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Collective efficacy and HIV prevention in South African townships

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Abstract

South African townships have high HIV prevalence and a strong need for collective action to change normative sexual risk behaviors. This study investigated the relationship between perceptions of individuals about collective efficacy in the community's ability to prevent HIV and their personal HIV risk behaviors. Men (n=1581) and women (n=718) completed anonymous surveys within four Black African Townships in Cape Town, South Africa from June 2008 to December 2010. Measures included demographics, alcohol use, attitudinal and behavioral norms, sexual health communications, and sexual risk behaviors. In multivariate logistic regressions, men were more likely to endorse collective efficacy if they were married, drank less often in alcohol serving establishments, believed that fewer men approve of HIV risk behaviors, talk more with others about HIV/AIDS, and had more sex partners in the past month. Women were more likely to endorse collective efficacy if they drank alcohol less often, talked more with others about HIV/AIDS, had more sex partners in the past month, but reported fewer unprotected sex acts in the past month. Community level interventions that strengthen collective efficacy beliefs will have to consider both protective and risk behaviors associated with believing that the community is ready and capable of preventing HIV.

Keywords

HIV/AIDS; Collective efficacy; Social Norms; South Africa

Introduction

South Africa has one of the most severe HIV/AIDS epidemics in the world with 5.7 million infected and 1,500 new HIV infections daily (UNAIDS/WHO 2010). The overall national prevalence of HIV in South Africa is 11% and prevalence among people living in townships is 21% (Shisana et al., 2005). Townships are settlements in urban settings originally designated during apartheid for non-whites only. Today townships continue to be

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characterized by extreme poverty with 45% unemployment, 41% of residents living in informal shacks (Statistics South Africa, 2001), and heavy drinking occurring in informal drinking establishments or shebeens (Kalichman et al., 2008, Suliman et al., 2010). Heavy alcohol consumption (Cook & Clark 2005, Pithey & Parry 2009, Morojele et al., 2006, Simbayi et al., 2006) and patronizing shebeens (Weir et al., 2003, Kalichman 2010, Cain et al., 2012) have been linked with increased risk for HIV. With HIV rates and hazardous drinking being so prevalent in these communities (Shisana et al, 2005), townships are settings where collective action is needed to address the social factors that put individuals at risk for HIV.

To address the HIV epidemic there has been an extensive focus on behavioral HIV prevention interventions with individuals (Trickett, 2005). However, behavioral HIV prevention interventions have little effect on behavior change with individuals when protective sexual behaviors are not supported by their social networks (Latkin & Knowlton 2005). The Social Ecological Model states that individual behavior is influenced by interpersonal (social norms, social support) as well as community (physical environment, settings) factors. These factors are particularly compelling in HIV prevention research because they provide insight into how individuals choose sex partners and what sex behaviors are practiced (Sallis et al., 2008). If protective sex behaviors are not normative within a social network in a setting with high HIV prevalence, then the risks for becoming infected with HIV are greater. Community responses are necessary to counteract these influential factors. Approaches to HIV prevention interventions that build upon group processes, like collective action, are critical to HIV prevention.

Collective efficacy strongly influences collective action because it can help determine whether and how the capability of one's group might influence the behaviors of an individual (Foster-Fishman et al., 2007; Lippman, 2007). Collective efficacy is defined as the shared belief in the ability of a group to address problems when it acts conjointly (Bandura, 1997, 2001). In community settings, collective efficacy is the belief held by community members that together people can make a difference (Sampson, 1997). Research on collective efficacy has suggested some protective effects on neighborhood violence prevention (Sampson, 1997), health seeking behavior for asthma (Browning, 2004), delayed sexual debut in adolescents (Browning et al., 2008; Kim, 2010), and increased communication between adolescents and adults on sexual health (Carlson et al., 2012). Collective efficacy, the perception that the community can prevent HIV, may influence HIV sexual risk behavior of individuals; individuals may be more likely to decrease number of sex partners and increase condom use when they believe there is collective motivation to change normative sex behaviors.

