

Teaching About Contraception: Adolescent Attitudes Surrounding Sexual Education

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Purpose: Adolescent pregnancy remains an important public health issue in the United States as it has profound health consequences for both mother and child. Evidence shows that improved contraception use is a critical factor in decreasing rates of adolescent pregnancy. In order to provide effective and engaging contraception education, it is important to understand adolescents' attitudes, questions, and misconceptions around the topic and its delivery.

Methods: Two searches were conducted using PubMed. Articles were limited to those published in the last 10 years that were written in English. The first search was completed using the search terms "Adolescent attitudes on sex education in the United States", and resulted in 688 articles. The second search was completed using the search terms "Adolescent attitudes on contraception in the United States", and resulted in 840 articles. Articles including contraception but focusing more on HIV, pre-exposure prophylaxis (PrEP), LGBTQ+ health and practices, human papillomavirus (HPV) vaccination, and studies completed in other countries were excluded. Remaining articles were screened by the authors for inclusion, and articles were included if they addressed information on adolescent attitudes on both contraception for pregnancy prevention and sex education, including education by schools, community organizations, the media, peers, parents, and physicians. A total of 56 articles were included in the review.

Results: The overwhelming theme that emerged from the review is that adolescents prefer comprehensive sex education in a safe space that allows for exploration and questioning. Adolescents want to ask their parents questions about sexual health without fear of punishment, and they desire the opportunity to learn from their physicians in a confidential environment.

Conclusion: The foundation of effective sex education is a non-judgmental, confidential, and safe space where adolescents can ask questions. There are multiple resources that adolescents use to gather information and establish their preferences and attitudes.

Keywords: pregnancy prevention, non-judgmental, confidential, media, parents, access to contraception

Introduction

Adolescent sex education has been widely recognized as an important aspect of public health. This first began in an effort to decrease adolescent pregnancy in the 1970's, given its profound health consequences for both mother and child.¹⁻³ The number of adolescent pregnancies in the US has decreased significantly since then, but it remains higher than other developed countries.^{4,5} Evidence points to improved contraception use as a critical factor in the decline of adolescent pregnancy.^{6,7} The majority of adolescent pregnancies remain unplanned at approximately 77%, illustrating a persistent need for contraception education among the adolescent population.^{8,9}

Evidence shows that comprehensive sex education, which includes education on contraception, is the most effective form of sex education.^{4,10-13} The World Health Organization defines comprehensive sexuality education as "accurate, age-appropriate information about sexuality and their sexual and reproductive health".¹⁴ There is no current federal mandate on sex education in the United States. 28 states and the District of Columbia mandate sex education, with only 20 of those states requiring inclusion of information on contraception.³ Among schools that provide sex education within the United States, many provide abstinence-only sex education, which is proven to be less effective.^{4,10-13} This bias toward abstinence-only sex education is evident in federal funding for sex education. For example, states that receive federal funding from the government

through Title V State Sexual Risk Avoidance Education, the largest source of federal funding for sex education funded at 75 million dollars per year, “cannot include demonstrations, simulations, or distribution of contraceptive devices”.¹⁵ Some progress has been made towards federal funding for comprehensive sex education in the last two decades, but there remains a need for consistent, comprehensive sex education for adolescents across the United States.¹⁶

In order to provide effective and engaging contraception education, it is important to understand adolescents’ attitudes, questions, and misconceptions around the topic and its delivery. To answer these questions, we conducted a thorough literature review that resulted in 56 articles. Articles were included in the review if they addressed information on adolescent attitudes on both contraception for pregnancy prevention and sex education, including the many different sources by which adolescents receive education, including schools, community organizations, the media, peers, parents, and physicians.

