

HHS Public Access

Author manuscript *J Sex Res.* Author manuscript; available in PMC 2018 September 01.

Published in final edited form as:

J Sex Res. 2018 September; 55(7): 817–823. doi:10.1080/00224499.2017.1376305.

Tactics Young Women Use to Resist Condom Use When a Partner Wants to Use a Condom

Rhiana Wegner^{iD}, Department of Psychology, University of Massachusetts–Boston

Melissa A. Lewis, Department of Psychiatry and Behavioral Sciences, University of Washington

Kelly Cue Davis, College of Nursing and Health Innovation, Arizona State University

Elizabeth C. Neilson, and Department of Psychology, University of Washington

Jeanette Norris

Alcohol and Drug Abuse Institute, University of Washington

Abstract

Although there is a growing literature on men's condom use resistance (CUR) tactics (e.g., direct requests, deception), little research exists on women's CUR tactics. This study investigated young women's (ages 18 to 21) self-reported use of CUR tactics since age 14 and related individual difference factors. Participants included 235 sexually active heterosexual women from a nationwide convenience survey sample who completed a newly adapted women's version of the Condom Use Resistance Survey. Consistent with the limited previous research, women were most likely to use risk-level reassurance (37.9%) and seduction (33.2%) tactics. A higher frequency and quantity of alcohol consumption, particularly prior to sex, lower perceived risk of sexually transmitted infections (STIs), and a history of STI diagnosis were associated with having previously used a greater number and variety of CUR tactics. This highlights the need for CUR prevention and intervention programming for women. Future research should specifically examine women's rationale for using CUR tactics and utilize longitudinal and experimental methods to further elucidate directional and causal relationships among individual-level risk factors, CUR, and negative sexual health outcomes.

Young adults in the United States are disproportionately at risk for sexually transmitted infections (STIs), comprising only one-quarter of the population engaging in sexual activity but accounting for over half of new STIs each year (Centers for Disease Control [CDC], 2016). Women are particularly at risk, with 86% of new human immunodeficiency virus (HIV) heterosexual transmissions occurring among women (CDC, 2016). Condom use is

Rhiana Wegner ^(D) http://orcid.org/0000-0003-1486-8751

Correspondence should be addressed to Melissa A. Lewis, University of Washington, Department of Psychiatry and Behavioral Sciences, Box 354944, Seattle, WA 98195. lewisma@uw.edu. ORCID

still currently the most effective method for reducing the risk of transmission; however,

Page 2

many men and women choose to not use condoms (Carter, McNair, Corbin, & Williams, 1999; Nasrullah, Oraka, Chavez, Johnson, & Dinenno, 2017). Only a handful of studies have examined women's condom use resistance (CUR; DeBro, Campbell, & Peplau, 1994; Oncale & King, 2001; Tschann, Flores, De Groat, Deardorff, & Wibbelsman, 2010). These studies have found up to 22.5% of women report using tactics, such as seduction, to get a partner to have unprotected sex (DeBro et al., 1994). In Oncale and King's (2001) study, the most common tactics reported by women included expressing concerns about their own reduced sensitivity (48.8%), reassuring their partner there is low risk for pregnancy (28.6%) or STI (10.7%), and using trust and the relationship to leverage for condom nonuse (5.9%). The goal of the current study was to replicate and extend this limited previous research by examining additional CUR tactics not previously assessed (e.g., use of deception, condom sabotage, and physical force) within a diverse sample of young women. We also examined relationships between women's CUR tactic history and their perceived vulnerability for STIs, sexual and drinking behaviors, and history of STIs.

Individual-level Factors Associated With Women's Cur Utilization

Perceived STI Vulnerability

The average college woman believes she is less likely to contract an STI than other women her age (Pollack, Boyer, & Weinstein, 2013; Stock, Gibbons, Beekman, & Gerrard, 2015). Underestimating one's risk is associated with a greater likelihood of having had unprotected sex recently (Biggs & Foster, 2013) and intentions to have unprotected sex in the near future (Foster, Higgins, Karasek, Ma, & Grossman, 2012). Although previous research has examined how perceived vulnerability for an STI is associated with unprotected sex intentions and behaviors, the association with CUR tactics has not yet been explored. Women with low levels of perceived STI vulnerability were expected to report using a greater number of risk-level reassurance tactics, as well as a greater total number of CUR tactics overall.

Sexual Behaviors

Approximately 20% of sexually active college women report having three or more sexual partners in the past year (American College Health Association, 2011). Recent research using longitudinal methods (10 waves across six years) has identified three trajectories that capture emerging adults' patterns of sexual partners across time: multiple partners, single partner, and rare partner (Ashenhurst, Wilhite, Harden, & Fromme, 2017). Individuals in the multiple-partner trajectory were up to 7.55 times more likely to report at least one instance of unprotected sex than individuals in the rare partner trajectory (Ashenhurst et al., 2017). Consistent with this research, and in support of the link between women's number of sexual partners and CUR, Oncale and King (2001) found that 40% of women who tried to persuade a partner to have unprotected sex also reported five or more lifetime sexual partners. Therefore, we expected that women's CUR history would be positively related to their number of sexual partners.

Drinking Behaviors

The pharmacological effects of acute intoxication negatively impact drinkers' executive cognitive functioning capabilities, reducing their ability to attend to typically inhibiting situational cues (risk of STIs/HIV), and instead focusing their attention on impelling situational cues (e.g., desire to have unprotected sex; Steele & Josephs, 1990). Consuming a large quantity of alcohol, especially prior to sex, and meeting criteria for alcohol dependence are associated with increased risk for contracting an STI (for a review, see Cook & Clark, 2005). Experimental alcohol administration research indicates acute intoxication is indirectly related to unprotected sex intentions in women through reduced perceptions of negative health outcomes associated with condom nonuse (Stoner et al., 2008) and greater attention to cues of sexual arousal rather than to cues of their partners' sexual risk (Davis, Hendershot, George, Norris, & Heiman, 2007). Thus, we expected that women who consumed a greater number of drinks on average and who reported drinking problems would also report a greater CUR history. As well, we expected that CUR history would be negatively associated with perceived vulnerability for STIs in sexual situations involving alcohol consumption.

