7%) agreed. Surveys were scanned and manual checks were completed to identify errors. All study procedures were approved by the ethical review boards in the US and in South Africa.

#### **Measures**

Measures were adapted from previous research conducted in South Africa and were administered in the three languages spoken throughout the township; English, Xhosa and Afrikaans. All of the measures were translated and back-translated to produce parallel forms.

**Demographics**—Participants were asked to report gender, age, education, ethnicity, employment, and marriage.

Proximity of shebeen to one's residence—Participants were asked to report how long it takes them to walk from their home to the shebeen they were currently being surveyed at. Together with key community informants, we reviewed multiple options for assessing the proximity of one's residence to shebeen. Based on this formative work, it was determined that time spent walking would provide a culturally relevant and comprehensible assessment of distance. Responses included: less than 15 minutes, 15–30 minutes, 30–60 minutes, and more than an hour. Due to the distribution of data (infrequent reporting of distance beyond 30 minutes[for men: 6% 30–60 min, 6% > hour; for women: 5% 30–60 min, and 3% > hour]), responses were dichotomized and included either less than a 15 minute walk (nearby shebeen) or greater than a 15 minute walk (distant shebeen).

HIV/STI testing and status—Participants were asked to report if they had ever tested for HIV and the result of their most recent HIV test. HIV status was dichotomized between those who reported being HIV positive and those reporting being HIV negative/unknown status. There were no significant differences between participants reporting HIV negative versus unknown HIV status and risk taking variables (alcohol use, and sex behaviors and partners). Participants were asked to report on whether they had been diagnosed with a sexually transmitted infection (STI) ever and in the past four months.

**Drug and alcohol use**—Participants were asked to report whether they used the following drugs in the past four months: "marijuana (dagga)," "glue, petrol or sprits," "tik (methamphetamine)," and "injected a drug with a needle." Responses were coded into two categories: reporting any recent drug use or not. Alcohol use was assessed using two items from the Alcohol Use Disorders Identification Test, each capturing unique components of alcohol intake (Saunders, Aasland, Babor, de la Fuente, & Grant, 1993). These items included (1) alcohol frequency: participants were asked to report how often they have a drink containing alcohol; and (2) alcohol consumption: participants reported how many drinks containing alcohol they have on a typical day when they are drinking.

**Sex partners and behaviors**—Participants were asked about the number of male and female sex partners they had in the past four months. For sex behaviors, participants reported the number of unprotected and protected sex acts they had in the past four months. Participants were also asked the number of times they had used alcohol before sex and drugs before sex in the past four months, and if they came to the bar that evening to look for a new sex partner

**Transactional sex**—Participants were asked whether they had exchanged sex for money, alcohol, drugs, or a place to stay in the past four months; and whether they had given money, alcohol, drugs, and a place to stay for sex in the past four months.

## Data analyses

We conducted descriptive analyses for sample demographic characteristics. Chi-square analyses for categorical demographic variables and t-tests for continuous demographic variables were conducted to assess similarities and differences separately for men and women who visited nearby shebeens versus distant shebeens. We used chi-square to assess for differences in the percentage of women versus men who travel to distant shebeens. We used generalized linear modeling with a binary logistic distribution (attending nearby vs. distant shebeen) to assess for differences on shebeen proximity and substance use, HIV testing, and sex behaviors. All generalized linear models were adjusted for significant differences on demographic variables. There were less than 5% missing data for any given variable. For all analyses, we used p < .05 to define statistical significance. PASW Statistics version 18.0 (SPSS Inc., Chicago, IL) was used for all analyses. Analyses were conducted separately by gender due to documented differences in their sexual and substance use patterns. There were less than 5% missing data for any given variable. For all analyses, we used p < .05 to define statistical significance. PASW Statistics version 18.0 (SPSS Inc., Chicago, IL) was used for all analyses.

## **RESULTS**

Participants were approached at twelve different shebeens and 4,338 agreed to complete a survey assessment. Of these participants, 987 (24.5%) had previously filled out a survey on a prior occasion and 90 (2%) assessments had missing data for key measures. Duplicate responses were removed leaving 3,261 participants (1,842 men and 1,419 women) in all further analyses. Among women, 330 attended distant shebeens and 1,089 attended nearby shebeens, among men 561 and 1,281 respectively. Men were more likely to attend distant shebeens than women (30.5% vs. 23.3%,  $X^2$ =20.9 (1), p<.001). Men and women traveling to distant shebeens were more likely to be of younger age, have higher levels of education, to report Black African ethnicity, and be employed. Women who were married were less likely to attend distant shebeens while married and non-married men were equally likely to attend nearby or distant shebeens (Table 1). All significant demographic findings were controlled for in all further analyses.

