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Being on the Safe Side: A Qualitative Study of Condom Use Motivations According to Contraceptive Type among Adolescents in Atlanta, Georgia

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Abstract

Study Objective: Quantitative data suggest that adolescent users of long-acting reversible contraception (LARC), compared with short-acting methods (pill, patch, ring, depot medroxyprogesterone acetate [DMPA]), might be less likely to use condoms. We qualitatively describe and explain adolescent contraceptive users' motivations for condom use, including variation according to contraceptive type.

Design: Individual, in-depth qualitative interviews, analyzed thematically.

Setting: Participants were recruited from public family planning clinics and an adolescent medicine clinic, as well as university and other community settings in Atlanta, Georgia.

Participants: Sexually active contraceptive users aged 17–19 years old (n = 30), including LARC (n = 10), DMPA (n = 10), and oral contraceptive (n = 10) users.

Results: Of the 30 participants, most (n = 25; 83%) used condoms with their more effective contraceptive method, although 11 of 25 used them inconsistently (44%). Oral contraceptive users were particularly motivated to use condoms for pregnancy prevention, because of concerns about contraceptive method efficacy and a desire to be on “the safe side.” In contrast, LARC users were primarily motivated by sexually transmitted infection (STI) prevention. DMPA users' motivations

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were more mixed. Across contraceptive type, factors influencing condom use motivations included sexual health education, personal awareness and/or experience, and perceived consequences and risk.

Conclusion: Because all participants were using an effective contraceptive method, it is notable that pregnancy prevention was a prominent motivator for using condoms, although LARC users reported STI prevention to be a more important motivation. Parental and school-based sexual health education that clearly addresses STI prevention in addition to pregnancy prevention has the potential to influence condom use motivations and behavior.

Keywords

Adolescents; Long-acting reversible contraception; Sexually transmitted infections; Condoms

Introduction

The past decade has seen marked declines in teen pregnancy rates, largely attributed to increasing use of effective methods of contraception.^{1,2} However, even the most effective contraceptive methods do not prevent sexually transmitted infections (STIs), which disproportionately affect adolescents and young adults.³ Moreover, condom use, a primary STI prevention strategy, appears to be declining, particularly among adolescents engaged in behaviors (eg, having multiple partners) that increase STI risk.⁴ National family planning guidelines from the Centers for Disease Control and Prevention recommend condom use with more effective contraception for those at risk for STIs,⁵ but users of moderately (oral contraceptives, depot medroxyprogesterone acetate [DMPA], patches, and rings) and highly effective (intrauterine devices [IUDs] and implants) contraceptive methods are less likely to use condoms,⁶⁻⁸ raising the possibility that increases in use of effective contraceptive methods among adolescents might be contributing to declines in condom use.

In particular, increasing adolescent use of long-acting reversible contraception (LARC), including IUDs and implants,⁹ has driven current attention to the relationship between more effective contraception and condom use.¹⁰⁻¹² Professional medical organizations, such as the American Academy of Pediatrics and American College of Obstetricians and Gynecologists, recognize LARC methods as safe and effective for young people,^{13,14} and their use has likely contributed to population-level reductions in teenage pregnancies.^{1,2,15} These methods are distinct from most contraceptive methods in being highly effective even with typical use (1% typical use failure rate for the first year vs 7% for pills and 13% for condoms).¹⁶ As a result, LARC users might not use condoms as a back-up pregnancy prevention strategy. Indeed, several recent studies have shown that LARC users compared with short-acting method users (ie, oral contraceptives, DMPA, patch, ring) are less likely to use condoms.¹⁰⁻¹²

Previous research suggests that pregnancy prevention is a more salient motivator for condom use than STI prevention.¹⁷⁻¹⁹ For example, a mixed methods study of college students found that nearly 80% associated condom use with pregnancy prevention whereas just 10% linked condom use solely to STI prevention.¹⁷ However, such studies have not considered condom use motivations and decision-making specifically among adolescents or young women also

using moderately and highly effective contraceptive methods. Only a few studies have examined this topic qualitatively,^{20–22} and only 1 qualitative study of 15– to 24-year-old young women in Colorado has considered whether decision-making about condom use with contraception differs between LARC and non-LARC hormonal methods; this study did not show notable thematic differences.²²

We add to the evidence base using a distinct sample and context. Specifically, we explore condom use motivations, including variation according to contraceptive type, among clinic- and community-recruited contraceptive users 17–19 years old in Atlanta, Georgia. Contraceptive users in this narrow age range are distinct from younger adolescents in terms of the factors that influence contraceptive type,²³ and rates of teenage pregnancy and STIs/HIV in the Southeast are particularly high.^{3,24} This study thus addresses an important population and setting that can inform efforts to increase condom use among adolescent contraceptive users.