The notion that perceptions about one's community can influence behavior is supported by research on social norms, where the perception of what others believe and practice influences personal behavior (Cialdini & Trost 1998). Social norms reflect either attitudinal or behavioral norms (Cialdini et al., 1990). With respect to HIV risk behavior, attitudinal norms refer to whether others approve of HIV risk or protective behaviors whereas behavioral norms refer to the perception about how others act. In South African townships, Carey et al. (2011) found that men overestimated how many peers approved of and engaged in risky behaviors. Further, permissive attitudinal and behavioral norms with regard to HIV risk behaviors were associated with higher self-reported risk behavior among men. Thus, not only were men inaccurate about their perceptions of norms surrounding risk behavior, but these perceptions were also related to higher risk behavior. Social norms have been linked with the formation of collective efficacy for social action (Lee, 2010; Thomas et al., 2009) and this could enhance HIV prevention efforts. Men who perceive others as less approving of risk behaviors may also be more likely to engage in protected sexual intercourse. Thus,

beliefs that their community has the capacity to support and practice safer sexual behaviors to prevent HIV may help individuals to adopt less risky behaviors.

Communication within the community and between individuals seeking to prevent potentially risky behavior is key to HIV prevention (Maharaj, 2001). Sexual health communication is connected with the norms of groups (Cain et al., 2010) and can promote collective action for HIV prevention by influencing perceptions of normative sexual behavior. Previous HIV prevention interventions, guided by diffusion of innovation model (Rogers, 1995), has recruited popular opinion leaders to spread messages about safer sex practices in an effort to reduce HIV risk among gay men (Kelly, 1997; Kegeles et al., 1996). In South African townships, individuals who communicate about HIV prevention with others in their community are more likely to use condoms (Scott-Sheldon et al., 2011). Efforts to increase sexual health communication among community members may contribute to perceptions of collective efficacy. Furthermore, if individuals believe their community can prevent HIV, they may be more likely to communicate more about HIV prevention strategies than individuals who do not endorse collective efficacy.

Research on the role of collective efficacy on HIV risk behavior may be informative in understanding how a community can generate collective action for HIV prevention. The townships of South Africa serve as an important setting because they are communities where HIV prevalence is high and community action is needed to promote safer sexual behavior. This study sought to investigate the relationship between collective efficacy and HIV risk behavior using community survey data from a large multi-level HIV prevention study in four South African Townships. We hypothesized that men and women who endorse collective efficacy for community prevention against HIV would be more likely to drink less alcohol, believe social norms are less approving of HIV risk behaviors, engage in more sexual health communication, and practice fewer unprotected sex acts than men and women who do not endorse collective efficacy.

Methods

Participants

Participants were 1,581 men and 718 women recruited to participate in a cross sectional anonymous community survey from June 2008 to December 2010. All participants were 18 years of age or older, with a median age of 29. Nearly all (98%) participants were indigenous Black African, 21% ($n=483$) were married, and 51% ($n=1164$) were employed.

Procedures

Community surveys were conducted in twelve separate neighborhoods within four contiguous Black African Townships approximately 4km wide and located 20km outside of Cape Town's business district. Neighborhoods were defined as an area approximately 0.5 km wide and contained at least one shebeen (bar) serving more than 75 patrons. Using methods described by Weir et al. (2002, 2003), we conducted rapid community assessments to identify twelve shebeens located at least 1km from each other. During field worker visits to shebeens, owners and patrons were assessed for shebeen attributes. Field workers were eight indigenous men and women from communities similar to our selected areas and who spoke both Xhosa and English. Field workers approached persons on the street (50%), and persons socializing and drinking in the neighborhood shebeens (50%), and asked if they wanted to complete a brief survey that could help their community. Persons who agreed to participate (95%) completed a 9-page anonymous survey. Surveys were available in either English or Xhosa; most participants completed in 15–20 minutes independently, but 3% required assistance. Participants were compensated for their time with a non-monetary item

(keychain or shopping bag). All surveys and study procedures were approved by the US and South African Institutional Review Boards.

Measures

Measures used in this analysis included demographic characteristics, collective efficacy, alcohol use, social norms, sexual health communication, and sexual risk behaviors.

Demographic items included race, employment status, marital status, age, whether they had passed matric, number of children, whether they had tested for HIV, their HIV status, and whether they ever had a STI. Participants who self-reported being HIV positive ($n=154$) were excluded from this analysis because their status might affect their belief in the community's ability to prevent HIV.

