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Understanding African American youth and adult perspectives on sex education in rural North Carolina

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Abstract

African American youth in the US rural South are at elevated risk for poor sexual health outcomes, including sexually transmitted infections and teen pregnancy. Historically, the southeastern USA has lagged behind in providing comprehensive sexuality-based education in secondary school, which may contribute to poor reproductive and sexual health outcomes. This study aims to understand the perspectives of African American youth and adults on comprehensive sexuality-based education in rural North Carolina. Twenty-four individuals (12 youth and 12 adults) participated in both semi-structured interviews and small discussion groups. Data were analysed and coded using inductive and deductive approaches to thematic analysis. Results indicated that comprehensive sexuality-based education was highly desirable; however, current efforts were viewed as insufficient. While both young people and adults agreed that abstinence was the most desirable path for youth, participants also acknowledged young people's autonomy in engaging in sexual activity and suggested that comprehensive sexuality-based education was needed to protect against unintended consequences. The findings of this study have practical implications for addressing challenges associated with providing sexuality-based education to African American youth in rural communities and offers suggestions regarding directions for future research.

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Declaration of interest

There are no conflicts to disclose.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to the inclusion of personal information that could compromise the privacy of research participants.

Keywords

Sexuality education; African American youth; rural communities; USA

Introduction

In the USA, young people aged 15–24 years have been disproportionately impacted by sexually transmitted infections (STIs); although they comprise only 25% of sexually active individuals, they account for 50% of annual STI diagnoses (Centers for Disease Control and Prevention 2017). In addition to concerns about STIs, young people are also at significant risk for unintended pregnancy. While recent figures suggest that the teenage birth rate has been declining steadily over the past two decades, geographic and racial disparities persist (Finer and Zolna 2016; Kost, Maddow-Zimet, and Arpaia 2017; Martin, Hamilton, Osterman, Driscoll, and Drake 2018; Romero et al. 2016). African American youth, for example, have birth rates that are more than twice those of their white peers (Office of Adolescent Health [OAH] 2019). Moreover, African American youth in the southeastern USA experience disproportionately high rates of unintended pregnancy and STIs compared to non-Hispanic whites. In North Carolina, for example, African American youth comprise nearly 40% of all teenage pregnancies (Sexual Health Initiative for Youth 2018). Moreover, despite comprising only 22% of North Carolina's population, 62% of all people living with HIV in the state are African American (North Carolina HIV/STD/Hepatitis Surveillance Unit, 2017).

In the USA, young people in rural communities are at greater risk for poor sexual health outcomes (e.g., unintended pregnancy and HIV infection) than their peers residing in urban communities (Schafer et al. 2017; Sexual Health Initiative for Youth 2018). Recent data, for example, revealed that rates of unintended pregnancy in some rural counties in North Carolina are up to 44% higher than comparable urban counties (Sexual Health Initiative for Youth 2018). While there are many socio-structural determinants that contribute to disproportionately high rates of unintended pregnancies and STIs among rural African American youth (Adimora and Schoenbach 2005; Adimora, Schoenbach, and Doherty 2006; Kogan, Yu, Allen, Pocock, and Brody 2015), inadequate sexuality-based education may be particularly salient for African American young people in the US rural southeast (Reif et al. 2014). Poor sexuality-based education could have long-term implications, including poor reproductive and sexual health outcomes and higher community health burden (Hill, Lynne-Landsman, Graber, and Johnson 2016; Schafer et al. 2017).

Historically, the southeastern region of the USA has lagged behind in providing formal comprehensive sexuality-based education—instruction that covers topics such as abstinence, condom use and contraceptive methods (Hallum-Montes et al. 2016). In 1995, for example, the North Carolina General Assembly passed a law mandating that public schools emphasise abstinence until marriage during sexuality-based education (Sexual Health Initiative for Youth 2018). Consequently, schools in North Carolina were not required to educate youth on methods to protect themselves against STIs and unintended pregnancy (Sexual Health Initiative for Youth 2018). As a result, many associated the steady rise in rates of unintended

