Condom Use Errors and Problems: A Study of High-Risk Young Black Males Residing in Three Southern US cities

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Short title: making mistakes with condoms

Counts: text = 1,852, abstract = 216

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Key Words: Condoms, young men, sexually transmitted diseases, sexual behavior

Summary

This study of young Black males found a high occurrence of condom-related errors/problems, especially among those having multiple partners. The protective value of condoms may be sub-optimal in this population.

Abstract

Objective: The primary aim of this study was to assess self-reported frequencies of selected condom use errors and problems, using a retrospective recall period of 2 months, among young Black males (YBM) attending sexually transmitted infection (STI) clinics. A secondary objective was to determine whether more errors/problems occurred among men reporting sex with multiple partners compared with those reporting one sexual partner.

Methods: Data were collected in clinics treating patients with STIs in three southern U.S. cities. Males 15-23 years of age who identified as Black/African American and reported recent (past two months) condom use were eligible (N = 475).

Results. Condom use errors and problems were common, with some of the most critical errors occurring for greater than 1 of every 5 YBM, such as late application, early removal, sipping off during sex, and re-using condoms. For 9 of the 24 errors/problems assessed (37.5), YBM reporting more than one sexual partner in the previous two months experienced more errors and problems than men reporting only one partner.

Conclusion. The disease protective value of condoms may be sub-optimal in this population. A need exists to improve the quality of condom use among YBM at risk of STI acquisition or transmission. Intensified clinic-based intervention that helps YBM improve the quality of their condom use behaviors is warranted.

Introduction

In the United States, young Black males (YBM) continue to be disproportionately likely to acquire sexually transmitted infections (STIs), including infection with Human Immunodeficiency Virus (HIV).[1-5] The problem is most pronounced in the Southern US.[6,7] In parallel fashion, the epidemic of STIs in the US disproportionately affects YBM.[8]

Condom use remains the primary public health strategy to prevent HIV and other STIs in YBM.[9-11] However, evidence strongly suggests that condoms are only efficacious when they are also used correctly.[12] Despite the urgency to prevent infections with HIV and other STIs among YBM, most research on male condom errors and problems has neglected this population. For example, of more than 30 studies reviewed that reported original data on condom use errors and problems, only one included predominately young Black/African Americans[13] and none specifically focused on YBM. Moreover, most studies of condom use errors/problems have excluded those 15 to 17 years of age, thereby neglecting a substantial portion of a high-risk population. Further, past evidence suggests that having multiple sex partners may be associated with having more errors/problems,[13-15] yet this association has never been investigated with YBM.

To the best of our knowledge, published studies have not comprehensively described the condom use errors and problems experienced by YBM. Accordingly, the purpose of this study was to describe self-reported frequencies of selected condom use errors and problems among YBM, using a retrospective recall period of 2 months. A secondary objective was to determine whether more errors/problems occurred among men reporting sex with multiple partners compared with those reporting sex with only one partner in the previous two months.

Methods

Study Sample

A purposive sample of YBM was recruited for participation from a larger NIH-funded randomized controlled trial of a safer sex intervention program designed for this population. Only the baseline data from that trial were used for the current study. Recruitment occurred in clinics that diagnose and treat STIs. Inclusion criteria were: self-identification as Black/African American; 2) aged 15 to 23 years; 3) engaged in penile-vaginal sex at least once in the past two months; and 4) not knowingly HIV-positive. Recruitment occurred from approximately 2010 through 2012, in a primary site (New Orleans, LA) and two secondary sites (Baton Rouge, LA and Charlotte, NC). The overall study participation rate was 60.4% (N = 702). For this secondary analysis, only YBM who reported recent (past two months) condom use were eligible (N = 475).

Study Procedures

After providing assent, research assistants asked young men less than 18 years of age for their permission to contact one parent or guardian to obtain consent for study participation. Young men aged at least 18 years old provided written informed consent. After enrollment, an audio-computer assisted self-interview (A-CASI) survey was administered. YBM were instructed in the use of a laptop computer to complete the A-CASI, lasting approximately 30 minutes. The A-CASI was completed in a private area with a research assistant being available to clarify wording if needed. Young men were provided with a $50 gift card. The study protocol was approved by the institutional review boards at all participating sites.

Measures

An expanded version of the Condom Use Errors/Problems Survey was employed.[16] This 24-item index is the most comprehensive assessment instrument available for this purpose.