Methods

Two searches were conducted using PubMed. Articles were limited to those published in the last 10 years that were written in English. The first search was completed using the search terms “Adolescent attitudes on sex education in the United States”, and resulted in 688 articles. The second search was completed using the search terms “Adolescent attitudes on contraception in the United States”, and resulted in 840 articles. Articles including contraception but focusing more on HIV, pre-exposure prophylaxis (PrEP), LGBTQ+ health and practices, human papillomavirus (HPV) vaccination, and studies completed in other countries were excluded. Remaining articles were screened by the authors for inclusion, and articles were included if they addressed information on adolescent attitudes on both contraception for pregnancy prevention and sex education, including education by schools, community organizations, the media, peers, parents, and physicians. A total of 56 articles were included in the review.

Adolescents’ Perspectives and Desires

When surveyed, adolescents report that they are more satisfied with comprehensive sex education compared to abstinence-only education.^{10,17} They desire multimodal education that includes information sharing, demonstrations, and skill development. Adolescents are critical of sex education that appears biased as they desire the space to form their own opinions. In particular, they do not respond well to scare tactics related to sex education. When sex education is viewed as irrelevant to their lives, adolescents are less engaged with the information. This includes overly scientific descriptions of sexual health.¹⁷ They desire sex educators that are closer to their age and use verbiage that they understand and view as applicable to their lives.^{18,19} Most importantly, they desire honest and nonjudgmental facilitators. Adolescents feel at ease when educators are knowledgeable and comfortable with the topic.⁴ Some adolescents appreciate their teachers’ instruction in the subject while others noted that they feel awkward discussing sensitive subjects with their teachers, which limits their willingness to ask questions.^{17,18,20–23}

Adolescents also desire education on navigating relationships. Peer relationships are a hallmark of adolescence, and they desire education on dealing with emotions in romantic relationships, such as dealing with a breakup. They are also interested in education on responding to situations related to sexual health such as how to decline sexual advances and negotiate condom usage.^{10,17} Studies show that adolescents in longer relationships and those that have more frequent intercourse are less likely to use a condom, often citing partner trust.^{24–26} Male adolescents note that condom use can affect their pleasurable experience and can be viewed as a threat to their masculinity.^{19,27} Given the many nuances of condom use that are difficult to navigate in an adolescent relationship, it is important to provide the space for adolescents to discuss their experiences and develop applicable techniques to protect their sexual health. Adolescents note that both receiving condoms and learning about sexual health topics in a variety of ways, including stories, videos, interactive online applications, and role play are particularly helpful.^{10,17,19,27}

Creating a safe environment to discuss these sensitive topics is vital to effective sex education. Adolescents desire open discussions with the opportunity to ask questions, and this curiosity is a normal part of their development.¹⁷ Despite this, stigma surrounding sex remains widespread.^{21,28} Many adolescents receive the message from sex education that “sex is bad and they should not be preparing for it”, and “that it is not appropriate to talk about sex”.¹⁷ Gender based differences exist with girls being more likely to report that their parents and best friends think they should abstain from

sex until marriage.²⁹ As such, girls are more likely to view abstinence as positive compared to boys.²⁹ A lack of education about sex can lead to adolescents being ill-equipped when they first become sexually active.¹⁰ Many adolescents have the mistaken perception that pregnancy and STIs will not happen to them, and this misconception is particularly evident when they are not provided with medically accurate information.¹⁸ Many adolescents report that their first sexual encounter was unplanned, which emphasizes the need for comprehensive sex education before sexual debut to decrease their risk for pregnancy and STIs. In fact, adolescents request earlier initiation of sex education, and younger adolescents with less sexual experience rate sex education more favorably.^{10,17}

Parental Perspectives and Role

Sex education is widely supported by parents, regardless of political party. One study surveyed over 1500 parents and found that 90% of Republicans and 96% of Democrats thought sex education was somewhat or very important in middle school with an increase to 94% of Republicans and 99% of Democrats agreeing on its importance in high school.³⁰ Parents agree that puberty, healthy relationships, abstinence, birth control, and STIs are important topics to be included in sex education.³⁰

