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A Qualitative Assessment to Understand the Barriers and Enablers Affecting Contraceptive Use Among Adolescent Male Emergency Department Patients

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Abstract

Early fatherhood is common in the United States (U.S.). The emergency department (ED) plays a disproportionate role in serving patients with unmet reproductive and sexual health needs. With 8 million adolescent males visiting U.S. EDs annually, the ED is a potential site to implement interventions to minimize early fatherhood and unintended teenage pregnancy. Little is known about how adolescent male ED patients perceive and behave in sexual relationships and how they influence contraceptive decision making. The objective of this study was to identify the barriers and enablers affecting contraceptive and condom use among adolescent male ED patients. Semistructured interviews were conducted with males aged 14–19 in one urban ED. Enrollment continued until saturation of key themes. Interviews were recorded, transcribed, and coded based on thematic analysis using NVivo 10. The Social Ecological Model was used to organize and understand themes. Participants ($n = 24$) were predominantly 18–19 years (63%) and Hispanic (92%). Most (71%) had sex ≤3 months prior but infrequently used a condom at last intercourse (42%). The primary barrier influencing contraceptive use was lack of knowledge of effective contraceptives. Other barriers consisted of perceived gender roles, poor partner communication, and little relationship with a primary provider. Enablers included intention not to get a partner pregnant, school-based sexual health education, normalcy to use condoms, and a trustworthy confidante. The identified barriers and enablers influencing adolescent males' perspectives toward contraceptives should be addressed if designing future ED-based pregnancy prevention interventions targeting teen males.

Keywords

Adolescent, male, young adult, teen pregnancy prevention, sexual behavior, emergency department, emergency medicine, contraception

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Although teen birth rates in the United States continue to decline, racial, ethnic, socioeconomic, and geographic disparities exist (Kost, Maddow-Zimet, & Arpaia, 2017). Teen fatherhood occurs at a rate of 10.4 births per 1,000 men aged 15–19 years, leading to approximately 15% of males fathering a child before age 20 (Bell, Breland, & Ott, 2013). Teen fathers are less likely to graduate high school and more likely to face fewer employment opportunities than nonparent males (Bunting & McAuley, 2004; Mollborn, 2010). Although 80% of young men age 15–19 years report that they would be upset if they were to get a female pregnant, the predominance of public health interventions target adolescent females (Centers for Disease Control and Prevention [CDC], 2018a;

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Healthy People 2020 Objectives: Adolescent Health, 2017) . Increased efforts that focus on males are needed to decrease early fatherhood and unintended pregnancy (Bell et al., 2013).

Emergency departments (EDs) play a disproportionate role in serving patients with unmet medical and social needs (Richardson, 2003). Adolescents frequently intersect the health-care system in emergency departments (ED), leading to over 15 million adolescent ED visits each year (Wilson & Klein, 2000; Ziv, Boulet, & Slap, 1998). The majority of ED patients are from minority populations, are economically disadvantaged, and more often report poor health status, substance abuse, and mental health problems than the general population (Carter et al., 2016; Chernick et al., 2017; Walton et al., 2010; Ziv et al., 1998). Among adolescent male ED patients, reproductive and sexual health-care needs are high, given that condom use is inconsistent and sex with multiple partners is common, which often occurs under the influence of drugs and alcohol (Goyal, Hayes, & Mollen, 2012; Goyal, Teach, Badolato, Trent, & Chamberlain, 2016). As the number of ED visits increases among all age groups, the ED visit presents a teachable moment. The ED may be an appropriate place to reach adolescents at high risk for unintended pregnancy and fatherhood and opportunity for preventive health interventions; yet, how to improve the reproductive and sexual health of these adolescent male ED patients remains unclear (Anderson, Hsieh, & Alter, 2016; Bell et al., 2013).

