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Executive Summary

Between June and August of 2013, graduate students from Emory University in Atlanta, Georgia conducted a mixed methods study in Cape Town, South Africa that explored the demand for, and feasibility of, incorporating custom-fitted male condoms into current sexual health interventions. In collaboration with the Human Sciences Research Council (HSRC) and other community-based and government agencies in Cape Town, the project surveyed 133 heterosexual men to explore experiences and attitudes regarding standard male condoms, and interest in non-standard sized male condoms. Team members also conducted 6 in-depth interviews with condom distribution and education staff at clinics and sexual health organizations to determine the feasibility of incorporating custom-fitted male condoms into existing interventions and practices, and 20 in-depth interviews with sex workers to examine interest in custom-fitted male condoms. Of the heterosexual men surveyed, nearly one-third (32%) had not used a condom during last sex. Two-thirds (67%) experienced condom fit problems including breakage or slippage, and 72% reported they would be more likely to use male condoms if they were custom-fitted. Findings from the qualitative interviews with condom distribution and education staff showed interest in greater condom size variety, with a preference for having a small number of different sizes, a well-organized supply chain, affordable pricing, and long-term supply availability. Most sex workers interviewed indicated that they had experienced condom failure during intercourse with clients, and the majority believed that the availability of more condom sizes would improve clients' willingness to use condoms. Sex workers felt that having several sizes (small, medium and large) would be most beneficial and feasible. Further, respondents indicated that size alone would not encourage increased condom use; clients prefer condoms that are colored, flavored, and textured. They also emphasized an aversion to using government-branded condoms. All of the different populations studied showed substantial interest in an expanded array of condom sizes. Further, the data highlight important considerations regarding the feasibility and logistics of introducing custom-fitted condoms as a sexual health intervention in Cape Town, South Africa.

Introduction

South Africa has one of the world's highest rates of HIV prevalence, with 18.8% of adults aged 15-49 HIV infected.¹ Research indicates that heterosexual sex is the leading mode of transmission of HIV in the region.¹ The correct and consistent use of male condoms has proven to be highly effective in the prevention of HIV transmission. Studies have indicated that condom errors, including inconsistent condom use, occur frequently and reduce their effectiveness.² The fit and feel of male condoms has presented as one of the leading barriers to consistent use.³ Multiple studies conducted across countries have indicated that men often report condom fit as being either too long, too short, too loose, or too tight.^{4,5} Studies have also suggested that men who report poor condom fit are more likely to report condom errors, including breakage and slippage, as well as sexual difficulties, and reduced sexual pleasure for both partners.⁶

Most male condoms are produced in a remarkably limited range of sizes.^{7,8} The male condoms used for free distribution by the South African government are 52 mm wide. Custom-fitted male condoms, which come in a variety of sizes to fit a man's penile length and width, have been implemented throughout Europe.⁹ A presentation at the 2012 International AIDS Meeting found that European men who purchased condoms from an expanded array of sizes only chose a standard size 12% of the time.⁹

In a 2008 study conducted in the United States, researchers found that male condom breakage and slippage were lower for men that used custom-fitted male condoms specific to their individual penile dimensions than for those who used standard condoms during intercourse.⁵ In light of these findings, some researchers and clinicians have called for the availability of a broader range of condom sizes.¹⁰

The current study, conducted between June and August of 2013, in Cape Town, South Africa explored the demand for, and feasibility of introducing custom-fitted male condoms as a sexual health intervention. The study collected data from three key populations that are impacted by or concerned with condom use. Because heterosexual intercourse is the leading mode of transmission of HIV, the study conducted surveys with heterosexual men regarding condom use experiences and attitudes toward custom-fitted condoms.¹ Further, in-depth interviews with clinic and organization staff were conducted to assess feasibility and logistics of introducing custom-fitted male condoms into distribution and education practices. Lastly, because sex work is prevalent in South Africa and sex workers have a particularly high burden of HIV, the current study also conducted in-depth interviews with sex workers to assess condom use experiences and opinions regarding custom-fitted condoms.^{11, 12} The following sections detail the methods and findings for each respective component.