Items were prefaced with the stem, “In the past two months…” and sequentially posed brief questions asking whether events such as breakage, slippage, etc. had occurred. Response options were simply, “No” versus “Yes” and “refuse to answer.” A single item asked YBM, “In the past two months, have you been: 1) having sex with only one person or 2) having sex with more than one person.”

Data Analysis

Frequency distributions were used to describe the errors/problems experienced by YBM. Those reporting sex with only one partner in the past two months were compared to those reporting sex with 2 or more partners in the past two months, through contingency table analyses. Significance was defined by an alpha of .05. All analyses were conducted using SPSS, version 20.0.

Results

Characteristics of the Sample

The mean age of the sample was 19.7 years (standard deviation [sd] = 1.9 years). About one-half (51.1%) reported attending school. Most (65.8%) had graduated from high school. The vast majority (94.4%) received public assistance of some kind. An income of less than $500 per month was reported by 50.8% of the sample. The mean frequency of unprotected penile-vaginal sex reported by YBM was 3.95 times in the past two months (sd = 10.4). All YBM self-reported having an STI in the past, with 83.5% reporting chlamydia diagnosis, 14.8% reporting gonorrhea, and 1.7% reporting herpes. Baseline testing conducted as part of the randomized trial found that 18.2% of participants tested positive for chlamydia and/or gonorrhea.

Descriptive Findings

Table 1 displays the frequency of errors/problems experienced by the 475 YBM who had used a condom in the past two months. Condom errors/problems were common throughout the condom use process, ranging from 2% (let condom contact sharp object) to 79% (not checking condom for visible damage). On average, each condom error/problem was reported by 24% of the sample and 98.9% of the sample reported at least one error/problem. The most common errors/problems occurring prior to sex were not discussing condom use before sex (31%), not checking condom for visible damage (79%), knowingly using a damaged condom (ripped or torn) (42%), and knowingly using an expired condom (37%). During condom application, common errors/problems included: not holding the tip of the condom while unrolling it (59%) and putting the condom on the wrong side up and then flipping it over and using it (29.5%). Condom errors/problems during sex were reported by 20- 25% of the sample; for example, putting condom on after sex had started (24%), taking condom off before sex had ended (21%), losing erection after sex began (21%), and having problems with fit and feel (23%). Nine percent reported condom breakage during sex and 20% reported that a condom slipped off during sex, or during withdrawal (12%). Thirteen percent reported that the condom contents leaked onto their partner.

Comparative Findings

There were nine significant differences between men reporting more than one sexual partners (1+P) over the past two months and those reporting one partner (1P). In every case, 1+P men reported more errors/problems than IP men. During condom application, 1+P men were more likely to put the condom on wrong side up and flip it over (36% vs. 24%), to not unroll the condom all the way to the base of the penis (22% vs. 14%), and to use oil-based lubrication (25% vs. 17%). During sex, 1+P men were more likely than 1P participants to put the condom on after the sex had started (32% vs. 17%), to lose their erection after sex had

begun (30% vs. 13%), to reuse a condom during the same sexual encounter (29% vs. 12%), and to report the condom slipped off during sex (25% vs. 15%).

Discussion

In this study, data were obtained on condom use errors and problems over the past two months among 475 YBM reporting recent condom use. Participants were recruited from clinics that diagnose and treat STIs in three U.S. cities. Condom use errors and problems were common, and occurred across all phases of the condom use process e.g., during application, during sex, and after withdrawal. Comparisons between YBM reporting more than one sexual partner over the past two months and those reporting only one partner indicated that, in the case of every significant group difference, men who reported more than one partner in the previous two months experienced more errors and problems than men who reported only one partner.

In a prior study of more than 900 clinic-attendees in three U.S. cities, five condom use errors were identified as negating the protective value of condom use in terms of STI prevention: delayed application, early removal, condom breakage, condom slippage during sex and during withdrawal.[12] These errors and problems were reported by between 10 and 25% of the current sample, indicating these YBM participants are at significant risk for STI acquisition and transmission, despite the fact that they are using condoms. Also alarming were the rates of using a condom that men knew to be expired or damaged, reported by approximately 40% of the current sample. Participants also reported reusing condoms, within the same and new sexual encounters. Given that almost all participants reported receiving some form of public assistance, and almost one-half reported an income of less than $500 per month, access to new condoms may have been limited.