History of STIs

The successful use of CUR tactics increases women's risk for contracting or transmitting an STI. Women with a history of STI diagnosis might have contracted an STI as a result of their previous CUR behaviors. Alternatively, a previous STI diagnosis, if perceived as a negative experience, might serve to reduce women's use of CUR tactics in the future. We explored the association of STI diagnosis history and CUR in the current study.

Study Goals and Hypotheses

Given the limited existing research on women's CUR and our expanded exploration of women's CUR tactics in the current study, we examined bivariate relationships between women's successful use of each individual CUR tactic type (at least once), total number of CUR tactics used, and number of different types of CUR tactics used (since age 14) with women's perceived STI vulnerability, sexual and drinking behaviors, and history of STI diagnoses. Consistent with previous research, a greater proportion of women were expected to report having previously used seduction, emotional consequences, relationship and trust, and risk-level reassurance tactics with their past sexual partners, compared to withholding sex, deception, condom sabotage, and physical force (DeBro et al., 1994; Oncale & King, 2001). Women who perceived less vulnerability for contracting an STI in both sober and intoxicated sexual situations were expected to also report more frequent use of CUR tactics and use of a wider variety of CUR tactics. Women who reported a greater number of lifetime sex partners and women who reported more alcohol problems and consuming a greater number of alcoholic beverages per week and prior to sexual intercourse were expected to also report more frequent and varied use of CUR tactics. Finally, we examined how women's history of STI diagnosis was associated with their CUR.

METHOD

Participants and Procedure

Eligibility Criteria and Data Quality Control—Participants were recruited nationally via online methods (61.7% Craigslist, 7.1% Facebook), advertisements and flyers (5.7%), participant referrals (22.5%), and other methods (4.0%, e.g., Researchmatch.org) for a larger study on alcohol use and sexual risk behavior. Participants were eligible for the larger study if they were ages 18 to 20 (at initial survey); men or women current residing in the United States; and if they provided a valid e-mail address, phone number, and first and last name. Consistent responses to items assessing age and birth year, as well as answer checks ("Select 4 for what is 2 + 2" and "Select the color green") were used to detect and prevent fraudulent data (Teitcher et al., 2015). In total, 5,470 men and women completed the online screening survey. Half (51%, n = 2,803) of those who completed the online screening survey were eligible based on the initial online screening.

Telephone Screening Prior to Baseline Survey—The telephone screening was completed by 79% (n = 2,217) of eligible individuals identified by the online screening. To ensure a diverse sample, we stratified recruitment by gender, education level, and race/ ethnicity. As a result, the primary reason that people were not invited to complete the baseline survey was that the quota, based on demographic information, had already been met (854 people). In addition, individuals were deemed ineligible for being duplicates (71 people) or for staff not being able to verify the information provided in the initial online screening survey (147 people). Twenty people declined participation at the telephone screening.

Baseline Online Survey—Of the 1,145 individuals who were invited to complete the online baseline survey, 1,038 (91%) completed it and were included in the final sample. A little more than half of these participants were women (53.4%, n = 554). Several study measures were given to a randomly selected subset (two-thirds) of participants to minimize survey length and participant burden (i.e., planned missingness; Little & Rhemtulla, 2013). Planned missingness and the focus on women for this study reduced the sample size associated with key study variables to n = 366. Study procedures were approved by the university's institutional review board (IRB). Participants received a \$25 gift certificate for completing the 30- to 45-minute survey and were also entered into a drawing to win an Apple iPad or \$100 gift card.

Sample for Current Data Analyses—One-fifth of the women (20.5%, n = 76) did not report a history of sexual behavior (defined as oral, penile–vaginal, or penile–anal intercourse); four women did not indicate their sexual history; and an additional 18 women did not complete the Condom Use Resistance Tactics Survey (Davis et al., 2014). As well, given the focus of the current study on heterosexual contexts, 14 women were removed from the data set because they indicated their previous sexual experience had been largely or entirely same-sex in nature. Of the remaining women, an additional 12 reported that their sexual desires were largely same-sex and were thus also removed from the data set.

Measures

Condom Use Resistance—The Davis et al. (2014) Condom Use Resistance Tactics Survey was used to assess 10 different tactics: risk-level reassurance (four items, e.g., "Reassuring him that you were 'clean' so that he would have sex without a condom"); seduction (three items, e.g., "Getting him so sexually excited that he agreed to have sex without a condom"); reduced sensitivity (three items, e.g., "Telling him you didn't want to use a condom because sex doesn't feel as good with one on"); direct request (three items, e.g., "Asking him to not use a condom during sex"); relationship and trust (three items, e.g., "Telling him that you trusted each other so that he would have sex without a condom"); emotional consequences (three items, e.g., "Telling him how angry you would be if he insisted on using a condom"); deception (four items, e.g., "Pretending that you had been tested and did not have any STDs"); condom sabotage (three items, e.g., "Agreeing to use a condom but removing it before or during sex without telling him"; withholding sex (three items, e.g., "Refusing to have sex with him if you had to use a condom"); and physical threat/force (three items, e.g., "Preventing him from getting a condom by staying on top of him"). The lead-in question asked: "Since the age of 14, how many times have you successfully avoided using a condom (i.e., had sex without a condom) with a man who wanted to use a condom by ..." An additional subscale was added to assess CUR rationale associated with partner's loss of arousal (three items, e.g., "Expressing concern that he would have difficulty staying physically aroused if you had to use a condom"). Additional items were also added to other subscales to specifically address women's experiences. "Telling him that you are on birth control (e.g., the pill, IUD, etc.)" was added to the risklevel reassurance subscale (five items); "Telling him you won't be able to stay lubricated ('wet') if you had to use a condom" was added to the reduced sensitivity subscale (four items); and "Agreeing to use a condom but intentionally damaging it (e.g., poking a hole in it) before using it" was added to the condom sabotage subscale (four items). "Pretending you

