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The Protective Value of Discussing Condom Use: A Study of Young Black Men Attending STI Clinics in the Southern United States

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Abstract

Young Black men (YBM) experience disparities in both HIV incidence and incidence of bacterial sexually transmitted infections (STIs); thus, developing efficacious behavioral interventions is an especially critical goal. One potential avenue for intervention involves improving sexual health communications among YBM and their partners, before sex occurs. Such discussions may serve several purposes, including improving condom use and facilitating the negotiation of correct and consistent condom use. The aim of the current study was to determine the STI-protective effects of discussing condom use with sex partners, among medically underserved YBM. A total of 702 YBM were recruited from three STI clinics in the Southern United States. YBM completed a self-interview at baseline and again 6 months later. At 12 months postenrollment, a chart review determined incidents of STIs. The majority of YBM participants (61.1%) had recently discussed condom use with partners before sex. Of the 12 assessed outcomes, 7 were significantly associated with this measure. In each case, a protective effect was observed. In controlled analyses, the 12-month incidence of STIs was significantly (p = .05) greater among YBM not discussing condoms with sex partners. The results of the current study suggest that, among YBM attending clinics, discussing condom use with sex partners may promote safer sex practices. This behavior was also predictive of lower STI incidence in the ensuing 12 months, suggesting that it may be an ideal intervention target for programs designed to protect YBM against STI acquisition, including HIV.

Keywords

condoms, HIV, safer sex, STIs, young Black men

Young Black men (YBM) constitute the single most affected population in the U.S. HIV epidemic (Centers for Disease Control and Prevention, 2007, 2014; Office of National AIDS Policy, 2015). This disparity is especially true for YBM who have sex with other men (Black MSM). The Centers for Disease Control and Prevention (2016) estimates that one of every two Black MSM will acquire HIV in his lifetime and, overall, African Americans/Blacks remain the racial/ethnic group most affected by HIV in the United States. Additionally, Americans living in the south (e.g., Georgia, Louisiana, and Florida) are at significantly greater risk for HIV than other Americans. Furthermore, as the prevalence of HIV among all YBM rises, so too does it increase in their sexual networks; and it becomes increasingly likely that this incidence will rise, even when these men practice safer sex; since individuals tend to have sex with members of their same race/ethnicity or network, the presence of HIV within a given network is a greater predictor of individuals' HIV risk than is their risk-taking behavior alone (Kann, O'Malley Olsen, Kinchen, Morris, & Wolitsku, 2016; Magnus et al., 2010). Recent enthusiasm about treatment as prevention and pre-exposure prophylaxis (PrEP) for HIV have been tempered by the reality of cascade effects, which illuminate the disparities in access to PrEP as well as in its

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uptake (Kelley et al., 2015; Mayer & Krakower, 2015; Mugavero, Amico, Horn, & Thompson, 2013). For instance, not all those who are at risk are aware of PrEP or are willing to use it, and, even among the knowledgeable and willing, individuals who want to use PrEP must also have access to health care and/or the finances to cover the costs associated with a prescription. Thus, refocusing attention on interventions that instill safer sex practices is needed. Given the long-standing and well-documented disparities in HIV incidence (Centers for Disease Control and Prevention, 2011) and the incidence of bacterial sexually transmitted infections (STIs) (Satterwhite et al., 2008; Weinstock, Bernman, & Cates, 2000) experienced by YBM, developing efficacious behavioral interventions is an especially critical goal.

