

Experiences of condom fit and feel among African-American men who have sex with men

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Objective: To offer an empirical understanding of characteristics associated with the fit and feel of condoms among African-American men who have sex with men (MSM), a particularly high-risk group for HIV and other sexually transmitted infections (STI) in the United States.

Methods: Survey data were collected from 178 adult African-American MSM attending a community event in Atlanta, Georgia.

Results: Although the majority of participants reported that condoms generally fit properly and felt comfortable, a substantial number of men reported a variety of problems with the fit and feel of condoms. Specifically, 21% reported that condoms felt too tight, 18% reported that condoms felt too short, 10% reported that condoms felt too loose, and 7% reported that condoms felt too long. There were significant associations between men's reports of condom breakage and slippage, and their perceptions of condom fit and feel. Perceptions of condom fit and feel were also related to men's reports of seeking condoms for their size-specific properties.

Conclusions: The fit and feel issues that men in this sample identified may be among those that contribute to their likelihood of using, or not using, condoms consistently and correctly. A better understanding of these factors will be beneficial to both condom manufacturers and sexual health professionals who share a common goal of increasing consistent and correct condom use and reducing the incidence of HIV and other STI among this and other communities.

Men who have sex with men (MSM) continue to be significantly impacted by STIs, including HIV and AIDS. Though the demographics of those infected continue to shift, MSM in the U.S. have a disproportionate incidence of STI, and rates are highest among African-American MSM.^{1–6} Accordingly, these men have been prioritised for campaigns to reduce HIV and STI, particularly those focused on increasing condom use.

The correct and consistent use of the latex condom remains among the most effective devices for preventing STI among sexually active individuals.^{7–10} Although several studies have examined reasons men do not use condoms,^{11–15} condom non-use among African-American MSM has rarely been explored.¹⁶

Researchers have suggested that experiences with the fit and feel of condoms^{3 16 17} and condom breakage and slippage^{18–28} reduce consistent use by some men. Men have associated condoms that are too tight, too loose, too long or too short with difficulty in applying condoms, erection problems when using condoms, and an increased likelihood of condom failure.^{29 30} It is also known that adult penile dimensions vary widely,^{31–35} and associations between penile dimensions and condom failure have been used to encourage manufacturing standards that support a wider range of condom sizes.^{23 24 36 37}

Reports of perceived condom fit and feel have been primarily anecdotal. When studied in the U.S., it has been with predominantly Caucasian, heterosexual college students.¹³ Only one small qualitative study has explored condom fit and feel among heterosexual African-American men.²⁹ With condom promotion being a core component of HIV and STI prevention, a deeper understanding of perceived condom fit and feel among disproportionately affected groups, such as African-American MSM, will be helpful to those who manufacture and promote the use of condoms.

METHODS

Participant recruitment

During the "Black Gay Pride" event in Atlanta, Georgia in 2006, 242 adult men within the vicinity of an HIV agency's outreach booth were approached and invited to participate in a survey related to condoms. Of these, 73.6% agreed to participate (n = 178).

Data collection

Data were collected anonymously using a 33-item paper-pencil instrument. Participants returned surveys to a box and were invited to submit their email address (using a separate form) into a lottery for one of 10 \$50 gift cards. Protocols were approved by the institutional review board of Indiana University-Bloomington.

Measures

Demographics

Participants described their gender, age, ethnicity, and geographic size of residence.

Sexual characteristics

Participants described their sexual orientation and numbers of sexual encounters with male and female partners within the past 30 days.

Condom fit and feel

The Condom Fit and Feel Scale³⁸ is a 14-item Likert-type scale on which men indicate the frequency of problems with the fit and feel of condoms (1 = never applies; 2 = sometimes applies; 3 = often applies; 4 = always applies). The scale, created by the

Abbreviation: MSM, men who have sex with men

first and third authors,^{27, 38} has five subscales, including condoms fitting correctly, being too loose, being too tight, being too long and being too short. The mean score for each subscale is used to assess men's experiences with condom fit and feel. One can also calculate an overall score of "condom fit and feel problems" by reverse-scoring the two positive items in the "condoms fit fine" subscale and creating a summed score. The items on the scale are detailed by factor in table 1.

