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Messages about abstinence, delaying sexual debut and sexual decision-making in conversations between mothers and young adolescents

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Abstract

STUDY OBJECTIVE—Little is known about the information shared during family discussions about sexuality. From a public health perspective, abstinence is one of the most important sexuality topics parents can talk with adolescents about. We sought to characterize the messages mothers communicate to young adolescents regarding abstinence.

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CONFLICT OF INTEREST

Dr. Akers (senior author and study PI) has research support from:

1. Bayer Healthcare, for an investigator initiated clinical trial. This investigator trial was not funded or operational during the time that the data presented in our submitted manuscript was being collected or analyzed.
2. Society of Family Planning, for an investigator initiated research study

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DESIGN—Content analysis of dyadic discussions that occurred between June 2011–December 2012 between mothers and their 10–14 years old adolescent sons and daughters. Discussions were audio-recorded, transcribed, and a grounded theory approach to content analysis performed.

SETTING—Urban city in Western Pennsylvania

INTERVENTIONS—None

MAIN OUTCOME MEASURES—None

PARTICIPANTS—21 dyads - 15 mother-daughter dyads and 6 mother-son dyads

RESULTS—Four key themes emerged reflecting the high priority mothers placed on abstinence, delaying their adolescent's sexual debut and nurturing sexual decision making skills. Theme 1 focused on ensuring that adolescents understand what abstinence means. In defining abstinence, only one mother explained what sex is. The 3 remaining themes emphasized sexual decision making and emphasized when it is acceptable to stop being abstinent (*Theme 2*), why abstinence is important (*Theme 3*), and mothers' desire to engage in ongoing discussions, particularly once an adolescent was considering becoming sexually active (*Theme 4*). Messages did not vary by mothers' age or by adolescent age, gender or race.

CONCLUSIONS—Mothers convey complex information about abstinence and sexual decision making to young, non-sexually active adolescents. Message tailoring based on the adolescents' age or sex was not observed.

Keywords

At-risk/High risk populations; communication; content analysis; dyadic relationships; sexual behavior

INTRODUCTION

Adolescents are disproportionately affected by negative sexual health outcomes. Although they represent only 14% of the U.S. population, adolescents account for half of all new sexually transmitted diseases (STD) and have the highest rate of unintended pregnancy among women in all reproductive age groups.^{1–5} Despite historic declines in the number of adolescents who are sexually active and increases in contraceptive use in this population over the past three decades,⁶ risky sexual behaviors remain problematic.⁷ These statistics highlight the continued need for research to understand modifiable factors that influence adolescent sexual risk behaviors.

Parents represent the earliest and often strongest influence on adolescents' sexual decisions.⁸ When parents talk about sex, adolescents are more likely to delay sexual initiation^{9–13} and use condoms^{14–17} and contraception^{11,18–20} once they are sexually active^{21–24}. Yet, information about what actually takes place during discussions is quite limited.²⁵ Most studies utilize survey designs that quantify the frequency of family discussions and identify which topics have been discussed and the family members most likely to engage in these discussions.²⁶ Few studies have involved direct observation of parent-adolescent conversations to characterize the communication process.^{27–31} A recent meta-analysis of 30

years of data from more than 50 studies assessing the effect of parent-adolescent sexual communication on adolescent safer sex behaviors identified the lack of data regarding the content of parental discussions as a critical knowledge gap.³² This information is important for clarifying the mechanisms by which family discussions influence adolescent sexual behaviors and for tailoring existing or developing new interventions to reduce adolescent sexual risk-taking behaviors.

From a public health perspective, abstinence is one of the most important topics adolescents can receive information about from their parents. Prior survey-based research and focus group with parents have demonstrated that parents emphasize the importance of delaying sexual initiation.^{33–35} However, no studies have observed family discussions to characterize the messages parents transmit to adolescents about abstinence, particularly early adolescents.

In this study, we examined conversations between mothers and their early adolescents as they discussed sexual health topics to characterize the messages mothers delivered about abstinence. We focused on mothers because they are the primary parent who provides sexual health education to their children^{14,36–41} and because adolescents report that mothers have a greater influence on their sexual decision making than fathers.⁴² We focused on young, non-sexually active adolescents because data are particularly sparse regarding the topics parents discuss with younger adolescents and with those who have not yet begun sexual activity. Given evidence that parents have a greater influence on their adolescents' sexual risk behaviors when discussions begin prior to sexual activity, this study represents an important contribution to the existing literature.