pregnancy and STIs during the 1990s and early 2000s with poor sexuality-based education (Stanger-Hall and Hall 2011). Abstinence-only policies were in direct conflict with what parents believed was best for their children; around that time, polls in North Carolina reported that 83% of parents favoured comprehensive sexuality-based education (Sexual Health Initiative for Youth 2018). The state responded the parental concerns 15 years later when the state General Assembly passed the Healthy Youth Act, which requires North Carolina public schools to adopt comprehensive sexuality-based education, referred to as Reproductive Health and Safety Education (Sexual Health Initiative for Youth 2018). Despite this progress, there have been persistent concerns about the provision in the law permitting "local control," in which local school boards determine how the law is implemented in their districts and which topics are emphasized or de-emphasised during classroom instruction. Moreover, formal coursework on this topic is required only in grades 7–9, potentially excluding key age groups.

Given the public school system's limitations in providing adequate instruction (e.g., Lloyd et al. 2012), African American youth are often reliant on community-driven efforts to provide comprehensive sexuality-based education usually in the form of family-based interventions. Such interventions, however, tend to have only short-term effects. There are a number of barriers to the effectiveness of interventions focused on improving parent-teenager communication about sex within African American families, including religious ideologies that discourage premarital sex and thus limit related communication (Udell and Donenberg 2014; Ritchwood et al. 2017), poor communication between parents and youth (Ritchwood et al. 2018), fears of promoting sexual activity (Hyde et al., 2013), lack of parent education about sex (Randolph et al. 2017), and parent or youth embarrassment (Wilson et al. 2010). Moreover, few paediatric healthcare professionals regularly engage their patients in discussions about sexuality (Alexander et al. 2014).

To overcome these barriers, there have been a number of programmes and interventions aimed at providing community-level, comprehensive sexuality-based education (e.g., Dave et al. 2017; Hill et al. 2016; Murry, Berkel, Chen, Brody, Gibbons, and Gerrard 2011; Ritchwood et al. 2015). Many of these interventions, however, are offered for only a limited period of time due to reliance upon grant funding and others have not demonstrated long-term effectiveness (Santa Maria, Markham, Bluethmann, and Mullen 2015). Despite the need for comprehensive sexuality-based education in school and community settings, formal sexuality-based education for youth has been trending downward across the USA, with notable racial and geographic disparities (Lindberg, Maddow-Zimet, and Boonstra 2016). Low-cost and sustainable interventions are needed to ensure that African American youth in rural communities receive comprehensive sexuality-based education to improve sexual health and community outcomes.

The identification and development of comprehensive sexuality-based interventions for rural African American youth that are effective, culturally-appropriate and grounded in community-level values may facilitate the reduction of unintended pregnancy and STIs within this population. However, we know little about youth and adult perceptions of comprehensive sexuality-based education in rural North Carolina. One study assessed rural African American youth and adults' perceptions of the role of public schools in HIV

prevention; however, this study pre-dated the implementation of the Healthy Youth Act and focused only on the role of public schools to the exclusion of other key community institutions, such as the church, local youth empowerment groups and local government (Lloyd et al. 2012). We posit that exploring these gaps has the potential to inform intervention approaches that impact the trajectory of teen pregnancies and STIs amongst African American youth in the US rural South. Therefore, the purpose of the current study was to characterise African American youth and adults' perceptions of comprehensive sexuality-based education for youth in rural North Carolina.

Methods

Participants

The Institutional Review Boards at the University of North Carolina at Chapel Hill and Yale University approved this study. Data were derived from the Sexual Health Promotion project, a mixed methods study assessing the acceptability and feasibility of using youth-adult partnerships to promote sexual health among African American adolescents in two rural communities in North Carolina. For this study, we conducted individual, semi-structured interviews with 24 African American, adults (n = 12) and youth (n = 12) residing in one of the targeted communities. Interviews were followed by small discussion groups (two adult and two youth), which were comprised of five to seven participants each. Eligible adults were 21 years of age or older who reported familiarity with local young people through participation in youth-serving organisations, community leadership roles, or through parental or other types of personal relationships. Interviews and small discussion groups were led by a single, experienced behavioural scientist. Actual participants included parents, a pastor (n = 1), youth-serving organisation leaders (n = 4), a church youth advisory board member (n = 1), a former athletic coach (n = 1), programme managers/directors for an afterschool programme (n = 2), a retired teacher (n = 1), a community advisory board member (n = 1), and government or private sector employees (n = 2).