While not always obvious, adolescents value their parents' perspectives on sexual health. Across studies, adolescents emphasize the importance of their parents' attitudes which in turn affect their own opinions.^{18,19,27,31–35} This is particularly true for younger adolescents.³⁴ They desire good communication with their parents on these topics with a positive parental tone leading to further discussions about sex.^{4,36} Adolescents again admonished scare tactics as ineffective. The effectiveness of parent communication about sex is well documented to decrease adolescent risky sexual behaviors. However, many parents have difficulty initiating discussions with their adolescent around sex.^{4,37} Parents believe that their adolescent will come to them with questions about sex, while adolescents report that they are unlikely to approach their parents about sexual health questions. Adolescents fear facing their parents' disapproval when discussing sex. They fear that going to their parents with questions would lead their parents to assume that they are sexually active and incite punishment.^{32,36} This emphasizes the importance of parents initiating conversations regarding sex. Many adolescents recognize parents' discomfort with these conversations, which leads them to emphasize the importance of school-based sex education when parents are unwilling or unable to have these conversations at home.¹⁸

Physicians play an important role in promoting communication about sexual health between parents and their children. By emphasizing sexual health as an important part of physical health, physicians can normalize these conversations for parents.^{4,19} Explaining to parents, in front of their adolescent, that questions about sexual health are part of normal adolescent development can help quell adolescents' fears that their questions will be interpreted by parents as evidence of promiscuity.^{32,38} It is also important to share with parents that evidence shows that their discussions can have a direct impact on their child's safety by decreasing risky sexual practices, and that talking about sex with their adolescent does not lead to increased sex.^{4,36,39}

The Media

When adolescents have questions about sex that are not answered by school-based sex education or by their parents, they look to their peers and the media for answers.^{17,35,37,40–42} Misinformation is rampant in both arenas. Social media influencers are focused on increasing views and engagement, which may come at the price of factual information. One study found that the majority of social media influencer YouTube videos discussed negative experiences and discontinuation of hormonal birth control.^{43,44} Social media influencers are particularly effective as viewers often form a connection with them and view them as a friend, leading their recommendations to be viewed as trustworthy. When information is factual, this can be a powerful source of education for adolescents.^{45,46}

Birth control often goes viral on social media sites such as TikTok, with the hashtag #birthcontrolproblems reaching over 600 million views.⁴⁷ Many of these videos, which are designed to be persuasive and attention grabbing, suggest viewers discontinue birth control in an effort to "reconnect with their periods" and "rebalance their hormones".⁴⁸ Frequently, these videos emphasize physician mistrust.^{44,46} Many influencers recommend natural family planning apps such as Daysy and Natural Cycles which are marketed as contraception tools.⁴⁹ Their accuracy for pregnancy prevention needs to be studied. The app Daysy reports a 99.4% accuracy rate in predicting fertile vs non-fertile days, while a study

supporting this claim was retracted from the journal *Reproductive Health* due to methodology flaws leading to unreliable conclusions.^{49,50} It is important for physicians and sexual health educators to understand the misinformation that adolescents are exposed to on a regular basis via social media so that they may provide effective communication and address adolescents' concerns about contraception and sexual health.

The Physician's Role

Physicians remain an important resource for parents and adolescents in promoting sexual health.⁴ When provided with a choice in the medical setting, patients prefer discussing sexual health in person with a doctor or nurse rather than a peer counselor.⁵¹ The most important first step in providing comprehensive healthcare, which includes sexual health, for adolescents is providing time in the encounter with parents outside of the room. Acknowledging the confidentiality of the discussion between a physician and an adolescent can increase trust and facilitate the discussion as this is often a top concern.^{4,41,52,53} Many adolescents note that they avoid reproductive health services to prevent their parents from finding out.⁵⁴ If there is a confidential reproductive health clinic available, adolescents are often limited via transportation or appointment times that conflict with school. If they are able to access reproductive health care, they fear that clinic communication will reach their parents.^{32,37} Time alone with their physician may be the only opportunity that they have to ask questions about sexual health. Many adolescents report that they are not offered time alone with their physician, despite the desire to ask questions one-on-one.^{4,37,53} They will not ask to speak to their physician alone as they worry their parent will infer it means they are doing something wrong. Girls particularly note that their parents will assume they are asking questions about sex. However, most parents recognize the importance of their adolescent spending time alone with their physician, with one studying finding 93% of parents surveyed noting it was important.³⁸ Therefore, incorporating time alone with the physician is invaluable in the adolescent well child visit.