Increasing evidence suggests that brief, focused behavioral health interventions in the ED setting (also known as SBIRT—Screening, Brief Intervention, and Referral to Treatment) are feasible and effective for identifying, reducing, and preventing problematic behavior (Anderson et al., 2016; D'Onofrio & Degutis, 2010). Interventions to reduce alcohol consumption and prevent violence have led to positive behavior changes in large, randomized controlled trials (Carter et al., 2016; McKay, Vaca, Field, & Rhodes, 2009; Rhodes et al., 2015; Suffoletto et al., 2014). To design effective preventive health interventions and programs, there is a need to understand the specific issues for particular populations of interest—in this case, contraception nonuse among adolescent male ED patients. It is critical that we understand how adolescent males presenting to EDs think about and behave in sexual relationships and how they influence contraceptive decision making in order to design an intervention that can affect their behaviors. While many studies explore women's reasons for contraceptive use, data regarding adolescent males' perspectives toward contraceptive use and dual contraceptive use remain scant, and no qualitative data exists from the ED (Hock-Long et al., 2013; Raine et al., 2010). It is unclear if adolescent male ED patients, given data suggesting their high-risk behaviors, have unique perspectives about contraception use and a different relationship to the medical community than males in the outpatient setting. Therefore, the objective of this study was to identify the barriers and enablers affecting condom and contraceptive use among adolescent males presenting to the ED for medical care.

Methods

Study Design

This qualitative study was performed using thematic analysis. Semistructured interviews were conducted at Columbia University Medical Center (IRB #AAAN4509) in an urban tertiary-care pediatric ED with 53,000 annual visits. The ED population is predominantly Hispanic, publicly insured, and of low socioeconomic status. The local Institutional Review Board approved the study with the requirement to obtain written informed written consent from the participant and a waiver of parental consent.

Study Subjects

A convenience sample of male ED patients was enrolled. Eligible males were aged 14–19 years and ever sexually active with females. Enrollment occurred from January 2015 to June 2016. Patients were excluded if they were cognitively impaired, were in foster care or wards of the state, did not speak English, or were too ill for participation per the attending physician. Given sexual activity rates in the United States and that the average age of first sexual encounter is 17 years old, sampling was based on age (half 14–17 years old, half 18–19 years old) in order to achieve a variation of opinions that may vary with age and sexual experience.

Study Procedures

Patients were approached by a trained researcher in the ED waiting or patient room and explained the study in detail. If the patient was interested, the researcher discussed eligibility criteria with the attending physician assigned to that patient. If eligible, the patient then signed written informed consent. To maintain privacy, visitors were asked to leave the room for the interview, or the patient was escorted to a private room in the ED.

First, participants completed a paper questionnaire regarding demographics, use of medical care and technology, sexual practices and behaviors, and pregnancy intentions. Survey questions were adapted from the Youth Risk Behavioral Surveillance System, National Survey of Family Growth, and written *de* novo by investigators

(Department of Health and Human Services Centers for Disease Control and Prevention, 2004; CDC, 2018b). Subsequently, interviews were conducted and recorded. Audio was transcribed by a HIPAA-compliant service. Participants received a $10 gift card.

Interview Guide

The principal investigator (LC) developed the semi-structured interview guide (Appendix A) in conjunction with experts in the fields of adolescent male health (DB) and pediatric emergency medicine (PD). The interview guide was divided into two parts. Part 1 (presented herein) focused on a central research question—*What are the barriers and enablers affecting contraception use among male adolescents using the emergency department for medical care?* Sections of the interview guide included the following: (a) condoms, (b) effective contraception knowledge and past experiences, (c) contraceptive decision making and responsibility, (d) types of relationships, (e) outside influences to contraception use (family, friends, religion, and culture), (f) access to contraception, (g) other risky behaviors (drug and alcohol use), (h) plans to have a family (as adapted from the CDC's "My Reproductive Life Plan"), and (i) pregnancy intentions. Photos of effective contraceptive methods were available for review. Effective contraceptive was defined as the birth control pill, patch, shot, ring, implantable device, or intrauterine device. Probes were used when necessary to elicit more information and clarify statements. While preventing sexually transmitted infections (STIs) is a well-known factor affecting male contraception use and that topic was discussed, the interviews concentrated on condom and contraceptive use in relation to the prevention of pregnancy and early fatherhood. Condoms were specifically labeled as condoms. Part 2 of the interview guide (still ongoing) focuses on receptivity to and preferences for ED-based adolescent male pregnancy prevention interventions.