MATERIALS AND METHODS

Data were collected as part of a multi-session intervention to teach mothers skills for communicating about sexual health topics. Participants completed a baseline visit prior to engaging in the intervention sessions. At the baseline visit mothers and adolescents completed a demographic questionnaire and engaged in a semi-structured conversation about abstinence, birth control and condom use. The current analysis focused on data from the baseline visit. Mothers provided written informed consent for themselves and their adolescent. Adolescents provided written informed assent. Mothers and adolescents each received \$20 for attending the study visit. The Institutional Review Board at the University of Pittsburgh approved this study, and all procedures were in accordance with the ethical standards of this IRB.

Participants included were recruited from Allegheny County in western Pennsylvania, where the mean age at sexual initiation is 14 years.^{43–45} This is three years younger than the national average.⁴⁶ This setting was ideal for examining how mothers raising children in a high-risk urban environment frame abstinence discussions with their children. Eligible mothers were African American or Caucasian women over age 21 years who were the biologic parent or legal guardian of an adolescent male or female between the ages of 10 and 14 years. Adolescents had to voluntarily to participate. We targeted African Americans and Caucasians families because these racial groups comprise the majority of Allegheny county

residents (13% and 83% respectively)⁴⁷. Mother-adolescent dyads were recruited using flyers mailed to individuals listed in research registries maintained by the University of Pittsburgh health system who resided in zip codes with high rates of early sexual initiation, teen pregnancies and teen births and who had agreed to be contacted for research studies. Patients presenting for inpatient or outpatient care at hospitals or clinics affiliated with the health system are invited to enroll in the research registry. Those who agree to participate are asked to sign a consent form allowing their names, selective patient characteristics and diagnostic code information to be placed in the research registry database. Patients can opt out of the registry at any time. University researchers can request to contact individuals who are potentially eligible for research studies using this database (<http://www.ctsi.pitt.edu/research-rsp-pitt.html>).

Baseline questionnaire measures

For mothers, the baseline questionnaire assessed maternal age, marital status, and the highest educational level completed. For adolescents, the baseline questionnaire assessed adolescents' age, race, sex, current grade, and history of sexual activity, including sexual abuse. Mothers and adolescents completed their questionnaires separately and in private.

Dyad conversation

Dyads engaged in an audio-recorded, semi-structured conversation in a private research room in an academic medical center. Audio recording was used because preliminary work with adolescents in the target age range indicated greater comfort with audio-recorded, but not video-recorded during discussions with parents about sexual health issues. A research staff read a script describing the ground rules for the conversation, which included being respectful towards one another and talking about topics in a way that felt most natural and comfortable for each dyad member (Figure 1). Dyads were then asked to discuss abstinence (defined as, "not having sex"), birth control and condom use, in that order. The term 'sex' was intentionally not defined for dyads as we wanted to understand what mothers told their young adolescents about abstinence, including how they defined sex. Dyads were asked to talk about each topic for up to 10 minutes. Dyads were allowed to move on to discuss the next topic prior to 10 minutes, if they felt they had said all that needed to be said. This approach of asking parents to discuss 3 broad sexual health topics without providing further boundaries on the discussion served our goal of exploring what messages mothers identified as appropriate for their young children. All conversations were timed and audio-recorded.²⁷

Analysis

Dyad conversations were transcribed verbatim and entered into Atlas.Ti, a qualitative data management program. Although sessions were only audio-recorded, notes were included in the written transcript made about non-verbal cues, such as maternal or adolescent comments about the other party's body language, the tone with which comments were made, long pauses that clearly reflected discomfort. A multi-step process was used to systematically examine the qualitative data and come to an understanding of what messages mothers communicated to their son or daughter about abstinence. Two independent coders read each transcript to identify passages related to abstinence using an inductive approach to content analysis and the constant comparative method⁴⁸. With content analysis, coders

systematically reviewed textual data to identify important content elements and the relationships between these elements. The constant comparative method allows identification of emergent themes within and across dyad interviews.^{49,50} This coding process resulted in a list of words, phrases and conversational passages that represented a broad array of messages mothers communicated about abstinence.⁵⁰ The coded text was reviewed to identify key major themes and related minor themes that were used to develop a codebook that outlined each theme and its definition. Two independent coders used the codebook to recode each transcript. Table 1 shows the major and related minor themes included the codebook. Coders then met to compare their results and resolve coding discrepancies.

