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Condom Discomfort and Associated Problems With Their Use Among University Students

Richard Crosby, PhD; William L. Yarber, HSD; Stephanie A. Sanders, PhD;
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Abstract. In addition to consistent use, condoms must be used correctly. The purpose of this study was to identify prevalence and types of condom-associated discomfort among university students, the outcomes of this discomfort, and the role of discomfort in condom breakage. We conducted a cross-sectional study of 206 students attending a private university in the southern United States. We assessed 3 potential outcomes: breakage, not using condoms throughout sex, and low condom-use motivation. Nearly one third reported discomfort, including tightly fitting condoms, vaginal irritation, and loss of sensation. Discomfort was associated with breakage ($p = .0001$), incomplete use ($p = .0001$), and less motivation to use condoms ($p = .018$). Gender moderated the latter 2 findings. Adjusted findings indicate that students reporting discomfort were 3.6 times more likely to also report breakage ($p = .0009$). Continued investigation of this topic is warranted. Prevention education may benefit university students by promoting several key practices, such as adding lubricant to condoms before they dry out and acquiring condoms that fit properly.

Key Words: breakage, condoms, pregnancy, sexually transmitted diseases

Healthy Campus 2010 delineates several objectives pertaining to decreased incidence rates of sexually transmitted diseases (STDs) among college students in the United States.¹ In addition, a recent report summarized the epidemic of STDs among America's young people (ie, persons aged under 25 years). The report clearly documented the broad-reaching scope of the epidemic and its economic, social, and personal consequences for young people.² Thus,

without question, preventive behaviors that contribute to reduction of STD incidence among defined populations of young people (eg, college students) are important. Of these behaviors, the consistent and correct use of condoms is a potentially efficacious strategy to avert many of the STDs commonly diagnosed in the United States.³

Although many researchers have investigated the consistency of using the male condom among heterosexuals,⁴ far fewer have assessed condom-use errors and problems. Of these, several studies have focused primarily on condom breakage and slippage.⁵⁻⁷ A few studies have addressed a broader array of issues, including incorrect application of condoms, incomplete use of condoms, and erection problems associated with condom use.⁸⁻¹² One potentially important aspect of individuals' experiences with condoms, however, has not been sufficiently addressed by previous research: discomfort associated with condom use.

Discomfort may be an important consideration when couples decide to use or not use condoms.¹³ Discomfort may also be clinically important in that it could signal fitting problems that may contribute to breakage.¹⁴ Another study found alternatively that ill-fitting condoms may contribute to less frequent use of condoms (although the same study did not find an association between ill-fitting condoms and condom failure).⁷

We report here the findings from an exploratory study of young, condom-using university students who provided responses to an open-ended question regarding recent discomfort experienced when using condoms during sex. Because the data were collected in the context of a quantitative study, we were also able to determine whether discomfort problems were associated with increased reporting of condom breakage. Finally, we identified associations between reported discomfort and personal motivation to use condoms and between discomfort and incomplete use of condoms.

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METHOD

Study Sample

From February through May 2003, a research assistant enrolled university students (aged 18 to 25 years) in an anonymous, cross-sectional survey of condom-use errors and problems. She recruited students consecutively, on arbitrary days, from the student health center (79%) and residence halls (21%), and she asked the students individually to participate in the study. Eligibility criteria were: (1) being aged 18 years or older and (2) having used a condom at least once in the past 3 months. A screening of 444 students yielded 233 who were eligible to participate. Of these, 206 (88%) provided written informed consent and returned a completed questionnaire to the research assistant. The research assistant handed the questionnaire directly to participants and instructed them that they could ask clarifying questions (eg, if they needed help with any of the reading) as needed. The Institutional Review Board approved the study protocol. We did not provide incentives for participation.

Measures

Students completed a questionnaire that assessed social demographic variables, recent sexual behavior (eg, frequency of condom use), and a broad range of potential condom use errors and problems. The questionnaire was a slightly modified version of an instrument used in similar studies of condom use errors and problems among university students.^{10–12} We used a 3-month recall period. We assessed discomfort using the following survey question: “In the past 3 months did you or your partner have problems with the way a condom fit or felt (for example, the condom was too large or too small, it was the wrong shape, it caused irritation of your skin or genitals or your partner’s genitals, it caused loss of erotic sensation for you or your partner)?”

We presented students with questions that assessed whether condoms had broken during sex, slipped off during sex, or slipped off during withdrawal. We also assessed incomplete use of condoms. Incomplete use was defined as students answering “yes” to at least 1 of 2 questions: (1) “Did you start having sex without the condom, then put the condom on later?” and (2) “Did you start having sex with the condom on, then take it off before sex was over?” Sex was clearly defined as placing the penis in the partner’s mouth, vagina, or rectum (anus, butt). We assessed personal motivation to use condoms using the following survey item: “I am highly motivated to use condoms.” Students responded to the statement using a 5-point Likert-type scale, ranging from *strongly agree* to *strongly disagree*. Because the resulting distribution for this measure was markedly skewed, we performed a median split, resulting in a comparison of those indicating *strongly agree* (56.6%) to the remaining sample. Two survey items assessed lubrication practices. One asked whether unlubricated condoms had been used and the other asked whether Vaseline or other oil-based substances (eg, mineral oil, baby oil, cooking oil) had been used to lubricate condoms.

