HHS Public Access

Author manuscript

Perspect Sex Reprod Health. Author manuscript; available in PMC 2025 June 01.

Published in final edited form as:

Perspect Sex Reprod Health. 2024 June ; 56(2): 158–170. doi:10.1111/psrh.12258.

"I wouldn't have felt so alone": The sexual health education experiences of transgender and gender diverse youth living in the southeastern United States

Paula E. Jayne[1], **Leigh E. Szucs**[2], **Catherine A. Lesesne**[3], **Rose Grace Grose**[4], **Michelle M. Johns**[5]

[1]U.S. Centers for Disease Control and Prevention's Division of Adolescent and School Health, Atlanta, Georgia, USA

[2]U.S. Centers for Disease Control and Prevention's Division of Adolescent and School Health, Chamblee, Georgia, USA

[3]Deloitte Consulting, Atlanta, Georgia, USA

[4]Colorado School of Public Health, Community Health Education, University of Northern Colorado, Greeley, Colorado, USA

[5]NORC at the University of Chicago, Chicago, Illinois, USA

Abstract

Background: Transgender and gender diverse youth experience multiple disproportionate adverse sexual health outcomes. Sexual health education teaches knowledge, attitudes, and skills for promoting sexual health, including reducing risk for sexually transmitted infection, HIV acquisition, and unintended pregnancy. Provision of sexual health education may be protective, but research remains scarce.

Methods: We conducted a multi-stage thematic analysis of 33 in-depth interviews among transgender and gender diverse youth (ages 15–24) living in the southeastern United States on their sexual health education experiences.

Results: Our study participants described school-based sexual health education as unhelpful due to a lack of relevant information, inadequately prepared teachers, and a perceived negative tone toward sexuality. They reported relying on online sources of sexual health information, finding relevant content and community despite some limitations. Participants desired content and pedagogy that expands beyond binary and white-centric presentations of sexuality and gender and sought resources that provide relevant, accurate, and judgment-free information while holding positive framing around sexuality and gender.

Correspondence: Leigh E. Szucs, U.S. Centers for Disease Control and Prevention's Division of Adolescent and School Health, 4770 Buford Highway, MS S107-6, Chamblee 30341-3741, GA, USA. lszucs@cdc.gov.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

Conclusion: There is much work needed to improve the breadth, quality, and relevance of school-based sexual health education. Sexual health education can improve by strengthening critical media literacy skills of youth; raising staff cultural competency on gender, race, and sexual identity through training and supports; using culturally relevant and inclusive curricula; and partnering with community-based organizations. Transgender and gender diverse youth would benefit from sexual health education from multiple sources which is queer-friendly, affirms their existence, and provides information on gender, race, and sexuality in positive and expansive ways.

Keywords

adolescent; LGBTQ+; pregnancy prevention; sexual health education; STI/HIV; transgender youth

INTRODUCTION

Transgender and gender diverse youth are adolescents and young adults with a gender identity different from the gender commonly assumed for their sex assigned at birth. In the aggregate, transgender and gender diverse youth experience similar rates of unintended pregnancy as cisgender peers as well as disproportionate risk of sexually transmitted infection (STI) including HIV acquisition,[1–4] harassment and violence,[5] and mental health sequalae,[6,7] often associated with stigma and discrimination.[8] These sexual[9,10] and mental[11] health disparities are often further heightened for transgender and gender diverse youth of color, due in part to structural and social marginalization, racism, stigma, and inequities resulting in medical mistrust.[12,13] While legal support for prohibiting gender-based discrimination provides a more comprehensive safety net,[14,15] building resilience among transgender and gender diverse youth is an important corollary strategy to decrease adverse health outcomes.[16,17]

Sexual health education is an individual-level intervention efficacious in supporting resilience among youth by (a) building an individual's knowledge, skills, and self-efficacy, with protective impacts on sexual attitudes and behaviors[18,19] and (b) setting peer norms and standards[20] including potentially increasing understanding of gender and sexual identities.[21] According to the United States (US) Centers for Disease Control and Prevention (CDC), sexual health education is a comprehensive and sequential combination of learning experiences providing opportunities for young people to gain information and skills needed to promote human sexual development and avoid or reduce STIs/HIV and pregnancy. Sexual health education uses medically accurate, developmentally appropriate, and culturally responsive and inclusive information and evidence-based strategies across pre-kindergarten through 12th grade.[22] While multiple settings provide sexual health education, most youth are reached through schools.[23,24] Thus, school-based sexual health education may serve as a ready intervention for all youth, including transgender and gender diverse youth.

Despite the potential benefits, emerging research suggests school-based sexual health education may be missing the mark for transgender and gender diverse youth. Queer theorists within education highlight most secondary education still relies on a premise of binary sex and gender and ignores the way in which different aspects of our identities (e.g., gender, sexuality, race) impact learning.[25,26] Queer theory further suggests the voices of

those excluded from a dominant narrative can illuminate its limitations[26–28]; this may be particularly true within sexual health education.[29,30] Thus, understanding the sexual health education experiences of transgender and gender diverse youth—particularly those who experience intersecting inequities—may help to support better their health and strengthen provision of sexual health education overall.[31,32]

However, until recently little research on the sexual health education experiences of transgender and gender diverse youth existed. Adjacent literature on the sexual health education experiences of lesbian, gay, bisexual, and queer youth might be informative since many transgender and gender diverse youth also identify as sexual minority youth.[33–35] Within this literature, sexual minority youth overwhelmingly report school-based sexual health education as missing or mistimed, lacking critical information, or irrelevant,[36,37] often because curricula and pedagogy exclude sexual orientation[38,39] and reinforce heteronormativity.[40–42] The few studies highlighting the sexual health education experiences of sexual minority youth of color confirm these findings[43,44] and report the additional negative impact of racialized sexual stereotypes expressed by curriculum or teachers.[45] Further, a recent analysis of nationally representative data confirms inequities in receipt and timing of sexual health education by race and sexual orientation.[46]

Surveys, policy reviews, and media research provide the first disaggregated evidence that, like their cisgender sexual minority youth peers, transgender and gender diverse youth experience sexual health education which does not meet their needs. In a survey of 198 transgender Australian students, two-thirds rated their sexual health education as “mostly inappropriate.”[35] Similarly, a survey including United Kingdom transgender youth reported they were more likely than cisgender sexual minority youth to rate their sexual health education as “poor” or “terrible.”[47] While the racial identity of the transgender respondents was not documented in prior studies, a 2018 content analysis of Google and YouTube videos by several racially diverse US transgender youth also document poor sexual health education experiences.[48] Although leading US health organizations recommend transgender and gender diverse inclusive sexual health education,[49,50] youth often report hostile school environments where omission of gender diversity and promotion of gender as binary are the norm.[51]

Recently, a small body of qualitative research focused specifically on the sexual health education experiences of US transgender and gender diverse youth is emerging. These small, majority white samples of transgender youth from the western and midwestern regions of the US echo earlier studies with sexual minority youth, documenting that transgender and gender diverse youth find sexual health education inadequate in multiple ways.[52–55] Our study builds on these results by highlighting the sexual health education experiences of 33 transgender and gender diverse youth (aged 15–24) from the southeastern United States.