A key component of the public health response has relied on conducting behavioral studies designed to understand and change the antecedents of adolescents' STI-associated risk behaviors (DiClemente & Crosby, 2006; DiClemente, Crosby, & Salazar, 2006; DiClemente, Milhausen, McDermott, Salazar, & Crosby, 2005; Kirby, 2007; Robin et al., 2004; Salazar, Crosby, Santelli, & DiClemente, 2009). One focal point of past research efforts has been to understand and utilize the role of adolescents' communication with their partners about sex-related issues such as condom use (Crosby et al., 2002; DiClemente et al. 2005; DiClemente et al., 2006; Kirby, 2007; Noar, Carlye, & Cole; 2006; Robin et al., 2004; Salazar et al., 2009; Shoop & Davidson, 1994; van Empelem & Kok, 2006; Whitaker, Miller, May, & Levin, 1999; Widman, Welsh, McNutty, & Little, 2006). Indeed, intervention strategies have frequently relied on the concept of improving adolescents' sexual communication skills (DiClemente et al., 2005; DiClemente, Salazar, & Crosby, 2007; Noar et al., 2006; Robin et al., 2004). Unfortunately, the vast majority of these studies have not focused on underserved YBM and thus may be lacking in the contextual issues that shape the sexual behaviors of YBM (Bowleg et al., 2013; Bowleg,Teti, Malebranche, & Tschann, 2013). The aim of the current article is to remedy this oversight by examining the potential protective function of sexual communication among YBM in their sexual relationships/encounters.

Given the multiple benefits of the consistent and correct use of condoms (e.g., prevention of STIs, HIV acquisition and transmission, as well as pregnancy prevention), a particularly important aspect of sexual communication among YBM involves their practices regarding mutual discussions about condom use, ideally before sex occurs. These "presex" discussions may serve several purposes, including bringing the skills of both partners to bear on the task of condom application and perhaps allowing more time to apply condoms—all of which benefit the protective quality of condom use (Crosby et al., 2008; Crosby, Graham, Yarber, & Sanders, 2010; Geter & Crosby, 2014). Additionally, such discussions may improve perceptions of partner-related barriers to negotiating the correct and consistent use of condoms and allow partners to negotiate condom use (Brown et al., 2008; Crosby et al., 2008; Noar, Morokoff, & Harlow, 2002; Orr & Langfeld, 1993). Accordingly, the purpose of this study was to determine the protective effects of discussing condom use with sex partners among YBM who reported the use of condoms at least once in the 2 months preceding study enrollment. Based on the great disparities in HIV/STD (sexually transmitted disease) incidence in the Southern United States (Reif et al., 2014), the sample for the current study was gathered from three southern U.S. cities.

Method

Study Sample

This is a secondary analysis of data collected as part of an National Institute of Mental Health–funded efficacy trial of a behavioral intervention known as *Focus on the Future* (Crosby, DiClemente, Charnigo, Snow, & Troutman, 2009). A consecutive sample of 702 YBM was recruited from three STI clinics, located in the Southern United States. The randomized controlled trial tested a brief, clinic-based intervention designed to promote the correct and consistent use of condoms. Details of the larger study have been published elsewhere (Crosby et al., 2009). Inclusion criteria were (1) self-identification as Black/African American, (2) aged 15 to 23 years, (3) engaging in penile–vaginal sex in the past 2 months, and (4) not knowingly HIV positive. Recruitment occurred in a primary site (New Orleans, LA) and two secondary sites (Baton Rouge, LA, and Charlotte, NC). The clinic patient participation rate was 60.4%. Study protocols were approved by the Institutional Review Boards at all participating sites. For this secondary data analysis, only YBM who reported using condoms at least once in the 2 months preceding study enrollment were included. Of the 702 YBM, 80.9% (n = 568) reported recent condom use.

Design and Measures

On enrollment, YBM completed an audio–computer-assisted self-interview (A-CASI) lasting approximately 30 minutes. The A-CASI was completed in a private area of the clinic. Unless otherwise defined, the A-CASI instructions repeatedly defined "sex" as either vaginal or anal penetration by a penis. One item asked, "In the past 2 months, did you discuss condom use with your partner(s) before having sex?" Response options were "yes" or "no" as well as an option for those refusing to answer. Six months later, the enrolled YBM returned to the clinic to complete a second and identical A-CASI.

This secondary analysis took unique advantage of the randomized trial methodology of the original data collection to generate both cross-sectional and longitudinal findings. For the cross-sectional analysis, eight of the selected outcome measures were taken from the baseline A-CASI. These measures were focused on condom use (see Table 1). For

Table 1. Bivariate Associations Between Discussing Condom Use and Selected Outcomes (Cross-Sectional Findings).