it) before using it" was added to the condom sabotage subscale (four items). "Pretending you are on birth control so that he would agree to not use a condom" was used in the deception subscale instead of "Pretending you have had a vasectomy ..." Participants were asked to report the number of times (0, 1, 2, ... up to 20, 21, or more) since the age of 14 they had successfully used each tactic. Responses were summed (38 items) to create a total number of CUR tactics used. Five outliers were removed from the data set (i.e., 4 *SD* or more above the mean). As well, for each subscale a yes/no dichotomy was created to indicate that participants had used each different type of tactic at least once.

Sexual Behavior Perceived Vulnerability (Gerrard, Gibbons, Houlihan, Stock, & Pomery, 2008; Johnston, O'Malley, Bachman, & Schulenberg, 2011)—

Participants were asked: "If you had sex with a casual partner ..., how likely is it you would experience health problems (such as an STI)?" Two circumstances were presented: (1) when not drinking alcohol and (2) when drinking four or more drinks. Response options ranged from 1 (*Very unlikely*) to 5 (*Very likely*). Only 126 women were asked to respond to these questions as a part of planned missingness.

Sexual Experiences Inventory (Lewis et al., 2014)—Participants were asked to indicate their lifetime number of penile–vaginal sex partners. Responses ranged from 1 to 50. Participants were asked to indicate if they had ever been diagnosed with the following

Wegner et al.

STIs: gonorrhea, chlamydia, herpes, syphilis, HIV, genital warts/human papillomavirus (HPV), or another STI. Responses were combined and dichotomized to indicate if participants had ever been diagnosed with an STI (1 = yes, 0 = no). A small percentage of women (13.2%, n = 31) reported a previous STI diagnosis.

Two items were used from the SEI to assess the number of sexual partners with whom women consumed alcohol before or during vaginal sex and the typical number of drinks consumed on these occasions during the past three months. Participants were asked to report a number using an open-ended format. Responses ranged from 0 to 4 for the number of partners and from 0 to 13 for the typical number of drinks consumed.

Daily Drinking Questionnaire (Collins, Parks, & Marlatt, 1985)—Participants were presented with information on standard drinks: 12 oz. beer (10 oz. microbrew; 8 oz. of malt liquor, Canadian beer, or ice beer; 6 oz. of ice malt liquor), 5 oz. of wine, 10 oz. of wine cooler, 1 cocktail with 1 oz. of 100 proof liquor or 1.25 oz. of 80 proof liquor. Then they were asked to indicate how many drinks they had on each day of a typical week during the past three months. Responses were summed to create a weekly estimate of the typical number of drinks per week.

Hazardous Alcohol Use (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001)— Participants completed the Alcohol Use Disorders Identification Test (AUDIT; $\alpha = .83$), a 10-item instrument that assesses level of alcohol consumption and alcohol-related problems during the past year. The AUDIT is used to screen individuals for alcohol use disorders and to assess hazardous alcohol use. Responses to all 10 items were summed to create a total AUDIT score. Most women (76.6%) did not meet diagnostic criteria for hazardous drinking (> 8).

RESULTS

Descriptive Information

Final sample size for the current study included 235 sexually active heterosexual women who were 19.26 years old on average (SD = .79, range = 18 to 21). Almost half identified as White/Caucasian (47.2%, n = 111); 20.9% (n = 49) as Black/African American; 12.3% (n = 29) as multiracial; 11.9% (n = 28) Asian/Asian American; 1.3% (n = 3) American Indian/ Alaskan; and 5.1% (n = 12) indicated other. For ethnicity, 16.2% (n = 38) identified as Hispanic. The majority of women were currently students (80%, n = 188), with 65.2% (n = 122) enrolled at a four-year college and 28.3% (n = 52) at a community college.

Women's Use of CUR Tactics

Total Number of CUR Tactics Used—Nearly half (48.5%, n = 114) of the sample reported that they had used a CUR tactic at least once. On average, women reported having engaged in 16.14 instances (*SD* = 32.77, range = 0 to 172) of CUR behavior since the age of 14.

Used CUR Tactic at Least Once—The most frequently used CUR tactics reported by women included risk-level reassurance (37.9%, n = 89) and seduction (33.2%, n = 78). A

Wegner et al.

smaller proportion of women reported using other tactics: direct request (18.3%, n = 43), reduced sensitivity (17.0%, n = 40), emotional consequences (15.3%, n = 36), relationship and trust (13.2%, n = 31), deception (5.5%, n = 13), partner's loss of arousal (5.1%, n = 12), withholding sex (3.4%, n = 8), condom sabotage (3.0%, n = 7) and physical force (2.6%, n = 6). Phi coefficients indicated that, with the exception of seduction tactics and physical force (r = .12, p = .08), use of any CUR tactic was associated with an increased likelihood of using another CUR tactic; rs ranged from to .15 to .77, and all ps < .05.

Particularly strong bivariate relationships emerged among deception, condom sabotage, and physical force, rs = .55 to .77. Because very few women reported having used these tactics, this suggests that those few women who did use coercive CUR tactics were highly likely to use other coercive CUR tactics. As well, there was a particularly strong relationship between women's direct requests to not use a condom and their use of reduced sensitivity tactics, r = .69.