Most adults who participated in an individual interview also participated in a small discussion group (10 of 12); however, five new participants joined only the discussion group. Eligible youth were 13–19 years of age, self-identified as African American, and were residents of the targeted communities. All the youth participants (n = 12) who completed the individual interviews also participated in the small discussion groups; however, three new participants joined only the discussion group.

Most adults were female (n = 8), between the ages of 46 and 60 years (n = 7), parents (n = 10), married or partnered (n = 7), had direct experience working with youth in the community (n = 12), and all (n = 17) were either currently or previously employed in the education or non-profit sector. Of the five adults who only participated in the small discussion group, most were female (n = 4), between the ages of 46 and 60+ years (n = 3), parents (n = 4), lived in the community for either 1–10 years (n = 2) or 11–20+ years (n = 3), and all five had direct experience working with youth in the community. Most of the youth interview participants (50% female) were between the ages of 16 and 19 years (M = 17.2) and had lived in the community between 6–10 years. Of the three young people who only

participated in a small discussion group, two were female, were between the ages of 17 and 19 years (M = 17.6), and had resided in the community for less than a year (n = 2).

Procedure

In 2015, we recruited adults and youth from two rural and neighbouring counties in eastern North Carolina that were comparable in socio-demographic and socio-economic status characteristics (State Center for Health Statistics 2019). We selected these counties because of the strong social ties among African American residents across these communities, their tendency to share community resources, close proximity to each other and high rates of STIs and teenage pregnancy relative to the rest of the state. We recruited participants from local churches, schools and other community organisations by distributing flyers announcing the study and through word of mouth. Adults (aged 21+ years) provided written consent for study participation and we obtained written parental permission and assent from minors (aged 17 years and younger).

There were two phases of the study: (1) a formative, qualitative phase and (2) a survey administration phase. This article focuses on data from the formative, qualitative phase during which an experienced interviewer from the research team conducted in-person, semi-structured interviews (between 45–60 minutes) and led hour-long small discussion groups with adults and youth, separately. Interviews and small discussion groups were audio-recorded and transcribed verbatim by a third-party organisation. The small discussion groups were conducted separately for young people and adults and were intended to facilitate greater elaboration upon key concepts identified during individual interviews. These groups focused on community members' perceptions of their community assets and needs, intergenerational interactions, youth-adult partnerships, adolescent sexual behaviour and healthy relationships, and perceived responsibility to intervene in issues affecting youth and the community. Questions from the individual interview and small discussion group guides are presented in Table 1. Each participant completed a brief demographic questionnaire. They received a $20 cash incentive for each activity in which they participated, including in an individual interview, small discussion group, and/or completing a behavioural questionnaire.

Data analysis

Interviews were audio-recorded, transcribed verbatim by a transcription company, and then reviewed by a member of the research team for quality and accuracy. We used inductive and deductive approaches to thematic content analysis to identify, analyse and report themes in the data (Braun and Clarke 2006). First, influenced by a socio-ecological framework that acknowledges the interactive influence of individual, social, community and societal factors on health and behavioral outcomes, we used a deductive approach to explore participants' perceptions of comprehensive sexuality-based education.

To do this, trained members of the research team coded a selection of the transcripts using broad topical codes derived from the interview guide, which was developed to explore themes related to sexual risk and resilience among African American youth. Next, after a thorough review of the data and based upon our knowledge to the literature, the research

team used an inductive approach to derive interpretive codes evolving from the data. We then developed a codebook that defined each code and provided guidance regarding when each code should be applied. Two of three coders from the research team independently coded each transcript. To ensure inter-coder reliability, coders received training until they reached at least 85% agreement amongst each other during practice coding assignments. Additionally, final codes were compared, and disagreements resolved via research team discussion and consensus, and the codebook was updated as needed post-discussion. Moreover, if the need arose, we revised questions in the interview guides after coding if the revision had the potential to enhance the depth of the data collected, and continued interviewing participants using the enhanced interview guides until we obtained a full range of responses.