Materials and Methods

Study Design

We conducted in-depth, semistructured individual interviews with 30 contraceptive users 17–19 years old in Atlanta, Georgia. To recruit participants, we actively approached individuals and posted fliers in publicly funded clinics that provide family planning services and an academically-affiliated outpatient adolescent medicine clinic, as well as university and other community settings. Additionally, snowball sampling was used whereby enrolled individuals were invited to refer friends.

We screened young women for eligibility in person or via phone, depending on the recruitment approach. Individuals were eligible to participate if they: (1) were 17–19 years of age; (2) had vaginal sex with a male sex partner in the previous 6 months; and (3) used a long-acting (IUD or implant) or short-acting (oral contraceptives, DMPA, patch, or ring) contraceptive method at last sex. We purposively enrolled a stratified sample of contraceptive users on the basis of their method's length of action. Specifically, we recruited young women using LARC (n = 10) for which no action is needed over a 3–10 year period after insertion; DMPA, ring, or patch, for which quarterly, monthly, or weekly action must be taken, respectively (n = 10); and oral contraceptives that must be taken daily (n = 10). We included oral contraceptive users as a distinct group because of previous findings from a nationally representative sample of high school students that condom use prevalence was lower among LARC users compared with oral contraceptive users but not DMPA, patch, or ring users.¹⁰ Although patch and ring users were eligible, none of the individuals enrolled in the study were using these methods.

Data Collection

We conducted all individual, in-depth interviews between June 2017 and January 2018, according to procedures approved by the Emory University institutional review board. Depending on the participant's preference, either an in-person (n = 21) or telephone interview (n = 9) was scheduled. Participants completed a brief quantitative survey

that assessed demographic characteristics, contraceptive and condom use, health-seeking behaviors, and relationship factors. The qualitative interview used a semistructured interview guide that covered pregnancy prevention and STI prevention goals and strategies, condom use behavior and motivations, and health services experiences (Table 1). Interviews lasted approximately 40 minutes and were digitally audio-recorded and professionally transcribed. Each participant received \$25 for completing the study.

Analysis

We conducted a thematic analysis, following guidelines from Braun and Clark.²⁵ Deidentified interview transcripts, which were reviewed for accuracy by the first author, were uploaded to MAXQDA version 12.3 (VERBI Software). We then developed a codebook, starting with deductive codes on the basis of the interview guide. Two coders independently reviewed a subset of transcripts (n = 10) to identify inductive codes, or those emerging from the data (eg, condom error, defined as references to a condom breaking or slipping off during sex, perceived risk, personal experience) and met to discuss potential additions. Including inductive and deductive codes is fairly standard for thematic analysis.²⁶ Each coder then independently coded the remaining transcripts so that all transcripts were double coded; we resolved any discrepancies through discussion. Additionally, each coder created a case-level meta-matrix to summarize condom use behavior, motivations, and influencing factors for each participant. The 2 coders discussed these summaries to ensure consistent interpretation of the data. The first author developed additional matrices to examine coded text across the entire sample and within and between the 3 strata of contraceptive users. Themes emerged relevant to 2 over-arching areas: (1) description of condom use motivations; and (2) explanation of condom use motivations. In addition to salient quotes, we provide descriptive statistics as appropriate to support the qualitative findings.

Results

Sample Characteristics

Overall, the mean age was 18.5 years, and more than half of the 30 participants were black/African-American (60%; n = 18; Table 2). Most participants had used condoms with their current contraceptive method (83%; n = 25), either consistently (every time they had sex) or inconsistently (not every time they had sex), on the basis of participants' qualitative descriptions. Taking into account consistent and inconsistent use, 8 LARC (80%), 8 DMPA (80%), and 9 oral contraceptive (90%) users also used condoms. Five participants (17%), including 2 LARC users, 2 DMPA users, and 1 oral contraceptive user, had previously been diagnosed with an STI; 1 DMPA user had an unplanned pregnancy.