METHODS

Study authors (MMJ, PEJ) conceptualized the Resilience and Transgender Youth Study to understand better socio-ecological protective factors[56,57] promoting health and well-being for transgender and gender diverse youth. We undertook this research after seeing

clear disparities in health outcome data and partnered with experts on transgender health who thoughtfully informed questionnaire development and sites for recruitment. For more information, see: https://www.cdc.gov/healthyyouth/disparities/ryt.htm. The CDC, in collaboration with ICF, led this study and their Institutional Review Boards approved the study design and procedures.

Data collection

We recruited youth through seven community-based organizations (CBOs) serving transgender and gender diverse youth in a southeastern US metropolitan area through posters, flyers, palm cards, and announcements on agency-affiliated websites and their accounts on social media. Using purposive sampling, we recruited until we met our segmentation targets and desired sample size.[58,59] Eligible participants identified as a gender other than the gender commonly associated with their sex assigned at birth, were aged 15–24 at recruitment, and attended organizations/groups or resided within the metropolitan area. Eight investigators trained on interview procedures conducted in-depth, standardized, and open-ended interviews[59] with 33 transgender and gender diverse youth (February–June 2017). The interview staff identified as Black cisgender ($n = 3$), white cisgender ($n = 3$), white transgender ($n = 1$), and white genderqueer ($n = 1$). We matched participants and interviewers on at least one salient identity. The interview guide elicited youth experiences with potential resilience-promoting factors across the socio-ecological framework.[17,60] We audio-recorded, transcribed verbatim, uploaded to MAXQDA 2018,[61] and de-identified interviews, which averaged 1 h in length. Participants received a $50 gift card after completing the interview.

Data analysis

We used multi-stage thematic analysis[62] to identify codes and emergent categories. We created a first codebook that included deductive codes based on the Resilience and Transgender Youth research questions and interview guide, which included broad codes for theorized protective factors. Our team of five coders tested this codebook on a subgroup of interviews and iteratively refined them through group discussion. Sets of two reviewers used the codebook to independently code each interview, resolving discrepancies through discussion.

Four of the five coders then each led an analysis on one of the broad codes for a specific potential protective factor, including parental support,[63] health services,[64] and general school supports.[65] Our authorship team analyzed the data on sexual health education. Interview questions about sexual health education experiences were purposefully worded to capture a broad range of experiences across transgender and gender diverse youth's intersecting identities (Box 1). We created a second codebook of inductive codes based on the sexual health education content of the transcripts, including conceptual codes for sources of sexual health information (e.g., teachers, internet), actual and ideal content (e.g., healthy relationships, STI prevention), and impact of messages. We independently coded four transcripts to reach consensus; two authors coded all remaining transcripts, meeting regularly to discuss themes and resolve discrepancies. After coding, PEJ developed, and LES confirmed, concept tables to elucidate relevant subthemes.

RESULTS

Participants identified as female or trans women (42%), male or trans men (33%), and outside the gender binary (24%) and as Black/African American (55%), white/Caucasian (39%), and multi-racial (9%); 6% also identified as Latinx. Participants identified along a range of sexual orientations, often not reflected in current labels.[66] The median age was 21.7 years (range 15–24) (Table 1). Of the 33 youth interviewed, 29 received sexual health education in middle or high school; all 33 youth discussed alternative sources of sexual health information and their ideal sexual health education. To represent the range of identities comprised under the umbrella term *transgender and gender diverse*, we share the participants' own definitions of their identities (e.g., Black, straight, female) after each quote. We also specify when participants identified as Latinx. Black and white participants articulated all the themes we discuss; when additional findings by race emerged, we highlight them.

Three main themes emerged. When asked about *received* sexual health education, youth described: (a) school-based sexual health education which often felt irrelevant and (b) seeking alternate sources of sexual health information. When asked about *desired* sexual health education, youth described (c) content and pedagogy which was queer friendly, trans-specific, and held a sex-positive frame, one regarding a range of consensual sexual activities as potentially positive and healthy.[67] Participants' perceptions of the implicit values displayed by sources of sexual health information underscore all three themes.

School-based sexual health education often felt irrelevant

Most participants found school-based sexual health education less relevant due to inadequate basic content, lack of trans-specific or gender diverse content, and ineffective teachers. In addition, participants' perceptions of the tone underlying sexual health education sometimes impacted their ability to engage with information or enact healthier behaviors.

Inadequate fundamental content—When asked what sexual health education contributed to their ability to be healthy, happy, or strong, nearly half of participants said, "nothing" and almost all reported significant deficits. Many shared that basic content (e.g., menstruation, pregnancy, disease prevention) was missing, inadequate, or provided too late, leaving youth without rudimentary knowledge. As one participant explained, "it left out a lot of stuff…they didn't even explain what a period was…They were just like, "This is how it looks. You can get diseases. Go back to class.'" (Mexican/white, pansexual, masculine/trans male, 18).

Even when basic content was provided, participants expressed it often felt irrelevant or even traumatic due to underlying assumptions that all students were heterosexual, white, and cisgender. Participants felt these assumptions were made visible by lack of representation in curricula and by pedagogical decisions. One participant remarked, "Because what they were teaching was sex ed if you're fucking straight, heterosexual. I felt like that didn't apply to me… I just felt disconnected. I didn't care" (White, straight, transgender male, 24). The lack of racial diversity in curricula further compounded the disconnect: "…not being just like hetero-normative. Like sex-ed is like, I don't really see myself in this, so it's

like—or it even being like White folks, you know what I mean?" (Black, queer, gender-fluid, 24). Participants reported how presentations organized around these underlying assumptions had the potential to cause discomfort. Sex-segregated classrooms worsened this disconnect: "That just made me feel weird, like bein' with the guys. I just didn't relate, or I would look at the [anatomy] picture and look at how much different my body was from the other" (Black, pansexual, transgender female, 21).