#### **HIV** testing

On the whole, three-fourths of the sample had ever been HIV tested. Among men, attending nearby shebeens was related to a greater likelihood of having been tested for HIV while there were no differences in HIV testing among women. However, among women, attending a distant shebeen (9.8%) was associated with a greater likelihood of reporting being HIV infected than women who had attended nearby shebeens (5.7%). Among women, attending a distant shebeen was associated with a greater likelihood of reporting both ever having had an STI and having had an STI in the past four months. There were no differences observed between men and proximity of shebeen relative to STI status (Table 2).

#### Substance use

Almost half of the sample reported consuming alcohol at least 2–3 times per week and just over half the sample reported consuming at least 5 alcohol drinks during an average drinking session. Among women, attending a distant shebeen was associated with a greater likelihood of reporting drinking 5 or more drinks during a typical drinking session than women attending nearby shebeens. No differences in alcohol consumption or frequency of alcohol drinking were observed among men. In regards to drug use, recent marijuana use was most frequently reported, followed by methamphetamine use, inhalant use, and injection drugs. Women attending distant shebeens (3.1%) were approximately twice as likely to report inhalant (glue) use as women at nearby shebeens (1.6%), and similarly, women at distant shebeens were around three times more likely to report injection drug use (3.1% vs. .9%). There were no differences in drug use among men (Table 3).

#### Sexual behavior

Among women, attending distant shebeens was associated with a greater likelihood of reporting having more sex partners in the past four months than women at nearby shebeens. No differences were observed among women in regards to numbers of unprotected/protected vaginal sex acts. Women at distant shebeens were more likely to report using drugs before sex. No differences emerged among men in regards to number of partners or numbers of unprotected/protected sex acts. The overall frequency of men and women attending the shebeen specifically to meet a new sex partner was low. However, among women, attending a distant shebeen was associated with a greater likelihood of reporting being at the bar that evening to look for a new sexual partner (10% vs. 4.4%). Rates of transactional sex among women were low and there were no differences in regards to reporting this act between women at nearby vs. distant shebeens. However, among men, traveling to distant shebeens was associated with a greater likelihood of reporting receiving money, alcohol, drugs, or a place to stay in exchange for sex (11.1% vs. 8.2%; Table 4).

In multivariate analyses among women, being at the bar to find a new sex partner was significantly associated with attending a distant shebeen (Table 5). In regards to men, no differences emerged in terms of the relationship between sexual and substance use related risk taking and proximity of shebeen.

## DISCUSSION

Data from the current study demonstrate an important and understudied relationship between distance of shebeen to one's residence and sexual risk taking. Among women, attending a distant shebeen was associated with greater sexual risk-taking behavior, higher levels of substance use, and elevated rates of HIV and other STIs in bivariate analyses. The overall numbers of men and women specifically seeking out new sex partners at shebeens were low. However, we did observe higher overall number of sex partners and greater likelihood of seeking out new sex partners among women attending distant shebeens versus women attending nearby shebeens. In multivariate analyses and consistent with our hypotheses, women who attended distant shebeens were more likely to report going to the shebeen specifically to seek out a new sex partner. Higher alcohol consumption and drug use, and greater likelihood of combining substance use with sex was reported among women attending distant shebeens relative to women at nearby shebeens. These women also reported a rate of HIV higher than that of women attending nearby shebeens. Patterns of seeking out sex partners, sexual risk behavior and substance use were not associated with proximity of shebeens among men. On the whole, proximity of shebeens appears to be a significant contextual variable important in understanding HIV/STI related transmission behavior and warrants further investigation.