Results

We identified three major themes, along with four sub-themes, that characterised community perceptions of comprehensive sexuality-based education for African American youth from rural North Carolina. These themes, along with sub-themes, are described in detail below and were consistent across adult and youth participants.

Comprehensive sexuality-based education for rural African American youth is acceptable and preferable

Youth and adult community members agreed that comprehensive sexuality-based education was acceptable and desirable for African American youth from rural North Carolina. Two sub-themes emerged during analysis, one emphasising the importance of sex education to young people's sexual health and the other emphasising the importance of 'all-inclusive' sex education that highlights both the positives and negatives of sexual initiation, as well as the appropriate timing and context governing sexual initiation.

Sex education promotes sexual health among youth—Adult and youth participants agreed that comprehensive sexuality-based education for African American youth is critical to their sexual health. Several adult participants expressed concerns for youth who were initiating sexual activity during early adolescence, as they suspected that early initiators lacked important knowledge about sexual and reproductive health, leaving them vulnerable to adverse outcomes such as teen pregnancy. One adult, for example, said:

> Kids are exposed to so much nowadays on TV… not only sexual promiscuity, [but also to alternative lifestyles]... Young people see that. They're so susceptible to these things. Then they say, 'hey, it's on TV. It must be all right. What can be wrong with it?' So, you have to sit down and explain the basics [about sexual health] to them. If they don't follow [your warnings about the consequences of teen sex], at least they have [the knowledge that they need] to fall back on since you would have discussed [it with them] and told them about it.

Youth participants reported that they received inadequate sex education, particularly from their caregivers, reporting that messages from the adults in their lives often warned them

against having sex, but often provided little substantive information concerning pregnancy and STI prevention.

Sex education should be 'all-inclusive' and incorporate communication of sexual values and appropriate timing of sex—Both adult and youth participants believed that, to facilitate sexual health among youth in their communities, comprehensive sexuality-based education should cover various topics, including pregnancy and STI prevention, contraception, biomedical prevention tools (e.g., condom use and spermicide gels), and anatomy and physiology. One youth interview participant speaking about the content of comprehensive sexuality-based education, for example, stated that, "I think [educators] should talk about condoms, like how the condoms can pop, and if you're not on birth control, you can get pregnant." Another youth interview participant said, "it should include explaining when it's safe [for youth] to have sex and when it's not – like what age..."

Adults tended to stress the importance of ensuring that youth understand that providing comprehensive, sexuality-based education to youth is meant to prepare them for adulthood and is not an indication of adult approval of adolescent sexual activity. Moreover, adults suggested that sexuality-based education should also emphasise sexual values, which included abstaining from sexual intercourse until marriage or at least until individuals were mentally and financially prepared to cope with the potential consequences of sexual activity. One adult, for example, suggested that comprehensive sexuality-based education for rural youth should include:

> "…teaching them about their body parts, STIs, and HIV. Also, teach not having sex, waiting until you are married. Like, I think all those components need to be taught from all aspects of it…what [STIs] are, how they are contracted, what you need to do if you do get one of those diseases, safe sex, how to use condoms, what would happen if you don't use a condom…how you can get pregnant."

Parents and schools are responsible for providing youth with comprehensive sexuality-based education

We asked participants to identify individuals or organisations believed to be responsible for providing young people with sexuality education. The majority of youth and adult participants (90%) reported parents were primarily responsible for educating their children about sex and STI prevention. The second most frequently cited responsible party was the school system.

Parents are primarily responsible for education their youth about sex, sexuality, and sexual health—Adult and youth participants agreed that parents were responsible for educating young people about sex. Specifically, parents were expected to: 1) initiate conversations about sex with their children; 2) ensure there was open communication between parents and their children to help youth feel more comfortable discussing their thoughts and interests, even if their thoughts were in contrast with those of their parents; and 3) communicate their values with regard to the appropriateness of sex while also acknowledging their children's autonomy. Moreover, several participants suggested that parents were responsible for negative sexual health outcomes among their children,

including early sex initiation and teenage pregnancy. They suggested that parents should not only monitor their children's extracurricular activities, but also anticipate events, such as peer pressure, that could cause them to be vulnerable to poor sexual decision-making.