Outcome	Outcome among those: Not discussing (%)	Discussing (%)	*p*
Any unprotected vaginal sex (past 2 months)	52.5	42.4	.018
Any unprotected vaginal or anal sex, past 2 months	60.8	49.4	.012
Used condoms last time sex occurred	47.5	69.9	<.001
Percent condom use lower than median[a]	56.0	36.4	<.001
Condom breakage (once or more, past 2 months)	24.6	22.1	.51
Condom slippage (once or more, past 2 months)	16.8	8.5	.005
Do not agree that condoms can be fun[b]	67.4	55.0	.003
Used condoms plus other contraceptive[c]	64.7	58.2	.12
Longitudinal findings			
Any unprotected vaginal sex (past 2 months)[d]	37.1	33.9	.80
Percent condom use lower than median, 6 months[e]	47.2	48.3	.83
Diagnosed with an STD within 12 months[f]	22.8	13.9	.017

[a]Among the 351 participants who provided valid data on sex and condom use, the percentage of use was calculated and the distribution was dichotomized by a median split, with the split being less than 70% use compared with 70% or more. [b]Response to this item were provided using a 5-point Likert-type scale, and those indicating that they strongly agreed that condoms can be a fun part of sex (38.4%), were compared with all others. [c]The "other contraceptive" was a female-controlled method reported by the male. [d]This outcome was assessed at the 6-month follow-up (n = 421) and used a retrospective recall period of 2 months. [e]Among the 343 participants who provided valid data on sex and condom use at the 6-month follow-up assessment, the percentage of use was calculated and the distribution was dichotomized by a median split, with the split being less than 75% use compared with 75% or more. [f]Assessed by a chart review 12 months after study enrollment.

the longitudinal analysis, three measures were taken from the follow-up A-CASI and a fourth was obtained through a 12-month chart review of STIs occurring 12 months after study enrollment. Because of staffing issues, these chart reviews were conducted only in the two clinics located in Louisiana (n = 443). The three longitudinal outcomes measures taken from A-CASI were having unprotected penile–vaginal sex, the percentage of times condoms were used (based on a median split, e.g., comparing those who reported condom use at less than 70% of sexual encounters vs. at 70% or more—allowing us to examine the trends among those who were below the average condom use rate for this sample), and whether a pregnancy was caused in the past 6 months.

For descriptive purposes, the prevalence of Chlamydia and gonorrhea was assessed during the enrollment session. YBM donated urine specimens that were shipped to Quest Diagnostics (Madison, New Jersey, U.S.) and tested using the Gen Probe Aptima Combo 2 Assay, a target amplification nucleic acid probe test that utilizes target capture for the in vitro qualitative detection and differentiation of ribosomal RNA (rRNA) from *Chlamydia trachomatis* and/or *Neisseria gonorrhoeae*.

Data Analysis

Bivariate associations were tested using chi-square analyses. Multivariable analyses were adjusted for age and the potentially confounding influence of having sex with multiple partners. Although the bivariate association between the predictor variable (discussing condom use with sex partners) and having multiple sex partners was marginal (p = .09, with 46.8% of those discussing condom use also indicating sex with multiple partners vs. 54.1% of those not having these discussions), the strong probable connection between having multiple partners and most of the outcome measures necessitated including this as a covariate. A series of logistic regression models (i.e., one for each of the 12 assessed outcomes) were used to calculate adjusted odds ratio and their respective 95% confidence intervals. Significance was defined by $\alpha \leq .05$. For the four outcome variables assessed at the 6-month follow-up, the regression models included group assignment (intervention vs. an attention-equivalent control condition) as a covariate. Because of attrition (28.2% for this analytic subsample), the number of YBM included in the models of 6-month outcomes were lower than those included for outcomes assessed at baseline (as noted in the tables).