Data Analysis

We organized open-ended responses to the question assessing discomfort into categories based on a review of the comments. We listed verbatim comments that were clearly legible and pertained to condom discomfort. Next, we grouped comments by their shared meanings (eg, we grouped together all comments suggesting that the condom fit too tightly) and we took a frequency count for each of the identified categories.

We determined associations between condom discomfort and the 3 hypothesized outcomes (breakage, incomplete use, less motivation) by chi-square tests. We used significant bivariate associations, followed by layered chi-square tests, to determine whether gender moderated the observed association. Finally, because we also assessed students’ condom lubrication practices, we constructed a multiple logistic regression model to determine the independent contribution of discomfort to condom breakage within the context of demographic variables and lubrication variables achieving bivariate significance with condom breakage. For all analyses, we defined significance as having an alpha value of .05.

RESULTS

Characteristics of the Sample

The average age of the students was 20.3 years ($SD = 2.1$). Just over half (55.3%) of the students were female. The majority identified as White (80.4%), 5.9% identified as African American, 5.4% as Asian, and the remainder identified as members of other races. Fifteen percent were graduate students, and the remainder were undergraduates. Seven students indicated they were bisexual, 3 men identified as gay, and 2 were uncertain of their sexual orientations.

Condom Discomforts

One hundred and ninety-four students responded to the question that assessed discomfort with condom use. Of these, 31.4% indicated having a recent problem with the way a condom fit or felt. Men (29.2%) and women (33.3%) were equally likely to report discomfort ($p = .54$). White students (28.6%) and racial minority members (39.5%) were equally likely to report discomfort ($p = .19$). The mean age of those reporting discomfort (20.5 years) did not differ from the mean age of those who indicated they had not had discomfort problems: 20.3 years, $t(192) = .84$, $p = .40$.

We organized into categories the 33 comments from men who provided written comments regarding their discomfort. Among these men, the most common form of discomfort described was that the condom was too tight (36%). The next most frequent comment was that condoms caused a loss of sensation (30%). As one male noted, “loss of sensation—sex becomes boring.” Other comments (provided by 3 or fewer men) included erection problems, allergies to latex, condoms are too big, and condoms cause dryness.

We organized into categories the 44 comments from women who provided written comments regarding their discomfort. Among these women, the most common form of discomfort described was that the vagina became irritated (43%). The next most frequent comment was that male partners complained the condom was too tight (27%). Twenty percent of the comments indicated that the man lost his sexual pleasure as a result of condom use. Other comments (made by 1 woman each) were that the condom was too big for the male partner and that condoms made sex uncomfortable for both partners.

Bivariate Analyses

Table 1 displays a summary of the bivariate correlations between experiencing discomfort using condoms and the hypothesized outcomes. Discomfort was significantly associated with condom breakage, incomplete condom use, and less motivation to use condoms. Among those reporting discomfort, 4 of every 10 reported that a condom had broken on at least 1 occasion in the past 3 months. Conversely, only one sixth of those who did not indicate discomfort reported breakage. Gender did not moderate this association. Among those reporting discomfort, 6 of every 10 of those surveyed reported incomplete use of condoms in the past 3 months as compared with one third who did not indicate discomfort. This association was significant only for women. Among those reporting discomfort, less than one half indicated that they were highly motivated to use condoms. In comparison, nearly two thirds of those who did not experience discomfort indicated they were highly motivated to use condoms. This association, however, was moderated by gender; the association was significant only for men.

Multivariate Analysis

Of the 197 students responding to the discomfort item on the questionnaire, 22.8% reported condom breakage on at least 1 occasion in the past 3 months. Gender ($p = .24$) and minority status ($p = .20$) were not associated with condom breakage. Those reporting breakage were significantly younger ($M = 19.8$ years of age) than those not reporting breakage ($M = 20.5$ years of age) ($p = .016$). Whether students had used condoms without a lubricant (reported by 18.4%) was not associated with breakage ($p = .13$). However, use of an oil-based lubricant (reported by 7.8%) was associated with breakage ($p = .0001$) in the expected direction, given that oil-based lubricants lead to the deterioration of latex. Thus, we constructed a logistic regression model using direct entry of 3 variables: students' age, use of oil-based lubricants, and discomfort.