Condom Use Experiences and Attitudes of Heterosexual Men

Methods

One hundred thirty three men took part in an assessment exploring their experiences with and attitudes towards male condoms. Questions were taken from: National HIV Behavioral Surveillance survey, The Demographics and Health Survey (South Africa), the Safe Sex Behavioral Questionnaire, the National Surveys of Sexual Attitudes and Lifestyles, the Attitudes Towards Condoms Scale, Consumer Profile Survey Questionnaire and a study by Grov et al. 2012.¹³ The mean age of respondents was 30.6 years, with a range of 18-69. Educational attainment was also diverse, spanning from the 1-5 grade bracket to the 13+ grade bracket, with median grade level in the 8-11 range. Most respondents (69%) identified as Black, followed by Coloured (20%), White (7%), and Other (4%). Incomes ranged from “No regular income” to “More than 384,001 ZAR per year.” Data were analyzed for descriptive purposes, and to explore possible correlations for interest in custom-fitted condoms using a Pearson chi-square test.

Results

- **Standard male condom experience:** As a whole, 67% of participants reported ever having *at least* one problem with condom fit or function. Specifically, 22% reported that male condoms did not appropriately fit their penile length, 31% stated that male condoms did not fit their penile girth, 53% have had a condom break during sex, and 41% have had a condom slip off during sex.
- **Standard male condom use:** In terms of recent behavior, 32% reported not using a condom during their last sexual encounter. Top reasons given for not using condoms included perceived reduction of sexual pleasure (28%); being in a safe, monogamous relationship (26%); and being too embarrassed to acquire them (20%).
- **Standard male condom attitudes:** Respondents reported using condoms for multiple reasons, including preventing HIV/STI infection (94%), as a precaution against HIV/STI transmission (94%), and avoidance of pregnancy (84%). However, dissatisfaction with condoms was high: 35% reported disliking the feel of condoms and 26% reported that they would be too embarrassed to use the free, one-size-fits-all government provided condoms.
- **Fitted male condom attitudes:** The vast majority of men, 77%, would prefer condoms to come in more sizes. This preference was sustained regardless of education level ($p < 0.554$), race ($p < 0.19$), religious affiliation ($p < 0.70$), or income ($p < 0.07$). In other words, demand for custom-fitted condoms was high regardless of participant background. Moreover, 72% reported that they would be more likely to use condoms if they were custom-fitted, suggesting that provision of custom-fitted condoms could lead to increases in condom use.

Discussion

While it is true that condoms are freely obtainable throughout South Africa, these findings suggest those currently available are not fully meeting the needs of the heterosexual male population surveyed. A third of men did not use condoms during their last sexual encounter, two-thirds of men have experienced at least one type of condom problem, and nearly three-fourths of men stated they would be more likely to use condoms if better-fitting options were available. It is not surprising, then, that the desire for more condom sizes is so prevalent across the myriad peoples of South Africa, cutting across divisions of race, religion, educational attainment and even income level. New condom options, be they a greater variety of sizes, or condoms made to better fit the South Africa population, are needed. The strong interest in better fitting condoms may indicate that addressing issues of fit could lead to greater condom utilization.

Attitudes towards Pregnancy Termination Amongst Heterosexual Males

Methods

One hundred thirty three men took part in an assessment exploring their experiences with and attitudes towards male condoms. The mean age of respondents was 30.6 years, with a range of 18-69. Educational attainment was also diverse, spanning from the 1-5 grade bracket to the 13+ grade bracket, with median grade level in the 8-11 range. Most respondents (69%) identified as Black, followed by Coloured (20%), White (7%), and Other (4%). Incomes ranged from “No regular income” to “More than 384,001 ZAR per year.”

Men were asked to categorize the relationship type of their most recent sexual encounter (wife, girlfriend, casual partner, one night stand, sex worker, other). They were then presented with two hypotheticals: in the case of pregnancy, would the participant support their partner’s decision to have an abortion, or would they support their partner’s decision to continue the pregnancy. One way ANOVA was used to explore possible correlations.