Emergent themes were compared across several participant characteristics. Themes were compared among mother-son versus mother-daughter dyads, across dyads with younger (10 to 11 year olds) versus older (12 to 14 year olds) adolescents, and among mothers who gave birth prior to age 31 years compared to those who delivered their participating child after 31 years of age.⁴⁸ For the latter comparison group, maternal age was determined using a median split. As reported themes arose across all groups and participant types, stratified data are not presented for any of these participant or dyad characteristics.

RESULTS

Sample Demographic Characteristics

Twenty-one dyads enrolled, including 15 mother-daughter and 6 mother-son dyads. Mothers' mean age was 39.75 years (range 30 – 52 years). Half were married (48%), a third single (33%), and the rest were separated, widowed or divorced (14%). Most had completed some college (75%), while the remainder had completed high school. Adolescents mean age was 11.95 years and 65% were females and half (50%) were African American or White (45%). Few were biracial (5%). All denied having ever had penile-vaginal sex or unwanted sexual contact.

Prior discussions about abstinence were reported by 44% and 69% of adolescents and mothers, respectively. Similarly, prior discussions about sexual intercourse were reported by 47% and 69% of adolescents and mothers, respectively. Mothers and adolescents were similar in their reports of discussions about STDs (67% and 67%), HIV (50% and 50%) and birth control (53% and 53%).

Thematic Overview

Across all dyad, mothers' remarks covered four main themes. Theme 1 (*You Need to Know What Abstinence Is*) highlighted the importance mothers place on ensuring that their adolescent understood the definition of abstinence. The three remaining themes emphasized sexual decision-making. Theme 2 (*Setting Boundaries for Abstinence*) reflected mothers' delineation of the expected time limits for remaining abstinent or conditions under which having sex was considered acceptable. Theme 3 (*Abstinence is Best Given the Risks*) encompassed mothers' explanations for their belief that abstinence is the best choice for youth. These remarks generally involved maternal descriptions of the psychosocial changes

that young people must go through before becoming mature enough to navigate sexual relationships and the potential social, emotional, and physical hazards that can occur. Theme 4 (*Come Talk to Me*) reflected mother's desire for their children to consult them once the child was considering becoming sexually active.

Theme 1: You Need to Know What Abstinence Is

Although a definition of abstinence was read by a study staff at the beginning of the conversation, all mothers redefined abstinence in their own words or elicited a definition from their adolescent providing clarification, if necessary. In half the dyads, mothers started the conversation by defining abstinence in the mother's own words. For example, the mother of a 13-year old female started by stating, "*Abstinence. Let's talk about abstinence. You should never have sex. [stated firmly] That's what that means.*" The other half of mothers started their conversation by eliciting a definition from their adolescent, then provided clarification, if necessary. This is exemplified in the exchange below between a mother and her 12-year old son:

Mother: So the three topics are: abstinence, condom use and birth control use. What do you know so far about any of those topics? Do you know what abstinence is?

Son: It said on that survey.

Mother: Oh, it said on your survey?

Son: Yeah. It said that you were, *[pause]* I don't know...

Mother: Refrain from having sex?

Son: Yeah.

Mother: Did it say that? *[pause]* So that's when people say that they're gonna remain abstinent, that's when they decide not that they're not going to have sex.

Regardless of the approach mother's took in starting the conversation, all mothers' definitions emphasized that abstinence meant avoiding sexual contact.

Only one mother explicitly defined 'sex'. In defining abstinence, this mother of a 10-year old daughter explained, "*When you are abstinent, you just do not have sex. You do not let a man put his penis into your vagina. Or, anywhere else.*" Among the remaining mothers, none asked their adolescent if they knew what sex was. None of the adolescents indicated that they did not know what sex was.

Despite defining abstinence, some mothers subsequently discovered that their children remained confused about what the term meant. For example, after one mother provided a long definition of abstinence and described her views on the benefits of remaining abstinent during the teen years, her 10-year old daughter indicated she still did not understand the word:

Mother: ...The best thing is abstinence because you know for sure you aren't... going to get pregnant and you're not going to get any sexually transmitted disease.