Themes Describing Condom Use Motivations

Two primary themes, reflecting variation according to contraceptive type, describe condom use motivations among the 25 individuals using condoms with their current, more effective contraceptive method (either consistently or inconsistently on the basis of participants' qualitative descriptions). Specifically: (1) oral contraceptive users seemed to primarily use condoms for pregnancy prevention; and (2) LARC users seemed to primarily use condoms

for STI prevention. DMPA users' current condom use motivations were more mixed and are not explicitly discussed.

Pregnancy Prevention as a Motivator for Condom Use Particularly among Oral Contraceptive Users

Most oral contraceptive users who were also using condoms cited pregnancy prevention as a motivator, either primarily or in addition to STI prevention. For example, "I use a condom to prevent from STDs [sic] and then that's my second for preventing pregnancy." In fact, 18 of the 25 (72%) individuals who used condoms with their current contraceptive method indicated that additional protection against unintended pregnancy was an important reason for their condom use (Table 3). Among participants not using condoms with their current contraceptive method, most had used them previously for pregnancy prevention.

Participants further described their motivation to use condoms for pregnancy prevention in a specific way that we've termed "the safe side," referring to participants' desires for additional protection (ie, "back-up plan") "just in case" or to be "safe than sorry" (see Table 4 for salient examples). Oral contraceptive users in particular recognized that their contraceptive methods were not 100% effective and described condoms as a way to be on the safe side for pregnancy prevention, as shown in Table 4. A few indicated concern about method effectiveness and motivation to use condoms as back-up pregnancy prevention at specific times, including when initiating a new method, starting a new pill pack, missing pills, ovulating, or when "paranoia is more active."

Several participants described hormonal contraceptive methods as a back-up to condoms rather than the other way around. A young woman who considered her implant as a back-up method said, "I feel a lot like more calm in knowing that I have a back-up plan and I'm safe if anything happened." In general, participants were clear that using condoms alone did not provide sufficient protection against pregnancy. When asked why she does not solely use condoms, a DMPA user said, "I don't want 1 type of protection. I'd rather have 2, to kind of break the odds of getting pregnant." An oral contraceptive user specifically cited concern about condoms breaking as a reason for using pills as a "second layer of protection." Most participants were aware of the potential for condom errors, and a number had experienced them.

STI Prevention as a Motivator for Condom Use Particularly among LARC Users

Most LARC users also using condoms explained their use primarily in relation to preventing STIs (Table 3). An implant user who had previously used oral contraceptives highlighted how her motivations changed on the basis of her contraceptive method: when using pills it "was like 60/40 at that point. It was like 60 like oh my God, STIs, but the 40 was like I don't know how consistent [with pills] I am right now." Now using the implant "it's very much like 100 STI, 0 pregnancy." Another LARC user who was using condoms consistently for pregnancy prevention stated an intention to discontinue her condom use. Moreover, 2 of the LARC users not using condoms had previously used them for pregnancy prevention (alone and with oral contraceptives). Some LARC users noted their decision to use condoms as a way to provide extra STI protection in the context of their relationship with a serious

boyfriend, but in general, descriptions of condom use in relation to being on the safe side for STI prevention were uncommon.

Themes Explaining Condom Use Motivations

Although participants' motivations seemed to vary according to contraceptive type, the themes identified that explain those motivations were similar across the contraceptive categories and included: (1) sexual health education; (2) personal awareness/personal experience; and (3) perceived consequences and risks. These themes are summarized in the following sections, with salient quotations provided in Table 5.

Parental and School-Based Sexual Health Education

Multiple participants who were motivated to use condoms as an additional contraceptive noted that their sexual health education in school emphasized pregnancy prevention, but not STI prevention. Likewise, for participants motivated to use condoms for pregnancy prevention, conversations with parents tended to emphasize pregnancy prevention over STI prevention. In contrast, several participants motivated to use condoms for STI prevention described school-based sexual health education that clearly addressed this prevention goal. Several LARC users who reported using condoms consistently for STI prevention described conversations with their parents about STIs, and one noted that her mother offered to provide condoms. However, sexual health education did not always correspond to condom use motivations and behavior. As an example, one DMPA user summarized a conversation in which her mother promoted condoms to be on the safe side for preventing STIs, but she did not feel she needed to use condoms because she was in what she perceived to be a monogamous relationship and had been tested, although she did not know if her partner had been tested as well.