Transgender-specific and gender diverse content missing or presented poorly—In addition to inadequate basic information, the lack of content addressing transgender and gender diverse sexual health further increased participants' feelings of alienation and impact their sexual health knowledge and safety. For example, one noted:

> Transgender people and gender-non-conforming people have different sexual health needs…The fact that I wasn't even taught—they didn't even talk about queer people in sex ed is so harmful […] You just don't know about basic, safe-sex practices and…that's dangerous.
>
> (Black, queer, masculine/agender, 17)

The desire for trans-specific and gender diverse content in school-based sexual health education was consistent across most interviews and participants noted transgender identities were routinely excluded. Only one participant reported their education mentioned transgender youth and only three received information about sexual orientation. When this information did exist, youth reported a poorly developed curriculum which negatively impacted them. The single student who received transgender-related content shared:

> It made me feel pretty alienated…I think it did enforce some unhealthy ideas about gender…the fact that the education about trans people was like, sometimes a boy's a girl, and sometimes a girl's a boy. It wasn't like gender is this fluid thing. It was just…very rigid.
>
> (White, queer, non-binary, 16)

Teachers lacking in preparation and ability to provide support—Well-intentioned, but theoretically naïve, attempts at inclusive curricula could be redeemed by adequately trained teachers; however, participants described sexual health education teachers as rarely providing appropriate instruction or support. Inadequate teacher preparation contributed to participants' sense of disconnect from sexual health education. Many lacked confidence in their teachers after finding basic scientific information (e.g., condom efficacy rates) presented inaccurately. Distrust was further compounded when students felt a lack of care or awareness from educators. One participant summarized:

> A lot of sidestepping—a lot of alternative facts…It felt very ingenuine, like they didn't really care about our sexual health…didn't care about I'm feeling depressed or I'm not as committed to this course because the curriculum directly invalidates my history as a Black person. Or just I'm very apathetic towards this lesson because it's gender-specific.
>
> (Black, bi-spectrum, gender non-conforming, 23)

No respondents named their sexual health education teacher as an ally or source of support and instead perceived a lack of adequate training, especially around transgender and gender diverse health issues: “LGBT [lesbian, gay, bisexual and transgender]-anything was not brought up at all, except in the anonymous questions, and then it was answered pretty mediocrely by an obviously untrained staff” (White, lesbian, female, 22). Even the few sexual health education classrooms with sexual and gender minority-specific content lacked cultural competency. For example, teacher insensitivity worsened a poorly conceived curriculum, which “had a list of words that people use to bully LGBT people….The F-word was a word that was used to bully me. The teacher made me stand up and was trying to make me read that word. I was like, ‘I’m not gonna read this.’ She was like, ‘You have to,’ and made me read it. I cried” (White, queer, non-binary, 16). Often, respondents reported sexual health education teachers actually increased student discomfort and harm through inappropriate pedagogy.

Tone impacted reception of information and subsequent behavior—The perceived tone of the sexual health education classroom strongly impacted participants’ willingness to engage and their ability to integrate information into their lives. Participants characterized tone as reflecting underlying beliefs (e.g., about adolescent sexuality, gender, and race) which were conveyed by chosen curriculum and teachers’ delivery. One respondent shared how initial excitement about sexual health education turned into disengagement due to the framing of sexual activity:

> It was kind of like, ‘oh, this is exciting. This is the first time we’re going to be talking about sex in school!’ Then, when the program actually started…They just talked about how we’re gonna die if we had sex, pretty much. I caught on to that and just was like, ‘I wanna go home. Play video games’
>
> (White, straight, transgender male, 24).

Classroom tone also impacted participants’ desire and ability to enact healthy behavior, such as open communication with a partner: “I think that sex ed actually made it more uncomfortable for me to talk about sex. Because it was looked at in such a negative light” (White, gay, trans male, 18).

Even when the content was scientifically accurate and thorough, implicit messages negated otherwise helpful sexual health education instruction. This was particularly true around STI prevention. One of the few participants who received clear and accurate STI education shared that the presentation of information, with “terrible pictures of STD” and characterizing sexual feelings as inappropriate, impacted their ability to turn knowledge into health protective behavior:

> I walked out of my public school system knowing what all of my contraceptive options are, and how they work…but the way that they provided the information impacted me in a negative way…the sex ed class just made myself, and pretty much all of my peers, feel very ashamed of the natural sexual nature within themselves. That it was something they had to hide, and that it was bad….made me very hesitant when I first sought out contraceptive options

(White, pansexual, genderfluid/trans masculine, 22).

Transgender and gender diverse youth needed alternate sources of sexual health information

Most participants stated school-based sexual health education provided little relevant information and they had to turn elsewhere for answers. All but one sought sexual health information from other sources, most often online. A majority found alternate sources useful in providing information and a sense of community, while some highlighted their limitations.

Community sources.—About one third of participants discussed CBOs and healthcare settings as helpful sources of information; Black participants were particularly likely to receive information from community sources. With few exceptions, most participants did not report family or even friends as a source of sexual health information. However, “other queer folk” and print media were named as helpful.

Online sources—Most participants sought sexual health information online. YouTube was the most common source, followed by Tumblr, sexual health webpages (e.g., Planned Parenthood, Scarleteen), general webpages (e.g., Wikipedia, WebMD), blogs, and pornography. Participants most often sought queer or trans-specific sexual health information, including medical gender affirmation, dating, and sexual mechanics and pleasure, with many seeking sources they felt to be reliable. When asked about the impact of online sources, most participants found them helpful in providing information not received from school or family. One participant noted:

> A lot of it comes from people who are sex educators. There’s this one woman… she’s an actual sex doctor—she runs a YouTube channel called “Sexplanations” and it’s very inclusive and queer friendly and disability friendly….Planned Parenthood’s website is really, really good. It’s very accessible and teen friendly… A lot more useful than sex ed. It’s actually relevant and it helps me make decisions about my sex life and helps me educate other people on what they need to know about sex
>
> (Black, queer, masculine/agender, 17)

Participants reflected online sources provided a sense of community and several shared the Internet was the only way they learned there were words (e.g., transgender, non-binary) to describe their experience, helping them realize they were not alone. Even when content quality was lacking, online queer or trans-specific information increased mental stability for some participants, sometimes functioning as suicide prevention. Still, some participants raised cautions about the quality and trustworthiness of online sources. Other limitations included questionable age-appropriateness; unhealthy messages about gender, sexuality, or relationships; and the inability to ask follow-up questions. One participant commented:

> Part of finding it [information] online was scary, because instead of being taught in a sexual-ed class an appropriate amount of information, I was seeing…all of this big, heavy stuff. It was being delivered to me by the computer screen, so there was

> no interaction—maybe if they [sexual health education instructor] had talked about gender issues, and it sparked something, I could've anonymously asked a question on a piece of paper to an adult, who, ideally, would be trained to deal with that sort of thing, instead of just clicking levels and levels deeper on the internet, alone
>
> (White, lesbian, female, 22).