Adults and young people also tended to attribute responsibility for educating youth about sex and sexuality to mothers in particular. In a small discussion group, for example, one teen mom discussing the importance of an open communication style during parent-teenager communication about sex and sexuality said:

> "When a child doesn't have that relationship with their mom like that, [they] are scared to say things or scared to ask questions about things because [they] don't know how [she's] going to react… what my mom always told me was – you better not get pregnant. I'm going to whoop you. I'm going to do this. You know that's how parents are. But I think, when I get older, I'm not going to be too cool with it, but I'm going to say, 'if you ever feel like that you want to have sex, come talk to me before you do anything, so I can put you on a birth control,' or something like that because I wouldn't want my child to do what I did. I would want her to talk to me about it."

The school system has an important, often secondary, role in providing youth with comprehensive sexuality-based education—Adult and youth participants identified the school system as responsible for educating adolescents about sex; however, several believed that the sexuality education offered in schools was limited. Others suggested that young people should first learn about sex from their parents. One young person, for example, said,

> "I think the parents should be the starters of [sexuality-based education] and then I think the school system should provide some type of class or some type of programme that discusses it. So, first your mom or dad or somebody in your family, then somebody that you don't really know but you really know because you've been in school all your life."

Some participants associated the absence of adequate school-based, sexuality education to the rise in teenage pregnancy and STIs among young people in their communities. In these cases, participants suggested that some parents were too uncomfortable to educate their children about sex and suggested that formal coursework could help to fill in the gap in sexuality-based education left by some parents. One young person said:

> I think [sexuality education is] needed because some parents don't talk to their kids about sex and stuff because before they get a chance their child will probably be already doing it or will probably have already experienced it one time before. And I think sexual education is needed because even though they probably already did it or done it there's still stuff that they do not know about it.

Some acknowledged that parents may not always be the best educators and suggested that any trusted adult who is open-minded, knowledgeable, and non-judgemental could teach youth about sex. Other suggested parties included other relatives (e.g., grandparents, uncles, aunts), trusted mentors or coaches, and staff from the health department, which some young

people suggested as a source for free condoms and helpful sexual health-related materials. A few participants suggested youth in their communities could learn from their peers who have experience with the consequences of initiating sexual activity, including teenage parents. Moreover, they believed that receiving education from individuals who had contracted STIs due to unprotected sex could deter sexual risk among peers.

Comprehensive sexuality-based education cannot take a 'one size fits all approach'

Adults suggested that it was important to assess young people's readiness for sex education, believing that the timing and frequency of comprehensive sexuality-based education could be variable. As a result, they recommended that parents pay special attention to the types of questions that young people pose as well as their behaviours to assess readiness for sexuality education. In this case, adults suggested that parents wait for the opportunity to initiate sexual communication. One adult suggested that parents use pubertal development as a cue to begin sexuality-based education with their children. When asked if there was a particular age at which parents should begin educating youth about sex and sexuality, the most frequently identified age among both youth and adults was 13 years, with responses ranging from 10–14 years. Participants suggested that these ages were significant due to the onset of pubertal development among girls, greater awareness of depictions of sexual situations in various media outlets, young people's growing curiosity about sex, and early sexual initiation among adolescents in their communities.

Both adult and youth participants highlighted the importance of biological sex in determining the timing of comprehensive sexuality-based education. One young woman suggested that girls be educated when they begin menstruating, associating pubertal development with the onset of sexual curiosity. However, she suggested parents attend to both pubertal development and age when considering readiness of sexuality-based education for boys, encouraging parents to initiate conversations with boys during early adolescence. It was notable that several adults suggested that their thoughts regarding the timing of sexuality-based education had evolved over time; most believed conversations were now necessary during early adolescence and even childhood due to various risk factors, including STIs and risk of child sexual abuse. One young woman suggested that parents introduce the conversations about sex and sexuality by saying,

> "You're getting older. You're maturing. You're going through puberty and I think we should talk about what comes with age. You're going to have a boyfriend or a girlfriend and hormones are kicking in. You're going to want to do more than just kiss and hug."