Results

Characteristics of the Sample

Greater than 6 of every 10 YBM (61.1%) indicated that they had recently discussed condom use with one or more partners before having sex. The mean age of the sample was 19.5 ± 1.84 years. Just over one half (51.2%) were currently enrolled in school. Most (63.1%) had graduated from high school. All participants reported receiving public assistance of some kind. An income of less than $500 per month was reported by 53.5% of the sample. Baseline testing conducted as part of the randomized trial found that 19.0% of participants tested positive for chlamydia and/or gonorrhea. Just under one half

(45.6%) reported ever causing a pregnancy. Also, just under one half (46.3%) reported having any unprotected penile-vaginal sex in the past 2 months. When combined with unprotected anal sex, 53.8% reported any unprotected penetrative sex in the past 2 months. Nearly one half (49.6%) reported having multiple sex partners in the past 2 months. Eleven percent of the YBM sampled reported ever having anal sex with other males.

Bivariate Findings

Table 1 displays the bivariate findings. As shown, 7 of the 12 assessed outcomes were significantly associated with condom use discussions with sex partners in the 2 months preceding study enrollment. In each case, a protective effect was observed, meaning that risk behaviors were more common among those who indicated that they had not had these condom discussions. Specifically, the protective effects of condom discussion were observed across several risk behaviors. Among those who had condom discussions, we observed fewer reports of having unprotected penile–vaginal sex or engaging in a combination of unprotected penile–vaginal and penile–anal sex, using condoms less frequently than the median percent of use for the sample, condom slippage during sex, lack of agreement that condoms can be a "fun part of sex," higher incidence of condom use at last vaginal or anal sex, and lower STI incidence (assessed by the 12-month chart review).

Adjusted Findings

Table 2 displays the adjusted findings from the logistic regression models. As shown, adjustment for the assessed covariates did not alter any of the seven significant bivariate associations. However, after controlling for the influence of multiple sex partners (reported prior to baseline assessment), the magnitude of the association pertaining to the 12-month incidence of STIs was substantially lessened, yet the association remained significant. Similarly, of the five outcomes that were not significant at the bivariate level, none were changed in the adjusted models.

Discussion

To the best or our knowledge, this is the first empirical study of YBM to find such a strong protective effect of a relatively simple behavior: discussing condom use before sex occurs. Especially important is the point that this protective effect was substantiated by a 12-month medical records review of STIs. This suggests that STI clinic–based and, indeed, any counseling efforts for YBM should include efforts to promote this proactive behavior. The weight of evidence from this study (both cross-sectionally and longitudinally) supports this recommendation.

The largest protective effect was observed in respondents' reporting a percentage of condom use that fell below the median for this sample: This was far less common among those who had discussed condom use. Similarly, protective effects were observed in respondents' having any unprotected penile–vaginal sex, any unprotected penile–vaginal/anal sex, and reporting that condoms slipped off during sex—all of which occurred less frequently among YBM who had engaged in condom discussions. Furthermore, those indicating that they discussed condom use with sex partners were more likely to report that they had used a condom the last time they had sex. Collectively, these findings strongly support the proposition that talking about condom use leads to increased vigilance in actual use. This suggests one of two scenarios: (1) YBM who discuss condom use with their sex partners have a proclivity for safer sex that can be enacted through this communication with their partners and (2) discussions about condom use (whether or not these are partner initiated) magnify the odds of having safer sex based simply on the fact that both partners may then be resolved to this behavior, despite the high level of sexual desire that may otherwise preclude use (e.g., Skakoon-Sparling, Cramer, & Shuper, 2016). This latter explanation is consistent with a past study suggesting that couple-based efforts to use condoms result in fewer problems and errors with their use (Widman et al., 2006).

Of interest, the finding related to viewing condoms as "being a fun part of sex" suggests that this perspective may be more common among those who discuss condoms with their partners. Regardless of whether this attitude is an antecedent or a consequence of discussing condoms with partners, the relationship is important as it highlights agreement with the possibility that condom use may make sex more pleasurable. The condom communication may, in fact, be somewhat erotic if couples discuss preferences for various options in texture, shape, scent, color, as well as lubricant options (Crosby et al., 2008). The concept of "better sex with latex" is one that may indeed be gaining traction as condom manufactures continue to engage in clever marketing designed to erotize condom use.