Number of Types of Tactics Used—Among women who reported ever using a CUR tactic, the average number of different types of tactics used was 3.18, (*SD* = 2.37, Mdn = 2) with the majority (74.7%) reporting the use of more than one type of CUR tactic.

Individual-Level Factors Associated With Women's CUR

Means, standard deviations, and ranges for all other variables, as well as their correlation with CUR tactics, are included in Table 1.

Perceived Vulnerability—Women's total number of CUR tactics and number of types of tactics used were negatively associated with their perceived vulnerability for STIs in sober and intoxicated contexts. The majority of individual CUR tactics were also negatively associated with women's perceived vulnerability.

Sexual and Alcohol Use Behaviors—Women's lifetime number of sexual partners was positively related to the two most common tactics, seduction and risk-level reassurance, but was unrelated to other CUR tactics and scales. Women's total number of drinks in a week, number of drinking problems, number of sexual partners with whom they consumed alcohol prior to sex, and typical number of drinks consumed on these occasions were each positively related to seduction and risk-level reassurance, as well as to deception tactics, total number of CUR tactics, and number of types of tactics used. Number of sexual partners with whom the woman consumed alcohol was also positively associated with use of reduced sensitivity and direct requests. The typical number of drinks was also positively associated with use of direct requests and withholding sex.

History of STI—Among women with a history of STI diagnosis (n = 31), 74.2% reported using CUR tactics versus 25.8% who did not. Among women without a history of STI diagnosis (n = 199), 44.2% reported using CUR tactics versus 55.8% who did not, chi-square = 9.65, phi = .21, p = .01. Z tests indicated that women with a history of STI diagnosis were significantly more likely to report a CUR history than those without one. STI diagnosis was positively correlated with the number of different types of CUR tactics used and the total number of CUR tactics used.

DISCUSSION

Almost half of the young women in this study reported having successfully used at least one CUR tactic since the age of 14. This proportion is much higher than had been observed in previous research (e.g., 13.5%–36.6%; DeBro et al., 1994; Oncale & King, 2001). The wider range of CUR behaviors examined in this study likely contributed to these observed differences. With the average woman reporting having successfully used over 16 CUR tactics since age 14, it is clear that these behaviors are common among women and should be addressed in safe sex programming.

The two most common CUR tactics, seduction and risk level reassurance, as well as the total number and number of different types of CUR tactics, were consistently linked with the individual difference risk factors. However, women's use of emotional consequences, relationship and trust, and partner's loss of arousal CUR tactics were unrelated. These tactics have a greater chance for success within close relationships because they rely on individuals being motivated to avoid potential negative relationship outcomes. Future research should compare and contrast CUR tactics in casual and committed relationship contexts. It is well established that as relationships become more serious, partners tend to stop condom use because concerns for STI/HIV transmission risk decrease (Manlove et al., 2011), despite the potential for continued STI risk if partners are not monogamous (Conley, Matsick, Moors, Ziegler, & Rubin, 2015).

Women who perceived less STI vulnerability reported using a greater number and variety of CUR tactics and reported utilizing more direct and at times coercive tactics to have unprotected sex. This insight is particularly important to share with young men. In this study, CUR tactics were much more common among women with a history of STIs (74.2%) than women without a history (44.2%), suggesting that women with the highest sexual risk may also be the most likely to negotiate for unprotected sex.

Limitations

The cross-sectional nature of the data does not allow us to draw any directional or causal conclusions about the observed relationships. Longitudinal research is needed to further our understanding of how CUR increases women's risk for transmitting or contracting an STI and how contracting an STI impacts future CUR. Acute intoxication is likely to mediate or moderate these relationships; however, directional and temporal ordering is needed to address these hypotheses. Women's relationship context (e.g., casual, monogamous) likely impacts the decision to use a CUR tactic and the type of CUR tactics, but we did not assess the type of relationship in which the CUR tactic was used. Additional research with larger sample sizes is needed to test more complex models. Finally, participants' ability to recall their CUR events may have been influenced by time since the event, frequency of CUR tactic use, or acute intoxication. Additional research should investigate participants' accuracy of recall and consider focusing on more recent experiences.

Implications

The current research highlights the need for specific programming aimed at addressing women's CUR and providing men with information on women's CUR. Future research should examine whether the mechanisms underlying CUR are similar for men and women to inform intervention efforts about the necessity of tailoring these interventions for different groups. Findings suggest that perceived vulnerability to STIs and high-risk drinking behaviors may be key intervention targets for such efforts with women.

Acknowledgments

FUNDING

Data collection and manuscript preparation were supported by an National Institute on Alcohol Abuse and Alcoholism grant (R01AA021379) awarded to M. A. Lewis.