Although we are uncertain as to the exact nature of the relationship between proximity of shebeen and risk-taking, it is possible that attending shebeens a greater distance from one's home increases a sense of anonymity. Under these circumstances, women most likely experience less concern about feeling negatively evaluated for the sexual and substance use behaviors they engage in at distant vs. nearby shebeens because they are outside of their immediate social network. Research has found that women tend to experience greater social sanctions for engaging in sex with multiple partners as well as other sexual behaviors, and thus, experience more pressure than men to manage how other's evaluate their sexual relationships (Kreager & Staff, 2009; Lyons, Giordano, Manning, & Longmore, 2011; Petersen & Shibley Hyde, 2011). Although limited research in these areas has been completed in South Africa, we know that, on the whole, men hold higher social status than women and that gender-based inequity is wide-spread. These cultural standings tend to afford men greater leniency in their sexual behaviors than women (Cain, Schensul, & Mlobeli, 2011; Harrison, O'Sullivan, Hoffman, Dolezal, & Morrell, 2006; R. K. Jewkes et al., 2010; Krishnan et al., 2008; Mantell et al., 2009; Ragnarsson, Townsend, Ekstrom, Chopra, & Thorson, 2010; Rani, Bonu, & Diop-Sidibe, 2004). Likewise, substantial numbers of both men and women are endorse acceptability of greater number of sexual partners for men than women.

Among men, we did not observe the same relationships between sex behaviors, substance and distance between home and shebeen that we observed among women. For men, we found that substance use and sexual behavior demonstrated similar patterns across nearby and distant shebeens. Overall, these findings were consistent with our interpretation of the data relating to women. That is, if men feel fewer social constraints and pressures around their sex behavior, travel to distant shebeens for increased anonymity should be of less importance. Likewise, considerable evidence exists that men in a variety of cultures,

including South Africa, are expected to demonstrate sexual prowess (R. Jewkes & Morrell, 2010; Walker, 2005).

Substance use emerged as an important in understanding findings from the current study. In particular, it was related to the increases in sexual risk-taking observed among women attending distant shebeens. Interestingly, we did not observe these same relationships among men. Men reported elevated rates of substance use and use of substances during sex when compared to women, but this finding did not differ by proximity to shebeen. Patterns of greater substance use among women attending distant shebeens are consistent with patterns observed of greater sexual risk-taking among these same women. Again, it is possible that factors relating to increased anonymity are important for engaging in greater substance use. However, further research is needed to substantiate these conclusions.

Findings from the current study should be viewed in light of their limitations. Findings related to substance use and sex behaviors are likely to vary between people who do and do not attend shebeens. Data were cross sectional, which prevents reporting on causal findings. We also relied on self-report of potentially stigmatizing information, which could potentially bias responses. Our measure of proximity of shebeen was limited to the number of minutes it takes to walk to the shebeen from one's residence. Furthermore, for a limited segment of the population, transportation to shebeens is an available option. It is unclear how transportation may affect the relationship between distance of shebeen and sexual risk taking. It would be beneficial to further investigate exactly what factors influence leaving nearby shebeens to travel to distant shebeens. Future studies should focus on developing a measure of shebeen proximity that is more sensitive to individual differences among participants. Participants with partners were not linked in the study, which precludes us from the ability to draw dyadic level conclusions with the current data. Other venues, such as shacks, community halls, salons, and night clubs, have also been documented as places where men and women go to meet sex partners and therefore understanding reasons for choosing these venues may offer important information for understanding disease transmission patterns. Finally, it is unclear exactly what motivates men and women to attend distal or nearby shebeens. We are unable to speak to the exact social drivers in this context and it is possible that other factors -outside of those relating to sexual risk taking and anonymity- actually play a more influential role when individuals chose which alcohol serving establishments to attend.

Findings from the current study raise intriguing questions about factors associated with HIV/STI risk taking that goes beyond individual-level characteristics. Future research would benefit from a more in-depth understanding of what psycho-social factors motivate men and women to seek out certain shebeens over others. Furthermore, qualitative methods, including individual in-depth interviews and observational fieldwork, may prove particularly beneficial in understanding the current study's findings. Intervention with women traveling to distant shebeens may include efforts focused on increasing awareness of elevated risk-taking when outside of one's social network.