Another young woman suggested parents begin conversations about sex by asking their children, "Have you been doing anything lately, been taking care of yourself, have you been [dating] anybody?" In this way, parents are able to broach the topic casually, limiting the embarrassment and discomfort often associated with parent-initiated sex and sexuality-based communication.

Regarding beliefs about the frequency of sexuality-based education, most participants suggested that such conversations should occur monthly, though responses ranged from 'as frequently as possible' to 'every few months'. One young man said, 'Parents really shouldn't

talk to their children about sex every day because then their children will want to have sex." He suggested that monthly parent-teenager communication about sex was sufficient. Despite the fact that adult and youth participants were asked to provide a specific estimate regarding the suggested frequency of sex and sexuality communication when probed, collectively, participants suggested that parents should adopt an open communication style that normalizses comprehensive sexuality-based education. Moreover, they suggested that readiness for parent-teenager communication about sex should be determined on an individual basis, believing that young people develop and mature at different rates and parents and sex educators should consider this prior to initiating sexual communication.

Though parents were largely viewed as being responsible for educating their children about sex and sexuality, schools were also important. However, young people believed that the time allotted to comprehensive sexuality-based education was insufficient, as it was often only offered for one semester in ninth grade (ages 14–15 years). One young woman said:

> "[The comprehensive, sexuality-based education class] shouldn't be a one-time thing…like, taking Physical Education in your ninth-grade year for one semester is not going to make you healthy. It should be on your schedule all year."

There may be incongruence between adults' beliefs about the timing of comprehensive, sexuality-based education and their actual engagement in conversations with their own children. For example, one adult mother who shared that she had also been a teenage mother and was thus a strong advocate for comprehensive sexuality-based education, reported that her own 8-year-old daughter was not ready sex education, saying: "Oh no! She's too young [to learn about sex]. But as you see, this type of mentality is part of the problem." This same mother also shared that she had participated in an intervention aimed at improving parent-teen communication about sex during early adolescence and admitted that she was not following her "own advice."

Discussion

This study characterised the perceptions of rural African American youth and adults on comprehensive sexuality-based education in North Carolina. We identified three themes that characterised youth and adult perspectives: 1) comprehensive sexuality-based education for rural African American youth is acceptable and preferable; 2) comprehensive sexuality-based education cannot take a 'one size fits all approach'; and 3) parents and schools are responsible for providing young people with comprehensive sexuality-based education.

Young people and adults agreed that comprehensive sexuality-based education was essential to adolescent sexual health and suggested that content include the promotion of abstinence, STIs and teen pregnancy prevention, and anatomy and physiology. These findings are aligned with the mandates of the Healthy Youth Act (Washington State Legislature n.d), which require sexuality-based education in North Carolina public schools to include emphasis on abstinence as the expected and safest choice for all youth, as well as education on: all Food and Drug Administration-approved contraceptive methods; HIV/STI prevention methods; and sexual assault and abuse prevention.

While young people and adults agreed that comprehensive sexuality-based education was both acceptable and desirable, both groups suggested that abstinence was the most desirable path for youth and believed that parents were responsible for communicating their sexual, and often religious, values to their children to prevent the early onset of sexual activity. These seemingly contradictory findings suggest that, while young people and adults believed that youth should abstain from sexual activity until they are older, more mature, and preferably married, they also acknowledged that youth have a certain degree of sexual decision-making autonomy and ultimately decide whether and when to engage in sexual activity. As such, comprehensive sexuality-based education was primarily viewed as a means to prepare youth for adulthood and secondarily, to equip those who choose to engage in sexual activity with essential education to help them protect themselves from the unintended consequences of early onset sexual activity, such as teen pregnancy and STIs.

While it is important for caregivers and culture gatekeepers to communicate their sexual values and expectations to guide and protect youth, acceptance of young people's autonomy to engage in sexual activity without condoning it could facilitate bidirectional communication that is open, informative and accurate (Deutsch and Crockett 2016; Holman and Kellas 2015; Rose, Friedman, Annang, Spencer, and Lindley 2014). Moreover, affirming young people's sexual decision-making autonomy, along with an open communication style, could also lead to less concealment of sexual interest or behaviour among youth, practices that are associated with greater risk of adverse outcomes (Kramer, 2012).