Participants wished relevant information found from multiple sources was provided in schools by trained educators. When asked how this would impact their health, one replied: "It would've been so much easier. I wouldn't have had to spend…hours learning about safe sex and how sex works for different people. I feel like it would've been…actually relevant and helpful" (Black, queer, masculine/agender, 17). Another added: "It would have been in a school setting which has a lot more weight" (White, bisexual, female, 23).

Desired sexual health education was queer-friendly and expansive

When asked about desired sexual health education, participants discussed trans-specific and queer-friendly content, adequately trained teachers who acted as allies, positive framing, and an expanded scope of sexual health topics.

Trans-specific content—Participants wanted adequate and tailored content and overwhelmingly desired discussion of gender diversity and trans-specific topics. While some participants desired information on dating, sexual mechanics, and gender affirmation processes, many acknowledge even introductory concepts would be helpful. Participants asked that school-based sexual health education explain differences between sex and gender and provide simple definitions of the spectrum of gender and sexual identities to help students understand what they or others were experiencing. For example, one participant related that an ideal school-based sexual health education would "equip them with the right tools, but also give them information on all of these different words that can describe your sexuality, or your gender. Because not having the vocabulary for it was the biggest barrier for me…because there wasn't a word that represented how I felt, I didn't think it was real" (White, pansexual, genderfluid/trans masculine, 22).

While coverage of gender and sexual orientation was absent from most school-based sexual health education, respondents discussed the impact it *could* have had to increase knowledge and decrease external and internalized stigma. One participant stated simply, "I wouldn't have felt so alone" (Black, straight, male, 21). Another emphasized the value of peer understanding of sexual and gender minority identities: "If all your peers learn that information …then perhaps transphobia and homophobia would have gone down at least a little bit. At least they would have at some point heard about what it's like to be gay or trans, and that would have been enormously helpful" (White, bisexual, female, 23).

Finally, participants believed discussing gender identity and sexual orientation was not only necessary, but feasible and compared it to other historically contentious sexual health topics now widely taught in schools. One participant noted more inclusive curricula already exist and could be adapted:

> If you can talk to us about the structure of a vagina, as a middle-schooler, if we can hear the word vagina, and clitoris, and labia, and ovaries—but they were afraid to say gay. Why?…Take that college sexual health textbook, which is going to cover…sexual and gender identity topics and [STIs] and all those things, and make it appropriate, difficulty-level-wise, and subject-matter-wise, for the age that you're teaching
>
> (White, lesbian, female, 22).

Well-trained teachers who were allies—When asked about characteristics of their ideal sexual health education teacher, participants described someone adequately trained in human sexuality, including gender and sexual identities. While there was some desire, particularly among Black participants, for teacher demographics to be more representative of their students, participants most often noted teachers must be queer-friendly or an ally, able to deliver information in non-judgmental and shame-free ways, and comfortable with basic sexual health education content. The importance of training to increase educator comfort with sexual health topics and pedagogy emerged. Given the perceived lack of adequately trained sexual health education teachers, some expressed interest in using external experts for delivering content.

Participants also desired more hands-on activities (e.g., peer-to-peer sharing, confidential questions boxes) which may have lessened the alienation many transgender and gender diverse youth felt in the sexual health education classroom, helping to increase engagement and learning. One participant remarked: "More interactive…Less 'memorize this definition and come back tomorrow,' and more like, 'You're involved in it, and it's part of you,' kind of thing" (Black, queer, transmale, 25). Another tied interactive pedagogy back to feeling seen and cared for by instructors, leading to better engagement: "Somebody to walk me through the dos and don'ts of health. Actually sat and took their time to tell me what is what and which is which, as opposed to just shouting it out" (Black, sexual identity not reported, transwoman, 24).

Positive tone and expansive definitions of sexual health—Respondents want sexual health education that is not bound by conventional understandings of sex and gender and which moves beyond disease prevention to deeper discussions of sexual health. When asked what school-based sexual health education had taught them about health, one participant replied, "Unfortunately, the basics. Like use condoms. Use condoms. Use condoms. [Laughter] That's as healthy as they helped me stay" (Black, heterosexual, transsexual/transgender woman, 22). Participants valued information sources that are queer-friendly and sex-positive in tone, helping to normalize sexuality. When asked what their ideal sexual health education should contain, another shared:

> Number one would be not conflating gender with anatomy. Not assuming everyone's heterosexual and cis. Not assuming that everyone wants to have sex or does have sex in the same way. Not assuming that sex is always about genitals or about orgasms or such things. Having a more open understanding of what sex is. Ideally, a discussion of what safety looks like….of what consent looks like.

> Also, I think ideally a discussion of how to care about yourself and others in sexual relationships.
>
> (White bisexual transfemme/transwoman/demi-girl/non-binary, 21)

DISCUSSION

Sexual health education remains an important strategy to increase knowledge and skills and decrease adverse health outcomes among youth. However, as in smaller studies of transgender youth[68] and sexual minority youth of color,[43,69] our participants often did not find school-based sexual health education relevant due to inadequacies in content and pedagogy. In addition, while our study did not ask specifically about race and racism, some of our Black transgender and gender diverse participants also found the curricula exclusionary by race or expressed frustration that teachers seemed unaware of the lack of representation, misrepresentations, and why it matters. Prior studies document the inadequacy of sexual health education for small samples of mainly white midwestern transgender youth; our results confirm these findings, adding the impact of racial exclusion in curricula and pedagogy. Taken together, findings point to practical implications for US schools and tailored suggestions for sexual health research.