Personal Awareness and Experience

More than half of participants across contraceptive methods had parents, other family, and/or friends who experienced an unintended pregnancy. Many of these contraceptive users cited pregnancy prevention as a reason for using condoms with their method. Several participants described pregnancy scares among friends, which made them particularly concerned about preventing pregnancy. However, a couple of young women had close, personal experiences with STIs that shaped their motivations to use condoms for STI prevention. For example, a pill user who was using condoms for pregnancy and STI prevention described being "super cautious" since her ex-boyfriend notified her that he had been diagnosed with herpes. In contrast to personal awareness aligning with condom use motivations, a young woman whose mother had an STI was more concerned about pregnancy than STI prevention.

Personal experience also seemed to be important with regard to STI prevention. Of the 5 participants previously diagnosed with at least 1 STI, 4 described using condoms for STI prevention. Likewise, the 1 participant who reported an unintended pregnancy and was currently using DMPA noted that she thought about pregnancy more than sexually transmitted diseases "because I've been pregnant."

Specific Consequences and Perceived Risk on the Basis of Relationship Type

For many participants motivated to use condoms for additional pregnancy prevention, it seemed the consequences of pregnancy outweighed those of STIs. For many, having a baby would negatively affect future goals and also have shorter-term consequences, including financial hardship and disappointing their parents. Several of these participants struggled to articulate why STI prevention was important to them or viewed it merely as an inconvenience. In contrast, participants who were motivated to use condoms for STI prevention described specific consequences of STIs that they perceived as severe, including stigma, infertility, potential incurability, and transmission to partners.

A few participants perceived the consequences of pregnancy and STIs to be equally concerning. However, their perceived risk of STIs was low because they were in perceived stable, mutually monogamous relationships. Overall, perceived STI risk was low to moderate, often largely on the basis of partnership characteristics, and many of these participants were not using condoms or were using them for pregnancy prevention only.

Discussion

From a purposive sample of 17- to 19-year-old adolescents in Atlanta, Georgia, we found that oral contraceptive users more commonly described condom use for pregnancy prevention rather than STI prevention, whereas the opposite pattern emerged as a theme for LARC users. A notable dimension of the theme regarding pregnancy prevention as a condom use motivation was “the safe side,” reflecting participants’ recognition that their contraceptive methods are not 100% effective. Across contraceptive type, themes explaining condom use motivations included sexual health education, personal awareness and/or experience, and perceived consequences and risk. These thematic findings have important practice implications because of evidence that users of moderately and highly effective contraceptive methods often do not continue using condoms after initiating a method that is more effective than condoms for pregnancy prevention^{6,7} and the recent data suggesting that use of condoms is especially low among LARC users compared with short-acting method users.¹⁰⁻¹²

Because all participants in our study were using an effective contraceptive method, it is notable that, except among LARC users, pregnancy prevention was a prominent motivator for using condoms. This finding aligns with previous qualitative work documenting pregnancy prevention as the primary motivator for condom use among contraceptive users.²² However, our findings differ from the prior qualitative study that compared condom use motivations according to contraceptive type because we found thematic differences between LARC users and oral contraceptive users. Perhaps this difference emerged because we distinguished oral contraceptive users from other shorter-acting methods (eg, DMPA). The theme of STI prevention as an important motivator for condom use among those using LARC methods supports previous conclusions that promoting condom use specifically for STI prevention might be particularly important in the context of LARC use.²⁷ Many of the LARC users in our sample were concerned about STI prevention, which likely explains why consistent condom use was actually most common among users of this contraceptive method.

Although promising that many LARC users in this study were using condoms for STI prevention, it is somewhat concerning that many oral contraceptive and some DMPA users described condom use to be on “the safe side” primarily for preventing pregnancy, but not STIs. Drawing on the way young women describe using condoms for additional protection against pregnancy, health educators and clinicians could promote condom use within the context of committed relationships as a way to be on “the safe side” for preventing STIs. Framing messages in this way could motivate young women to be extra cautious as they are for pregnancy prevention, without undermining trust in the partnership. Framing condoms as the primary prevention strategy for pregnancy and STIs, supplemented by more effective methods of contraception and relationship characteristics that minimize STI risk, might also be an effective approach. Health communications research that empirically tests these potential messages is warranted.