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#### REFERENCES

Cain D, Schensul S, Mlobeli R. Language choice and sexual communication among Xhosa speakers in Cape Town, South Africa: implications for HIV prevention message development. Health Education Research. 2011; 26(3):476–488. [PubMed: 21059802]

- Chang J. The role of anonymity in deindividuated behavior: A comparison of deindividuation theory and the social identity model of deindividuation effects (SIDE). Undergraduate Journal of Baylor University. 2008; 6(1):1–8.
- De Vries, L. Crime falls as cops close illegal shebeens. 2010. http://www.iol.co.za/news/south-africa/crime-falls-as-cops-closes-illegal-shebeens-1.469499.
- Goldenberg SM, Strathdee SA, Gallardo M, Nguyen L, Lozada R, Semple SJ, Patterson TL. How important are venue-based HIV risks among male clients of female sex workers? A mixed methods analysis of the risk environment in nightlife venues in Tijuana, Mexico. Health Place. 2011; 17(3): 748–756. [PubMed: 21396875]
- Guerin B. Social behaviors as determined by different arrangements of social consequences: Social loafing, social facilitation, deindividuation, and a modified social loafing. Psychological Record. 1999; 49(4):565–577.
- Harrison A, O'Sullivan LF, Hoffman S, Dolezal C, Morrell R. Gender role and relationship norms among young adults in South Africa: measuring the context of masculinity and HIV risk. Journal of Urban Health. 2006; 83(4):709–722. [PubMed: 16758334]
- Jewkes R, Morrell R. Gender and sexuality: emerging perspectives from the heterosexual epidemic in South Africa and implications for HIV risk and prevention. Journal of the International AIDS Society. 2010; 13:6. [PubMed: 20181124]
- Jewkes R, Sikweyiya Y, Morrell R, Dunkle K. The relationship between intimate partner violence, rape and HIV amongst South African men: a cross-sectional study. PLoS One. 2011; 6(9):e24256. [PubMed: 21935392]
- Jewkes RK, Dunkle K, Nduna M, Shai N. Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: a cohort study. Lancet. 2010; 376(9734):41–48. [PubMed: 20557928]
- Kalichman SC, Pinkerton SD, Carey MP, Cain D, Mehlomakulu V, Carey KB, Harel O. Heterosexual anal intercourse and HIV infection risks in the context of alcohol serving venues, Cape Town, South Africa. BMC Public Health. 2011; 11:807. [PubMed: 21999574]
- Kalichman SC, Simbayi LC, Vermaak R, Jooste S, Cain D. HIV/AIDS risks among men and women who drink at informal alcohol serving establishments (Shebeens) in Cape Town, South Africa. Prevention Science. 2008; 9(1):55–62. [PubMed: 18264762]
- Kreager DA, Staff J. The sexual double standard and adolescent peer acceptance. Social Psychology Quarterly. 2009; 72(2):143–164.
- Krishnan S, Dunbar MS, Minnis AM, Medlin CA, Gerdts CE, Padian NS. Poverty, gender inequities, and women's risk of human immunodeficiency virus/AIDS. Annals of the New York Academy of Science. 2008; 1136:101–110.
- Liljeros F, Edling CR, Nunes Amaral LA. Sexual networks: implications for the transmission of sexually transmitted infections. Microbes and Infection. 2003; 5(2):189–196. [PubMed: 12650777]
- Lurie M, Harrison A, Wilkinson D, Abdool Karim S. Circular migration and sexual networking in rural KwaZulu/Natal: Implications for the spread of HIV and other sexually transmitted disease. Health Transition Review. 1997; 7(3):S17–S27.
- Lyons H, Giordano PC, Manning WD, Longmore MA. Identity, peer relationships, and adolescent girls' sexual behavior: an exploration of the contemporary double standard. Journal of Sex Research. 2011; 48(5):437–449. [PubMed: 20818574]
- Mah TL, Halperin DT. Concurrent sexual partnerships and the HIV epidemics in Africa: evidence to move forward. AIDS and Behavior. 2010; 14(1):11–16. dicussion 34-17. [PubMed: 18648926]

Mantell JE, Needham SL, Smit JA, Hoffman S, Cebekhulu Q, Adams-Skinner J, Milford C. Gender norms in South Africa: implications for HIV and pregnancy prevention among African and Indian women students at a South African tertiary institution. Culture, Health & Sexuality. 2009; 11(2): 139–157.