Daughter: Is that a pill?

Mother: What? Abstinence?

Daughter: Uh huh [positive].

Mother: Oh that's just not having sex at all.

Daughter: Oh!

When adolescents had difficulty understanding what abstinence meant, mothers often struggled to reframe their initial definition. This difficulty was evident in their tone; some mothers expressed frustration with themselves for not being clear, while others expressed frustration with their child for not understanding. However, all mothers worked to correct these misunderstandings when they arose, as shown in the example below. In this example, a mother is initially confused and upset to learn that her 12-year old daughter does not want to be abstinent until the mother realizes her daughter does not understand that the decision to be abstinent is not a permanent one.

Mother: Abstinence means that you obtain [sic] from having sex. You don't have sex at all. Is that something that you would be interested in?

Daughter: No.

Mother: No? When do you...[interrupted by daughter]

Daughter: I want to have kids.

Mother: [chuckles] Well, what do you think would be a good age to maybe have sex, since you don't want to be abstinent?

Daughter: 14

Mother: 14?

Daughter: Mmm hmm [positive response]

Mother: And why do you feel 14 is a good age?

Daughter: I don't know.

Mother: Well, there's a reason why you picked that number. Why'd you pick that number?

Daughter: 'Cause I don't want to have sex right now.

Mother: Why not set it for an older age? Like 16 or 18?

Daughter: I don't know. Because I want to have a baby.

Mother: And, how old do you want to be when you have a baby?

Daughter: 18.

Though initially confused by her daughter's response, this mother continued exploring her daughter's rationale, gaining a better understanding of when her daughter wanted to have children and what goals she wanted to achieve before doing so. This process of exploring adolescents' comprehension of the term 'abstinence' and how it was pertinent to an adolescent's life was observed among most mothers. Of note, in defining abstinence, some

mothers mispronounced the term by mistakenly using other words (e.g., “obtain”, “refrain”), as in the preceding quote.

Some mothers provided more nuanced definitions of abstinence than simply avoiding penile-vaginal sex. In addition to reinforcing the idea of waiting to have sex, some mothers acknowledged that sex (and therefore abstinence) can refer to other sexual acts. For example, the mother of a 10-year old female said, “*When you are abstinent, you just do not have sex. You do not let a man put his penis into your vagina. Ok? Or anywhere else. Alright?*” Some introduced the concept of secondary abstinence, where a person who has been sexually active decides to cease sexual activity. The mother of a 12-year old female explained it this way, “*Abstinence—that’s for people who save themselves for marriage. Or, they have sex, and want to not have [sex] no more, so they stop*”

A concept that emerged in less than half of discussions was maternal endorsement of adolescents’ autonomy in making the decision to have sex. Mothers who addressed this issue articulated that an adolescent’s decision to remain abstinent or to have sex are personal choices, as illustrated by the quote below. These mother’s emphasized that their role as a parent was to help their adolescent to consider various aspects of the decision making process and to make the best choice for themselves:

“I don’t feel that it’s right for me to tell you to wait until you’re married to have sex because I was 16 and pregnant. And, like I said, my eyes and ears can’t be everywhere. You know? I just got to be able to instill and trust in you that when the time comes that you’re going to make the right choice.” (Daughter, age 12).

Like this mother, many mothers shared personal stories – both positive and negative – with the goal of providing examples of decisions and consequences to inform their adolescent’s subsequent decisions and to highlight mothers’ values and behavioral expectations for their child.

Theme 2: Setting Boundaries for Abstinence

All mothers described the boundaries on abstinence that they wanted their adolescent to use as a guide. These boundaries fell into 4 categories. Mother described 1) time limits on how long their adolescent should be abstinent (e.g. waiting until an older age), 2) religious or morally-based boundaries (e.g. waiting until marriage), 3) romantic relationship milestones (e.g., waiting until one is in love or in a strong, mutually committed relationship), and 4) developmental milestones that indicated that an adequate level of maturity was reached (e.g., waiting until one completed their education or achieved a career goal). Although mothers varied in their opinions about how long or until when their adolescent should wait, mothers universally believed that their adolescent was too young “right now”.