Theoretical Framework

Preventing early fatherhood and unintended teen pregnancy requires an understanding of the many factors that influence condom and contraception use. The Social Ecological Model (SEM) is a theory-based framework for understanding the multifaceted and interactive effects of personal and environmental factors that determine behaviors, and for identifying behavioral and organizational leverage points and intermediaries for health promotion (Center for Disease Control and Prevention, 2018c; McLeroy, Bibeau, Steckler, & Glanz, 2016). The SEM considers the interplay between individual (biological or personal history factors), interpersonal (relationships), community (settings in which relationships occur), and societal factors (social and cultural norms, laws and policies). As we collected and analyzed our data, we used the SEM as a way to organize our themes and those factors influencing condom and contraception use.

The SEM model also suggests that, in order to prevent a behavior, it is necessary to act across levels of the model at the same time in order to sustain prevention efforts. However, individual and interpersonal factors are more likely affected by a single behavioral intervention. Therefore, interviews in this study focused more on the individual and interpersonal environments rather than on community and societal factors.

Data Analysis

This qualitative study was performed using thematic analysis, which involves examining or recording patterns or "themes" within data. After each interview, memos were attached to transcripts, documenting impressions. After the first five interviews, data were reviewed and an initial set of codes was generated. Each additional interview was then reviewed, and the codebook was edited. Codes were compared and synthesized. The codebook included shared coding categories and subcategories, all with definitions, inclusion and exclusion criteria, and examples. Investigators discussed discrepancies until consensus was achieved. The codes were applied to the data using NVivo 10. Data were reviewed for overarching themes, and interviews were continued until saturation of perspectives was reached. Two data validity procedures were conducted: (a) member checking, in which we took data and interpretations back to the participants to confirm data credibility; and (b) peer debriefing, that entailed reviewing the data and research process by someone (DB) who is familiar with the research being explored.

Results

Participant characteristics are displayed in Table 1. The majority of participants were age 18–19 (15/24; 63%), Hispanic (22/24; 92%), and insured (21/24; 88%). Most had sex in the prior 3 months (17/24; 71%) and three or more lifetime partners (17/24; 71%). Few used condoms at last intercourse (10/24; 42%), and fewer ever discussed future pregnancy with a partner (5/24; 21%).

Table 2 displays quotes exemplifying the identified barriers and enablers that affected contraceptive and condom use. Themes were organized within the levels of the SEM.

Table 1. Characteristics of Interviewed Males ($N = 24$).

Characteristics	*n* (%)
Demographics	
Age	
15–17 years	9 (38)
18–19 years	15 (62)
Race	
White	1 (4)
Black or African American	1 (4)
Native Hawaiian or other Pacific Islander	1 (4)
Other	19 (79)
I don't know or don't want to answer this	2 (8)
Hispanic/Latino	
Hispanic	22 (92)
No	2 (8)
Has medical insurance	21 (88)
Past use of medical care	
Has a regular source of health care	18 (75)
Last healthcare visit was to a doctor office or clinic	17 (71)
Has seen doctor within 3 months	10 (42)
Discussed condoms at last doctor visit	11 (46)
Sexual history	
First intercourse $<$17 years old	21 (88)
Has had sex in last 3 months	17 (71)
Lifetime sexual partners $\geq$3	17 (71)
Most recent partner was "girlfriend" or "ex-girlfriend"	17 (71)
Ever had or been treated for a sexually transmitted infection	3 (13)
Ever gotten a woman pregnant	5 (21)
Current or last partner wants to get pregnant	2 (8)
Used a condom at last intercourse	10 (42)
Ever discussed pregnancy timing with partner	5 (21)

Individual

Perceived gender roles. Participants clearly acknowledged the perceived separate roles that males and females play in sexual relationships. As one 18-year-old Hispanic male who sometimes used condoms and whose partner used the ring explained, "I worry about the condoms and she worries about the birth control." Females were the ones "you expect to do it [get birth control]," because they "make the decisions…because it's more comfortable for them." The choice to use contraceptives was not the males' decision to make, noted an 18-year-old Hispanic male: "She just told me she just uses them [the pills] and I'm like, 'That's you.'" The sense that contraception was the role of the woman also expanded to emergency contraception.