Results

- **Support for abortion:** Supporting a partner’s decision to have an abortion is related to how the participant views their relationship with that partner, with less support for wives and girlfriends and more support for casual partners and one-night stands ($p = .016$).
- **Support for continued pregnancy:** Relationship type made no significant difference in whether participants would support a continued pregnancy ($p = .075$).
- **Overall views:** There is more support for continued pregnancy than for abortion. The table below gives the mean scores of support, broken down by partner type and question. A score of 5 would be interpreted as strong support, while a score of 1 represents a strong lack of support.

Table 1: Mean Scores for Support by Partner Type

	Wife	Girlfriend	Casual Partner	One-night Stand
Support for abortion	1.71	2.09	2.4	3
Support for continued pregnancy	4.38	4.29	3.94	3.5

Discussion

These findings suggest that surveyed men would not be supportive of their partner’s choice for an abortion, writ large, and would be especially unsupportive with those partners described as wives or girlfriends. On the other hand, support for continuing a partner’s pregnancy is relatively high, with no difference between partner types. That is, while there is a significant difference in regards to our participants’ views on abortion based on partner type, that difference does not extend in regards to continuing a pregnancy.

Perspectives from Condom Education and Distribution Staff

Methods

Researchers conducted ten qualitative, semi-structured in-depth interviews with 6 staff members in charge of condom distribution and 4 staff members in charge of condom education in 2 sexual health organizations and 4 clinics in Cape Town, South Africa. In addition, participants assessed their organization's condom stock and availability through questionnaires and mapping. Through this mapping exercise, condoms distribution staff were asked to draw the clinics and indicate where the condoms were ordered, stored, and distributed. This exercise helped the staff to think about all the locations of condom distribution and storage in the clinics and organizations. This exercise helped focus discussion of the condom logistics process within the interview and gave the researchers a pictorial representation of the clinics and organizations. Data from the interviews were transcribed, entered into MAXQDA and analyzed using a constant comparative approach to identify themes. The clinic maps were used to clarify information from the interviews.

Results

- Clinics and sexual health organizations kept between 6,000 and 60,000 condoms in stock on a monthly basis
- The government-issued standard-sized condoms were available at all sites and the distribution system was easy to use and quick to restock
- The distribution and education staff had mixed opinion about the government issued *Choice* condoms. Opinions ranged from having a pragmatic approach to condom use, encouraging use of the government issued condoms and teaching that all condoms are the same in function to wanting further condom options and putting more effort into having a greater selection of types of condoms available at the organizations.

"We encourage them to use Choice condoms, because, I mean, it's funded by government in the end of the day" – Staff member NGO(1)

"There are free condoms available even though [...] it's the Choice condom with no choice" – Staff member government clinic (1)

- Grant funded, population specific, and subsidized condoms were seen as more desirable for the condom users but the availability of these condoms was sporadic

"Who cares about the department of health, for me, if we can come up with a product that works for our males in a better uptake in terms of condom usage, then that's for me, the key [...] It isn't to impress the department of health." – Staff member NGO(2)

- All clinics and sexual health organizations had condoms available in public areas for condom users to freely take

"Condoms have always been free, especially the ones from clinic." – Staff member NGO(3)

- All clinics and sexual health organizations had educational outreach on correct condom use

"[There's] a lot of education, everywhere- left, right, center" - Staff member NGO(1)

- Limited availability of space for men to perform penile measurements in the clinics or sexual health organizations
- Interest in fitted condoms was dependent on changes needed to the current fitted sizing system that distributes 95 condom sizes, with a need to have a small number of different sizes, a well-organized supply chain, affordable pricing, and long-term supply availability

“I feel [95 sizes] is much, too many options...I think it try 10 sizes, different lengths and widths” – Staff member government clinic

Discussion

There is a clear interest in and potential mechanism for distribution of custom-fitted condoms in Cape Town. Clinic managers believed that custom-fitted condoms might improve consistent use and reduce HIV transmission and unintended pregnancy. Further research should explore the commercialization and logistical aspects of custom-fitted condom distribution.