Collective efficacy was adopted from Carroll et al. (2005) and assessed by asking whether they agreed or disagreed with the statement, "As a community, we can prevent HIV." Responses were measured as strongly disagree, disagree, agree, and strongly agree and coded dichotomously as either not endorsing (0) or endorsing (1) collective efficacy.

Alcohol use was assessed using items adapted from the Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS-IV) (Grant et al., 2003). Frequency was measured by participants reporting how many days they drank alcohol in the past month. Quantity was measured by participants reporting the number of times in the past month they drank 5 or more drinks on one occasion. Alcohol use in drinking venues was measured by participants reporting how many days in the past month they drank in public places such as bars, taverns, or shebeens. Responses included never, once in the past month, 2–3 times a month, once a week, 2 times a week, 3–4 times a week, and nearly every day.

Social Norms include attitudinal and behavioral norms. *Perceived attitudinal norms* were assessed by asking men and women how other men in their community feel about four target behaviors: (a) having more than one sex partner, (b) having sex with a condom, (c) having sex when drunk, and (d) meeting sex partners in the shebeen (bar). Responses were measured as (1) strongly disapprove, (2) disapprove, (3) approve, and (4) strongly approve. For *perceived behavioral norms*, men and women were assessed by asking men and women how many men in their community regularly practice the same four target behaviors. Responses were measured as (1) none, (2) few, (3) some, (4) many, or (5) all men.

Sexual Health Communication was assessed by asking participants when they last talked with another community member about (a) HIV/AIDS, (b) getting HIV tested, and (c) using a condom. Responses were "never", "yes, in the past 30 days," and "yes, but not in the past 30 days." We recoded these responses dichotomously as no communication in the past month (0) vs. communication in the past month (1).

Sexual Risk Behaviors. Participants reported the number of male and female sex partners they had in the past month and the number of times they had vaginal and anal intercourse with and without condoms. All sex behavior questions were asked with regard to the past month (30 days) and used open response formats to improve recall accuracy and optimize candid reporting (Napper et al., 2009).

Data Analyses

First, we compared the demographic characteristics, alcohol use, lifetime risk characteristics, and sexual behaviors of men and women who endorsed collective efficacy ($n=1,780$) with those who did not endorse collective efficacy ($n=516$). For the categorical and continuous characteristics, we conducted logistic regression and report odds ratios with

95% confidence intervals. We then conducted multivariate logistic regressions for men and women separately to identify the factors associated with collective efficacy. The multivariate model included all the significant variables (at the level $p < .10$) associated with collective efficacy from univariate analyses. We did not include attitudinal norms for women in the multivariate analysis because it asked women about the perceptions of other men and represents a more indirect pathway of behavior influence.

Results

Men and women were examined for demographics, alcohol use and sexual behavior by endorsement of collective efficacy. Seventy-seven percent of men and 78% of women endorsed the collective efficacy belief that their community can prevent HIV/AIDS.

Demographics

For men and women, there were no differences in age, employment status, education, and having children for those who endorse and who do not endorse collective efficacy (Table 1). Men who were married and women who were black were marginally more likely to endorse collective efficacy.

Alcohol Use

Men and women who endorsed collective efficacy drank alcohol less frequently and lower quantities than men and women who did not endorse collective efficacy (Table 2). They were also less likely to drink alcohol in public places, such as taverns, bars, and shebeens.

Social Norms

Men and women who endorsed collective efficacy also perceived less risky attitudinal norms, perceiving fewer men in their community approving of HIV risk behaviors (Table 3). There were no differences for men or for women between those who endorsed and did not endorse collective efficacy on perceived behavioral norms about how other men behave.

Sexual Health Communication

Men and women who endorsed collective efficacy were more likely to talk with people about HIV/AIDS, about getting HIV tested, and for women, also more likely to advise someone to use condoms in the past month (Table 3). However, men who endorsed collective efficacy were less likely to have been tested for HIV.

Sexual Risk Behavior

For men and women, there were no differences in protected sex acts, talking to partners about condoms, drinking alcohol before sex, or having a sex partner that drank alcohol before sex (Table 4). Both men and women were marginally more likely to have more total sex partners in the past month if they endorsed collective efficacy. Women who endorsed collective efficacy were less likely to have unprotected vaginal and anal sex acts in the past month.

