Journal of Adolescent Health 60 (2017) 534–540

ELSEVIER

JOURNAL OF ADOLESCENT HEALTH

www.jahonline.org

Original article

Associations Between Sex Education and Contraceptive Use Among Heterosexually Active, Adolescent Males in the United States

Nicole Jaramillo, M.P.H. *, Eric R. Buhi, M.P.H., Ph.D., John P. Elder, Ph.D., M.P.H., and Heather L. Corliss, M.P.H., Ph.D.

Division of Health Promotion and Behavioral Science, Graduate School of Public Health, San Diego State University, San Diego, California

Article history: Received August 10, 2016; Accepted November 18, 2016
Keywords: Sex education; Contraception; Adolescents; Youth; Males; Men

A B S T R A C T

Purpose: This study examined associations between reports of receiving education on topics commonly included in sex education (e.g., abstinence only, comprehensive) prior to age 18 years and contraceptive use at the last sex among heterosexually active, 15- to 20-year-old males in the United States.
Methods: Cross-sectional data from 539 males participating in the 2011–2013 National Survey of Family Growth were analyzed. Bivariate and multinomial logistic regression analyses adjusting for confounding estimated associations between receipt of seven sex education topics (e.g., information on HIV/AIDS, how to say no to sex) and contraceptive use at the last sex (i.e., dual barrier and female-controlled effective methods, female-controlled effective method only, barrier method only, and no method).
Results: Nearly, all participants (99%) reported receiving sex education on at least one topic. Education on sexually transmitted diseases (94.7%) and HIV/AIDS (92.0%) were the most commonly reported topics received; education on where to get birth control was the least common (41.6%). Instruction about birth control methods (adjusted odds ratio [AOR] = 3.01; 95% confidence interval [CI] = 1.32–6.87) and how to say no to sex (AOR = 3.39; CI = 1.33–8.64) were positively associated with dual contraception compared to no use. For each additional sex education topic respondents were exposed to, their odds of using dual methods compared to no method was 47% greater (AOR = 1.47; CI = 1.16–1.86).
Conclusions: Exposure to a larger number of sex education topics is associated with young men's report of dual contraception use at the last sex. Comprehensive sex education, focusing on a range of topics, may be most effective at promoting safer sex among adolescent males.

IMPLICATIONS AND CONTRIBUTION

A broad range of sex education topics taught before age 18 years is likely to promote safer sex and encourage dual method contraceptive use among adolescent and young adult males. Findings from this study indicate that promotion of comprehensive sex education may be beneficial for adolescents.

Rates of sexually transmitted infections (STIs) and unintended pregnancies among adolescents in the United States (US) are among the highest of all industrialized countries [1]. In 2013, the annual incidence of STIs in the US was estimated to be 20 million, with nearly half of all cases occurring among people ages 15–24 years [2]. In 2015, the total combined cases of chlamydia, gonorrhea, and primary and secondary syphilis infections has risen to all-time high [3]. In contrast, despite being the highest among all developed nations, the US teen birth rate has declined steadily to an all-time low of 24.2 live births per 1,000 women aged 15–19 years in 2014 [4]. Decreases in the teenage birth rate

Conflicts of Interest: The authors have no conflicts of interest to disclose.

* Address correspondence to: Nicole Jaramillo, M.P.H., Division of Health Promotion and Behavioral Science, Graduate School of Public Health, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-4162.
E-mail address: njarami3@gmail.com (N. Jaramillo).

1054-139X/
http://dx.doi.org/10.1016/j.jadohealth.2016.11.025

may be due to a rise in use of long-acting reversible birth control methods among 15- to 19-year-old females from .4% to 7% in 2013 [5]. In order to reduce STIs and continue the positive trends of lowering birth rates among adolescents, research must identify strategies that promote the consistent use of effective methods of contraception.

Dual method use of hormonal and barrier contraceptive methods is most effective at preventing STIs and unplanned pregnancies and is recommended for heterosexually active couples by the Centers for Disease Control and Prevention/Office of Population Affairs, the American Academy of Pediatrics, and the American Congress of Obstetricians and Gynecologists [6–8]. However, dual methods are not being utilized consistently by most sexually active males between ages 15 and 19 years, as approximately 66% report using only a barrier method, a female-controlled method, or no method at the last sex [1].

