HHS Public Access

Author manuscript

AIDS Care. Author manuscript; available in PMC 2017 February 01.

Published in final edited form as:

AIDS Care. 2016 ; 28(2): 228–233. doi:10.1080/09540121.2015.1080792.

Sexual communication self-efficacy, hegemonic masculine norms and condom use among heterosexual couples in South Africa

Anna Leddy[1], **Deepalika Chakravarty**[2,3], **Sibongile Dladla**[4,a], **Guy de Bruyn**[b], and **Lynae Darbes**[2]

[1]Department of Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

[2]Center for AIDS Prevention Studies & Global Health Sciences, University of California San Francisco, San Francisco, CA, USA

[3]Center for Research and Education on Gender and Sexuality, San Francisco State University, San Francisco, CA, USA

[4]Perinatal HIV Research Unit, University of the Witwaterstrand, Soweto, South Africa

Abstract

Hegemonic masculine norms (HMN), which promote sexual risk-taking among males and the subordination of women, are believed to play a key role in the HIV epidemic among heterosexual couples in South Africa (SA). Sexual communication self-efficacy (SCSE) (i.e. a couple's confidence in their ability to communicate about HIV prevention) may be a key leverage point for increasing HIV prevention behaviors among this population. We interviewed 163 sexually active heterosexual couples in Soweto, SA to investigate the association between SCSE, HMN and consistent condom use. We collected information on demographics, relationship dynamics and sexual activity. We utilized the SCSE scale to measure couples' SCSE, and a subscale of the Gender Equitable Men scale to measure HMN among males. We performed bivariate and multivariable analyses to determine the association of consistent condom use with couples' SCSE as well as the male partner's endorsement of HMN. We found that couples with higher SCSE have greater odds of consistent condom use (aOR=1.30, 95% CI: 1.15–1.47). Furthermore, male endorsement of HMN was found to be negatively associated with consistent condom use among couples (aOR=0.47, 95% CI: 0.24–0.89). Joint HIV serostatus was not significantly associated with the outcome. Future interventions that equip heterosexual couples with sexual

Corresponding Author: Lynae Darbes, Ph.D., Associate Professor of Medicine, Center for AIDS Prevention Studies, UCSF, Mailcode 0886, 550 16th Street, 3rd Floor, San Francisco, CA, USA 94158, Tel: +1 (415) 476-6265, ; Email: lynae.darbes@ucsf.edu

[a]Current affiliation: Centers for Disease Control (CDC), Pretoria, South Africa

[b]Current affiliation: Sanofi Pasteur, Swiftwater, PA, USA

Anna Leddy, MHS, Johns Hopkins Bloomberg School of Public Health, 615 N. Wolfe Street, Baltimore, MD, USA, 21205, Tel: +1 (415)-637-3209, aleddy3@jhu.edu

Deepalika Chakravarty, MS, Center for AIDS Prevention Studies, UCSF, Mailcode 0886, 550 16th Street, 3rd Floor, San Francisco, CA, USA 94158, Tel: +1 (415)-476-6240, Deepalika.Chakravarty@ucsf.edu

Sibongile Dladla, CDC South Africa, 1140 Prospect Street, Hatfiled, Pretoria, South Africa, Tel: +27 12 424 9000, ntilolo41@gmail.com

Guy de Bruyn, MBBCh MPH, Sanofi Pasteur, Discovery Drive, Swiftwater, PA, USA, 18370, Tel: +1 (570)-957-0746, gdebruynmd@gmail.com

communication skills, while simultaneously promoting more gender equitable norms, may increase consistent condom use and thereby reduce the transmission of HIV among this at-risk population.

Keywords

sexual communication; couples; gender norms; South Africa; HIV prevention

INTRODUCTION

Heterosexual couples in primary relationships are disproportionately affected by HIV in sub-Saharan Africa (SSA) (Dunkle et al., 2008; WHO., 2011). Couple sexual communication self-efficacy (SCSE), defined as a couple's confidence in their ability to communicate about sexual risk reduction, has the potential to be a key leverage point for HIV prevention interventions for this high risk group (Matseke, Peltzer, Mchunu, & Louw, 2012; Vamos et al., 2013). Past research in this area has typically focused on the impact of condom negotiation self-efficacy on consistent condom use at the individual level (Onoya et al., 2011; Sayles et al., 2006). However, the Dyadic Framework for HIV prevention posits that adopting HIV prevention methods, such as consistent condom use requires the successful coordination and cooperation between both partners (Karney et al., 2010). Thus, high SCSE for both partners, instead of a single partner, may have a greater impact on uptake of HIV prevention behaviors.