US youth, including transgender and gender diverse youth,[52,53] increasingly turn to online sources to find sexual health information which reflects their lived experiences,[64,70] increases knowledge and skills,[71] and decreases feelings of isolation.[72] Black participants, in particular, were actively seeking out sexual health information and sharing knowledge with peers, echoing prior studies naming advocacy and self-learning as sites of resilience for Black youth[73] and for transgender and gender diverse youth of color.[74] Innovative online sexual health programs developed for sexual minority youth are effective (see Reference 37) but such programs have yet to be scaled nationally. Indeed, none of the transgender and gender diverse youth in our study reported accessing tailored, online sexual health education programs.

Regardless of the source of sexual health information, the transgender and gender diverse youth in our study overwhelmingly reported that the tone and delivery of curricula matter. Underlying assumptions about adolescent sexuality, gender and racial identities, and sexual orientation—and how these are coded by class in the US context—affect not only what content is presented, but whether youth engaged with and are able to integrate health protective knowledge and skills conferred in sexual health education.[32,45,75] School-based sexual health education which assume all students are cisgender, straight, and white are critiqued by many[76,77] to reinforce oppressive values and norms influencing sexual development.[31] Our participants expressed a clear desire for school-based sexual health education which acknowledges a spectrum of identities, histories, bodies, and sexualities and frames sexuality positively, even when encouraging youth to delay sexual initiation. Similar to other transgender youth research,[48] our participants challenged the adults in their lives to acknowledge, examine, and expand how they understand and teach sexuality, race, and gender.

Finally, these results raise questions about protective factors for transgender and gender diverse youth which need further investigation. These include the importance and impact of virtual communities for transgender and gender diverse youth and what health-enhancing skills (e.g., communication and advocacy) are most critical for transgender and gender diverse youth. Findings challenge 21st century school-based sexual health education to develop critical skills (e.g., social and digital media literacy[78,79]), increase positive peer and instructor norms,[21] and acknowledge and address the multiplicative impacts from race, class, (dis)ability, sexual identity, and gender on sexual health *and* how we teach about it.[80]

Implications

Our study suggests research and programmatic actions to help improve sexual health education for transgender and gender diverse youth. Given the authors' expertise within the school setting, we direct our recommendations there. However, this study also highlights the need for accurate and tailored sexual health information from multiple sources, including parents, peers, CBOs, faith communities, and, most especially, online. Further research on how these sources can support the sexual heath of transgender and gender diverse youth is needed.[81]

Recommendations for schools

Schools face multiple constraints in providing quality sexual health education, including competing needs for curricular time; lack of funds and trained sexual health educators; perceived or actual opposition to sexual health education; bias around adolescent sexuality, gender, and race; and need for continuous staff professional development.[82,83] Given these barriers, it is perhaps not surprising that many adolescents report current school-based sexual health education as insufficient. Since schools provide a bedrock educational setting for most US adolescents, however, they remain an important—and youth-desired—avenue of accurate, non-stigmatizing sexual health information. Despite real challenges, significant school-based sexual health education improvement is possible and necessary to help reduce health disparities among transgender and gender diverse youth.[84,85]

Schools can consider a range of actions to strengthen sexual health education content, delivery, and school-community partnerships to reduce the adverse health outcomes faced by transgender and gender diverse youth. School-based sexual health education content would benefit, at a minimum, from culturally responsive curricula which acknowledges and affirms the existence of diverse transgender and gender diverse youth and provides clear and non-stigmatizing vocabulary explaining the spectrum of gender identities and sexualities.[22,86,87] Content should feature scientifically accurate descriptions of sexual behaviors and appropriate disease prevention[88,89]; in addition, changes to topic framing may have significant impact. Focusing discussion on physiological function (e.g., erectile tissue) or using anatomy-based (e.g., "a" penis) rather than gender-based (e.g., "his" penis or "male genitalia") language to describe biology and sexual acts may increase relevance and decrease potential gender dysphoria.[48,54] Transgender and gender diverse youth in our study and others[41,53] also desire discussion of healthy relationships including consent, particularly important given the disproportionate risk of early intercourse and multiple forms of coercion and violence faced by transgender and gender diverse youth.[3,90] As participants described

obtaining sexual health information from various online sources, including pornography, sexual health curricula would benefit from addressing social and digital media literacy to strengthen skills in evaluating valid information that is not only scientifically accurate, but also queer-friendly and developmentally appropriate.[91] Similarly, given the barriers to appropriate care and subsequent distrust of medical professionals reported by transgender and gender diverse youth,[37,92] particularly transgender youth of color,[12] building skills to identity and access youth-friendly and culturally competent health services to address transgender health is needed.

Beyond sexual health content, improvements in training, pedagogy, and partnerships are necessary. Where teacher capacity lags, professional development can lead to more relevant sexual health education.[93,94] In particular, training strengthening sexual and gender minority cultural competency and decreasing bias among school staff is desired,[95] and may provide safer learning environments for transgender and gender diverse youth.[96] Trainings and pedagogy addressing racial biases in addition to sexuality and gender biases could improve educational and health outcomes, since perceived racism is associated with decreased skills necessary for learning (i.e., concentration and retention of material) and adverse mental health among students.[13,87] Respectfully using trans-specific terminology (e.g., using chosen names/ pronouns) and efforts to ameliorate bias and assumptions about youths' multiple identities are an essential beginning.[97,98] Recognizing schools may need time to transition to more culturally relevant curricula, teachers themselves can emphasize gender-neutral language and the topics and skills highly relevant to sexual and gender minority youth. Finally, strategic school-community partnerships leveraging school staff training, materials, and delivery of sexual health education with capacity and resources from CBOs could improve youth receipt of culturally relevant sexual health information[99,100]

Although research on the impact of sexual and gender minority-relevant sexual health education remains nascent,[37] initial results are promising. A recent state-level analysis shows a significant association between higher proportions of schools teaching inclusive sexual health education and lower reported harassment by sexual minority youth and protective effects for suicidal ideation and for making a suicide plan among all youth.[101] An earlier study showed sexual minority youth who received sexual minority-sensitive health education had fewer sexual partners, less recent sex, and less substance use prior to last sex than sexual minority youth who received standard sexual health education.[102] Two additional interventions, Project LifeSkills[103] and the IN·clued Program,[104] although not specific to a classroom setting, also showed significantly decreased sexual risk behavior among transgender and gender diverse youth who received tailored instruction. Thus, in addition to sexual and gender minority culturally relevant curricula discussing appropriate terminology and tailored disease prevention information, schools might consider adopting a trans-specific or gender inclusive intervention for after-school programs or in collaboration with sexual and gender minority-friendly CBOs.