References

- American College Health AssociationAmerican College Health Association—National College Health Assessment II: Reference group, executive summary, fall 2010 Linthicum, MD: Author; 2011
- Ashenhurst JR, Wilhite ER, Harden KP, Fromme K. Number of sexual partners and relationship status are associated with unprotected sex across emerging adulthood. Archives of Sexual Behavior. 2017; 46:419–432. DOI: 10.1007/s10508-016-0692-8 [PubMed: 26940966]
- Babor TF, , Higgins-Biddle J, , Saunders J, , Monteiro M. The Alcohol Use Disorders Identification Test: Guidelines for use in primary health care 2. Geneva, Switzerland: World Health Organization; 2001
- Biggs MA, Foster DG. Misunderstanding the risk of conception from unprotected and protected sex. Women's Health Issues. 2013; 23:e47–e53. DOI: 10.1016/j.whi.2012.10.001 [PubMed: 23231762]
- Carter JA, McNair LD, Corbin WR, Williams M. Gender differences related to heterosexual condom use: The influence of negotiation styles. Journal of Sex and Marital Therapy. 1999; 25(3):217–225. DOI: 10.1080/00926239908403996 [PubMed: 10407794]
- Centers for Disease Control and Prevention. HIV among women 2016 Retrieved from http:// www.cdc.gov/hiv/group/gender/women/index.html
- Collins RL, Parks GA, Marlatt GA. Social determinants of alcohol consumption: The effects of social interaction and model status on the self-administration of alcohol. Journal of Consulting and Clinical Psychology. 1985; 53:189–200. DOI: 10.1037/0022-006X.53.2.189 [PubMed: 3998247]
- Conley TD, Matsick JL, Moors AC, Ziegler A, Rubin JD. Re-examining the effectiveness of monogamy as an STI-preventive strategy. Preventive Medicine. 2015; 78:23–28. DOI: 10.1016/ j.ypmed.2015.06.006 [PubMed: 26116890]
- Cook RL, Clark DB. Is there an association between alcohol consumption and sexually transmitted diseases? A systematic review. Sexually Transmitted Diseases. 2005; 32:156–164. DOI: 10.1097/01.olq.0000151418.03899.97 [PubMed: 15729152]
- Davis KC, Hendershot CS, George WH, Norris J, Heiman JR. Alcohol's effects on sexual decision making: An integration of alcohol myopia and individual differences. Journal of Studies on Alcohol and Drugs. 2007; 68:843–851. DOI: 10.15288/jsad.2007.68.843 [PubMed: 17960302]
- Davis KC, Stappenbeck CA, Norris J, George WH, Jacques-Tiura AJ, Schraufnagel TJ, Kajumulo KF. Young men's condom use resistance tactics: A latent profile analysis. Journal of Sex Research. 2014; 51:454–465. DOI: 10.1080/00224499.2013.776660 [PubMed: 23548069]
- DeBro SC, Campbell SM, Peplau LA. Influencing a partner to use a condom: A college student perspective. Psychology of Women Quarterly. 1994; 18:165–182. DOI: 10.111/j. 1471-6402.1994.tb00499.x [PubMed: 12287707]
- Foster DG, Higgins JA, Karasek D, Ma S, Grossman D. Attitudes toward unprotected intercourse and risk of pregnancy among women seeking abortion. Women's Health Issues. 2012; 22:e149–e155. DOI: 10.1016/j.whi.2011.08.009 [PubMed: 22000817]

Wegner et al.

- Gerrard M, Gibbons FX, Houlihan AF, Stock ML, Pomery EA. A dual-process approach to health risk decision making: The prototype willingness model. Developmental Review. 2008; 28:29–61. DOI: 10.1016/j.dr.2007.10.001
- Johnston LD, , O'Malley PM, , Bachman JG, , Schulenberg JE. Monitoring the future: National results on adolescent drug use: Overview of key findings, 2010 Ann Arbor: Institute for Social Research, The University of Michigan; 2011
- Lewis MA, Patrick ME, Litt DM, Atkins DC, Kim T, Blayney JA, Larimer ME. Randomized controlled trial of a Web-delivered personalized normative feedback intervention to reduce alcohol-related risky sexual behavior among college students. Journal of Consulting and Clinical Psychology. 2014; 82:429–440. DOI: 10.1037/a0035550 [PubMed: 24491076]
- Little TD, Rhemtulla M. Planned missing data designs for developmental researchers. Child Development Perspectives. 2013; 7:199–204. DOI: 10.1111/cdep.12043
- Manlove J, Welti K, Barry M, Peterson K, Schelar E, Wildsmith E. Relationship characteristics and contraceptive use among young adults. Perspectives on Sexual and Reproductive Health. 2011; 43:119–128. DOI: 10.1363/4311911 [PubMed: 21651711]
- Nasrullah M, Oraka E, Chavez PR, Johnson CH, Dinenno E. Factors associated with condom use among sexually active U.S. adults: National Survey of Family Growth, 2006–2010 and 2011– 2013. Journal of Sexual Medicine. 2017; 4:541–550. DOI: 10.1016/j.jsxm.2017.02.015
- Oncale RM, King BM. Comparison of men's and women's attempts to dissuade sexual partners from the couple using condoms. Archives of Sexual Behavior. 2001; 30:379–391. DOI: 10.1023/A: 1010209331697 [PubMed: 11446199]
- Pollack LM, Boyer CB, Weinstein ND. Perceived risk for sexually transmitted infections aligns with sexual risk behavior with the exception of condom nonuse: Data from a nonclinical sample of sexually active young adult women. Sexually Transmitted Diseases. 2013; 40:388–394. DOI: 10.1097/OLQ.0b013e318283d2e5 [PubMed: 23588128]
- Steele CM, Josephs RA. Alcohol myopia: Its prized and dangerous effects. American Psychologist. 1990; 45:921–933. DOI: 10.1037/0003-066X.45.8.921 [PubMed: 2221564]
- Stock ML, Gibbons FX, Beekman JB, Gerrard M. It only takes once: The absent-exempt heuristic and reactions to comparison-based sexual risk information. Journal of Personality and Social Psychology. 2015; 109:35–52. DOI: 10.1037/a0039277 [PubMed: 26098587]
- Stoner SA, Norris J, George WH, Morrison DM, Zawacki T, Davis KC, Hessler DM. Women's condom use assertiveness and sexual risk-taking: Effects of alcohol intoxication and adult victimization. Addictive Behaviors. 2008; 33:1167–1176. DOI: 10.1016/j.addbeh.2008.04.017 [PubMed: 18556139]
- Teitcher JEF, Bockting WO, Bauermeister JA, Hoefer CJ, Miner MH, Klitzman RL. Detecting, preventing, and responding to "fraudsters" in Internet research: Ethics and tradeoffs. Journal of Law, Medicine, and Ethics. 2015; 43:116–133. DOI: 10.111/jlme.12200
- Tschann JM, Flores E, De Groat CL, Deardorff J, Wibbelsman CJ. Condom negotiation strategies and actual condom use among Latino youth. Journal of Adolescent Health. 2010; 47:254–262. DOI: 10.1016/j.jadohealth.2010.01.018 [PubMed: 20708564]