In general, mothers articulated more than one boundary on abstinence; however, the most common milestone for waiting was until marriage. A minority of mothers referenced their religious beliefs as their rationale for endorsing waiting until marriage. For example, the mother of an 11-year old male said, “*We’re a Christian family. We believe in keeping God’s word. And, we believe that you shouldn’t have sex until you’re married.*” Mothers who

expressed religiously-based boundaries on abstinence expressed the sentiment in the preceding quote that decisions about abstinence are dictated by the family's religious values, not by personal choice. This was also exemplified in this statement by the mother of a 10-year old male, *"You marry her and then you have sex. Ok? And on a spiritual level, that's what God wants you to do too."* There was rarely any discussion of the adolescent's perspective regarding these religious values or whether the adolescents' beliefs aligned with those of the parent and might be used as a guide for deciding when sex was appropriate.

The majority of mothers did not express a religious basis for their preference that their adolescent wait until marriage before having sex. These mothers expressed greater support for their adolescent's autonomy in making decisions about when and with whom to be sexually active. They also expressed greater acceptance of the idea that their adolescent might have sex before marriage and greater willingness talk openly if their adolescent was considering having sex on a timeline that differed from what the mother desired. In one conversation, a mother acknowledged the possibility of her daughter having sex before marriage despite her daughter insisting that she would remain abstinent until marriage: *"Yeah, I would like for you to wait until you're married but I don't know how realistic that is. But, you could at least wait until a long, long time from now."* The mother of a 13-year old female acknowledged her preference that her daughter wait until marriage to have sex, and at the same time also affirmed her daughter's autonomy in making this decision: *"I'm glad and so proud that you know you're not ready to have sex... if it were me and your dad, we'd have you wait until you were married... but that's a decision you have to make, not me."*

Another key boundary mothers described was refraining from sex until one achieved a personal, developmental or relationship milestone. Most commonly, the milestones discussed were completing one's education or establishing a career path that would ensure financial independence, as indicated by this quote from the mother of a 13 year old daughter: *"Abstinence. Let's talk about abstinence. OK. That's good. You should never have sex. Abstinence. That's what that means. Ok? At least for a very long time. Because then you can focus on your school work. And becoming a doctor."* A few mothers endorsed the concept that sex could also be appropriate within the context of a loving, supportive relationship. Fewer still communicated the idea that the right time was not predetermined, might vary depending on circumstances, and therefore necessitated a thoughtful approach when deciding what might be right for oneself. This is reflected in the following quote from the mother of an 11-year old boy:

Mother: ...it's a good idea probably to wait until you fall in love with somebody or you get married.

Son: I think it at least until you're like, at least like 21 or older.

Mother: 21 or older?

Son: Yeah.

Mother: Do you think you could put an age on it? Or do you think that stuff happens? Something might happen in the future to change your idea. But that's a

good [idea], like a good thing to set [some guidelines] for yourself because right now you might not be mature enough, definitely, to handle what would happen if you did have sex...And, you would definitely want to choose to be in love with somebody first. You're not just going to go out and sleep with some girl because you think she's pretty, right? You're going to use your brain and your heart, as well as your body, everything all involved..."

Finally, some mothers communicated their belief that sex is not just a physical act, but can also a very special emotional connection made between people who care deeply for one another. Most mothers recommended that their adolescent reserve sex for a "special" person – someone the adolescent had an emotionally rich relationship with. One mother elicited her daughter's beliefs, while reflecting on her own in this way: "*What are your beliefs? My beliefs [are] that you should wait until you're older, more responsible, and it's supposed to be someone you know you have a strong bond with and care about.*" Mothers shared their views on what an ideal sexual partner should look like, and acknowledged that it is impossible to know when a special person might come along whom their son or daughter might choose to have sex with. Mothers noted that it was their responsibility to help their adolescent to critically assess potential sexual partners. In the passage below, the mother of an 11-year old girl connected the concepts of exercising sexual autonomy and waiting for that special person:

"Yeah. I think it's better to wait until, you know, you really get to know someone and find that special person...Because don't you think your body is precious enough to wait? To give it that much respect? Your body is your holy temple and it's something that you got to respect and take care of. You got to make sure [*you are sure*] when you invite that person into your holy temple."