Young people and adults believed that parents (particularly mothers) were primarily responsible for providing youth with comprehensive sexuality-based education, followed by formal coursework in school. Previous research has suggested that mothers, more so than fathers, have a more active role in sexuality-based education for African American children, regardless of their gender (Bennett, Harden, and Anstey 2018; Brown, Rosnick, Webb-Bradley, and Kirner 2014; Harris 2016). Beyond this, participants identified the school system is a key party responsible for educating youth about sex. Specifically, they suggested that formal coursework was necessary to provide youth with a well-rounded education on sex and sexuality (Brener et al. 2017; Szirom 2017; Guttmacher Institute 2017). While the Healthy Youth Act requires North Carolina public schools to provide comprehensive sexuality-based education to youth, both adult and youth participants in this study indicated that the law has fallen short in educating youth in their communities about sex and sexuality. Youth participants cited limitations on the types of topics discussed, as well as limited duration, in high school. From the community's perspective, the provision in the law that allows school districts to determine how to cover mandated topics has led to significant differences in the type and quality of sexual health information provided throughout the state, with rural African American youth and adults in this study perceiving school-based, comprehensive sexuality-based education to be inadequate.

Finally, youth and adults believed that the timing and frequency of comprehensive sexuality-based education should vary for each child. Regarding the timing of sexuality education, while some youth and adult participants suggested that parents observe their children's behavior to determine whether they are ready to be educated about sex and sexuality, others suggested that assessing readiness could be more objective. Consistent with findings from

previous research, some respondents suggested that youth be educated during the onset of pubertal development, such as the start of the menstrual cycle in girls (Burns and Caldwell 2016; Ritchwood et al. 2019). Delaying sexuality education until youth reach certain developmental milestones may place them at greater risk for poor sexual health outcomes, as many caregivers often underestimate their children's interest in sex (Van De Bongardt, De Graaf, Reitz, and Deković 2014) or are unaware that they are sexually active (Williams, Pichon, and Campbell 2015). While many participants believed that communication about sexual and reproductive health should occur frequently, few presented a clear picture regarding the form and structure of regular communication about sex.

Limitations

This study is not without limitations. First, findings may not be generalisable beyond the current population but may have relecvance to similar at-risk groups in rural communities. Next, we did not collect data from paediatric healthcare providers or individuals who self-identified as sex education teachers in the school system. As a result, we are unable to triangulate data from relevant professionals to obtain a holistic view of comprehensive sexuality-based education for rural African American youth. Lastly, most of the adult participants were female. Considering the previous research has identified African American fathers as important sources of sexual health information for their sons, creative efforts are needed to engage more men in this area of research to inform future directions (Coakley, Randolph, Coard, and Ritchwood 2019). Future research is also needed to understand how healthcare providers are involved in sexuality-based education for African American youth and their caregivers. Moreover, considering that North Carolina public schools are not required to provide sexuality-based education that incorporates sexual health issues relevant to sexual and gender minority youth, there is a major need for tailored education addressing the sexual health needs of this population, which is disproportionately impacted by STIs.

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Table 1.

Questions from the adult and youth interview and small discussion group guides

Individual interviews	What do you think about sex education for youth? What should it include?
	When do you think should adults begin talking with youth about sex?
	When should youth start receiving information about sex?
	How frequent should such discussions be?
	Who should talk with youth about sex?
	Why should these people be the ones to talk with youth about sex?
	How do youth in your community learn about sex?
	What do you think of when you hear, “safer sexual practices?”
	What is the school’s role in teaching youth about safer sexual practices?
	What is the church’s role in teaching youth about safer sexual practices?
	How can adults help youth to engage in safer sex practices? What percentage of youth between 14 and 19 do you think are currently having sex in your community?
	What needs to be done to decrease HIV rates among youth in your community?
	Who should do these things?
	Who is doing them now?
Discussion groups	Whose responsibility is it to prevent HIV infection among youth?
	What about when they get pregnant?
	How do you think the adult community members should be involved in helping adolescents to protect themselves from sexually transmitted diseases?
	What are the barriers to doing these things?
	What is the church’s role in STI prevention?
	What is the school’s role?
	What is the government’s role?
	What are the roles of adults like you?