The model correctly classified 79.1% of the cases, was significant, $\chi^2 (3, N = 29.4)$, $p < .0001$, and achieved satisfactory fit with the data, goodness of fit $\chi^2 (7, N = 6.64)$, $p = .47$. Table 2 displays the significant multivariate associations between condom breakage and correlates achieving bivariate significance. Compared to their counterparts who did not indicate discomfort, students reporting discomfort were about 3.6 times more likely also to report

TABLE 1. Bivariate Associations Between Condom Discomfort and Hypothesized Outcomes

Outcome	% with discomfort	% without discomfort	<i>p</i>
Condom breakage	40.0	15.2	.0001
Incomplete use	60.0	33.1	.0001
Highly motivated	45.9	63.9	.018

TABLE 2. Significant Multivariate Associations Between Assessed Correlates and Condom Breakage

Correlate	AOR	95% CI	<i>p</i>
Reported discomfort	3.59	1.68–7.63	.0009
Use of an oil-based lubricant	6.11	1.91–19.54	.002
Older age	.75	.60–.95	.015

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

breakage. Students reporting the use of an oil-based lubricant were about 6.1 times more likely to report breakage. Finally, for each advancing year of age, students were 0.25 times less likely to report breakage.

COMMENT

Findings from this exploratory study of university students suggest that men and women may experience problems with the fit and feel of condoms. The observation that discomfort occurred at least once, in a brief recall period (ie, 3 months), for nearly one third of the students suggests that the problem may be common. Specifically, condoms may often be perceived as fitting too tightly, indicating that students may not know where to acquire larger sized condoms (or even that larger sizes are available). Responses also suggest that condoms may commonly be perceived as the cause of vaginal irritation. Indeed, this irritation may occur if condoms are not adequately lubricated or if they lose substantial amounts of lubrication during sex. It is plausible that tightly fitting condoms and vaginal dryness may foster breakage (because of increased stress on the condom); the observed association between discomfort (ie, fit and feel) and breakage supports this proposition. This possibility clearly deserves more extensive investigation, preferably in the context of a study that collects event-specific data (ie, events specific to the episode of intercourse when the condom broke are identified).

The loss of pleasurable sensation resulting from condom use was also a common concern. The extent to which this loss of sensation is attributable to tightly fitting

condoms or vaginal irritation/dryness should be determined (as both problems can be rectified by teaching condom users to purchase condoms that fit and to add water-based lubricant to condoms as they dry out during sex). Some loss of sensation, alternatively, may be inevitable given that skin-to-skin contact is lost when condoms are used. Future investigations might benefit from determining how this loss of sensation may factor into students' decisions about using condoms. Our findings also suggest the possibility that condom discomfort may be associated with incomplete use of condoms (at least as reported by young women). It is conceivable that discomfort with the fit and feel of condoms may affect decisions that couples make about whether to start sex without using condoms or to remove condoms before sex is over.

Our findings also suggest that male students experiencing condom discomfort may subsequently become less motivated to use condoms than their counterparts who have not recently experienced discomfort. Given the relatively wide range of discomforts reported by men, researchers should further attempt to identify specific problems with condom use (eg, too tight, loss of sensation) that may result in less motivation to use condoms. Rectifying these problems through education or clinic-based counseling programs may be an important part of campus-wide efforts aimed toward reducing incidence of pregnancy and STDs among students. Moreover, if condoms are provided to students at a campus health center, then making a variety of sizes available (and small packages of additional lubrication) may be a beneficial practice.

To the best of our knowledge, this is the first study to report that discomfort is associated with condom breakage after accounting for competing variables, such as age and the use of oil-based lubrication. Because discomfort was also associated with incomplete use and less motivation to use condoms, education and counseling programs may substantially reduce typical condom-user failure rates (for both pregnancy and STDs) by helping young men and women to rectify any problems they may experience relative to the fit and feel of condoms.

Limitations

Findings are limited by several factors, including the inherent limitations of a cross-sectional study design. This is particularly problematic because temporality between events cannot be established. The exception to this is the measure of motivation (an outcome representing students' evaluation after the events occurring in the past 3 months). Prospective studies are clearly needed to establish cause and effect. The small sample size also precluded quantitative analysis of the separate coded categories of condom discomforts. In a larger study, categories (eg, fit too tight, loss of sensation) should be treated as separate variables in analyses designed to identify antecedents of breakage, incomplete use, and less motivation. Another important limitation is reliance on the validity of students' self-reports and the retrospective nature of the assessments.

Finally, the use of a convenience sample limits generalizability of the study. Although the minority versus nonminority composition of the sample approximated that of the university (approximately 25% of students at the university are members of ethnic or racial minorities), the use of a nonprobability sampling method clearly implies that sampling bias may have occurred. This is reflected, for example, by the fact that about 6% of the sample identified as African American, compared to 12% shown by university census.

Conclusions

Findings from this exploratory study suggest the possibility that a substantial proportion of young men and women may experience discomfort during sex when condoms are used. Observed associations suggest that discomfort could be a potential antecedent of condom breakage, incomplete use, and less motivation to use condoms. Given further investigation establishing the causal nature of these associations, prevention education may benefit young men and women by promoting key practices, such as adding lubricant to condoms before they dry out and cause vaginal irritation and acquiring condoms that fit properly.

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NOTE

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