Theme 3: Abstinence is Best Given the Risks

All mothers expressed the sentiment that abstinence was the best choice at present because their adolescent was too young to deal with the potential consequences of being sexually active. The mother of an 11-year old boy expressed this concern in the following way:

"You are not ready for grown up consequences. There's always consequences to everything that you do. Just like when you do things as a child, there's consequences, right?...There is always a pro and con to everything. So you have to be careful about what you do because everything is not appropriate for you..."

As in the example above, many mothers mentioned consequences but lacked clarity about what types of consequences could result from sexual activity. Those who did identify consequences mainly emphasized negative health-related outcomes, such as experiencing a pregnancy or a sexually transmitted infection. This is evident in the following quote by a mother speaking with her 11-year old son:

"With abstinence, you don't have to worry about sexually transmitted diseases. You don't have to worry about getting pregnant. You don't have to worry about anything like that, because if you're not doing it, then you don't have to worry about it, right?"

Some mothers also described negative emotional consequences, particularly heartbreak. The mother of a 14-year old daughter described the potential for individuals who enter a sexual relationship to have different motivations for engaging in sex, which could cause one partner emotional anguish: *“Don’t think that just because everybody says they love that they really love you... Guys still say they love you just to have sex with you.”* Peer pressure to engage in sexual behaviors came up in many discussions as a possible influence on an adolescent’s sexual decision.

“People will pressure you a lot of time. Most of the time, that’s what you get out here in this world – peer pressure... Don’t never let anyone tell you nothing. Always do what you feel is the right thing to do. Always be a leader. Don’t ever follow anybody! You [could] follow them to a rotten path. You always lead yourself.”

Mothers used these examples of positive and negative consequences asked their adolescent to think about these various consequences as their adolescent considered their own motivations for wanting to have sex with a partner, why a partner may want have sex with them, and how the adolescent and their partner might manage positive or negative consequences of that decision.

Theme 4: Come Talk to Me

Despite mothers’ vocalization of their discomfort discussing abstinence, all mothers expressed their hope that their adolescent would seek the mother’s guidance once the adolescent was considering becoming sexually active. This was exemplified in the comments of the mother of a 13-year old girl who said, *“I think it would be in your best interest and my best interest if you would just be abstinent. Be a virgin. Don’t have sex until you’re ready. Now, when you ready, holla!”*

Creating open, on-going lines of communication was not limited to conversations between mothers and the older adolescents. For example, the mother of a 10-year old female stated, *“Can I ask you this? And, be honest, be totally honest with me. If you’re 15 or 16 and you think that you decide you want to have sex, would you feel comfortable coming to me?”* Whether this request implied that an adolescent needed to get their mother’s approval before having sex, or a mother’s desire to aid their adolescent with making a major life decision depended on the collaborative environment the mother created during the conversation for sharing information, holding differing views, and supporting adolescents’ autonomy. One mother typified how a parent could simultaneously affirm and support her daughter’s decision to be abstinent, acknowledge her adolescent’s ability to change her mind about whether to be sexually active when the time was right for her, and offer to both serve as a sounding board as well as help her daughter to obtain contraception:

“I think it’s great if you would wait until you were married. I just feel like you might change your mind later. And, if that’s the case, I want you to feel like you can discuss it with me, especially what pertains to [contraception]” (daughter, age 12).

Mothers like this one were clear in expressing a preference to revisit the topic of their child's abstinence, rather than to miss the opportunity to aid their adolescent with making a major life decision.

For a minority of mothers, the suggestion to talk later reflected the mother's discomfort and desire to put this discussion off until the future or a desire to have an opportunity to talk their adolescent out of having sex. The former was evident in the conversation below between a mother and her 11-year old son, during which the son repeatedly asked for more information in a tone that clearly indicated he wanted to talk now, while his mother repeatedly said he was not ready for the information:

Mother: ...I think that there is a time period for everything you need to discuss... it will be a discussion soon as you get a little older...

Son: How much older?

Mother: It depends...I'll make sure that you know as much as possible. But, as far as the topic of waiting to have sex, it is important to wait...because, like I said before, you should enjoy being a child. And not rush to get old and do grown up things. Um,

Son: What if I did do grown up things [*when I was still*] young?