Adolescents often report embarrassment and stigma as a barrier to asking questions about sexual health in their doctor's office.⁵⁴ They are concerned that they will be judged, and they recognize the power differential between patient and physician. Adolescents reported feeling surprised when an unfamiliar physician asked about their sexual health, and taking the time to introduce the topic of sexual health, including the reasons for asking about it, can put the patient at ease.⁵² Normalizing sexual health as a part of physical health is important to create a non-judgmental atmosphere and establish rapport.⁴ It is important to have a culturally competent approach, as some girls note being stereotyped by their physicians that they would get pregnant young while other adolescents reported varied opinions on early pregnancy, sometimes viewing it as a blessing.^{4,17,54}

It is important to note that both primary care physicians and subspecialists play a vital role in adolescent health and contraception. Many adolescents encounter the health system outside of a general pediatric office. Some adolescents are more likely to visit the emergency department for care, which can be a vital source of sexual health information.^{51,55} Many adolescents with chronic diseases interact with their subspecialists on a regular basis, and their subspecialist may be their most trusted source of health information. Given that pregnancy can have a profound impact on their chronic illness, subspecialists can provide critical health care by addressing pregnancy prevention with their patients. In addition, subspecialists' insights can be immensely valuable in the choice of a contraception option given multiple disease specific considerations, such as drug interactions with anti-epileptics or risk of blood clots in sickle cell disease.

In addition to a robust discussion during the encounter, it is important to provide resources for adolescents to explore after the doctor's visit. Accurate sexual health messages online or on social media can be effective at increasing safe sexual practices among adolescents.^{45,46} One such online resource is Bedsider.org which was developed by Power to Decide (formerly the National Campaign to Prevent Teen and Unplanned Pregnancy) and is endorsed by the American Congress of Obstetricians and Gynecologists. Bedsider.org is a free contraception support tool that provides information in an engaging way for adolescents and young adults, often utilizing video testimonials. It allows users to find health centers in their area to connect them to reproductive health care.^{56,57} Users particularly appreciate that it is easy to access, which provides adolescents with an accurate source of information to turn to for questions that undoubtedly come up later. As one user said,

So it's helpful to come to a site like this rather than read a pamphlet when you don't have anyone to talk to and you're nervous and you don't know how to say it.⁵⁶

Contraception

There are many contraception options available today, including those containing estrogen and progesterone such as the combined oral contraception pill, the patch, and the vaginal ring, as well as those containing progesterone alone, such as hormonal IUDs, the implant (Nexplanon), Depo-Provera, and the progestin only pill. The only non-hormonal contraception option at this time is the copper IUD. Contraception has many benefits in addition to its ability to prevent pregnancy, and these benefits vary by contraception method.⁵⁸ Many adolescents report that their contraception choice is driven by a desire to relieve menstrual symptoms such as dysmenorrhea and irregular menstrual bleeding.⁵⁹ This can be beneficial in patients whose anemia is caused by heavy or prolonged menstrual bleeding. Pre-menstrual symptoms such as headache and dysphoric mood may also be improved. Contraception is an important adjunct therapy for acne, and as such, it is frequently prescribed for this reason in the adolescent population.⁵⁸