Multivariate Logistic Regression model

Using a multivariate logistic regression model we identified factors that were uniquely associated with endorsing the collective efficacy among men and among women (Table 5). For men, collective efficacy was associated with being married, drinking less often in public places in the past month, perceiving less permissive attitudinal norms, talking with people about HIV/AIDS in the past month and having more sex partners in the past month. For women, collective efficacy was associated with drinking less frequently in past month,

talking with people about HIV/AIDS in the past month, having more sex partners in the past month, and having less unprotected sex in the past month.

Discussion

This study examined whether collective efficacy was associated with HIV risk behavior among men and women in South African townships. Consistent with study hypotheses, men and women who endorsed collective efficacy beliefs (i.e. believed that the community could prevent HIV) consumed alcohol less frequently, in lower quantities, and in less public places. They also believed that others were less approving of HIV risk behaviors, and they were more likely to discuss HIV with others. Further, for women but not men, endorsing collective efficacy was associated with less unprotected sex in the past month. Alcohol consumption and drinking at shebeens have been linked with increased HIV risk. Men and women who do not engage in these behaviors or socialize in these settings may perceive that the community is capable of preventing HIV. This also reflects their attitudinal norms where individuals reported that other men are less approving of HIV risk behaviors. These perceptions may be important determinants to collective efficacy for HIV prevention where the judgment of other community members involved influence the community's ability to reduce risk. Men and women who believed in their community's collective efficacy were also more likely to recently talk about HIV/AIDS, to talk to someone about getting test for HIV, and advise someone about using condoms. Consistent with a social diffusion model (Rogers, 1995), for normative behaviors to spread in a social network, it is important for those who are practicing safer behaviors to talk about the importance of risk reduction behaviors to others in the community. Similarly, if members of the community discuss the importance of HIV prevention and strategies for safer sex, individuals may perceive that their community is more capable to prevent HIV.

For sexual risk behaviors, collective efficacy was associated with both protective and risky behaviors for HIV. Women who endorsed stronger collective efficacy reported less unprotected sex in the past month. Previous research in a low income South African community linked women with personal empowerment, increasing social networks, and encouraging community development (Slater, 2001). Women may feel constrained by societal factors and a woman's ability to protect herself could be related to her perception of what the community will support and can collectively achieve. However, this study found that men and women who endorsed collective efficacy actually had more sex partners than those who did not endorse this belief. And men who endorsed collective efficacy were less likely to have been tested for HIV. Although these results did not confirm our hypothesis, they suggest that this relationship may be more complex. In these communities, the social norm for having multiple partners may be so widely prevalent that beliefs about group readiness to prevent HIV may not be related to this behavior. Further examination could also determine whether those who endorsed collective efficacy believe their own behaviors are not contributing to the risk of their community and the responsibility to prevent HIV belongs to others who are perceived to be practicing riskier behaviors. This is supported by the finding that perceptions of what others do are often exaggerated in a more risky direction (Carey et al., 2011). These associations warrant further exploration to understand the mechanisms by which social norms influence the community's collective capability to prevent HIV.

These results should be considered in light of study limitations. First, we relied upon self-report data. Use of anonymous surveys was intended to minimize bias and, when bias in self-report occurs, it is usually in the direction of social desirability. Therefore, it is possible that alcohol consumption and sexual risks may be higher than the rates reported. Second, we relied on a single item to measure collective efficacy and including additional collective

efficacy items may have strengthened this measurement. Third, both men and women were asked about the attitudinal and behavioral norms of other men. In this case, women's perceptions of what other men think and do may have an indirect influence on their behavior through relationships and partnerships. Finally, because of the cross-sectional nature of these data, we cannot establish the directionality of the relationships between the identified correlates and collective efficacy. Notwithstanding these limitations, we believe that our findings are important for understanding the importance of collective efficacy for HIV prevention in South African townships.

With HIV prevalent in South Africa townships, it is often easy to focus on what resources these communities lack and what risk behaviors people are practicing. However, it is important to recognize the assets these communities possess. Collectivism is a prominent feature in the South African philosophy of Ubuntu, where the humanity of individuals is expressed through their relationship with others (Hailey, 2008). Utilizing collectivism to generate collective action for HIV prevention in South Africa is a resource that warrants further exploration (Outwater, 2005). Collective action has helped these communities in other adversities, such as generating support to protest against Apartheid. Collective action can play an important role in HIV prevention because changes in the social environment and the strengthening of community prevention goals can influence the behaviors of individuals (McLeroy et al., 1988).