Remaining research needs

Further research needs are considerable. Research should continue to develop or adapt and evaluate trans-specific[103] and gender inclusive curricula.[105] Developing an online

trans-specific or gender inclusive sexual health education curriculum for adolescents may be of particular value. In addition, the potential protective effect of online versus in-person curricula and community for transgender and gender diverse youth warrants further attention[106] as does the most effective ways to build health-enhancing skills (e.g., decision-making, communication) and provide information in the online setting. Given the heavy reliance on online sexual health information among transgender and gender diverse youth, continuing to develop and evaluate media literacy lessons facilitated in multiple venues (e.g., schools, CBOs, online) is essential. More research is also needed on how youth-serving organizations can most effectively connect youth to existing high-quality online content and which sites, packaging, and messaging are compelling to varying groups of transgender and gender diverse youth.[107,108]

For delivery, additional research is needed on the impact of school staff sexual and gender minority cultural competency training on subsequent pedagogy and student outcomes[53] and how to build cultures of productive conversation within schools leading to meaningful support for transgender and gender diverse youth.[96] Health sciences literature on increasing transgender and gender diverse cultural competency for medical professionals, including critical reflection and increasing understanding of health inequities, may offer an adaptable roadmap for schools,[109,110] as might early discussions on creating anti-racist curricula, including in the SHE classroom.[87,111] Research translation and sharing current best practices[84,106,110,112] remains important as the evidence-base for more inclusive sexual health education continues to grow.[21]

Finally, research investigating how different components of identity may impact receipt of sexual health education for transgender and gender diverse youth may lead to more tailored, inclusive education and protective outcomes for youth. Our study with a majority of Black and multiracial transgender and gender diverse participants confirms many of the findings of earlier studies with predominantly white transgender respondents[e.g.,55] and reminds us of the negative impact of curriculum and pedagogy that ignores the rich racial diversity within the US, creating multiple points of disconnect for Black transgender and gender diverse youth in particular. More research on the impact of inadequate (e.g., missing or stereotyped) representation[45,80] and the development of racial equity strategies within the sexual health education classroom[81,87] are overdue.

Limitations

This study contains several limitations. Data come from a purposive sample of youth living in the southeastern urban US and cannot be generalized to other groups of transgender and gender diverse youth or to all school-based sexual health education experiences. Although we sought both high school and college-aged youth, recruitment yielded more young adults than adolescents. Participants retrospectively reflected on their sexual health education experiences and recall bias is possible. Caution in interpreting findings and implications for schools, broadly, are warranted. Despite purposive sampling for gender identity and race/ethnicity, Latinx youth remained under-represented, and we did not include a marker of socio-economic status.

Although we took care to recruit a diverse sample by gender identity and race, we were not able to fully examine all meaningful differences among transgender and gender diverse participants within our small qualitative study. To collect a robust sample, we collapsed numerous gender identities under the umbrella term “transgender and gender diverse”. Although our sample is racially diverse and race-specific findings emerged, we did not ask youth to explicitly connect their sexual health education experiences to their racial identities. Further research should examine whether and how sexual health education needs may vary among the rich multiplicities of transgender and gender diverse youth. Despite these limitations, this study adds the voices of Black and multiracial transgender and gender diverse youth living in the southeastern US to the growing literature and highlights implications possibly relevant for other transgender and gender diverse youth receiving sexual health education across a variety of settings.

CONCLUSION

Transgender and gender diverse youth, particularly youth of color, continue to face stigma and discrimination and remain at disproportionate risk of multiple adverse health outcomes. Although sexual health education has the potential to play a key role in supporting transgender and gender diverse youth, the voices of our participants highlight there is much work to be done to improve its breadth, quality, and relevance for transgender and gender diverse youth. In the meantime, they would benefit from a multifaceted approach to sexual health education. Further research on the ability of parents, CBOs, virtual resources, and trans-specific or gender inclusive sexual health education interventions to support the sexual health of transgender and gender diverse youth is essential.

ACKNOWLEDGMENTS

We are deeply grateful to the transgender and gender diverse youth and experts who shared their time and their experiences with us and the community-based organizations that aided with recruitment. We also thank the field staff who helped conduct interviews and Lisa Carver, Lorin Boyce, Jack Andrzejewski, Sanjana Pampati, and Schell Hufstetler for their contributions to the study approach, recruitment, and data collection.

FUNDING INFORMATION

Funding for this study was provided, in part, by the HHS, CDC’s Division of Adolescent and School Health to ICF under contract HHSD-200-2013-M53944B, task order 200-2014-F-59670. This research was also supported by a grant from the Arcus Foundation awarded to the CDC Foundation.

Biographies

Paula E. Jayne is a (retired) Health Scientist in the Division of Adolescent and School Health at the U.S. Centers for Disease Control and Prevention in Atlanta, Georgia, USA. Her CDC research focused on school-based sexual health education and adolescent sexual health

more broadly, with an emphasis on populations at disproportionate risk of adverse health outcomes.

Leigh E. Szucs is a Senior Health Scientist in the Division of Adolescent and School Health at the U.S. Centers Disease Control and Prevention in Atlanta, Georgia, USA. Her research focuses on adolescent sexual and reproductive health, and program implementation and evaluation of school-based sexual health education.

Catherine A. Lesesne is a Specialist Executive at Deloitte Consulting in Atlanta, Georgia, USA. She is a senior evaluator and applied scientist in public health. Her research interests include child and adolescent health, sexual and reproductive health, chronic disease and violence prevention, and evaluation of policy/systems/environment strategies to promote health. Dr. Lesesne leads Deloitte's Evaluation and Research for Action Center of Excellence.

Rose Grose is an Associate Professor of Community Health Education in the Colorado School of Public Health at the University of Northern Colorado. She studies gender, power, and sexuality to inform evidence-based policies and programs to reduce sexual health disparities and promote gender equity.

Michelle M. Johns is a Senior Research Scientist in the Bridge and Public Health Research Department at NORC at the University of Chicago. Her research examines how social stigma and resilience shape experiences of minority stress, violence victimization, and behavioral health within LGBTQ+ communities over the life course.