Mother: It's not a good thing because you are not ready for grown up consequences...your focus should be what you want to be when you grow up...I will get to more detail about all that as you get older...everything comes with time and age but I'll definitely tell you before you know, you hear it.

Son: Before I'm 15?

Mother: Yeah.

DISCUSSION

We explored the content of maternal discussions about abstinence with young adolescents residing in an urban environment with high rates of early sexual initiation and teen pregnancy. Four themes emerged that highlight the high priority mothers place on defining abstinence and their emphasis on helping adolescents develop sexual decision-making skills by setting boundaries on abstinence, explaining why abstinence is important, and expressing their desire to serve as an advisor once their adolescent is considering becoming sexually active. Although defining sex for young adolescents is important before defining and discussing abstinence, only one mother defined sex. Moreover, mothers did not tailor the information provided based on their adolescents age or gender. Although these themes have been noted in prior work,^{20,37,51-54} this study contributes to existing literature by characterizing abstinence messages shared by mothers during actual conversations with their young, non-sexually active adolescents³¹. These findings provide more specificity about the types of abstinence messages mothers communicate prior to adolescents' sexual debut.

These findings confirm and build on prior research. Survey studies have consistently found that parents frequently report discussing abstinence-related themes with their adolescents.

20,37,51–54 Such themes include discussing the definition of abstinence and the importance of waiting to have sex. Focus group studies with parents and/or adolescents have highlighted that during these discussions parents strive to articulate their personal values and behavioral expectations regarding teen sexual activity, the moral rationale for these behavioral expectations, the dangers of sex, and the conditions under which sexual activities are considered acceptable.^{34,35} The current study extends the existing literature by confirming that these abstinence-related themes, including discussions about sexual decision-making, are present in mothers' discussions with young, non-sexually active adolescents.

This study demonstrated that even in brief conversations, mothers convey a wide range of abstinence messages. We found that mothers' transmitted factual knowledge, family values, and behavioral expectations. This is encouraging as it suggested that mothers' discussions contain many of the tools that are associated with reductions in adolescent sexual risk-taking.^{55,56} However, there are some critical omissions in mothers' messaging. Most notably, only one mother defined what sex is. As young adolescents have a more limited foundation of sexual health knowledge, assessing what they already know about sex and defining the term, if necessary, is a critical part of discussing abstinence. This omission may explain why some adolescents remained confused about what abstinence meant even after mothers defined it.

The second omission was the lack of tailoring of abstinence messages. We found that regardless of and adolescents' age mothers communicated the four abstinence themes. Coupled with the fact that the majority of mother's did not define sex, this could be an indicator of poorer quality communication due to mother's not being developmentally sensitive to their adolescent's informational needs. A 10-year-old fifth grader has a very different developmental capacity and experiential knowledge to comprehend highly nuanced sexual health information compared to a 14-year-old high school freshman. When viewed in this light, the uniformity in the messages mothers conveyed suggests that mothers may not be skilled at tailoring the information they provide to best meet adolescent's developmentally needs.^{25,27,31}

Experts in family-based sexual health education recommend that sexuality education begins at birth and be developmentally tailored based on a child's age, maturity, and pre-existing understanding of sexual health topics.⁵⁷ Lack of tailoring of abstinence messages based on adolescents' age or developmental stage may explain findings from prior studies that adolescents want to learn about sex from their parents, yet report infrequently of doing so.^{58,59} Adolescents may be receiving information from parents, yet not receiving the information they need in an understandable form.⁶⁰ This is supported from the findings of the current study in which mothers communicated many complex messages regarding abstinence without tailoring the information. These data may also help to explain the consistent finding of non-congruence in reports by parents and adolescents regarding whether sexual health topics have been discussed.^{37,59,61} Parents are more likely to report that they have discussed various sexual health topics compared to their adolescents. Parents' didactic communication style and lack of information tailoring may cause adolescents to tune out or miss critical information.³¹ This conclusion is supported by studies showing that more open and interactive communication is associated with greater agreement among

adolescents and mothers about which topics have been discussed and greater knowledge transmission.^{37,62}

Our findings have implications for interventions to improve parent-adolescent communication. The finding that abstinence messages were uniform regardless of adolescent age, suggests that parents may need to learn communication skills to help determine the appropriate content and amount of information to discuss with children at different developmental stages.³² Our finding that some adolescents' remain confused about what abstinence is after talking with their mothers suggests that mothers would benefit from help crafting clear, succinct abstinence messages that emphasize that abstinence is a temporary state that will be transcended by the vast majority of individuals as they go through adolescence. Although this analysis focused on maternal discussions about abstinence, it is likely that parental caregivers may need helping crafting key messages about a wider range of sex health topics. Future studies are needed to assess parental caregivers ability to communicate about other important sexual health topics (e.g., sexual abuse, dating aggression/violence, sexually transmitted infections, and birth control) and identify communication skills that can be enhanced through evidence-based interventions.