The current findings suggest that perceptions of group capability to prevent HIV, known as collective efficacy, are associated with lower personal HIV risk, such as less alcohol consumption, less belief that others approve of HIV risk behaviors, talking more about HIV prevention and lower rates of unprotected sex in women. However, it remains unclear why belief in collective efficacy is not related having multiple partners, or whether the responsibility to change normative risky behaviors belongs to others in the community. There is a continuing need for community level interventions that increase the ability of communities to prevent HIV by generating collective action to challenge risk behaviors and building support for individuals who engage in protective behaviors. Our findings highlight the role of collective efficacy in building collective action for HIV prevention, especially when it comes to the examining how these beliefs are associated with risk behaviors.

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References

- Bandura, A. *Self-Efficacy: The Exercise of Control*. New York: W.H. Freeman and Company; 1997.
- Bandura A. Social Cognitive Theory: An Agentic Perspective. *Annual Review of Psychology*. 2001; 52:1–26.
- Browning CR, Burrington LA, Leventhal T, Brooks-Gunn J. Neighborhood structural inequality, collective efficacy, and sexual risk behavior among urban youth. *Journal of Health and Social Behavior*. 2008; 49:269–285. [PubMed: 18771063]
- Cagney K, Browning C. Exploring Neighborhood-level Variation in Asthma and other Respiratory Diseases. *Journal of General Internal Medicine*. 2004; 19:229–236. [PubMed: 15009777]
- Cain D, Pare V, Kalichman SC, Harel O, Mthembu J, Carey MP, Carey KB, Mehloakulu V, Simbayi LC, Mwaba K. HIV risks associated with patronizing Alcohol Serving Establishments in South African Townships, Cape Town. *Prevention Science*. 2012; 13:627–634. [PubMed: 22992872]

- Carey KB, Scott-Sheldon L, Carey MP, Cain D, Mlobeli M, Vermaak R, Mthembu J, Simbayi L, Kalichman SC. Community norms for HIV risk behaviors among men in a South Africa township. *Journal of Behavioral Medicine*. 2011; 34:32–40. [PubMed: 20680673]
- Carlson M, Brennan R, Earls F. Enhancing adolescent self-efficacy and collective efficacy through public engagement around HIV/AIDS competence: A multilevel, cluster randomized-controlled trial. *Social Science and Medicine*. 2012; 75:1078–1087. [PubMed: 22703885]
- Cialdini RB, Reno RR, Kallgren CA. A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology*. 1990; 58:1015–1026.
- Cialdini, RB.; Trost, MR. Social influence: Social norms, conformity and compliance. In: Gilbert, DT.; Fiske, ST.; Lindzey, G., editors. *The handbook of social psychology*. 4. New York: Oxford University Press; 1998. p. 151-192.
- Cook RL, Clark DB. Is there an association between alcohol consumption and sexually transmitted diseases? A systematic review. *Sexually Transmitted Diseases*. 2005; 32:156–164. [PubMed: 15729152]
- Foster-Fishman P, Cantillon D, Peirce S, Van Egeren L. Building an active citizenry: the role of neighborhood problems, readiness, and capacity for change. *American Journal of Community Psychology*. 2007; 39:91–106. [PubMed: 17393297]
- Hailey, J. Ubuntu: A Literature Review. 2008. Retrieved from Tutu Foundation website: http://www.tutufoundationuk.org/documents/UbuntuLiteratureReview_JH_Dec08.pdf
- Kalichman SC, Simbayi LC, Vermak 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; 9:55–62. [PubMed: 18264762]
- Kalichman SC. Social and Structural HIV Prevention in Alcohol-Serving Establishments. *Alcohol Research and Health*. 2010; 33:184–194. [PubMed: 23584060]
- Kegeles S, Hayes RB, Coates TJ. The Mpowerment Project: A Community level HIV prevention intervention for young gay men. *American Journal of Public Health*. 1996; 86:1129–1136. [PubMed: 8712273]
- Kelly, JA. Changing HIV risk behavior: Practical strategies. New York, NY US: Guilford Press; 1995.
- Kelly JA, Murphy DA, Sikkema KJ, McAuliffe TL, Roffman RA, Solomon LJ, Winett RA, Kalichman SC. The Community HIV prevention Research Collaborative. Randomized, controlled, and community-level HIV prevention intervention for sexual risk behavior among homosexual men in US cities. *Lancet*. 1997; 350:1500–1505. [PubMed: 9388397]
- Kim J. Influence of neighbourhood collective efficacy on adolescent sexual behaviour: Variation by gender and activity participation. *Child*. 2010; 36:646–654.
- Latkin CA, Knowlton AR. Micro-social structural approaches to HIV prevention: a social ecological perspective. *AIDS Care*. 2005; 17(Suppl1):S102–13. [PubMed: 16096122]
- Lee F. The perceptual bases of collective efficacy and protest participation: The case of pro-democracy protests in Hong Kong. *International journal of public opinion research*. 2010; 2:392.
- Lippman SA, Derrigan D, Chinaglia M, Diaz J. Chaos, co-existence, and the potential for collective action: HIV-related vulnerability in Brazil's international borders. *Social Science and Medicine*. 2007; 64:2464–2475. [PubMed: 17434653]
- Maharj P. Male attitudes to family planning in the era of HIV/AIDS: evidence from KwaZulu-Natal, South Africa. *Journal of South African Studies*. 2001; 27:245–57.
- Mathews C, Aaro LE, Flisher AJ, Mukoma W, Wubs AG, Schaalma H. Predictors of early first sexual intercourse among adolescents in Cape Town, South Africa. *Health Education Research*. 2009; 24:1–10. [PubMed: 18203683]
- McLeroy K, Bibeau D, Streckler A, Glanz K. An ecologic perspective on health promotion programs. *Health Education Quarterly*. 1998; 15:351–77. [PubMed: 3068205]
- Merson M, O'Malley J, Serwadda D, Apesuk C. The History and Challenge of HIV Prevention. *Lancet*. 2008; 372:475–88. [PubMed: 18687461]
- Morojele NK, Kachieng'a MA, Mokoko E, Nkoko MA, Parry CDH, Nkowane AM, et al. Alcohol use and sexual behaviour among risky drinkers and bar and shebeen patrons in Gauteng province, South Africa. *Social Science & Medicine*. 2006; 62:217–227. [PubMed: 16054281]