- Miller KW, Wilder LB, Stillman FA, Becker DM. The feasibility of a street-intercept survey method in an African-American community. American Journal of Public Health. 1997; 87(4):655–658. [PubMed: 9146448]
- Morojele NK, Kachieng'a MA, Mokoko E, Nkoko MA, Parry CD, Nkowane AM, Saxena S. Alcohol use and sexual behaviour among risky drinkers and bar and shebeen patrons in Gauteng province, South Africa. Social Science and Medicine. 2006; 62(1):217–227. [PubMed: 16054281]
- Pessar, PR. The role of gender, households and social networks in the migration process: A review and appraisal. In: Hirschman, C.; Kasinitz, P.; DeWind, J., editors. The Handbook of International Migration: The American Experience. New York: Russell Sage Foundation; 1999. p. 53-70.
- Petersen JL, Shibley Hyde J. Gender differences in sexual attitudes and behaviors: A review of metaanalytic results and large datasets. Journal of Sex Research. 2011; 48(2–3):149–165. [PubMed: 21409712]
- Postmes T, Spears R. Deindividuation and antinormative behavior: A meta-analysis. Psychological Bulletin. 1998; 123(3):238–259.
- Ragnarsson A, Townsend L, Ekstrom AM, Chopra M, Thorson A. The construction of an idealised urban masculinity among men with concurrent sexual partners in a South African township. Global Health Action. 2010; 3
- Rani M, Bonu S, Diop-Sidibe N. An empirical investigation of attitudes towards wife-beating among men and women in seven sub-Saharan African countries. African Journal of Reproductive Health. 2004; 8(3):116–136. [PubMed: 17348330]
- Reicher, SD.; Spears, R.; Postmes, T. A social identity model of deindividuation phenomena. In: Strobe, W.; Hewstone, M., editors. European review of social psychology. Chichester, UK: Wiley; 1995. p. 161-198.
- Saunders JB, Aasland OG, Babor TF, de la Fuente JR, Grant M. Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption--II. Addiction. 1993; 88(6):791–804. [PubMed: 8329970]
- Sikkema KJ, Watt MH, Meade CS, Ranby KW, Kalichman SC, Skinner D, Pieterse D. Mental health and HIV sexual risk behavior among patrons of alcohol serving venues in Cape Town, South Africa. Journal of Acquired Immune Deficiency Syndrome. 2011; 57(3):230–237.
- Townsend L, Jewkes R, Mathews C, Johnston LG, Flisher AJ, Zembe Y, Chopra M. HIV risk behaviours and their relationship to intimate partner violence (IPV) among men who have multiple female sexual partners in Cape Town, South Africa. AIDS and Behavior. 2011; 15(1):132–141. [PubMed: 20217470]
- Townsend L, Rosenthal SR, Parry CD, Zembe Y, Mathews C, Flisher AJ. Associations between alcohol misuse and risks for HIV infection among men who have multiple female sexual partners in Cape Town, South Africa. AIDS Care. 2010; 22(12):1544–1554. [PubMed: 20824551]
- UNAIDS. UNAIDS report on the global AIDS epidemic 2010. 2010.
- Walker L. Men behaving differently: South African men since 1994. Culture, Health & Sexuality. 2005; 7(3):225–238.
- Weir SS, Morroni C, Coetzee N, Spencer J, Boerma JT. A pilot study of a rapid assessment method to identify places for AIDS prevention in Cape Town, South Africa. Sexually Transmitted Infections. 2002; 78(Suppl 1):i106–i113. [PubMed: 12083428]
- Weir SS, Pailman C, Mahlalela X, Coetzee N, Meidany F, Boerma JT. From people to places: focusing AIDS prevention efforts where it matters most. AIDS. 2003; 17(6):895–903. [PubMed: 12660537]
- Weir SS, Tate JE, Zhusupov B, Boerma JT. Where the action is: monitoring local trends in sexual behaviour. Sexually Transmitted Infections. 2004; 80(Suppl 2):ii63–ii68. [PubMed: 15572642]
- Wojcicki JM. "She drank his money": survival sex and the problem of violence in taverns in Gauteng province, South Africa. [Research Support, Non-U.S. Gov't]. Medical Anthropology Quarterly. 2002; 16(3):267–293. [PubMed: 12227257]

Woolf-King SE, Maisto SA. Alcohol use and high-risk sexual behavior in Sub-Saharan Africa: a narrative review. Archives of Sexual Behavior. 2011; 40(1):17–42. [PubMed: 19705274]

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Table 1

Demographic characteristics among participants at nearby and distant shebeen.