Themes related to explaining condom use motivations suggest that parental and school-based sexual health education and personal awareness/experiences might reinforce the consequences and risk of pregnancy, but not STIs. Not only is school-based education about condoms suboptimal according to surveillance data,²⁸ but a recent content analysis of online health promotion information for adolescents showed that condom use messages do not sufficiently emphasize STI prevention.²⁹ Parental and school-based sexual health education should comprehensively address STIs, including risks and consequences, and promote condoms with contraceptive methods as an effective STI prevention strategy. Perhaps incorporating personalized stories in formal and informal sexual health education can help such information resonate with young people. Of course, efforts to address STIs more directly should not involve fear-based tactics, such as exaggeration of negative consequences, shown to be ineffective.³⁰ Although challenging, tackling the shame and stigma associated with STIs to encourage open discussion with family and peers about experiences with or concerns about STIs would likely reinforce the importance of STI prevention.

Of course, study limitations should be considered. As with most qualitative studies, the data are from a purposive, convenience sample; findings might not be generalizable to adolescent users of moderately or highly effective contraceptive methods outside of our target population and setting. Although using clinic and community recruitment approaches yielded a diverse sample, there were differences in recruitment approach according to contraceptive type that could have influenced the findings. It is also possible that social desirability or recall biases affected participants’ descriptions of their sexual behavior, motivations, and influencing factors. More generally, this work is exploratory and there are certainly other dimensions of condom use motivations (eg, perspectives of male partners) in the context of contraceptive use not reflected in our data.

In summary, our thematic findings suggest that adolescent contraceptive users might be particularly motivated to use condoms for additional pregnancy prevention, although this motivation might not be as salient for LARC users who were primarily motivated by STI prevention. Emphasizing condom use with contraceptive methods for STI prevention could encourage consistent condom use among contraceptive users regardless of contraceptive type. Parental and school-based sexual health education that clearly addresses STI

prevention in addition to pregnancy prevention has the potential to influence condom use motivations and behavior. Additionally, innovative health promotion messages might help ensure that adolescents are on “the safe side” in terms of both pregnancy and STI prevention.

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References

1. Lindberg L, Santelli J, Desai S: Changing patterns of contraceptive use and the decline in rates of pregnancy and birth among U.S. Adolescents, 2007–2014. *J Adolesc Health* 2018; 63:253 [PubMed: 30149926]
2. Finer LB, Zolna MR: Declines in unintended pregnancy in the United States, 2008–2011. *N Engl J Med* 2016; 374:843 [PubMed: 26962904]
3. Centers for Disease Control and Prevention: Sexually Transmitted Disease Surveillance, 2016 Atlanta, GA, Centers for Disease Control and Prevention, 2017
4. Harper CR, Steiner RJ, Lowry R, et al. : Variability in condom use trends by sexual risk behaviors: findings from the 2003–2015 national youth risk behavior surveys. *Sex Transm Dis* 2018; 45:400 [PubMed: 29465682]
5. Gavin L, Moskosky S, Carter M, et al. : Providing quality family planning services: recommendations of CDC and the U.S. Office of Population Affairs. *MMWR Recomm Rep* 2014; 63:1
6. Ott MA, Adler NE, Millstein SG, et al. : The trade-off between hormonal contraceptives and condoms among adolescents. *Perspect Sex Reprod Health* 2002; 34:6 [PubMed: 11990639]
7. Goldstein RL, Upadhyay UD, Raine TR: With pills, patches, rings, and shots: who still uses condoms? A longitudinal cohort study. *J Adolesc Health* 2013; 52:77 [PubMed: 23260838]
8. Cushman LF, Romero D, Kalmuss D, et al. : Condom use among women choosing long-term hormonal contraception. *Fam Plann Perspect* 1998; 30:240 [PubMed: 9782048]
9. Abma JC, Martinez GM: Sexual activity and contraceptive use among teenagers in the United States, 2011–2015. *Natl Health Stat Report* 2017; 104:1
10. Steiner RJ, Liddon N, Swartzendruber AL, et al. : Long-acting reversible contraception and condom use among female us high school students: implications for sexually transmitted infection prevention. *JAMA Pediatr* 2016; 170:428 [PubMed: 26974492]
11. Bastow B, Sheeder J, Guiahi M, et al. : Condom use in adolescents and young women following initiation of long- or short-acting contraceptive methods. *Contraception* 2018; 97:70 [PubMed: 29031814]
12. Kortsmiit K, Williams L, Pazol K, et al. : Condom use with long-acting reversible contraception vs. non-long-acting reversible contraception hormonal methods among postpartum adolescents. *JAMA Pediatrics* 2019. Epub ahead of print.
13. Committee on Adolescence: Contraception for adolescents. *Pediatrics* 2014; 134:e1244 [PubMed: 25266430]
14. Committee on Adolescent Health Care Long-Acting Reversible Contraception Work Group, American College of Obstetricians and Gynecologists: Committee opinion no. 539: adolescents