- Outwater A, Abrahams N, Campbell J. Women in South Africa: Intentional Violence and HIV/AIDS: Intersections and Prevention. *Journal of Black Studies*. 2005; 35:135–154.
- Pithey A, Parry C. Descriptive systematic review of sub-Saharan African studies on the association between alcohol use and HIV infection. *SAHARA J : Journal of Social Aspects of HIV/AIDS Research Alliance / SAHARA, Human Sciences Research Council*. 2009; 6:155–169.
- Rogers, EM. *Diffusion of Innovation*. 4. New York: Free Press; 1995.
- Sallis, JF.; Owen, N.; Fisher, EB. Ecological Models of Health Behavior. In: Glanz, Karen; Rimer, Barbara K.; Viswanath, K., editors. *Health Behavior and Health Education: Theory, Research, and Practice*. San Francisco: Jossey-Bass; 2008. p. 465-485.
- Sampson R, Raudenbush S, Earls F. Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy. *Science*. 1997; 277:918–924. [PubMed: 9252316]
- Shisana, O.; Rehle, T.; Simbayi, L.; Parker, W.; Bhana, A.; Zuma, K.; Connolly, C.; Jooste, S.; Pillay, V., et al. *South African National HIV Prevalence, Incidence, Behaviour And Communication Survey 2005*. Cape Town: Human Sciences Research Council Press; 2005.
- Simbayi LC, Mwaba K, Kalichman SC. Perceptions of the combination of HIV/AIDS and alcohol as a risk factor among STI clinic attenders in South Africa: Implications for HIV prevention. *Social Behavior and Personality*. 2006; 34:535–544.
- Slater R. Urban agriculture, gender and empowerment: an alternative view. *Development Southern Africa*. 2001; 18:635–650.
- Statistics South Africa. *Population Census 2001*. 2001. Accessed at www.statssa.gov.za
- Suliman S, Seedat S, Williams D, Stein D. Predictors of transitions across stages of alcohol use and alcohol-use disorders in South Africa. *J Stud Alcohol Drugs*. 2010; 71:695–703. [PubMed: 20731974]
- Thomas E, McGarty C, Mayor K. Aligning Identities, Emotions, and Beliefs to create Commitment to Sustainable Social and Political Action. *Personality and Social Psychology Review*. 2009; 13:194. [PubMed: 19622800]
- Trickett, E. Community Interventions and HIV/AIDS Affecting the Community Context. In: Trickett, E.; Pequegnat, W., editors. *Community Interventions and AIDS*. New York: Oxford Press; 2005.
- UNAIDS/ World Health Organization. *AIDS epidemic update*. Geneva: World Health Organization; 2010.
- 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):i106–13. [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; 17:895–903. [PubMed: 12660537]