Finally, and of greatest importance, YBM indicating at study enrollment that they discussed condom use with partners before sex appear to have experienced a long-term protective effect against the acquisition or urethrally-acquired Chlamydia/gonorrhea. The difference in the incidence rates was quite large (22.8% for those not discussing condom use vs. 13.9 for those discussing condom use—yielding a 39% relative difference). This finding clearly speaks to the potential benefits of clinic-based intervention efforts that provide YBM with the communication skills needed to confidently engage in conversations with their sex partners about safer sex and condom use. Indeed, the acquisition of these skills may be an "active ingredient" in future behavioral interventions that protect YBM against STI acquisition. Thus, future work should be directed toward developing and testing

Table 2. Adjusted[a] Associations Between Discussing Condom Use and Selected Outcomes (Valid *n* = 564, Unless Otherwise Noted).

Outcome	AOR	95% CI	*P*
Cross-sectional findings			
Any unprotected vaginal sex (past 2 months)			
Age	1.19	[1.08, 1.31]	<.001
Multiple sex partners	2.84	[2.01, 4.03]	<.001
Discussing condom use	0.68	[0.48, 0.97]	.036
Any unprotected vaginal or anal sex, past 2 months			
Age	1.17	[1.05, 1.29]	.003
Multiple sex partners	2.85	[1.97, 4.12]	<.001
Discussing condom use	0.65	[0.44, 0.95]	.027
Used condoms last time sex occurred			
Age	0.90	[0.82, 0.99]	.03
Multiple sex partners	1.09	[0.77, 1.56	.61
Discussing condom use	2.61	[1.83, 3.71]	<.001
Percent condom use lower than median[b]			
Age	1.14	[1.03, 1.27]	.01
Multiple sex partners	1.53	[1.04, 2.24]	.03
Discussing condom use	0.48	[0.33, 0.71]	<.001
Condom breakage (once or more, past 2 months) (*n* = 515)			
Age	0.94	[0.85, 1.06]	.36
Multiple sex partners	2.04	[1.32, 3.14]	.001
Discussing condom use	0.92	[0.66, 1.42]	.71
Condom slippage (once or more, past 2 months) (*n* = 518)			
Age	1.01	[0.87, 1.17]	.87
Multiple sex partners	1.36	[0.78, 2.37]	.28
Discussing condom use	0.47	[0.27, 0.81]	.007
Do not agree that condoms can be fun[c]			
Age	0.94	[0.86, 1.03]	.21
Multiple sex partners	1.58	[1.12, 2.23]	.009
Discussing condom use	0.60	[0.42, 0.86]	.005
Used condoms plus other contraceptive[d]			
Age	1.06	[0.96, 1.16]	.26
Multiple sex partners	0.55	[0.39, 0.78]	.001
Discussing condom use	0.73	[0.51, 1.04]	.086
Longitudinal findings			
Any unprotected vaginal sex (past 2 months)[e]			
Age	1.18	[1.05, 1.33]	.005
Multiple sex partners	1.93	[1.27, 2.92]	.002
Discussing condom use	1.04	[0.68, 1.60]	.84
Percent condom use lower than median, 6 months[f] (*n* = 416)			
Age	1.04	[0.93, 1.15]	.53
Multiple sex partners	1.67	[0.45, 0.99]	.047
Discussing condom use	1.03	[0.69, 1.54]	.88
Conceived a pregnancy within 6 months of baseline			
Age	1.09	[0.89, 1.34]	.41
Multiple sex partners	0.65	[0.30, 1.41]	.28
Discussing condom use	0.56	[0.26, 1.18]	.13
Diagnosed with an STD within 12 months[g] (*n* = 443)			
Age	0.94	[0.89, 1.09]	.42
Multiple sex partners	1.80	[1.07, 3.01]	.026
Discussing condom use	0.60	[0.36, 1.00]	.05

Note. AOR = adjusted ods ratio; CI = confidence interval.