> The girls in school to go get it for me, because I am not going to go up in there and just be like, Hey I would like Plan B…That's like having a guy go get a tampon for his woman. I am just not that brave yet.—17-year-old Hispanic, condom user

Pregnancy intentions. When asked the questions based on the CDC reproductive life plan, males had clear insight into their futures, the number of children they wanted, and the age at which they wanted them. Males did not want immediate fatherhood, feeling they were "too young" and needed to "teach myself how to be a man first." Whether it be having "one hundred thousand dollars in the bank" or a "stable job," there was a strong connection between the right time to father a child and "financial security." Having a baby meant "spending mad money on that baby," dealing with your "baby mother," and "ruining everything," including "school and sports, my social life." As an 18 year-old Hispanic male who had impregnated one prior sexual partner explained:

> I can't keep the baby. That's something that's shocked me before, but I can't. I've got to think about myself first and my future because I'm still young. I can't f*** that up. I know a lot of people that messed their lives up just because they have a kid. It's not really hard having a kid, but just your money, everything's got to go to that kid. It's not going to go to you. Everything you saved up is going to go for them, not for you, because you already lived your life.

Trust in and control of condoms. Participants described condom use as a driver to achieve their desired futures. A number of young men expressed that condoms provided control: "She's a female…That's not my life. You feel me? I know how to take care of myself." Carrying and using a condom was defined as how a male can "take care" of himself. Being "prepared with your own condoms" eliminated fears that a female partner might not have one or that a female partner tampered with the condom, like "they make a hole on the condom." Males also controlled condom use based on the perceived appearance of the female: "With a hot girl, then you're not thinking about that [wearing a condom], but then, with a girl that's not so pretty, then you do think about it, and that's when I'll use it." Nevertheless, it was recognized that the "heat of the moment" eliminated some of that control ("If I am doing something with a girl and we rush into it, I guess it just happens without a condom…I am not going to stop."),

The positive characteristics of condoms often outweighed the negative physical qualities of condoms. Despite "the manufacturing" of condoms causing them to "pop" (which males experienced firsthand) or that with certain condoms one might not "feel that much pleasure" (like "wearing a bag") participants appreciated the physicality of condoms, which made them feel "confident" that pregnancy would be prevented because "the semen is going to [stay in] the space." Condoms exemplified

Table 2. Summary of Themes and Exemplary Quotes Organized by the Social Ecological Model.