Table 2
Alcohol use in the past 30 days among men and women who endorsed and did not endorse collective efficacy for HIV/AIDS prevention

	Men (n=1581)				Women (n=718)				
	Yes (n=1218)		No (n= 363)		Yes (n=562)		No (n= 153)		
	n	%	n	%	n	%	n	%	
How often do you drink an alcohol beverage?									
Never	193	16%	41	11%	252	45%	46	30%	.83 *** (.76, .91)
Once in past 30 days	86	7%	10	3%	31	6%	8	5%	
2-3 times in past 30 days	141	12%	30	8%	56	10%	15	10%	
Weekly	149	12%	26	7%	53	10%	10	7%	
2 times a week	316	26%	108	30%	100	18%	40	26%	
3-4 times a week	226	19%	112	31%	45	8%	23	15%	
Everyday or nearly everyday	96	8%	32	9%	18	3%	10	7%	
How many times did you have 5 or more drinks on an occasion?									
Never	324	28%	85	24%	304	57%	53	36%	.82 *** (.75, .90)
Once in past 30 days	160	14%	42	12%	36	7%	19	13%	
2-3 times in past 30 days	107	9%	28	8%	33	6%	9	6%	
Weekly	153	13%	36	10%	56	11%	16	11%	
2 times a week	221	19%	93	26%	73	14%	31	21%	
3-4 times a week	150	13%	62	18%	24	5%	16	11%	
Everyday or nearly everyday	46	4%	9	3%	9	2%	4	3%	
How often did you drink in public places such as bars, taverns, or shebeens?									
Never	250	21%	50	14%	304	57%	53	36%	.86 ** (.78, .94)
Once in past 30 days	126	11%	17	5%	36	7%	19	13%	
2-3 times in past 30 days	130	11%	33	9%	33	6%	9	6%	
Weekly	148	12%	22	6%	56	11%	16	11%	
2 times a week	293	24%	103	29%	73	14%	31	21%	
3-4 times a week	174	15%	98	24%	24	5%	16	11%	
Everyday or nearly everyday	79	7%	35	10%	9	2%	4	3%	

[†] p<.10,

* p<.05,

p<.01,

p<.001; Covariate in model for men- marriage, Covariate in model for women- ethnicity; Collective efficacy for community prevention (0=no, 1=yes); Alcohol entered as a continuous variable in logistic regression.

Table 3

Social Norms, sexual health communication, and HIV testing among men and women who endorsed and did not endorse collective efficacy for HIV/AIDS prevention

	Men (n=1581)						Women (n=718)						
	Yes (n=1218)			No (n=363)			Yes (n=562)			No (n=153)			
	M	SD	%	M	SD	%	M	SD	%	M	SD	%	
Perceived Attitudinal Norms of other Men	2.59	0.8	3.02	0.66	.36*** (.29, .45)			2.77	0.69	3.03	0.56	.52*** (.38, .71)	
Perceived Behavioral Norms of other Men	3.17	0.65	3.22	0.53	.87 (.72, 1.05)			3.28	0.65	3.23	0.56	.98 (.73, 1.30)	
Talked with people about HIV/AIDS[‡]	n	%	n	%	AOR (95% CI)			n	%	n	%	AOR (95% CI)	
	689	57%	141	39%	2.11*** (1.66, 2.69)			364	65%	72	47%	2.10*** (1.46, 3.02)	
Talked to someone about getting tested[‡]	659	55%	149	41%	1.74*** (1.37, 2.21)			365	65%	72	47%	2.08*** (1.45, 2.99)	
Advised someone to use condoms[‡]	866	72%	269	75%	.86 (.66, 1.13)			429	77%	97	63%	1.87** (1.27, 2.74)	
Tested for HIV	786	65%	258	71%	.75* (.58, .97)			409	73%	114	75%	.90 (.59, 1.35)	
STI Diagnosed in Lifetime	490	40%	147	41%	1.02 (.80, 1.3)			199	35%	45	30%	1.31 (.88, 1.93)	