[a]Logistic regression models adjusted for the influence of age and having 2 or more sex partners during the 2 months prior to study enrollment. [b]Among the 351 participants who provided valid data on sex and condom use, the percentage of use was calculated and the distribution was dichotomized by a median split, with the split being less than 70% use compared with 70% or more use. [c]Responses to this item were provided using a 5-point Likert-type scale, and those who indicated they strongly agreed that condoms can be a fun part of sex (38.4%), were compared with all others. [d]The "other contraceptive" was a female-controlled method reported by the male. [e]This outcome was assessed at the 6-month follow-up (*n* = 421) and used a retrospective recall period of 2 months. [f]Among the 343 participants who provided valid data on sex and condom use at the 6-month follow-up assessment, the percentage of use was calculated and the distribution was dichotomized by a median split, with the split being less than 75% use compared with 75% or more use. [g]Assessed by a chart review 12 months after study enrollment.

interventions to improve YBM knowledge and skills related not only to the use of condoms but also to improving sexual communication skills related to condom use (for an example of a small scale intervention that improved sexual health communication in a Hispanic/Latino MSM sample, see Rhodes et al., 2017).

Five of the 12 selected outcomes did not obtain either bivariate or multivariable significance. Two of these five involved a longitudinal investigation of whether recently discussing condom use (prior to baseline) predicted condom use behaviors 6 months forward in time. The lack of a longitudinal association may be a product of changing sex partners (a variable that was not assessed in this study). A third nonsignificant longitudinal association involved self-reports of whether the YBM enrolled had caused a pregnancy in the past 6 months. Given the direction of this association and a relative risk of .59 (calculated from Table 1), it is plausible that future studies of pregnancy prevention may in fact find a significant protective effect for the behavior of discussing condom use before sex. From a cross-sectional perspective, condom breakage was not associated with condom discussion. This was a surprise given the strong association seen with condom slippage and that the logical reasons for the differences in these two variables are not readily apparent. Finally, dual method use (e.g., hormonal birth control along with condom use) was not associated with condom discussions. It may be that the contraceptive habits/behaviors of female partners operated independently of any characteristics tied to the males enrolled in our study.

Implications for Practice

The results of the current study suggest that improving condom-related communication skills for YBM may be a "high-impact" intervention method. Training YBM to develop better sexual communication skills and especially training in communication related to condom use may help normalize condom use discussions and help prevent future STI transmission in this population. This method of behavioral intervention is, of course, quite compatible with biomedical options that become available to YBM after reaching the age of 18 years (i.e., PrEP in daily form or alternative forms that may soon be FDA approved).

Limitations

Four limitations are apparent in the current study. First, with the exception of STI incidence, as assessed by chart review, significant associations observed in this study were all cross-sectional, suggesting that temporality is an issue. Second, the measure of discussing condom use before sex was assessed using a single item with a "yes versus no" response; this may have lacked precision, as frequency was not assessed. Had we assessed the frequency of these discussions, the findings may have been more robust given the greater precision of such a predictor variable. Third, it cannot be determined whether the discussions that occurred were based on a trait/need of the males we studied or as a result of a trait/need of their sex partners. If the latter scenario were true, this would predispose the findings to a type 1 error given the misclassification bias of YBM who may have only passively engaged in these discussions. Alternatively, if the findings are considered at the couple level, which would arguably be quite appropriate (Issacs, 2013), this error is a mute point given that the end result (i.e., safer sex) occurs regardless of whether the study participants or their sex partners initiated the discussions. Finally, the small percentage (yet larger than expected by chance) of MSM in this sample precluded stratified analyses based on whether YBM had sex with other males.

Conclusion

Findings from this multisite study suggest that at least 50% of YBM attending STI clinics may be in the habit of discussing condom use with sex partners before sex occurs. This behavior appears to be robustly protective as it predicted lower incidence of Chlamydia/gonorrhea over the ensuing 12 months. Other behavioral findings (e.g., increased condom use, endorsement of the idea that condoms can be a fun part of sex, etc.) support this medical finding, thereby suggesting that clinic-based counseling to promote this behavior may be valuable against the acquisition of STIs, including HIV infection.

Declaration of Conflicting Interests

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