Theme	Exemplary quote representing a barrier to contraceptive or condom use	Exemplary quote representing an enabler of contraceptive or condom use
Individual		
1.1 Perceived gender roles	I don't really sit down with a doctor and be like "hey, talk about this and that [birth control]," because I'm a male. I mean female are the one you expect to do it.	I worry about the condoms and she worries about the birth control.
1.2 Pregnancy intentions	Both of us work and we have our own room…we never used condoms …well, eventually she might get pregnant and me and her were fine with dealing with the situation.	I would prefer her to use it [birth control]. First of the fact I was scared of having my future ruined because I cannot be what I want to be.
1.3 Trust in and control of condoms	I use condoms with partners that I am not with I don't see myself being with…and so if I don't use condoms with you, it is because you know we've been dating for a while, and I know that you are clean and you don't have nothing.	I have told her to take birth controls, but she don't want to, because she is talking about her hormones and stuff. But then I just, I mean, f*** them, I'm going to stay using condoms.
1.4 Trust in effective contraception	I thought that after it [pill] dissolve it was ineffective…in my mind it was like I can still get her pregnant even though she is on a pill.	The fact that it [IUD] had to do with a doctor so I was like, "okay." I mean I trust doctor so I would trust it.
1.5 Life experience	We didn't know about that [condoms and birth control]. We were young.	I trust myself more than I trust others because I've been done dirty since my past lifestyle. So, I got more wiser and more smart…I don't want that to happen again…I used to be weak. Now I'm a stronger person.
1.6 Drugs and alcohol	Let's say for instance I am drunk, I can't, I am not aware when I have sex, I will probably come inside her.	I don't use it [drugs] while I have sex…it gets you tired fast.
Interpersonal		
2.1 Partner communication about contraceptives	Just because the way she asked [me to use a condom] just seemed like she was – I don't want to say kidding, because I know she was serious, but I guess at the moment I thought it was a joke.	I don't want to get her pregnant …So I'm always reminding her like, "Oh take out the ring, today is your day to take out the ring and put it back on" and stuff like that…because, if she gets pregnant, it's also my responsibility.
2.2 Partner relationship label and length	I was with a girl for three years and I wasn't using condoms at the end of our relationship because I knew everything she was doing.	We do not talk every day, so I don't know what she is doing and so with people like that, then I use protection [condom].
2.3 Relationship with health-care provider	The only time I see a doctor is here in the ER.	I like my doctor. She tells me – right in my face—the truth—whatever I ask her, like, what's this, what's that, and she tells me…what to prevent and what do to.
2.4 Parents and family	But losing my father, not having him half of my life. It would have good to have him now because he could encourage me not having kids, how to be a man…I've got to teach myself now.	I would've been stuck, man. S***- I would have been in the shelter with the baby. I will tell you the truth. Because I don't have a place you know. My mother would not have let me stay in the house with that baby. She's been told me when I was young, you better now bring no grandchild over here.
2.5 Peers and female confidante	No, we [friends and I] don't talk about girl birth control and stuff like that.	I didn't know exactly what a condom was…towards 7th grade, I think my friend…brought a condom in and he opened it and I saw it.
Community and Societal		
3.1 School based learning	In school, I didn't really learn a lot about it. They taught me the basics. I taught myself basically.	I feel like being taught [in school] at such a young age [5th grade] causes a rising curiosity so it is like- Oh, I want to know. Because if they're teaching it [sexual education] in school, it can't be bad.
3.2 Access to contraception	She said she couldn't use it [birth control] because of stuff like how to get it.	I have condoms for days at home.
3.3 Societal norm to use a condom	I use condoms with partners that I am not with I don't see myself being with…and so if I don't use condoms with you, it is because you know we've been dating for a while, and I know that you are clean and you don't have nothing.	I have told her to take birth controls, but she don't want to, because she is talking about her hormones and stuff. But then I just, I mean, f*** them, I'm going to stay using condoms.
3.4 Media and internet	Yes, I have tried [looking things up on the internet], but it's just, like, there was a lot of information. I didn't really know which one was actually correct one…so I kind of just stopped looking for it.	We [partner and I] were right next to each other and we were talking about it [birth control]…we just Googled it.
3.5 Culture and religion	In general, the man would do the dominance because he's the one with the penis, and the female is the sensitive one, the one with her vagina…you think [with] the penis…you want to f*** anything.	My mother would not have let me stay in the house with that baby…she always tell me to use a f***ing condom. She's Spanish.

security "from all types of infection and getting the girl pregnant," "something you actually…put it around your penis."

Trust in effective contraception. Contributing to lack of trust in contraceptives was lack of knowledge. Many males had not heard of the majority of methods, especially long-acting hormonal contraceptives. Some participants struggled to understand how a pill could prevent fertilization and how they "don't really know if it's working."

> Pregnancy can happen with the pill…The ring does is, like, it stops the sperm from going to the—like, it holds it. But the pill it's, like, the sperm stays in the vagina. So, it's like I won't really feel comfortable with the pills.—16-year-old Hispanic male, condom user only

Life experience. Attitudes toward contraceptives were modified based on life and sexual experiences. Some males noted that when they were younger, they "didn't know" about condoms and contraceptives. As participants got older, mistrust in sexual partners, based on personal experiences or the experiences of peers, caused an increase in condom use. Sometimes, despite a partner telling a male that she is using birth control, he did not "know if she is telling the truth or not" and, therefore, used a condom to be "safe."

> You don't know what females are doing these days, especially this new generation that's now been built…Some of them are not liars, some of them are. You've got to have that second thought in your head.—18-year-old Hispanic male, first sex at age 12

Drugs and alcohol. Drugs and alcohol were not a prominent theme. For those participants who did admit to doing drugs or using alcohol, condom nonuse occurred when "getting high."

Interpersonal

Partner communication about contraceptives. Male knowledge and perception of contraceptives was influenced by their female partner's experience with birth control. For some men, partners' positive experiences with hormonal birth control led males to both have knowledge of that method and encourage its use. In certain circumstances, when a female partner entered a relationship already on contraception, a discussion about that method did not occur, and male knowledge regarding birth control remained low. Condom use was occasionally discussed between partners, especially when the male wanted to use it during intercourse but did not have one available.