		Wor	Women				M	Men		
	Nearby a	shebeen	Nearby shebeen Distant shebeen	hebeen		Nearby s	hebeen	Nearby shebeen Distant shebeen	hebeen	
	I)	(n=1089)	Ŭ	(n=330)		1)	(n=1281)		(n=561)	
	M	SD	M	SD	t	M	SD	M	SD	t
Age	32.9	11.8	30.2	10.7	4.1***	31.1	8.6	29.9	8.4	2.5**
Education	2.1	∞.	2.4	6:	-5.8***	2.6	6.	2.8	6:	4.9***
	п	%	¤	%	$X^2$	п	%	п	%	$X_2$
Ethnicity										
Black	405	37.2	189	57.3	42.0***	791	61.8	408	73.2	22.3***
Coloured	684	62.8	141	42.7		488	38.2	149	26.8	
Employed										
Yes	272	25.1	105	32.0	6.1*	754	59.0	364	65.4	6.5
Married										
Yes	290	26.9	26	17.1	13.0***	285	22.4	128	23.1	.74
** <i>p</i> <.001,										
* <i>p</i> <.01,										
50:>a										

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Table 2

STI/HIV testing histories and status among women and men at nearby and distant shebeens.

		Women	nen					Men	u			
	Nearby shebeen	rby een	Distant shebeen	ant een			Nearby shebeen	·by een	Distant shebeen	ant een		
	(n=1)	(n=1089)	(n=330)	30)			(n=1281)	(18	(n=561)	(19		
	u	%	u	%	AOR	95% CI	u	%	п	%	AOR	95% CI
Ever HIV tested?												
Yes	826	7.97	240	74.1	1.22	.91–1.65	794	63.8	327	60.1	1.24*	60.1 1.24* 1.01–1.53
HIV status												
Positive	59	5.7	31	8.6	1.77**	1.10-2.83	70	5.6	23	4.2	<i>TT</i> :	.47–1.26
Negative/Unknown	985	94.3	284	90.2			1186	94.4	525	95.8		
Have you ever been diagnosed with an STI?												
Yes	84	7.8	42	13.0	1.56** 1	1.04-2.36	232	18.6	119	21.9	06:	.70–1.16
Have you been diagnosed with an STI in the past four months?												
Yes	38	3.5	25	7.7	2.17**	2.17** 1.25-3.70	70	5.6	42	7.7	<i>TT</i> :	.52-1.16

Note: For women, OR adjusted for Age, Education, Ethnicity, Employment, and Marital Status. For men, OR adjusted for Age, Education, Ethnicity, and Employment.

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 $^{***}_{p<.001},$   $^{**}_{p<.01},$   $^{*}_{p<.05}$ 

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Table 3

Alcohol and drug use among women and men at nearby and distant shebeen.

		Women					Men	ua			
	Nearby shebeen (n=1089)		Distant shebeen (n=330)			Nea shel (n=1	Nearby shebeen (n=1281)	Distant shebeen (n=561)	Distant shebeen (n=561)		
	п	. •	%	AOR	95%CI	ı ı	%	п	. %	AOR	95% CI
Alcohol Frequency											
How often do you have a drink containing alcohol?											
Never	121 11	11.2 31	9.5	.94	.84–1.04	91	7.3	36	6.5	1.01	.93-1.10
Monthly or less	261 24	24.1 80	24.5			273	21.8	117	21.2		
2-4 times a month	289 26	77 77	23.6			304	24.3	152	27.5		
2–3 times a week	298 27	27.5 97	29.8			351	28.0	160	29.0		
More than 4 times a week	114 10	10.5 41	12.6			233	18.6	87	15.8		
Alcohol Consumption											
How many drinks containing alcohol do you have on a typical day when you are drinking?											
None	118 10	10.9 28	8.6	.91	.84–.98	77	6.1	28	5.1	96.	.90-1.03
1–2	279 25	25.8 70	21.5			277	22.1	102	18.5		
3-4	77 997	24.6 77	23.7			274	21.8	132	24.0		
5–6	191 15	17.7 62	19.1			195	15.5	68	16.2		
7–9	63 5	5.8 32	8.6			81	6.5	46	8.4		
10 or more	165 15	15.2 56	17.2			351	28.0	153	27.8		
Marijuana use in past four months											
Yes	118 11	11.0 40	12.4	1.19	.80–1.79	275	22.0	104	19.0	.92	.71–1.19
Glue use in past four months											
Yes	17	1.6 10	3.1	2.43**	1.06-5.55	47	3.8	53	5.3	1.49	.92–2.41
Meth use in past four months											
Yes	909	5.6 22	6.9	1.61	.95–2.74	71	5.7	24	4.4	.94	.57–1.53
Injected drugs in past four months											
Yes	10	.9 10	3.1	3.68***	1.48–9.15	27	2.2	17	3.1	1.57	.84–2.92
$^{***}_{p<001}$											