- and long-acting reversible contraception: implants and intrauterine devices. *Obstet Gynecol* 2018; 131:e130 [PubMed: 29683910]
15. Harper CC, Rocca CH, Thompson KM, et al. : Reductions in pregnancy rates in the USA with long-acting reversible contraception: a cluster randomised trial. *Lancet* 2015; 386:562 [PubMed: 26091743]
 16. Sundaram A, Vaughan B, Kost K, et al. : Contraceptive failure in the United States: estimates from the 2006–2010 National Survey of Family Growth. *Perspect Sex Reprod Health* 2017; 49:7 [PubMed: 28245088]
 17. O’Sullivan LF, Udell W, Montrose VA, et al. : A cognitive analysis of college students’ explanations for engaging in unprotected sexual intercourse. *Arch Sex Behav* 2010; 39:1121 [PubMed: 19365717]
 18. Cooper ML, Agocha VB, Powers AM: Motivations for condom use: do pregnancy prevention goals undermine disease prevention among heterosexual young adults? *Health Psychol* 1999; 18:464 [PubMed: 10519462]
 19. Harvey SM, Washburn I, Oakley L, et al. : Competing priorities: partner-specific relationship characteristics and motives for condom use among at-risk young adults. *J Sex Res* 2017; 54:665 [PubMed: 27246878]
 20. Carter MW, Hock-Long L, Kraft JM, et al. : Strategies for managing the dual risk of sexually transmitted infections and unintended pregnancy among Puerto Rican and African American young adults. *Am J Public Health* 2012; 102:449 [PubMed: 22390507]
 21. Murray CC, Hatfield-Timajchy K, Kraft JM, et al. : In their own words: romantic relationships and the sexual health of young African American women. *Public Health Rep* 2013; 128(Suppl 1):33
 22. Lemoine J, Teal SB, Peters M, et al. : Motivating factors for dual-method contraceptive use among adolescents and young women: a qualitative investigation. *Contraception* 2017; 96:352 [PubMed: 28669507]
 23. Clarke KE, Kraft JM, Wiener JB, et al. : Factors associated with contraceptive use differ between younger and older African-American female adolescents. *J Pediatr Adolesc Gynecol* 2016; 29:448 [PubMed: 26877099]
 24. Martin JA, Hamilton BE, Osterman MJ, et al. : Births: final data for 2015. *Natl Vital Stat Rep* 2017; 66:1
 25. Braun V, Clarke V: Using thematic analysis in psychology. *Qual Res Psychol* 2006; 3:77
 26. Longmire-Avital B, Oberle V: “Condoms are the standard, right?”: exploratory study of the reasons for using condoms by black American emerging adult women. *Womens Health* 2016; 56:226
 27. Steiner RJ, Liddon N, Swartzendruber AL, et al. : Moving the message beyond the methods: toward integration of unintended pregnancy and sexually transmitted infection/HIV prevention. *Am J Prev Med* 2018; 54:440 [PubMed: 29287938]
 28. Brener ND, Demissie Z, McManus T, et al.: School Health Profiles 2016: characteristics of health program among secondary schools. Atlanta, GA, Centers for Disease Control and Prevention, 2017
 29. Steiner RJ, Raspberry CN, Sales JM, et al. : Do health promotion messages integrate pregnancy and STI prevention? A content analysis of online information for adolescents and young adults. *Contraception* 2018; 98:163
 30. Wilson KL, Wiley DC, Rosen B: Texas sexuality education instruction: shame and fear-based methodology. *J Health Educ Teach* 2012; 3:10