Sober Second ($n = 126$) After Four Drinks Second ($n = 126$) Lifetime Vaginal Second ($n = 126$) AttDirk Second ($n = 126$) Or of Parinking Second ($n = 126$) Cond ($n = 126$ Cond ($n = 126$) Cond ($n = 126$ C		Perceived V	ulnerability for STI				Before or Duri Encoun	ng Sexual ter
Mean (SD) $3.21 (1.30)$ $3.77 (1.17)$ $4.73 (6.41)$ $5.28 (6.77)$ $5.76 (5.48)$ $0.46 (0.69)$ Range 1 to 5 1 to 5 1 to 5 0 to 40 $0 to 35$ $0 to 26$ $0 to 4$ CUR tactic -16 -18^* $1 6^*$ 20^{**} $21 ^{***}$ $21 ^{***}$ CUR tactic -16 -18^* 16^* $0 to 35$ $0 to 26$ $0 to 4$ Schuction -16 -18^* 16^* 20^{**} 21^{***} 21^{***} 21^{***} 21^{***} 21^{***} 21^{***} 23^{***} Reductions unus -23^{***} -18^* 07 07 07 07 07 23^{***} Reduced sensitivity -23^{***} -18^* -23^{***} 07 07 07 07 07 07 07 07 07 Reduced sensitivity -23^{***} -18^* 07 07 07 07 03 03^{**} 01^{**}		Sober Scenario $(n = 126)$	After Four Drinks Scenario (n = 126)	Lifetime Vaginal Sexual Partners	Total Drinks per Week	AUDIT Drinking Problems	No. of Partners Woman Drank With	No. of Drinks
Range $1 \ 10 \ 5$ Reduced sensitivity $-1 \ 10 \ 5$ $-1 \ 10 \ 5$ $-1 \ 10 \ 5$ $-1 \ 10 \ 5$ $1 \ 10 \ 5$ $1 \ 10 \ 5$ $1 \ 10 \ 5$ $1 \ 10 \ 5$ $1 \ 10 \ 5$ $1 \ 10 \ 5$ Reduced sensitivity $-1 \ 10 \ 5$ $-1 \ 10 \ 5$ $-1 \ 10 \ 5$ $1 \ 10 \ 5$ $1 \ 10 \ 5$ $1 \ 10 \ 5$ $1 \ 10 \ 5$ Reduced sensitivity $-1 \ 10 \ 5$ $-1 \ 10 \ 5$ $-1 \ 10 \ 5$ $-1 \ 10 \ 5$ $1 \ 10 \ 5$ $1 \ 10 \ 5$ Reduced sensitivity $-1 \ 10$	Mean (SD)	3.21 (1.30)	3.77 (1.17)	4.73 (6.41)	5.28 (6.77)	5.76 (5.48)	0.46 (0.69)	1.50 (2.35)
CUR tactic Seduction 16 18 $.16$ $.20$ $.21$ $.21$ Emotional consequences 16 18 $.16$ $.20$ $.07$ $.07$ $.21$ Emotional consequences 16 12 $.05$ $.07$ $.07$ $.07$ $.13$ Relationship and trust 17 09 $.04$ $.01$ $.02$ $.11$ Risk level reassurance 27 27 $.19$ $.07$ $.09$ $.07$ $.21$ Risk level reassurance 27 23 $.07$ $.09$ $.06$ $.29$ $.24$ Reduced sensitivity 23 18 $.07$ $.09$ $.06$ $.29$ $.24$ Direct request 16 23 $.19$ $.17$ $.09$ $.06$ $.29$ $.26$ Withholding sex 18 23 $.07$ $.09$ $.06$ $.10$ $.06$ $.10$ Deception 16 23 $.12$ $.12$ $.16$ $.$	Range	1 to 5	1 to 5	0 to 40	0 to 35	0 to 26	0 to 4	0 to 13
Seduction 16 18 $.16$ $.16$ $.21$ $.21$ $.21$ $.21$ Emotional consequences 16 12 0.5 0.7 0.7 $.07$ $.13$ Relationship and trust 17 09 $.04$ $.01$ $.02$ $.11$ Risk level reassurance 27 * 27 * $.19^*$ $.19^*$ $.07$ $.02$ $.11$ Risk level reassurance 27 * 18^* $.07$ $.07$ $.03$ $.03$ $.25^*$ *Reduced sensitivity 23 * 18^* $.07$ $.09$ $.06$ $.29^*$ * $.25^*$ *Direct request 27 * 28^* $.07$ $.09$ $.06$ $.29^*$ * $.29^*$ *Untholding sex 18^* 28^* $.07$ $.09$ $.06$ $.29^*$ * $.10^*$ Deception 16^* 28^* $.07$ $.09$ $.06$ $.09^*$ $.09^*$ Deception 16^* 28^* $.01$ $.09$ $.06$ $.09^*$ $.09^*$ Deception 16^* 28^* 02^* $.01^*$ $.09^*$ $.09^*$ $.09^*$ Physical force 16^* 24^* * 04^* $.01^*$ $.06^*$ $.01^*$ $.07^*$ Physical force 16^* 24^* * 06^* $.01^*$ $.06^*$ $.01^*$ $.07^*$ Physical force 16^* 24^* * 06^* $.01^*$ $.06^*$ $.01^*$ $.07^*$ Physical force 16^* $24^$	CUR tactic							