A key strategy for promoting safer sexual behaviors in young people, including consistent contraceptive use, is formal sex education [9–11]. Sex education programs lie on a continuum ranging from abstinence-only education (AOE) to more comprehensive sex education (CSE) that includes more instructional topics [9]. Prior to 2008, federal funding primarily supported AOE, which resulted in a large adolescent population who had received instruction only on waiting until marriage to have sex [11]. In 2010, the Obama Administration reduced funding for AOE and increased funding of evidenced-based sex education programs nationwide by $185 million [12,13]. Thirty-five evidence-based programs are eligible for funding by the US Department of Health and Human Services, 10% of which are AOE programs [14].

Research suggests that formal sex education is associated with young people's sexual health outcomes [9–11], including delayed intercourse, use of more effective forms of contraception, and use of condoms among young men [10,15,16]. However, the utilization of AOE as a tool to reduce the number of sexual partners, increase contraceptive use, or reduce STIs is not supported by scientific evidence [9,10,17]. Studies indicate that AOE may have a negligible impact on delaying sexual initiation and reducing unplanned pregnancies [10,18,19]. In comparison, evaluations of CSE programs suggest that it is associated with positive sexual outcomes, such as lower rates of pregnancy, increased use of condoms, decreased sexual activity, and lower rates of STIs [9,10,18,20].

Despite studies suggesting that young men serve an important role in couples' decision-making about sexual and reproductive health [16], men are less likely than women to be a focus of studies on contraception [21]. Furthermore, while nearly all men in the US between ages 15 and 24 years receive some type of formal sex education, they are less likely than females to report receipt of education on contraceptives [15,16,22,23]. Data from the 2006–2010 National Survey of Family Growth (NSFG) indicated that more adolescent males received education on how to say no to sex (82.5%) than education on birth control methods (60.8%) [24]. Additionally, males' receipt of instruction about birth control has declined from 61% in 2006–2010 to 55% in 2011–2013 [25], despite Healthy People 2020 having the objective to increase the number of males receiving instruction on birth control methods by 6.1% [24]. This is important because men who received education on contraception are more likely to report consistent use of condoms than men who received AOE [16].

Although AOE and CSE strategies are generally associated with young men's use of contraception, there is less information on how exposure to different sex education topics, which are frequently included in sex education curricula, is related to males' use of contraception and, especially, dual method use. To fill this gap, we employed data from the 2011–2013 NSFG to estimate relationships between young men's exposure to different sex education topics and their reported use of contraception at the last sex. We also examined whether the number of sex education topics young men reported receiving was associated with their odds of contraceptive use at the last sex. We conceptualized exposure to a greater number of topics to be an indicator of more CSE. We restricted our study to men aged 15–20 years to minimize recall bias and maximize temporal specificity between receiving sex education and engaging in sex. Furthermore, we focused our analysis on the last sexual experience because research shows that young men are more likely to report contraceptive use (especially condoms) during their first sexual experience, but then use subsequently declines [1,16]. Consequently, we were interested in examining the more enduring effects of exposure to sex education on subsequent contraception use.

Methods

Data source

Data for this study came from the publically available 2011–2013 NSFG, which is a cross-sectional, household survey of persons aged 15–44 years living in the US [26]. The NSFG is a stratified, multistage, clustered, probability sample, which allows researchers to derive nationally representative estimates related to medical care, pregnancy, sexual activity, contraception use, infertility, and childbirth [26]. Data were collected through computer-assisted personal interviews conducted from September 2011 to September 2013. Participants were asked a series of questions by an interviewer guided by a programmed laptop. Detailed methodology for the NSFG has been reported elsewhere [26]. The 2011–2013 survey interviewed 4,815 men who are the focus of the current study. The response rate for males was 72.1%.

Study sample

Respondents between the ages of 15 and 24 years were asked questions about the types of formal sex education they had received before 18 years of age. We restricted the analytic sample to include only never-married, heterosexually active males between the ages of 15 and 20 years. The sample was limited to participants of this age range in order to maximize the temporal specificity for estimating the relationship between exposure to sex education and subsequent contraceptive use. By limiting the amount of time between receiving sex education and participating in the NSFG, this study was better able to determine the proximal associations between exposure to sex education and contraceptive use and to minimize potential recall bias. Furthermore, we included only never-married men to focus on those at highest risk of unintended pregnancy. The total unweighted sample size for this study was 539 males.