The scale demonstrated acceptable reliability in this sample; internal consistency coefficients (Cronbach's alpha) ranged from 0.60 on the "condoms are too long" subscale to 0.88 on the "condoms feel too loose" subscale. This is consistent with scale reliability (0.60–0.86) among other (primarily Caucasian and heterosexual) populations.^{27, 38}

Condom failure

Participants reported condom breakage and slippage during insertive anal or vaginal intercourse within the past 30 days, and rates were calculated and reported using established guidelines.²⁵

Condom seeking

Men described types of condoms used within the previous year (eg, condoms marketed for larger or smaller penises).

Statistical analyses

Using version 14.0 of the Statistical Package for the Social Sciences, descriptive analyses were conducted to describe the sample and the men's perceptions of condom fit and feel. Univariate and bivariate analyses were conducted to characterise relations between participant characteristics, condom fit and feel, and condom failure.

RESULTS

Participant description

Participants included 178 men who described their ethnicity as Black or African-American. Their mean age was 33.85 years (SD = 9.53), and the majority (72%, n = 126) were from large urban areas. Most men (77%, n = 137) self-identified as gay, and 23% (n = 41) self-identified as bisexual. The majority (69.7%, n = 124) reported at least one male sexual partner within the previous 30 days. A few (8.2%, n = 15) reported having both male and female sexual partners within the past 30 days; of these men, 73.3% (n = 11) self-identified as bisexual and 26.6% (n = 4) as gay.

Perceptions of condom fit and feel

Participants most strongly endorsed items on the "condoms fit fine" subscale (mean = 2.65, SD = .92), followed by "condoms feel too tight" (mean = 1.82, SD = .75), "condoms are too short" (mean = 1.71, SD = .84), "condoms are too long" (mean = 1.50, SD = .62) and "condoms feel too loose" (mean = 1.42, SD = .64).

Individual scale items were similarly endorsed, with the largest proportion of participants reporting that condoms always or often "fit my penis just fine" (60.7%, n = 108). Notable proportions indicated problems with condoms being too tight or too short, including 23.0% (n = 41) who reported condoms often or always "felt too tight around the base of [their] penis," 18.0% (n = 32) who reported that condoms often or always were "too short for [their] penis" and "would not roll down far enough to cover [their] penis completely." Conversely, some men indicated specific problems associated with condoms being too loose, particularly at the penile shaft (10.7%, n = 16) and glans (10.1%, n = 18). Some men (14.0%, n = 25) reported that they often or always "have some unrolled condom left at the base of the penis after it is unrolled." No significant differences existed on the scale scores and men's demographic or sexual characteristics. Table 1 provides an overview of the extent to which men strongly endorsed (eg, often or always applies to me) each item.

Using The Condom Fit and Feel Scale, men describe specific locations along the penis where they perceive the fit and feel of condoms to be problematic in order to help HIV and STI providers understand men's complaints about fit and feel and subsequently make condom recommendations. Analyses were conducted to assess the extent to which men endorsed multiple items within each subscale (eg, did men discriminate between the points on the penis at which the condom felt too loose?). In this sample, men were indicated specific points at which they felt discomfort, with small proportions endorsing all items on each subscale equally. On the "condoms feel too tight" subscale, only 8.4% of men (n = 15) endorsed all items assessing tightness, with fewer (5.1%, n = 9) similarly endorsing items on the "condoms feel too loose" subscale. Similar patterns existed with the "too long" subscale (4.5%, n = 8) and the "too short" subscale (11.8%, n = 21). The most consistent levels of endorsement (39.3%, n = 70) were with items on the "condoms fit fine" subscale.