p<.01

\* p<.05

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Note: For women, OR adjusted for Age, Education, Ethnicity, Employment, and Marital Status. For men, OR adjusted for Age, Education, Ethnicity, and Employment.

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Table 4

Sexual partners and acts among women and men at nearby and distant shebeens.

		Women	nen					Men	u			
	Nearby shebeen	rby	Distant shebeen	nnt sen			Nearby shebeen	rby	Distant shebeen	ant een		
	(n=1	(n=1089)	(n=330)	30)			(n=1	(n=1281)	(n=561)	(1)		
	M	SD	M	$\mathbf{SD}$	AOR	95%CI	M	SD	M	SD	AOR	95%CI
Number of male sex partners in past four months	66.	1.11	1.24	1.45	1.12	1.01-1.23*	.30	1.41	.40	1.62	1.04	.78–3.18
Number of female sex partners in past four months	.11	.45	.19	6.	1.18	.94–1.48	2.14	3.36	2.33	3.49	1.01	.98–1.04
Number of unprotected vaginal sex acts in the past 4 months,	3.43	8.78	3.42	9.33	1.01	.99–1.02	4.44	13.00	4.50	14.88	1.01	.99–1.01
Number of protected vaginal sex acts in the past 4 months,	2.31	6.10	3.54	7.03	1.01	.99–1.03	3.18	68.9	3.79	8.01	1.01	.99–1.02
In the past four months how many times did you drink alcohol before sex?	2.52	09.9	3.02	98.9	1.01	.99–1.03	4.06	9.45	4.58	10.58	1.01	.99–1.01
In the past four months how many times did you use drugs before sex?	.23	1.01	.36	1.24	1.12	$1.01-1.25^*$	99.	2.51	.40	1.73	.94	66.–68.
	п	%	п	%	AOR	95% CI	п	%	п	%	AOR	95% CI
Came to bar this evening to look for new sex partner?												
Yes	47	4.4	32	10.0	2.29	1.41–3.7**	154	12.1	79	14.2	68:	.66–1.20
Has someone given you money, alcohol, drugs or a place to stay in exchange for sex in the past 4 months?												
Yes	47	4.4	20	6.3	1.30	.74–2.28	102	8.2	09	11.1	1.51*	1.01–2.14
Have you given someone money, alcohol, drugs or a place to stay in exchange for sex in the past 4 months?												
Yes	23	2.1	4	4.4	1.80	.88–3.67	115	9.2	84	8.8	.93	.65–1.33
p<0.01												
$^{**}_{P<.01},$												
$\stackrel{*}{p}$ <.05,												
$^{7}p$ =.05												

Note: For women, OR adjusted for Age, Education, Ethnicity, Employment, and Marital Status. For men, OR adjusted for Age, Education, Ethnicity, and Employment.

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Table 5

Multivariate analyses of risk variables and shebeen proximity among women and men.

	×	Women		Z	Men
	AOR	95%CI		AOR	95%CI
HIV status	.74	.42–1.29	Ever been HIV tested?		
			yes	.82	.66-1.01
Ever STI	1.30	.79–2.13	Has someone given you money, alcohol, drugs or a place to stay in exchange for sex in the past 4		
Past four months STI	1.62	.84–3.11	months?		
Alcohol consumption	.93	.85–1.02	yes		
				1.52	1.07-2.15
Glue use	.85	.25–2.85			
ıbv	.53	.14–2.02			
At bar to find sex partner	1.94*	1.13-3.33			
Number of male sex partners in past four months	76.	.87–1.08			
In the past four months, used drugs before sex?					
yes	.93	.82–1.05			

Note: Nearby shebeens were coded as "0" and distant shebeens were coded as "1". For women, OR adjusted for Age, Education, Ethnicity, Employment, and Marital Status. For men, OR adjusted for Age, Education, Ethnicity, and Employment.