Emotional consequences 16 12 $.05$ $.07$ $.07$ $.13$ Relationship and trust 17 09 $.04$ $.01$ $.02$ $.11$ Risk level reassurance 27 ** 27 ** $.19$ ** $.19$ ** $.25$ **Reduced sensitivity 23 ** $.07$ $.09$ $.06$ $.25$ **Direct request 27 ** 28 ** $.07$ $.09$ $.06$ $.29$ **Vithholding sex 18 * 28 ** $.07$ $.09$ $.06$ $.29$ **Direct request 16 28 ** 02 $.14$ * $.08$ $.10$ Vithholding sex 16 26 ** 02 $.14$ * $.08$ $.10$ Deception 16 26 ** 02 $.14$ * $.08$ $.10$ Deception 16 26 ** 02 $.14$ * $.09$ $.06$ $.07$ Deception 16 26 ** 02 $.14$ * $.09$ $.06$ $.07$ Direct request 16 26 ** 02 $.14$ * $.09$ $.07$ Deception 16 24 ** 04 $.12$ $.17$ * $.17$ **Direct request 16 24 ** 04 $.02$ $.07$ $.09$ $.07$ Direct request 16 24 ** 16 $.02$ $.10$ $.07$ $.07$ Direct request 16 24 ** 16 $.02$ $.10$ $.06$ $.10$ Direct request $-$	Seduction	16	18*	.16*	.20**	.21 ***	.21 **	.19**
Relationship and trust 17 09 $.04$ $.01$ $.02$ $.11$ Risk level reassurance 27 ** 27 ** 27 ** 27 ** 25 *** 25 ***Reduced sensitivity 23 ** 18 * $.07$ $.03$ $.03$ $.25$ ***Direct request 27 ** 23 ** $.07$ $.09$ $.06$ $.29$ ***Withholding sex 18 * 23 ** $.07$ $.09$ $.06$ $.29$ ***Direct request 16 23 ** 14 * 07 $.09$ $.06$ $.29$ ***Withholding sex 16 28 ** 12 * 14 * 08 10 Deception 16 24 ** 02 14 * 17 ** 19 ***Physical force 16 24 ** 04 12 10 $.07$ Physical force 16 24 ** 04 12 10 $.07$ Physical force 16 24 ** 04 12 10 17 Physical force 16 24 ** 04 12 10 17 Physical force 16 24 ** 02 10 17 * 17 * 17 *Physical force 12 28 ** 10 10 10 10 10 Physical force 20 ** 12 12 * 12 * 12 * 17 * 17 *Physical force 20 ** 20 ** 12 <	Emotional consequences	16	12	.05	.07	.07	.13	.06
Risk level reassurance 27 ** 27 ** $.19$ ** $.15$ ** $.25$ ***Reduced sensitivity 23 ** 18 * $.07$ $.03$ $.03$ $.25$ ***Direct request 27 ** 18 * $.07$ $.09$ $.06$ $.29$ ***Withholding sex 18 * 23 ** $.07$ $.09$ $.06$ $.29$ ***Direct request 16 * 28 ** 02 $.14$ * $.08$ $.10$ Withholding sex 16 * 26 ** 02 $.14$ * $.08$ $.10$ Deception 16 * 26 ** 02 $.12$ * $.17$ ** $.19$ **Deception 16 * 26 ** 02 $.12$ * $.10$ ** $.01$ $.07$ Provide subtage 24 ** 31 *** 04 $.12$ * $.17$ ** $.19$ **Physical force 16 * 24 ** 06 ** $.01$ ** $.05$ $.01$ Physical force 16 * 24 ** 06 ** $.01$ ** $.05$ $.01$ Physical force 16 * 24 ** 06 ** $.01$ ** $.06$ ** $.01$ Physical force 16 ** 24 ** 26 ** 12 ** 12 ** 17 **Physical force 24 ** 24 ** 22 ** 12 ** 12 ** 12 **Physical force 16 ** 22 ** 23 ** 12 ** 12 ** 12 ** 17 **Physical force 20	Relationship and trust	17	09	.04	.01	.02	.11	.05
Reduced sensitivity 23 ** 18 * $.07$ $.03$ $.03$ $.23$ **Direct request 27 ** 23 ** $.07$ $.09$ $.06$ $.29$ ***Withholding sex 18 * 23 ** $.07$ $.09$ $.06$ $.29$ ***Withholding sex 18 * 28 ** 02 $.14$ * $.08$ $.10$ Deception 16 26 ** $.12$ $.12$ * $.17$ ** $.19$ **Deception 16 26 ** 04 $.12$ $.10$ $.07$ Physical force 16 24 ** 04 $.12$ $.10$ $.07$ Physical force 16 24 ** 04 $.12$ $.10$ $.07$ Physical force 16 24 ** 06 $.08$ $.01$ $.05$ Physical force 16 24 ** 06 $.08$ $.01$ $.05$ Physical force 16 24 ** 04 $.12$ $.10$ $.07$ Physical force 16 24 ** 06 $.08$ $.01$ $.05$ Physical force 16 24 ** 06 $.08$ $.01$ $.05$ Physical force 16 24 ** 06 $.08$ $.01$ $.06$ $.10$ Physical force 16 24 ** 16 $.02$ $.10$ $.06$ $.10$ Physical force 21 ** 16 16 12 ** 12 12 Physical forc	Risk level reassurance	27 **	27 **	.19**	.19**	.15**	.25 ***	.22