Hegemonic masculine norms (HMN), which value male "toughness," virility, and dominance over women, are believed to play a key role in the heterosexual HIV epidemic in South Africa (SA) (Connell & Messerschmidt, 2005; Higgins, Hoffman, & Dworkin, 2010; Jewkes & Morrell, 2010; Richardson et al., 2014). South African men who subscribe to these norms are more likely to engage in HIV risk behaviors (MacPhail et al., 2009; Mantell et al., 2011; Stephenson, Bartel, & Rubardt, 2012). These norms also promote male control over reproductive and sexual health decisions, including condom use, childbearing, and the timing and terms of sex (Blanc, 2001; Ghanotakis, Peacock, & Wilcher, 2012). Individuals in relationships characterized by these norms are less likely to use condoms consistently (Durevall & Lindskog, 2014; Pettifor, Measham, Rees, & Padian, 2004; Shai, Jewkes, Nduna, & Dunkle, 2012).

We examined the relationship between couple-level SCSE and consistent condom use, adjusting for the male partner's endorsement of HMN.

METHODS

Recruitment and Eligibility

Data are from a cross sectional study conducted in Soweto, SA in 2008 among heterosexual couples recruited from ten community locations and from one clinic (the Tswarisanang Couples Testing Clinic affiliated with the Perinatal HIV Research Unit (PHRU) at Chris Hani Baragwanath Hospital) using a non-probability, venue-based sampling strategy. A combination of active (i.e. recruiter-based outreach) and passive (i.e. flyers) recruitment

strategies were used. Depending on the couples' availability, partners were screened separately either in person or via telephone.

To be eligible, both partners in a couple had to be 18 years or older and in the relationship for at least three months. Informed consent and survey responses were obtained individually. The study protocol and informed consent were approved by the Committee on Human Research Ethics at the University of California, San Francisco, and the University of Witwatersrand in Johannesburg, SA.

Measures

We collected data on sexual history, relationship length and status, and HIV testing history. Couples' serostatus and its awareness was measured using a composite variable of self-reported HIV-serostatus and self-reported knowledge of partners' serostatus (Unknown and/or unaware: at least one partner has not tested or does not know partner's serostatus; Serodiscordant, aware: partners are serodiscordant, and aware of it; Concordant, aware: partners are seroconcordant negative/positive, and aware of it).

We administered the 8-item *Sexual Communication Self-efficacy Scale* (Cronbach alpha= 0.74 for men and for women) (Rosenthal, Moor, & Flynn, 1991). Responses ranged from 'Strongly disagree (1)' to 'Strongly agree (4)'. Items were summed and partners' scores were averaged to obtain the couple's mean score. Higher scores indicate greater SCSE.

The 19-item subscale from the *Gender Equitable Men scale* (Cronbach alpha= 0.75) measured endorsement of HMN among male participants (Pulerwitz & Barker, 2008). Response options were dichotomous ('Agree (1)' and 'Disagree (0)'), and responses were summed to obtain the total score. The continuous scale was dichotomized into 'low endorsement of HMN' (0) and 'moderate to high endorsement of HMN' (1).

In line with prior studies, the outcome measure was *consistent condom use*, defined as 100% condom use with the primary partner in the past 30 days (El-Bassel, Witte, Gilbert, & et al., 2003; El-Bassel et al., 2010; Genberg et al., 2008). The proportion of protected sex acts in the last 30 days was calculated for each partner and both partners' responses were averaged for the couple's mean proportion of protected sex.

Data Analysis

The survey responses were recorded on paper questionnaire forms, then entered into an MS-Access database by study staff, verified for accuracy, and transferred to STATA 12 for analyses (StataCorp, 2011).

Frequencies and measures of central tendency were calculated. Bivariate logistic regression and multivariable logistic regression analyses determined the association between the independent variables and consistent condom use. The multivariable model controlled for participation in Couples HIV Testing and Counseling (CHTC) and relationship length, which have been shown to be associated with condom use in SSA. (Hendriksen, Pettifor, Lee, Coates, & Rees, 2007; Moyo, Levandowski, MacPhail, Rees, & Pettifor, 2008;

Rosenberg et al., 2013) The multivariable analysis controlled for clustering on recruitment locations.