Perspectives from Female, Male, and Transgender Sex Workers

Methods

Researchers conducted 20 in-depth interviews with female, male and transgender sex workers affiliated with SWEAT's Peer Education program. Participants answered questions regarding condom use history, barriers to condom use amongst clients and partners, experiences of condom failure, and variations in penile size amongst sex worker partners. Data were transcribed, entered into MAXQDA and analyzed using a constant comparative approach to identify themes.

Results

- 10 out of 20 sex workers interviewed indicated that they had experienced condom failure during intercourse with clients, with 12 sex workers indicating that they had experienced condom breakage with a client and 5 sex workers indicating that they had experienced a condom slipping off of a client during sex.

“So it's when I started realizing about condoms, condoms are safer, but sometimes they do break, sometimes they do slip off, you know... I'm saying that, the problem is the size.” ~Female Sex Worker

- Respondents had mixed feelings about incorporating penis measurement into foreplay with clients, with half of sex workers indicating that penile measurement would be better suited for clients to conduct in private and half responding that their clients would find it sexy to have their penises measured before sex.
- The majority of sex workers interviewed, 16 out of 20 sex workers, indicated that they believe clients who are reluctant to use current male condom options would be willing to use condoms that fit them better, and responded that they thought it would increase client willingness to reconsider condom use.

“It's like clothes. If you feel it's too small for you, its uncomfortable. You understand? And if it feels, if its too big its too loose. And if its your size, you feel comfortable. I think even [with] condoms, you need a size.” ~Transgender Sex Worker

- Most sex workers indicated that 95 sizes of condoms would be unmanageable given the transient nature of sex work
- Conversely, a number of participants indicated that condoms in limited size variations (i.e. small, medium, large) would be easier to manage with their clients.
- Participants indicated that limited condom sizes posed a challenge to consistent condom use with clients and expressed support for the possibility of incorporating custom-fitted male condoms into their work.

The only thing that I can say is when doing certain, the only thing that I'm not happy about with condoms is the size that we get here in South Africa, but I'm glad because I'm seeing that you've got different sizes...” ~Female Sex Worker

- Sex workers indicated that in order for custom-fitted male condoms to be accepted and utilized by South Africans, widespread education and promotion would be necessary and the condoms would either need to be available for free or at a highly subsidized cost.
- Respondents indicated that size alone might not be sufficient to encourage increased condom use; clients prefer condoms that are colored, flavored, and textured, and there is an aversion to government-branded condoms.

Discussion

There is a great deal of interest on the part of sex workers to incorporate custom-fitted male condoms into their business with clients. Sex workers participating in the study expressed support for the idea and believe that their clients would be more likely to revisit their decision whether or not to use condoms if they had a condom that was better suited to their penile dimensions. Participants provided mixed responses regarding the incorporation of penile measurement in their foreplay with clients, indicating that there is a need to explore other options to sized condoms, including colored, textured, and flavored condoms.

Conclusion

Overall, the current study found interest in expanded male condom sizes across the diverse study populations. A substantial number of respondents indicated issues with currently available condoms, including breakage, slippage, discomfort, and unwillingness to utilize them. While most heterosexual men sampled expressed favorable attitudes toward the idea of custom-fitted condoms, some sex workers and some condom distribution staff expressed potential feasibility issues with custom-fitted condoms and indicated greater interest in increased availability of condom sizes. Interest in expanded variety of condoms sizes was mainly dependent on important considerations regarding feasibility and logistics of sizing and distribution.

The current study provides a foundation for exploring the possibility of expanding male condom size choices in Cape Town, South Africa. Further, it displays the promise of male condom size expansion as a sexual health intervention in this context. Future studies should delve deeper into logistical considerations of custom-fitted male condom distribution, including cost, stocking and supply, outreach, and education.

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