> You have to have a conversation with them. You have to know whether you want kids now or do you want to wait and get—and get them later. I mean to me there's nothing wrong with waiting but it's something wrong if your rushed or you're peer pressured or you're cornered and you can—I'm not going to say you can't really fend for yourself but you can really say what you want to say. I think that, you know, I think you must have a conversation with your partner whether you want to have sex—I mean whether you want to have babies or do you want to be…Do you want to use protection while you're having sex?—16-year-old, Hispanic male

Relationship label and length. Condom use was prevalent with "friends with benefits," one-night stands, and women who "don't want my kid." As one male clarified, "I use condoms with partners that I'm not with or I don't see myself being with." Yet, condom use was less frequent when in "long-term" relationship, such as girlfriends they had been "dating" for months to years. Men contemplated their relationships and how they defined their partners:

> I think about it as, if I don't use a condom with you, then that means to me I must be ready to have a baby and have a family with you. That's my thought of it. Because if I'm having sex with you raw, then you must be a great person, because that means I'm willing to sacrifice my life to give you life, but then if you have something, I'm sacrificing my body, as same way you're sacrificing yours.—16-year-old Native American/Pacific Islander, first sex at age 13

There was recognition that pregnancy intention could change based on the perceived seriousness and length of each relationship. Being in a long-term relationships led to nonuse of contraceptives and sense of passivity. As one 18-year-old Hispanic male who used no birth control method at last intercourse noted,

> Because then I was with that girl too for like a year and once you are like in a relationship and you are in love and you forget about like, what you gotta to do with yourself. So, I was just into her and I am like, oh I want to have a family with you…So, it's like, when you're in love with a girl then you start forgetting about yourself and caring about yourself. I feel like that's how it always is.

Relationship to health-care provider. The impact of health-care providers on the intention to use condoms and contraceptives was not a prominent theme. Despite participants claiming to have primary care providers, many admitted to not seeing their primary doctors for many years ("The only time I see a doctor is here in the ER") and not discussing safe sex with providers ("I have a doctor but I've never…talk[ed] about it."). While some clinicians did provide condoms and instructed on proper

use, participants said that providers rarely discussed female hormonal birth control methods with them.

Parents and family. Overall, parents were strong enablers of male contraception use. Fathers or "father figures" who were present in the males' lives were driving forces in using and having condoms: "He [His father] actually tells me how it works, the condoms and how to use them, how to prevent from me to get her pregnant." Similarly, mothers were vocal enablers of condom use, and strongly discouraged early fatherhood. Mothers would "go crazy" if the participant got a woman pregnant. As one 18-year-old Hispanic male who used condoms intermittently explained, "My mom, basically, the first time having sex, she used to tell me wear a condom. She used to show me the pictures to diseases…She even showed me how to put a condom on."

In addition, extended family members reinforced condom use: "They all tell me the same thing: to wear a condom." Aunts, uncles, and older siblings and cousins acted as trusted confidantes, available to answer questions and provide needed sexual health information. In certain circumstances, older family members also encouraged sexual activity, as one 18-year-old who endorsed sexual intercourse with six or more people in the past 3 months said: "He [the older brother] was like, "Are you f***ing girls at this age? And I am like, 'Of course.' I was 13 at the time…he is my role model."

Peers and female confidant. Male peers created a norm around condom use, during conversations about "the people we have had sex with," yet, they rarely conversed together about hormonal contraceptives. Close relationships with women, such as with a "best" friend, sister, or cousin, were enablers of contraception knowledge and led to an understanding of the perils of nonuse. For example, one participant described speaking with a close female friend who had recently had an elective abortion:

> And one time she was pregnant, and she didn't know what to do… I was actually the one that was sitting down with her, talking to her. And she went, and did it on her own, because she knew once she would've took that step of letting her family know, that was it for her…But we sat down and spoke about it and I don't know how she got over it, and but she was just very strong about it.—19-year-old Hispanic, condom user

Community and Societal

School-based learning. Participants received education of varying session lengths about condom and contraceptives at various levels of their high, middle, and even elementary school experience, where they "explain everything, every single disease, and how to prevent pregnancy." Although some participants admitted that they weren't "paying attention" or "don't remember," school-based sexual health education was regarded as a positive and important first exposure to contraceptives.