RESULTS

Descriptive Statistics

Of the 208 couples (N=416 individuals) recruited, 45 couples (22%) were excluded because they either had not had sex in the past 30 days (n=6) or were actively trying to conceive (n=39), for a final sample of 163 couples (N= 326 individuals). Nearly half the men (49.7%) had moderate to high endorsement of gender inequitable norms (Table I). Over a third of the couples (37%) reported consistent condom use in the past 30 days. More than half (55.8%) of the couples had no knowledge of their joint serostatus. Couple-level SCSE scores ranged from 9–32 (median=25) (Table II).

Bivariate analyses

Bivariate analyses demonstrate that couples where the male partner has moderate to high endorsement of HMN have decreased odds of consistent condom use (OR=0.46, 95% CI: 0.22, 0.95), compared to couples where the male partner reports low endorsement of HMN (Table III). Couples with higher levels of SCSE (OR=1.33, 95% CI: 1.20, 1.46), and who participated in CHTC (OR=3.08, 95% CI: 1.99, 4.76) have increased odds of consistent condom use. Couple knowledge of joint serostatus and relationship length were not significantly associated with condom use.

Multivariable analysis

The multivariable analysis revealed that SCSE (aOR=1.30, 95% CI: 1.15, 1.47), and previous participation in CHTC (aOR=2.94, 95% CI: 1.28, 6.73) are associated with increased odds of consistent condom use. Moderate to high endorsement of HMN is associated with decreased odds of consistent condom use (aOR= 0.47, 95% CI: 0.24, 0.89).

DISCUSSION

Our findings indicate that male endorsement of HMN and couple SCSE are associated with consistent condom use among heterosexual couples. While studies have examined the influence of HMN and sexual communication on HIV risk behavior (Matseke et al., 2012; Pettifor et al., 2004; Sayles et al., 2006; Shai et al., 2012), few have examined these issues among heterosexual couples (Burton, Darbes, & Operario, 2010; El-Bassel et al., 2010), and none have explored these relationships among couples of varied serostatus compositions. Furthermore, no study has assessed the combined effect of couple SCSE and male endorsement of HMN on consistent condom use among heterosexual couples.

The results of this study support prior reports of South African couples engaging in sexual risk behaviors (Dunkle et al., 2008; Mantell et al., 2011; Venkatesh et al., 2011; Venkatesh et al., 2012). Couples in our study had high numbers of lifetime sexual partners, concurrent partners, and high rates of HIV (Dunkle et al., 2008; Mantell et al., 2011; Venkatesh et al.,

2011; Venkatesh et al., 2012). Yet, 55.8% of the couples were unaware of their joint HIV-serostatus, and only 37% of the couples reported consistent condom use.

Interestingly, our findings suggest that couple knowledge of joint serostatus does not significantly influence consistent condom use. It is possible that other factors such as intimacy and trust may have more influence over condom use than serostatus in the context of primary relationships. Indeed, evidence suggests that couples in primary relationships in SA believe that condoms symbolize distrust and infidelity, and interfere with intimacy. (Mindry et al., 2011; Parker, Pettifor, Maman, Sibeko, & MacPhail, 2014)

Our results also build upon existing research by demonstrating that HMN are negatively associated with consistent condom use among a heterogeneous sample of couples (Durevall & Lindskog, 2014; Jewkes & Morrell, 2010; Pulerwitz & Barker, 2008; Shattuck et al., 2013). These findings indicate the need for HIV prevention interventions that target heterosexual couples, and promote gender equality.

Gender-transformative interventions re-define gender roles and norms to be more equitable and are a promising strategy to shift gender norms and increase HIV prevention behaviors (Dworkin, Treves-Kagan, & Lippman, 2013; Jewkes et al., 2008; Kalichman et al., 2009). However, there are few rigorous studies that assess the efficacy of these interventions, and they have faced a backlash (Dworkin, Colvin, Hatcher, & Peacock, 2012; Dworkin et al., 2013). Considering these limitations and challenges, researchers must explore alternate strategies that promote HIV prevention behaviors among couples. Our results support couple SCSE as one approach. Couple SCSE can be achieved through couple-based HIV prevention interventions that facilitate communication between partners (El-Bassel & Wechsberg, 2012; El-Bassel et al., 2010; Medley et al., 2013). This approach is both effective in reducing sexual risk behavior, and acceptable among couples (Burton et al., 2010; Naju, Watt, Ostermann, Manongi, & Sikkema, 2012). Thus, it is essential that more couples-based prevention interventions be developed for heterosexual couples in contexts such as SA.