Of those who reported that condoms were too loose (9.0%, n = 16), 62.5% (n = 10) described looseness along the penile

Table 1 Proportion of participants strongly endorsing* items on The Condom Fit and Feel Scale (n = 178)

Scale items by subscale	n (%)
Condoms fit fine	
Condoms fit my penis just fine	108 (60.7)
Condoms feel comfortable once I have them on my penis	84 (47.2)
Condoms are too long	
Condoms are too long for my penis	12 (6.7)
I have some unrolled condom left at the base of my penis after I unroll it	25 (14.0)
Condoms are too short	
Condoms are too short for my penis	32 (18.0)
Condoms will not roll down far enough to cover my penis completely	32 (18.0)
Condoms feel too tight	
Condoms are too tight on my penis	37 (20.8)
Condoms feel too tight along the shaft of my penis	26 (14.6)
Condoms feel too tight on the head of my penis	27 (15.2)
Condoms feel too tight around the base of my penis	41 (23.0)
Condoms feel too loose	
Condoms are too loose on my penis	16 (9.0)
Condoms feel too loose along the shaft of my penis	19 (10.7)
Condoms feel too loose around the head of my penis	18 (10.1)
Condoms feel too loose around the base of my penis	16 (9.0)

*Proportion of participants responding "often applies or always applies" to each scale item.

base, 52.6% ($n = 10$) along the shaft, and 66.7% ($n = 12$) along the glans. Among those describing condoms as being too tight (20.8%, $n = 37$), 65.9% ($n = 27$) reported tightness around the base, 73.1% ($n = 19$) around the shaft, and 70.4% ($n = 19$) around the glans.

Condom breakage and slippage

Only 14.5% ($n = 24$) of men reported non-clinical breakage, and 9.7% ($n = 16$) reported clinical breakage. A similar proportion reported complete condom slippage during withdrawal following intercourse (14.5%, $n = 24$), 9.1% ($n = 15$) complete slippage during insertion and 4.8% ($n = 8$) complete slippage during intercourse. No significant differences existed between reports of condom failure and men's demographic and sexual characteristics.

Condom breakage and slippage and perceptions of fit and feel

Breakage and perceptions

Men experiencing non-clinical breakage scored higher on the "condoms feel too tight" subscale (mean = 2.27, $SD = .95$) than those without such breakage (mean = 1.72, $SD = .68$), $t = 3.38$, $p = .001$ as was the case with clinical breakage (mean = 2.25, $SD = .84$ vs mean = 1.75, $SD = .72$), $t = 2.60$, $p = .010$. Conversely, those who reported no clinical breakage scored higher on the "condoms fit fine" subscale (mean = 2.71, $SD = .93$) than those with clinical breakage (mean = 2.21, $SD = .73$), $t = -2.04$, $p = .043$.

Slippage and perceptions

Men who reported complete condom slippage at insertion, during intercourse, or upon withdrawal had higher scores on the "condoms feel too tight" subscale. Those who reported complete condom slippage at insertion scored higher ($t = 2.31$, $p = .022$) on this subscale (mean = 2.21, $SD = 1.03$) than those with no such slippage (mean = 1.75, $SD = .70$). This was also evident among men who reported experiencing condom slippage during intercourse (mean = 2.69, $SD = 1.09$ vs mean = 1.75, $SD = .71$, $t = 3.56$, $p = .001$) and men who reported complete condom slippage upon withdrawal of the penis following intercourse (mean = 2.09, $SD = 1.01$ vs mean = 1.75, $SD = .69$, $t = 2.08$, $p = .039$). These men had lower scores on the "condoms fit fine" subscale than their counterparts who had no complete slippage upon withdrawal (mean = 2.31, $SD = .75$ vs mean = 2.74, $SD = .95$; $t = -2.14$, $p = .036$).

Men who experienced complete condom slippage during intercourse also had higher scores on the "condoms are too loose" subscale than those with no such slippage (mean = 1.84, $SD = .67$ vs mean = 1.38, $SD = .63$, $t = 2.01$, $p = .046$). No other significant associations existed between scores on the "condoms feel too loose" subscale and condom breakage and slippage.

Condom-seeking behaviours

Less than one-third of participants (28.7%, $n = 50$) reported using condoms designed for "larger penises," and 2.3% ($n = 4$) reported using condoms for "smaller penises." Those using condoms designed for "larger penises" more strongly endorsed the item "condoms are too short" (mean = 1.86, $SD = .90$) than those not using larger-sized condoms (mean = 1.54, $SD = .94$) ($t = -2.051$, $p = .042$). Some men (14.4%, $n = 25$) reported using "custom fitted" condoms. There were no other statistically significant associations between seeking specific sizes of condoms and scores on The Condom Fit and Feel Scale.