Table 1

Interview Guide Domains and Example Questions

Domain	Example Questions
Pregnancy prevention	<ul style="list-style-type: none"> • How important is it to avoid getting pregnant at this point in your life and why? • How have people in your life influenced how you feel about getting pregnant at this point in your life? • What do you currently do to reduce the chance that you'll get pregnant? • Why are these the strategies you use? • Thinking back, how have you prevented pregnancy in the past? • Why were these the strategies you used?
STI prevention	<ul style="list-style-type: none"> • How important is it to avoid getting a sexually transmitted disease or STD at this point in your life and why? • How have people in your life influenced how you feel about getting an STD at this point in your life? • What do you currently do to reduce the chance that you'll get an STD? • Why are these the strategies you use? • Thinking back, how have you prevented STDs in the past? • Why were these the strategies you used?
Condom use	<ul style="list-style-type: none"> • How do you feel about using condoms? • Please describe a scenario in which you'd be likely to use a condom • Probe for factors related to birth control (eg, missing pills, shots) • Please describe a scenario in which you'd be unlikely to use a condom • Probe for factors related to birth control (eg, effectiveness) • Why did you use/not use a condom the last time you had sex?
Health services	<ul style="list-style-type: none"> • Tell me about your experiences starting your current method of birth control. What advice did you receive? • Probe for advice related to condom use, STI prevention • Since then, what are your clinic visits related to birth control like? What advice do you receive during these visits? • Probe for advice related to condom use, STI prevention

STD, sexually transmitted disease; STI, sexually transmitted infection.

Table 2

Sample Characteristics

	Overall (n = 30)	LARC Users (n = 10)	DMPA Users (n = 10)	Oral Contraceptive Users (n = 10)
Community recruitment, % (n) [*]	73.3 (22)	80.0 (8)	40.0 (4)	100.0(10)
Demographic characteristic				
Mean age, years	18.5	18.7	18.2	18.6
Race/ethnicity, % (n)				
Non-Hispanic/black/African-American	60.0(18)	50.0 (5)	90.0 (9)	40.0 (4)
Non-Hispanic white	6.7 (2)	0(0)	0(0)	20.0 (2)
Hispanic/Latina	20.0 (6)	50.0 (5)	0 (0)	10.0(1)
Other [‡]	13.3 (4)	0 (0)	10.0(1)	30.0 (3)
Mother graduated high school, % (n)	86.7 (26)	70.0 (7)	90.0 (9)	100.0(10)
Contraceptive use and partner history				
Using current contraceptive method 1 year or less, % (n)	63.3 (19)	80.0 (8)	50.0 (5)	60.0 (6)
Number of partners past 3 months, range (median)	0–3(1)	0–3(1)	1–3(1)	0–3(1)
Current sex partner, % (n)	63.3 (19)	70.0 (7)	70.0 (7)	50.0 (5)
Serious boyfriend, % (n) [‡]	84.2 (16)	85.7 (6)	85.7 (6)	80.0 (4)
Condom use behaviors				
Used a condom at last sex, % (n)	53.3 (16)	60.0 (6)	50.0 (5)	50.0 (5)
Consistency of condom use, % (n) [§]				
Uses consistently	46.7 (14)	60.0 (6)	50.0 (5)	30.0 (3)
Uses inconsistently	36.7 (11)	20.0 (2)	30.0 (3)	60.0 (6)
Not using	16.7 (5)	20.0 (2)	20.0 (2)	10.00(1)

DMPA, depot medroxyprogesterone acetate; LARC, long-acting reversible contraception.

^{*} Including school-based and online strategies; remaining participants were recruited using clinic-based approaches.

[‡] Including multiracial.

[‡] Among those with a current sex partner.

[§] With current method, on the basis of semistructured interviews; all other data on the basis of quantitative survey.

Table 3

Condom Use Motivations among Participants Using Condoms* with their Current Contraceptive Method

Motivation	LARC Users (n = 8)	DMPA Users (n = 8)	Oral Contraceptive Users(n = 9)
Pregnancy only	25.0 (2)	50.0 (4)	66.7 (6)
STIs only	62.5 (5)	12.5 (1)	11.1 (1)
Pregnancy and STIs	12.5(1)	37.5 (3)	22.2 (2)

Data are presented as % (n).

DMPA, depot medroxyprogesterone acetate; LARC, long-acting reversible contraception; STI, sexually transmitted infection.

* Includes consistent and inconsistent condom use.