Access to contraceptives. Participants had clear knowledge where they could access free condoms. Males had "condoms for days," which were easily accessed at schools, parks, "pharmacies, stores, anywhere," and cost was not directly labeled as a barrier. Participants knew where their partners could access hormonal contraceptives and recognized that their partners sometimes did not know where to get such contraceptives as well, as explained by one male when he said, "She said she couldn't use it [birth control] because of stuff like how to get it."

Societal norm to use a condom. Participants described that they are "always being told to use condoms." Nonuse of condoms was seen as being contrary to the broader norm, even by those who did not use them: "To me it [not using them] was, like, I was doing something bad." However, persistent condom use often led to disinterest in dual contraception as exemplified by one participant: "I don't know, because I always use condoms. There's no need to ask about birth control if I'm using protection."

Media and internet. Participants admitted that there was so much information online about birth control and pregnancy prevention, through searching with Google, using Wikipedia, or asking "Siri." Occasionally, there was confusion as to the "correct one [site]." Pornography was not noted as a way to learn about contraceptive use.

Culture and religion. While cultural backgrounds influenced how parents discussed contraceptives, culture and religion were not regarded as salient influences in the adolescents' personal decisions to have sex or use contraceptives. When we asked men about who "controls" their relationships, males recognized how some people might think that men should be the dominant figure, but they did not agree with that assessment.

Discussion

These research findings add to the growing body of literature exploring adolescent male reproductive and sexual health. To our knowledge, this is the first qualitative analysis of adolescent males who use the ED for medical care and the perceived factors that influence their use of condoms and their partners' use of contraceptives. Males expressed how hormonal contraceptives, unlike condoms, were neither within their locus of control nor their responsibility. While they identified several facilitators of condom use, they expressed lack of knowledge of, mixed

interest in, and limited access to contraceptives. Few conversations with medical providers and sexual partners about birth control options occurred.

These findings strengthen the evidence that condom use is enabled by a range of dynamic factors (Hock-Long et al., 2013). Facilitators of condom use include the ease of obtaining, knowledge of using, and repeated discussion of condoms. Consistent with prior literature, participants described conversations from a young age with both mothers and fathers about how condoms prevented pregnancy (Harris, Sutherland, & Hutchinson, 2013). Dialogues with peers normalized condom use, and participants stressed how condom brands mattered, particularly condoms made by brands that broke (Jones, Salazar, & Crosby, 2017).

Condom use did fluctuate based on two factors—relationship characteristics and the frequency of sexual intercourse with each partner, a finding consistent with prior research (Hock-Long et al., 2013; Manlove, Ikramullah, Mincieli, Holcombe, & Danish, 2009; Raine et al., 2010). Similar to other qualitative studies, young males often described relationships with sexual partners as fluid, ranging from casual to serious, taking different shapes at different times depending on intimacy and trust (Raine et al., 2010). Although the interviews presented herein focused on pregnancy prevention, often the reasons for condom use also swayed toward STI prevention when talking about new partners. Condom use was common with casual sexual partners where fear of STI was high. Yet, fear of STIs dissipated with serious partners, "girlfriends," or frequent sexual partners, leading to decreased condom use. As in prior studies, communication with a female sexual partner also influenced condom use (Rattray et al., 2015; Williams & Fortenberry, 2013). For some males in this cohort, condom use decreased when they knew that their partners were using birth control and the fear of pregnancy diminished. However, this sentiment was not pervasive either in this cohort or in other studies, with some males not factoring in their partner's contraception choices when considering condom use (Raine et al., 2010).

While condom use varied by relationship status, pregnancy intentions amongst the males interviewed did not. Amongst this study's participants, there was little desire for immediate fatherhood and no plans for contraception sabotage. As opposed to prior studies, this study's population also voiced little pregnancy ambivalence, which has been reported to correlate to nonuse of contraceptives (Higgins, Hirsch, & Trussell, 2008). Instead, this population described their condom use patterns with a strong sense of self-efficacy, which has been reported to predict intention to use condoms among males (Sieving, Bearinger, Resnick, Pettingell, & Skay, 2007; Villarruel, Jemmott, Jemmott, & Ronis, 2004). While the immediate desire to have a baby was low, when relationships became long-term, there was a sense of fatalism, and recognition that, if fatherhood occurred, that would be accepted. Interestingly, however, the adolescent males in this study differed in pregnancy intentions from a prior study of adolescent females interviewed in the same setting. While females of similar ages in prior studies were often ambivalent toward pregnancy and appeared to be able to visualize their current life with a newborn, males in this study did not see being a father fitting in nicely with their current adolescent life (Chernick et al., 2015).