[‡] p<.10,

* p<.05,

** p<.01,

*** p<.001;

Covariate in model for men- marriage, Covariate in model for women- ethnicity; Collective efficacy for community prevention (0=no, 1=yes);

[‡] in the past 30 days.

Sexual behavior in the past 30 days among men and women who endorsed and did not endorse collective efficacy for HIV/AIDS prevention

Table 4

	Men (n=1581)				Women (n= 718)							
	Yes (n=1218)		No (n= 363)		Yes (n=562)		No (n= 153)					
	M	SD	M	SD	M	SD	M	SD				
Total Partners	1.64	1.51	1.48	1.14	1.09 [‡]	(.99, 1.19)	1.22	0.96	1.07	0.78	1.21 [‡]	(.98, 1.50)
Unprotected Vaginal and Anal Sex Acts	6.62	8.42	5.74	7.12	1.01	(.99, 1.03)	5.49	7.4	7.03	8.33	.98 [*]	(.96, 1.0)
Protected Vaginal and Anal Sex Acts	6.01	8.36	6.45	7.18	.99	(.98, 1.0)	5.11	7.63	4.38	5.75	1.01	(.99, 1.04)
Talked with Partner about Condoms	3.15	6.74	3.74	7.25	.99	(.97, 1.01)	4.13	7.26	3.59	7.19	1.01	(.98, 1.04)
Drank Alcohol Before Sex	4.22	6.28	4.04	5.05	1.01	(.99, 1.03)	2.17	4.74	2.27	3.87	.99	(.96, 1.04)
Partner Drank Alcohol Before Sex	1.65	3.65	1.81	3.33	.99	(.96, 1.02)	2.89	4.8	3.26	4.62	.986	(.95, 1.02)

[‡] p<.10,

* p<.05,

** p<.01,

*** p<.001;

Covariate in model for men- marriages, Covariate in model for women- ethnicity; Collective efficacy for community HIV prevention (0=no, 1=yes)

Table 5

Multivariate binary logistic model examining predictors of collective efficacy among men (N=1486) and women (N= 673).

Variable- Men	<i>B (SE)</i>	<i>OR</i>	OR 95% CI	
			Lower	Upper
Married	.35 (.17)	1.36*	1.01	1.97
Alcohol Frequency in the past month	.07 (.07)	1.07	0.93	1.23
Alcohol Quantity in the past month	.00 (.04)	1.00	0.92	1.09
Alcohol Use in Drinking Venue Frequency in the past Month	-.21 (.06)	.81***	0.72	0.91
Ever tested for HIV	-.22 (.14)	.81	0.61	1.06
Perceptions of Other Men Attitudes	-.95 (.11)	.39***	0.31	0.49
Talked with people about HIV/AIDS	.53 (.16)	1.70**	1.25	2.31
Number of sex partners in the past month	.12 (.05)	1.13*	1.01	1.26

Variable- Women	<i>B (SE)</i>	<i>OR</i>	OR 95% CI	
			Lower	Upper
Ethnicity	.45 (.56)	1.56	0.52	4.66
Alcohol Frequency in the past month	-.22 (.10)	.80*	0.64	0.97
Alcohol Quantity in the past month	-.06 (.09)	0.97	0.81	1.15
Alcohol Use in Drinking Venue Frequency in the past Month	.04 (.09)	1.04	0.89	1.27
Talked with people about HIV/AIDS	.42 (.22)	1.53 [†]	1.00	2.44
Number of sex partners in the past month	.39 (.13)	1.48**	1.14	1.91
Unprotected sex acts in the past month	-.03 (.01)	0.97*	0.95	0.98

Notes.

 $p < .001$,

**
 $p < .01$,

*
 $p < .05$,

[†]
 $p < .10$; Collective Efficacy Endorsement=1, Non-endorsement=0