This study has several key limitations. The findings may not be generalizable to nonurban populations, racial groups other than African Americans or Whites, fathers, non-parental caregivers, or older adolescents. Participants were a highly motivated group who had volunteered to be included in a research registry; thus, findings might differ in a less selective group. The setting for conversations was experimentally contrived; messages may have differed had mothers and their adolescents talked at home or in another more familiar environment. Our approach of asking mothers simply to discuss 3 broad sexual health topics may have yielded more general, abstract messages. Messages may have differed had other methodologies been used to prompt discussions, such as asking dyads to read and discuss a case study or other educational material about abstinence. A limitation of our analytic approach was that the transcripts were not stratified based on whether prior discussions about abstinence or other sexual health topics had occurred. This is unlikely to have changed our findings substantially given that almost half of adolescents and almost three quarters of mothers reported having discussed abstinence previously. Our relatively small sample size of adolescent males limited our ability to compare findings across mother-daughter and mother-son dyads. Our findings may have been influenced by social desirability bias, meaning mothers may have discussed the assigned topics in a manner that reflects what they thought the research team wanted to hear, rather than saying what they would in a different context. Finally, our study relied on a brief snapshot of maternal communication and therefore does not capture the dynamic process of educating adolescents about abstinence that likely occurs over time. Despite the limitations, our study fills an important gap. It provides information about the types of messages mothers communicate to their early adolescent children about abstinence and highlights opportunities for improving family communication processes.

Conclusions

We explored the content of discussions between urban mothers and early adolescent children to characterize the abstinence messages mothers convey. Mothers ensured their adolescent understood what abstinence is, described acceptable boundaries on abstinence, explained why abstinence is important, and expressed a strong desire to serve as an advisor once their adolescent was considering becoming sexually active. Messages did not vary by maternal age nor by adolescent age or gender, which suggests that mothers may benefit from learning how to tailor the messages they communicate to match their child's developmental stage and informational needs.

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Directions:

- Thank you for coming today.
- Sit where ever you feel most comfortable.
- You will spend the next 15 to 45 minutes talking to one another about 3 topics:
 - Everyday issues: may be things you talk about maybe at dinner time, at bed time, or in the car. For example, school, sports, hobbies, or friends.
 - Abstinence or waiting-to-have-sex
 - Condom and birth control use
- No one else will be in the room with you while you talk.
- We will audio-record your conversation so we have a record of your conversation.
- You should discuss each topic at a level that feels most comfortable for both of you.
- We are interested learning more about how mothers and their adolescents talk so please discuss these topics in a way that feels more natural to you.
- Because we want to make sure you have time to talk about each of the 3 topics, I will return every 7-10 minutes and ask you to prepare to move on to the next topic.
- If you have already moved on to the next topics, just let me know.
- If you feel like you need a few more minutes to wrap up, just let me know.
- Do you have any questions?

Figure 1.

Instructions provided for the dyad conversation

Table 1

Major and related subthemes included in the codebook

Major themes	Sub-themes (if applicable)
Definition of abstinence	<ul style="list-style-type: none"> • Defines abstinence without defining sex • Defines abstinence and defines sexual behavior <ul style="list-style-type: none"> – Oral, vaginal and/or anal sex – Distinguishes coital from non-coital behaviors
Waiting until marriage	---
Waiting until non-marriage related time-point	<ul style="list-style-type: none"> • Until one is “ready” • Until one is “older” or “more mature” • Until one is “In love” • Until marriage • Until out of college • Until a “long time from now”
Reference to family, community, or cultural beliefs	<ul style="list-style-type: none"> • Religious beliefs • “In our family” • “In our community”
Alternatives to sex	
“Being a virgin is a good thing”	