Comparisons between men reporting multiple sex partners over the past two months and men reporting one partner suggested that men with multiple partners were at particular risk for

condom use errors and problems. This finding is supported in other literature. Among an STI clinic attendee sample, men of mixed ethnicities having sex with women were more likely to report recent errors with condom use if they had multiple sexual partners.[15] Reporting multiple partners over a three-month recall period was associated with increased condom breakage and slippage among a predominantly white, college sample.[17] Though it is not known if participants in the current sample engaged in concurrent or consecutive sexual relationships, research indicates that the risk of STI infection for the individual is no different.[17] YBM are rewarded socially for having many sexual partners, and also have more opportunities for sexual partnerships because of the disproportionate number of male to female young adults.[18] As such, encouraging men to reduce their number of sexual partners to reduce their condom use errors and problems, and subsequent sexual health risks, may not be an effective strategy. Instead, men having sex with multiple partners (concurrently or consecutively) should be targeted for education regarding correct condom use and provide access to a range of condoms at low or no cost.

The geographic diversity of the sample is limited to patients attending clinics in three US cities; thus, generalizability of the findings to other populations of YBM is problematic. Also, study findings are limited by the validity of participants' self-reports of condom use errors/problems; however, problems associated with recall are minimized by the use of a short recall period.

Despite the above limitations, these findings extend the literature on condom use errors and problems by focusing on a neglected, but high-risk group of men. Regarding implications, condom use breakage and slippage are related to user errors[19-24] and, thus, are amenable to change with behavioral and educational interventions. Men who experience erection difficulties or who perceive condoms to reduce sensation may be less motivated to apply a condom prior to

the start of sex and to use it until sex is over.[25] Men should be encouraged to experiment with condoms to find one that is best suited to them. In under-resourced areas it is critical that public health agencies, clinics that test for and treat STIs, and education settings, make very accessible a range of condoms for men who may not otherwise have access to these. In particular, free public clinics are ideally positioned to provide condom use education and condoms to attendees and morally obligated to do so given the high rates of risk behaviors among attendees.

Acknowledgement

This study was funded by a grant from the National Institute of Mental Health to the first author, R01MH083621.

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Table 1. Frequency of Condom Use Errors/Problems Stratified by Partner-Application Among Young Black Men

Error or Problem	% overall	% w/1P	% w/1+P	P
Didn't discuss condom use before sex	31.2% (452)	28.5%	29.9%	.79
Knowingly used expired condom	37.1% (445)	37.2	35.0	.66
Didn't check condom for visible damage	78.8% (419)	75.6	80.9	.21
Knowingly used damaged condom: ripped or torn	42.4% (460)	45.8	36.6	.06
Let condom contact sharp jewelry, fingernails, teeth	2.2% (413)	1.2	2.1	.52
Put condom w/o full erection	14.4% (416)	12.9	17.3	.25
Condom wrong side up & flipped over	29.5% (447)	24.0	36.0	.01
Didn't unroll condom all the way to penis base	18.1% (437)	13.8	21.6	.047
Unrolled condom before putting it on	16.9% (419)	16.1	18.2	.59
Didn't hold tip while unrolling condom	59.3% (442)	58.0	62.3	.39
Used condom without lubrication	45.1% (457)	43.1	46.8	.46
Wanted lubrication, didn't have any	14.6% (419)	13.2	16.8	.34
Used oil based lubrication	21.4% (435)	16.5	24.8	.047
Lost erection while putting condom on	14.0% (422)	10.9	13.6	.44

Lost erection after sex began	21.0% (428)	12.9	29.6	.0001
Put condom on after sex started	24.1% (431)	16.9	31.7	.001
Took condom off before sex ended	21.3% (436)	18.9	25.4	.13
Reused condom during same sex encounter	19.7% (441)	12.2	28.7	.0001
Reused condom at later time	2.9% (414)	2.4	3.0	.69
Condom broke during sex	9.0% (413)	7.6	10.3	.37
Condom slipped off during sex	19.8% (439)	14.9	25.0	.014
Condom slipped off during withdrawal	11.5% (427)	10.9	11.8	.77
Condom contents leaked onto partner	12.6% (422)	11.0	13.0	.55
Had problems with condom, needed another one	15.3% (426)	9.1	18.4	.01
Problem with fit or feel	23.0% (422)	21.4	25.4	.37