DISCUSSION

African-American MSM identified specific issues with the fit and feel of condoms, with high proportions reporting that condoms were too tight or too short. While fewer men reported problems with the looseness of condoms, approximately 10% did so. Men's perceptions of condom fit and feel were associated with incidents of condom failure.

It was not possible to determine the directionality of the findings. It may be that men reporting problems with fit and feel are basing these upon their past experiences with condom failure, or vice versa. However, these findings are consistent with a limited number of related studies in which men associated condom fit with condom failure and difficult use.²⁷ It could also be the case that an individual's actual behaviours before and during condom use, the characteristics and behaviours of sexual partners, and other variables not assessed in this study influenced both the perceptions of fit and feel and condom failure.

The lack of variability with the gender of recent sexual partners, sexual orientation, and ethnicity, combined with rather low reports of condom failure and limited statistical power, prevented an appropriate use of multivariate analyses to test the predictive capacity of The Condom Fit and Feel Scale; this should be assessed in studies with larger samples of men with more diverse demographic and sexual characteristics.

Those who reported having some unrolled condom left at the base of the penis after it was unrolled may have perceived this as contributing to problems with condom fit or feel, although this may actually help secure the condom to the base of the penis and reduce slippage.²⁷ Particular aspects of condoms, regardless of whether they support condom efficacy, may be among those that drive men to seek condoms that they perceive as better fitting.^{29 30}

Men's ability to discriminate the areas of the penis where they perceived problems with condom fit and feel has important implications for condom manufacturers and STI prevention workers. For example, of those men who reported that condoms were too tight, over 70% described tightness on the glans. Condom manufacturers have designed condoms with more bulbous heads that reduce the constriction of latex on the glans, given its high density of nerve endings. HIV and STI prevention providers may alleviate men's perceptions that condoms are too tight at the penile glans by recommending such condoms. However, men who reported problems with looseness on the glans may want to select condoms other than these. Given the wide range of condoms on the market, prevention providers can play a valuable role in helping men to identify condoms that they find more suitable and potentially increase the likelihood that they will use them more consistently and correctly as a result.

Some condom manufacturers have developed condoms that have larger or smaller dimensions at differing points along the condom (eg, shaft and head), and others have developed condoms with varying overall length and circumference dimensions.²⁷ That men can identify problems at specific points on the penis offers valuable insights for those who develop condoms, although it will be vital to ensure that men are comfortable with the manner in which condoms with varying dimensions are labelled and accessed. This may particularly require increased sensitivity to men who might be uncomfortable with seeking, purchasing and using condoms with smaller dimensions.

Similar to other studies in this area, we used convenience sampling, and findings therefore have limited generalizability. It is also possible that men attending a "Pride" event responded differently than other MSM. The typical challenges of self-report questionnaires, particularly social desirability, should

Key messages

- The continued promotion of condoms for the prevention of HIV and other STI necessitates that providers and researchers have an understanding of the perceptions that those targeted for sexual-health programmes have regarding the fit and feel of condoms.
- There is an urgent need to understand perceptions of condoms that exist among African-American MSM in the United States, given the disproportionate impact of HIV and STI on these men, their prioritisation in condom campaigns and the lack of research conducted with this population.
- Findings of this study indicate that substantial proportions of African-American men report problems with the fit and feel of condoms and that these perceived problems are associated with condom failure.
- These findings offer important insights for condom manufacturers and the HIV/STI providers who promote condom use.

also be considered given the nature of this study. The public nature of data collection also limited our ability to assess penile dimensions and circumcision, two important factors in condom failure.

As the industry progresses, HIV and STI researchers and practitioners should consider more participatory work with condom manufacturers to ensure that new condoms are consistent with men's experiences with condom fit and feel, and the extent to which new condoms (particularly those in varying sizes) are made available to men in an acceptable manner.

CONTRIBUTIONS

Drs Michael Reece and Debby Herbenick developed The Condom Fit and Feel Scale and were responsible for the design and conduct of this study. Drs Michael Reece, Brian Dodge, and Debby Herbenick conducted the statistical analyses presented in this paper and led the development of the manuscript. Christopher Fisher and Sonya Satinsky coordinated the data collection and management and contributed to the development of this manuscript. Andreia Alexander collected all study data and contributed to the development of this manuscript.

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