Reports from friends and family regarding side effects may affect contraception choice, ranging from positive reports of a decrease in acne to negative side effects such as changes in mood. Many reported misconceptions from these stories such as hearing that contraception would decrease their future fertility.^{54,60} These stories from trusted sources are very influential, and one study found that 39% of over 2500 respondents chose their current method of birth control in part due to a friend's recommendation.⁵⁹ This is compared to only 16% reporting their doctor's recommendation influenced their contraception choice.⁵⁹ Beginning the discussion of contraception with an open-ended question like, "what have you heard about methods from your friends and family?" can start a dialogue to explore the variety of perspectives that patients bring to the visit.⁶⁰

There is a robust list of contraception options that can be discussed with the patient. Often significant time is spent on the Long Acting Reversible Contraception (LARC) methods, such as the Nexplanon and IUD, as these methods are the first line recommendation in this population.⁵⁸ Misconceptions regarding LARCs are prevalent among adolescents, so it is important to ask about patient concerns up front. Many adolescents do not know that LARCs are the most effective method. They frequently report concerns over foreign body insertion.^{43,61} One study found that a history of vaginal intercourse was associated with greater acceptability of LARCs, particularly the implant, while older adolescents were less likely to accept an IUD.⁶² Many adolescents choose their contraception method for ease of use, and LARCs require no effort on the patients' part once inserted, and they remain effective for years. One particular concern regarding LARCs is pain with IUD insertion.^{44,61} Anticipated pain with IUD insertion is associated with greater procedural pain, but anticipated pain is not associated with patient factors such as prior sexual activity, pregnancy, or gynecologic exams.⁶³ Multiple efforts can be made to decrease procedural pain including pre-procedure naproxen and lidocaine, and counseling on these pain-relieving options can be effective in decreasing both anticipated and experienced pain.⁶³ In addition, most report that the IUD was worth the level of discomfort, which was improved when procedural pain was decreased.³¹

Emergency contraception is another important component of pregnancy prevention. Misinformation is prevalent, and many adolescents mistakenly believe that emergency contraception would harm them or would cause a miscarriage or abortion.^{41,64} Many were concerned that it would affect their future fertility.^{41,64} Confidentiality concerns remain widespread, and many adolescents did not know that they could buy Levonorgestrel Emergency Contraception (Plan B) over the counter, at any age, without a parent's consent.^{41,64} Correcting these misconceptions is important to adolescent sexual health and sex education.

Access to Contraception

It is important to note when discussing adolescents and contraception use that the US Supreme Court affirmed the right of adolescents to access contraception in the 1977 court case *Carey v. Population Services International*.⁶⁵ Since that historic court case, multiple advancements have been made by the US government to increase access to contraception across the country. In 2012, the Affordable Care Act guaranteed coverage for female preventative healthcare, including contraception.⁶⁶ On June 23, 2023, the executive order entitled *Strengthening Access to Affordable, High-Quality Contraception and Family Planning Services* was signed. This order will seek to improve access to contraception by increasing affordability of contraception for those with both private and public insurance, expand access to over-the-counter contraception, increase availability of contraception in public colleges and federally supported health centers, and

promote research on contraception access in the US.⁶⁷ On July 13, 2023, the FDA approved the progestin only pill for over-the-counter use, the first daily birth control pill available without a prescription.⁶⁸ As we celebrate improvements in contraception access, it is important to address persistent barriers that the adolescent population faces in accessing contraceptive services, starting with access to comprehensive sex education.

Conclusion

The foundation of effective sex education is a non-judgmental, confidential, and safe space where adolescents can ask questions. This can take the form of school-based sex education, the doctor's office, an informative website, or a conversation with a parent. Across modalities, adolescents are clear on what they desire: information applicable to their lives. It is important to remember the adolescent developmental stage which is characterized by increasing autonomy, social relationships, and self-discovery. Through access to accurate information, resources, and education about sexual health and relationships, we can empower adolescents to take control over their life-changing decisions as they move forward into adulthood.

Disclosure

The authors report no conflicts of interest in this work.

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