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Table 4

Select Quotations Illustrating “The Safe Side” for Pregnancy Prevention

Contraceptive Type	Select Quotations
Oral contraceptive users	<ul style="list-style-type: none"><li data-bbox="451 390 1052 415">• “Just in case—they’re [pills] like 96%, I think it is, so just in case.”<li data-bbox="451 426 1354 474">• “I just started my new birth control again this past week so we just wanted to make sure that we weren’t risking anything.”<li data-bbox="451 485 1354 548">• “Because I was missing [pills], I was like, even though this is supposed to be—not really guaranteed, but it’s supposed to be a prevention of it, we could take other preventions. We can use others to prevent the risk.”<li data-bbox="451 558 1247 583">• “Everything that you can do would never hurt ‘cause no method is ever 100% preventative”

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Explanation of Condom Use Motivations

Table 5

Explanatory Factor	Quote(s) from Participants Motivated to Use Condoms Primarily for Pregnancy Prevention	Quote(s) from Participants Motivated to Use Condoms Primarily for STI Prevention
School-based sexual health education	<ul style="list-style-type: none"> School-based sexual health education “just focused on pregnancy. They tell you, ‘Oh, use condoms because you don’t wanna end up pregnant.’ So it was like, yeah, they touched on STDs, but they didn’t go in depth with it.” —Oral contraceptive user “I feel like mostly people focus on pregnancy as opposed to diseases. Because like I don’t know that much about diseases, like sexually transmitted diseases, to be quite honest.” —DMPA user 	<ul style="list-style-type: none"> Participant’s health teacher “really, really paid attention to STDs and sexual health. And after we talked about all the types of diseases and permanent diseases and things like that you can get if you’re not careful and you don’t protect yourself, then I was just like, I don’t even play with that.” —Oral contraceptive user
Parental sexual health education	<ul style="list-style-type: none"> “My parents actually never talked to me about STDs. [...] I think they were just more consistent about pregnancy, never really about STDs.” —Oral contraceptive user 	<ul style="list-style-type: none"> “They were like, ‘Just make sure you’re using condoms, and make sure you’re having the talk with your partner.’” —LARC user
Personal awareness	<ul style="list-style-type: none"> “I think I know so much about pregnancy ‘cause it’s been in my family [...] like I said, my grandma was pregnant at a young age, my mom. [...] your parents don’t want you to repeat what they did [...] Because they never experienced it [STDs], it was more on the side of the pregnancy than on the STD side.” —DMPA user “I think more about pregnancy than STDs because, like I said, it’s more known and it’s more happening around my age group. [...] STD is something that you can hide. Pregnancy isn’t something. Once your stomach grows, it’s there.” —DMPA user “I haven’t really heard of a lot of people getting STIs, so I feel like I’m not really worried about it. For me, I don’t think it’s a common thing, even though it might be. So, I’m less worried about that than I am about pregnancy.” —LARC user 	<ul style="list-style-type: none"> “I lived through her experience and I’m just like, that can’t happen to me.” —A LARC user describing when her friend was diagnosed with genital herpes
Personal experience	<ul style="list-style-type: none"> “I probably think about pregnancy more than I think about STDs. [...] I guess it’s because I’ve been pregnant.” —DMPA user 	<ul style="list-style-type: none"> “I’ve never been pregnant so I’ve never had to worry about it. But I’ve had 3 STDs so that’s something that’s more on the forefront of my mind.” —DMPA user
Specific consequences	<ul style="list-style-type: none"> Preventing STIs is “not quite as important to me as pregnancy prevention just ‘cause I do not think it would change my life so drastically.” 	<ul style="list-style-type: none"> Having an STI “would completely change your whole life.”

Explanatory Factor	Quote(s) from Participants Motivated to Use Condoms Primarily for Pregnancy Prevention	Quote(s) from Participants Motivated to Use Condoms Primarily for STI Prevention
	—Oral contraceptive user	—LARC user
	"I have too much that I want to do [...] I think that a pregnancy would just absolutely get in the way. I'm obviously a college student. I want to finish college. I hope to go to law school. I hope to enter the working world."	
	—Oral contraceptive user	
Perceived risk based on relationship type	<ul style="list-style-type: none"> <li data-bbox="308 262 332 789">"I'm equally concerned about getting pregnant and getting an STD, but I think my chances of getting pregnant are higher than an STD." 	<ul style="list-style-type: none"> <li data-bbox="308 789 332 1795">"I don't want to run that risk [of getting an STI]. So while we're still apart, I'd rather use condoms if we do have sex."
	—Oral contraceptive user with a serious boyfriend	—LARC user in a long-distance relationship with her boyfriend
	"I don't really worry about it [STIs] just because I know I'm only with 1 person."	—LARC user

DMPA, depot medroxyprogesterone acetate; LARC, long-acting reversible contraception; STD, sexually transmitted disease; STI, sexually transmitted infection.