As opposed to the many factors that appeared to enable condom use, the predominant barrier influencing male investment in contraceptive use was little knowledge of birth control methods. This finding has been noted in prior studies, where young adult males, in particular, displayed serious gaps in objective knowledge about the major contraceptive methods (Frost, Lindberg, & Finer, 2012; Jaramillo, Buhi, Elder, & Corliss, 2017; Merkh, Whittaker, Baker, Hock-Long, & Armstrong, 2009). Having an accurate knowledge of female contraceptive methods supports better communication with female partners about birth control and affects the timing of fatherhood (Merkh et al, 2009; Garfield et al., 2016). Interestingly, condom use in this cohort appeared to be enabled by poor knowledge of other contraception or infrequent communication with their partner. In this cohort and others, control over condom use was sometimes rooted in fears that a female partner was conducting reproductive sabotage (e.g., poking a hole in the condom; Raine et al., 2010). Designing effective interventions for young men will need to account for these seemingly inconsistent perceptions.

Data from this study suggest there is a gap between the public health call for dual contraceptive use and the adolescent male perception of their role in that paradigm. Findings reveal that males perceive hormonal birth control as neither in their control nor their responsibility. There is a need to reframe the messages about dual contraception to concepts within the male locus of control, such as supporting their partner's use of more effective methods (Johnson, Sieving, Pettingell, & McRee, 2015). Despite sexual health school-based curriculums and confidential medical provider interactions, new educational strategies are needed that educate and activate these young men to communicate with sexual partners (Bell et al., 2013; Hiltabiddle, 1996; Marcell et al., 2017; Merkh et al., 2009). Primary care providers should consider including comprehensive contraceptive counseling during adolescent male check-ups, similar to that provided to adolescent females. Efforts to include parents in this discussion could solidify the message that adolescent males need education not only about condoms but about all types of contraceptives.

The ED visit may represent an important clinical moment when sexual health education can occur and the

importance of dual contraception can be reinforced. With millions of adolescent males seeking medical care in the ED annually, the ED visit becomes an opportunity for intervene; yet, several questions remain as how to best design and implement such interventions. EDs are notoriously busy with limited resources. Plus, little is known regarding adolescent male receptivity to and preferences for ED-based pregnancy prevention interventions. Future ED-based sexual health interventions need to fit into the ED workflow, respect adolescent male preferences, and prove to create lasting behavior change.

This study had some limitations. First, the sample population was from a single center and predominately Hispanic; however, fatherhood and STI rates among Hispanic men are higher than White men, so the barriers and enablers may differ (HIV/AIDS Surveillance Report, 2008). Second, although the issue of withdrawal was raised during interviews, it is recognized that more questions on this subject may have increased its significance within themes. Third, while study investigators reviewed themes to understand how they compared and contrasted with known behavioral frameworks, such as the SEM, it is recognized that other factors, such as those at the community and society level, must also be addressed to change behavioral patterns. Interviews in this study focused more on individual and interpersonal factors influencing condom and contraceptive use; however, sustained behavior must require the consideration of community, organization, and policy factors as well. Fourth, this was a convenient sample based on interviewer availability and data are not available to compare those who agreed to be interviewed and those who refused. Lastly, interviews were not conducted with the female partners of these participants nor was formal testing of the interview questions performed. Interventions to improve contraceptive use may need to include both members of a sexual dyad and focus on communication skills of individuals and couples (Zukoski, Harvey, & Branch, 2009).

Conclusion

Findings in this qualitative analysis highlight the barriers and enablers to condoms and contraceptive use among adolescent male ED patients. Overall, males felt a sense of control over and high knowledge of condoms. They possessed little knowledge of hormonal contraceptives, which was perceived as more of the female than male responsibility. While pregnancy intentions among males were low, they rarely talked to partners about effective or dual contraception as a method to prevent pregnancy. Future ED-based sexual health interventions should incorporate these findings in order to effectively reduce male risk of teen fatherhood and unintended fatherhood.

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Supplemental Material

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