REFERENCES

1. Stephens SC, Bernstein KT, Philip SS. Male to female and female to male transgender persons have different sexual risk behaviors yet similar rates of STDs and HIV. AIDS Behav. 2011;15(3):683–686. doi: 10.1007/s10461-010-9773-1 [PubMed: 20694509]
2. Mimiaga MJ, Hughto JMW, Biello KB, et al. Longitudinal analysis of syndemic psychosocial problems predicting HIV risk behavior among a multicity prospective cohort of sexually active young transgender women in the United States. J Acquir Immune Defic Syndr. 2019;81(2):184–192. doi:10.1097/qai.0000000000002009 [PubMed: 30839380]
3. Veale J, Watson R, Adjei J, Saewyc E. Prevalence of pregnancy involvement among Canadian transgender youth and its relation to mental health, sexual health, and gender identity. Int J Transgenderism. 2016;17(3–4):107–113. doi:10.1080/15532739.2016.1216345
4. Reynolds CA, Charlton BM. Pregnancy prevention and unintended pregnancy across gender identity: a cross-sectional study of college students. Sex Health. 2021;18:441–443. doi:10.1071/SH21103 [PubMed: 34731596]
5. Johns MM, Lowry R, Andrzejewski J, et al. Transgender identity and experiences of violence victimization, substance use, suicide risk, and sexual risk behaviors among high school students—19 states and large urban school districts, 2017. MMWR Morb Mortal Wkly. 2019; 68(3):67–71. doi:10.15585/mmwr.mm6803a3
6. Eisenberg ME, Gower AL, McMorris BJ, Rider GN, Shea G, Coleman E. Risk and protective factors in the lives of transgender/gender nonconforming adolescents. J Adolesc Health. 2017;61(4):521–526. doi:10.1016/j.jadohealth.2017.04.014 [PubMed: 28736148]
7. Clark TC, Lucassen MFG, Bullen P, et al. The health and well-being of transgender high school students: results from the New Zealand adolescent health survey (youth'12). J Adolesc Health. 2014;55(1):93–99. doi:10.1016/j.jadohealth.2013.11.008 [PubMed: 24438852]
8. Hatzenbuehler ML, Pachankis JE. Stigma and minority stress as social determinants of health among lesbian, gay, bisexual, and transgender youth: research evidence and clinical implications. Pediatr Clin. 2016; 63(6):985–997. doi:10.1016/j.pcl.2016.07.003
9. McFarland W, Wesson P, Turner C, et al. High HIV incidence among young and racial/ethnic minority transgender women in San Francisco: results of a longitudinal cohort study. J Acquir Immune Defic Syndr. 2020;84(1):e7–e10. doi:10.1097/QAI.0000000000002315
10. Becasen JS, Denard CL, Mullins MM, Higa DH, Sipe TA. Estimating the prevalence of HIV and sexual behaviors among the US transgender population: a systematic review and meta-analysis, 2006–2017. Am J Public Health. 2018;109(1):e1–e8. doi:10.2105/AJPH.2018.304727 [PubMed: 30496000]
11. Lefevor GT, Janis RA, Franklin A, Stone W-M. Distress and therapeutic outcomes among transgender and gender nonconforming people of color. J Couns Psychol. 2019;47(1):34–58. doi:10.1177/0011000019827210
12. Arrington-Sanders R, Hailey-Fair K, Wirtz AL, et al. Role of structural marginalization, HIV stigma, and mistrust on HIV prevention and treatment among young black Latinx men who have sex with men and transgender women: perspectives from youth service providers. AIDS Patient Care STDs. 2020;34(1):7–15. doi:10.1089/apc.2019.0165 [PubMed: 31944853]
13. Mpofu JJ, Cooper AC, Ashley C, et al. Perceived racism and demographic, mental health, and behavioral characteristics among high school students during the Covid-19 Pandemic—adolescent behaviors and experiences survey, United States, January-June 2021. MMWR Suppl. 2022;71(3):22–27. doi:10.15585/mmwr.su7103a4 [PubMed: 35358163]
14. Bostock v. Clayton County Georgia. No. 17–1618. 2019 https://www.supremecourt.gov/opinions/19pdf/17-1618_hfci.pdf
15. Reisner SL, Hughto JMW, Dunham EE, et al. Legal protections in public accommodations settings: a critical public health issue for transgender and gender-nonconforming people. Milbank Q. 2015;93(3):484–515. doi:10.1111/1468-0009.12127 [PubMed: 26219197]
16. Johns MM, Beltran O, Armstrong HL, Jayne PE, Barrios LC. Protective factors among transgender and gender variant youth: a systematic review by socioecological level. J Prim Prev. 2018;39(3):263–301. doi:10.1007/s10935-018-0508-9 [PubMed: 29700674]