There are several strengths of our study. In contrast to previous studies, our sample was community-based and heterogeneous in terms of HIV testing histories and serostatus compositions, thereby making our results applicable to a wider range of couples. Limitations of our study include the use of a non-probability sample, which may limit the generalizability of our findings. However, by being community-based, our sample is comparatively more inclusive than the majority of the existing literature on this population (Becker, Mlay, Schwandt, & Lyamuya, 2010; Jones et al., 2013). Second, participant's HIV serostatus was self-reported. However, sexual behaviors are informed by one's perceptions of their own and their partner's HIV status, thus lack of confirmatory testing does not diminish the strength of our findings.

CONCLUSION

Our study demonstrates the influence that both SCSE and HMN have on consistent condom use among heterosexual couples in an urban setting in SA. Future interventions should focus on promoting gender equitable norms while simultaneously equipping couples with the tools

necessary to improve SCSE and foster partners' ability to cooperate to achieve improved sexual and reproductive health outcomes together.

Acknowledgments

Funding:

This work was supported by the NIMH under Grant NIH K08 MH 072380.

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Table I

Individual-level Demographic Characteristics by Gender (N= 163 couples)

Characteristic	Men		Women	
	n	(%)	n	(%)
Age (years) mean (SD)	34.5	10	31	8.9
Highest level of education				
None	0	0	2	1.2
Primary	23	14	13	8
Secondary	128	78.5	134	83
Post Secondary	12	7.4	14	8.7
No. of lifetime sexual partners mean (SD)	17	20.8	4.6	4.2
At least one concurrent partner	19	11.7	1	0.61
Ever tested for HIV	122	75	147	91
HIV-positive[a]	40	35.4	58	41.1
Unaware of partner's HIV status	44	27	55	33.7
Male endorsement of Hegemonic Masculine Norms				
Low endorsement	82	50.3	--	
Moderate to high endorsement	81	49.7	--	

[a]Percentages are calculated out of the total number who disclosed HIV test results to the interviewer (n=113 men, n= 141 women).

Table II

Couple Demographics (N= 163 couples)

Couple Characteristic	n	(%)
Relationship status		
Married	25	15
Unmarried but in a committed relationship	138	85
Live together	76	47
Relationship Length (years) mean(SD)	5.5	6.1
HIV testing history[a]		
Neither partner has ever tested	11	7
Only one partner has ever tested	32	20
Both partners have tested	118	73
Participated in CHTC	23	14
Couple sexual communication self-efficacy mean (SD)	24.9	3.7
Couple serostatus, joint awareness[b]		
Unknown and/or unaware	91	55.8
Serodiscordant, aware	17	10.4
Concordant, aware	55	33.7
Consistent (100%) condom use in the past 30 days	61	37

[a]Percentages are calculated out of the total number of couples who disclosed whether or not each partner individually tested for HIV (n=161 couples)

Table III

Results of Logistic Regression Analyses with consistent condom use for the past 30 days as the outcome

Independent Variables	Bivariate		Multivariable[a]	
	OR (95% CI)	p-value	AOR (95% CI)	p-value
Couple's sexual communication self-efficacy	1.33 (1.20, 1.46)	<0.001	1.30 (1.15, 1.47)	<0.001
Medium to high endorsement of hegemonic masculine norms by the male partner (reference category: Low endorsement)	0.46 (0.22, 0.95)	0.03	0.47 (0.24, 0.89)	0.02
Participated in CHTC	3.08 (1.99, 4.76)	<0.001	2.94 (1.28, 6.73)	0.01
Couple serostatus joint awareness (reference category: Unknown and/or unaware)				
Serodiscordant, aware	0.91(0.35, 2.35)	0.85	--	--
Concordant, aware	1.03(0.42, 2.57)	0.94	--	--
Relationship length	0.98 (0.91,1.06)	0.63	0.98 (0.92, 1.05)	0.71

[a] Hosmer-Lemeshow Goodness of fit p=0.82