Direct request $_{-27}^{**}$ $_{-23}^{**}$ $_{07}$ $_{09}$ $_{06}$ $_{29}^{***}$ Withholding sex $_{-18}^{*}$ $_{-28}^{**}$ $_{-02}$ $_{14}^{*}$ $_{08}$ $_{10}$ Deception $_{-16}^{*}$ $_{-26}^{**}$ $_{12}^{*}$ $_{17}^{**}$ $_{19}^{**}$ Deception $_{-16}^{*}$ $_{-26}^{**}$ $_{12}^{*}$ $_{12}^{**}$ $_{19}^{**}$ Condom sabotage $_{-24}^{**}$ $_{-31}^{***}$ $_{-04}^{*}$ $_{12}^{*}$ $_{10}^{*}$ Physical force $_{-16}^{*}$ $_{-24}^{**}$ $_{-06}^{*}$ $_{08}^{*}$ $_{01}^{*}$ $_{05}^{*}$ Physical force $_{-16}^{*}$ $_{-24}^{**}$ $_{-06}^{*}$ $_{08}^{*}$ $_{01}^{*}$ $_{05}^{*}$ Physical force $_{-16}^{*}$ $_{-24}^{**}$ $_{-20}^{**}$ $_{02}^{*}$ $_{10}^{*}$ $_{07}^{*}$ Physical force $_{-16}^{*}$ $_{-26}^{**}$ $_{02}^{*}$ $_{10}^{*}$ $_{06}^{*}$ $_{10}^{*}$ Pointer's loss of arousal $_{-12}^{*}$ $_{-28}^{**}$ $_{12}^{*}$ $_{12}^{*}$ $_{10}^{*}$ $_{10}^{*}$ No of types of CUR $_{-30}^{**}$ $_{-30}^{**}$ $_{-10}^{*}$ $_{-11}^{*}$ $_{-11}^{*}$ $_{-11}^{*}$ $_{-12}^{*}$	Reduced sensitivity	23 **	18*	.07	.03	.03	.23 **	.13
Withholding sex 18^{*} 28^{**} 02 $.14^{*}$ $.08$ $.10$ Deception 16 26^{**} $.12$ $.21^{**}$ $.17^{**}$ $.19^{**}$ Deception 16 26^{**} $.12$ $.17^{**}$ $.19^{**}$ Condom sabotage 24^{**} 04 $.12$ $.10$ $.07$ Physical force 16 24^{**} 06 $.08$ $.01$ $.05$ Physical force 16 24^{**} 06 $.08$ $.01$ $.05$ Partner's loss of arousal 12 16 $.02$ $.10$ $.06$ $.10$ Total number of CUR 27^{**} 28^{**} $.12$ $.14^{*}$ $.12$ $.17^{**}$ No. of types of CUR 30^{**} 30^{**} $.11$ $.17^{*}$ $.14^{*}$ $.27^{**}$	Direct request	27 **	23 **	.07	60.	.06	.29 ***	.18**
Deception 16 26^{**} $.12$ $.21^{**}$ $.17^{**}$ $.19^{**}$ Condom subotage 24^{**} 31^{***} 04 $.12$ $.10$ $.07$ Physical force 16 24^{**} 06 $.08$ $.01$ $.05$ Pattner's loss of arousal 12 16 $.02$ $.10$ $.06$ $.10$ Total number of CUR 27^{**} 28^{**} $.12$ $.14^{*}$ $.12$ $.17^{**}$ No. of types of CUR 30^{**} 30^{**} $.11$ $.17^{*}$ $.14^{*}$ $.27^{**}$	Withholding sex	18*	28 **	02	$.14^{*}$.08	.10	.19**
Condom subotage 24^{**} 31^{***} 04 $.12$ $.10$ $.07$ Physical force 16 24^{**} 06 $.08$ $.01$ $.05$ Pather's loss of arousal 12 16 $.02$ $.10$ $.06$ $.10$ Total number of CUR 27^{**} 28^{**} $.12$ $.10$ $.06$ $.10^{**}$ No. of types of CUR 20^{**} 30^{**} 11 17^{*} 14^{*} 17^{**}	Deception	16	26**	.12	.21 **	.17 **	.19**	.22 **
Physical force 16 24^{**} 06 $.08$ $.01$ $.05$ Partner's loss of arousal 12 16 $.02$ $.10$ $.06$ $.10$ Total number of CUR 27^{**} 28^{**} $.12$ $.14^{*}$ $.12$ $.17^{**}$ No. of types of CUR 30^{**} 30^{**} $.11$ $.17^{*}$ $.14^{*}$ $.27^{**}$	Condom sabotage	24 **	31 ***	04	.12	.10	.07	.11
Partner's loss of arousal 12 16 .02 .10 .06 .10 Total number of CUR 27^{**} 28^{**} .12 $.14^{*}$.12 $.17^{**}$ No. of types of CUR 30^{**} 30^{**} 11^{*} 17^{*} 14^{*} 27^{**}	Physical force	16	24 **	06	.08	.01	.05	.06
Total number of CUR 27^{**} 28^{**} $.12$ $.14^{*}$ $.12$ $.17^{**}$ No. of types of CUR 30^{**} 30^{**} 30^{**} 11 17^{*} 14^{*} 27^{**}	Partner's loss of arousal	12	16	.02	.10	.06	.10	.08
No. of types of CUR 30^{**} 30^{**} 11 17^{*} $.14^{*}$ $.27^{**}$	Total number of CUR	27 **	28**	.12	$.14^{*}$.12	.17 **	.20 **
	No. of types of CUR	30 **	30**	.11	.17*	$.14^{*}$.27 **	.21 **

Descriptive Information and Bivariate Relationships Between Women's Condom Use Resistance and Individual-Level Factors (N = 235)

Table 1

J Sex Res. Author manuscript; available in PMC 2018 September 01.

Note. Each condom use resistance (CUR) tactic is dichotomized: 1 = yes, 0 = no. Total number of CUR tactics range from 0 to 172. No. of types of CUR tactics range from 0 to 11. Perceived vulnerability is

within the context of casual sexual partners.

p < .001;p < .001;p < .01;p < .05.

Author Manuscript