17. Grossman AH, D'Augelli AR, Frank JA. Aspects of psychological resilience among transgender youth. J LGBT Youth. 2011;8(2):103–115. doi:10.1080/19361653.2011.541347
18. Chin HB, Sipe TA, Elder R, et al. The effectiveness of group-based comprehensive risk-reduction and abstinence education interventions to prevent or reduce the risk of adolescent pregnancy, human immunodeficiency virus, and sexually transmitted infections: two systematic reviews for the guide to community preventive services. Am J Prev Med. 2012;42(3):272–294. doi:10.1016/j.amepre.2011.11.006 [PubMed: 22341164]
19. Goesling B, Colman S, Trenholm C, Terzian M, Moore K. Programs to reduce teen pregnancy, sexually transmitted infections, and associated sexual risk behaviors: a systematic review. J Adolesc Health. 2014;54(5):499–507. doi:10.1016/j.jadohealth.2013.12.004 [PubMed: 24525227]
20. Kirby D. Abstinence, sex, and STD/HIV education programs for teens: their impact on sexual behavior, pregnancy, and sexually transmitted disease. Annu Rev Sex Res. 2007;18(1):143–177. doi:10.1080/10532528.2007.10559850
21. Goldfarb ES, Lieberman LD. Three decades of research: the case for comprehensive sex education. J Adolesc Health. 2021;68(1):13–27. doi:10.1016/j.jadohealth.2020.07.036 [PubMed: 33059958]
22. Centers for Disease Control and Prevention. Health Education Curriculum Analysis Tool, 2021. CDC; 2021 https://www.cdc.gov/healthyyouth/hecat/pdf/2021/full-hecat-2021.pdf
23. Donaldson AA, Lindberg LD, Ellen JM, Marcell AV. Receipt of sexual health information from parents, teachers, and healthcare providers by sexually experienced U.S. adolescents. J Adolesc Health. 2013;53(2):235–240. doi:10.1016/j.jadohealth.2013.03.017 [PubMed: 23743003]
24. Breuner CC, Mattson G. Sexuality education for children and adolescents. J Pediatr. 2016;138(2):e20161348. doi:10.1542/peds.2016-1348
25. Mayo C. Queering foundations: queer and lesbian, gay, bisexual, and transgender educational research. Rev Res Educ. 2007;31(1):78–94. doi:10.3102/0091732X06298013
26. Brockenbrough E. Queer of color agency in educational contexts: analytic frameworks from a queer of color critique. Educ Stud. 2015; 51(1):28–44. doi:10.1080/00131946.2014.979929
27. Anzaldúa G. Borderlands/la Frontera: the New Mestiza. Aunt Lute Books; 1987.
28. McCready LT. Queeruptions, queer of color analysis, radical action and education reform: an introduction. Equity Excell Educ. 2019;52(4):370–372. doi:10.1080/10665684.2019.1705206
29. McCarty-Caplan DM. Schools, sex education, and support for sexual minorities: exploring historic marginalization and future potential. Am J Sex Educ Education. 2013;8(4):246–273. doi:10.1080/15546128.2013.849563
30. Quinlivan K, Town S. Queer pedagogy, educational practice and lesbian and gay youth. Int J Qual Stud Educ. 1999;12(5):509–524.
31. Elia JP, Eliason M. Discourses of exclusion: sexuality education's silencing of sexual others. J LGBTQ Youth. 2010;7(1):29–48. doi:10.1080/19361650903507791
32. Meadows E. Sexual health equity in schools: inclusive sexuality and relationship education for gender and sexual minority students. Am J Sex Educ. 2018;13(3):297–309. doi:10.1080/15546128.2018.1431988
33. Aronson B, Laughter J. The theory and practice of culturally relevant education: expanding the conversation to include gender and sexuality equity. Gend Educ. 2020;32(2):262–279. doi:10.1080/09540253.2018.1496231
34. Kattari SK, Atteberry-Ash B, Eugene Walls N, Rusow J, Klemmer C, Kattari L. Differential sexual behavior experiences of LGBQ and transgender/nonbinary young people in colorado. Youth Soc. 2021; 53(3):371–391. doi:10.1177/0044118x19854783
35. Jones T, Smith E, Ward R, Dixon J, Hillier L, Mitchell A. School experiences of transgender and gender diverse students in Australia. Sex Educ. 2016;16(2):156–171. doi:10.1080/14681811.2015.1080678
36. Kosciw JG, Clark CM, Truong NL, Zongrone AD. The 2019 National School Climate Survey: the Experiences of Lesbian, Gay, Bisexual, Transgender, and Queer Youth in our Nation's Schools. Gay, Lesbian and Straight Education Network (GLSEN); 2020 https://www.glsen.org/sites/default/files/2020-10/NSCS19-Full-Report_2.pdf

37. Pampati S, Johns MM, Szucs LE, et al. Sexual and gender minority youth and sexual health education: a systematic mapping review of the literature. J Adolesc Health. 2020;68(8):1040–1052. doi:10.1016/j.jadohealth.2020.09.032 [PubMed: 33162290]
38. Rabbitte M. Sex education in school, are gender and sexual minority youth included?: a decade in review. Am J Sex Educ. 2020;15(4):530–542. doi:10.1080/15546128.2020.1832009 [PubMed: 33762901]
39. Fisher CM. Queer youth experiences with abstinence-only-until-marriage sexuality education: "I can't get married so where does that leave me?". J LGBT Youth. 2009;6(1):61–79. doi:10.1080/19361650802396775
40. McAllum M. Young bisexual women's experiences in secondary schools: "not everyone's straight so why are they only teaching that?". Sex Educ. 2018;18(3):253–267. doi:10.1080/14681811.2017.1369024
41. Hobaica S, Kwon P. "This is how you hetero": sexual minorities in heteronormative sex education. Am J Sex Educ. 2017;12(4):423–450. doi:10.1080/15546128.2017.1399491
42. Gowen LK, Winges-Yanez N. Lesbian, gay, bisexual, transgender, queer, and questioning youths' perspectives of inclusive school-based sexuality education. J Sex Res. 2014;51(7):788–800. doi:10.1080/00224499.2013.806648 [PubMed: 24003908]
43. Roberts C, Shiman LJ, Dowling EA, et al. LGBTQ+ students of colour and their experiences and needs in sexual health education: 'you belong here just as everybody else'. Sex Educ. 2020;20(3):267–282. doi:10.1080/14681811.2019.1648248
44. Rose ID, Friedman DB. Schools: a missed opportunity to inform African American sexual and gender minority youth about sexual health education and services. J Sch Nurs. 2017;33(2):109–115. doi:10.1177/1059840516678910 [PubMed: 28288553]
45. Garcia L. "Now why do you want to know about that?": heteronormativity, sexism, and racism in the sexual (mis)education of Latina youth. Gend Soc. 2009;23(4):520–541.
46. Lindberg LD, Kantor LM. Adolescents' receipt of sex education in a nationally representative sample, 2011–2019. J Adolesc Health. 2022;70(2):290–297. doi:10.1016/j.jadohealth.2021.08.027 [PubMed: 34743916]
47. Terrence Higgins Trust. Shh… No Talking: LGBTQ Inclusive Sex and Relationship Education in the UK. Terrence Higgins Trust; 2016.
48. Riggs DW, Bartholomaeus C. Transgender young people's narratives of intimacy and sexual health: implications for sexuality education. Sex Educ. 2018;18(4):376–390. doi:10.1080/14681811.2017.1355299
49. American Public Health Assocation. Promoting transgender and gender minority health through inclusive policies and practices. Policy Number: 20169. 2016 https://www.apha.org/Policies-and-Advocacy/Public-Health-Policy-Statements/Policy-Database/2017/01/26/Promoting-Transgender-and-Gender-Minority-Health-through-Inclusive-Policies-and-Practices
50. American Medical Assocation. Sexuality education, sexual violence prevention, abstinence, and distribution of condoms in schools, H-170.968. 2018 https://policysearch.ama-assn.org/policyfinder/detail/Sexuality%20Education,%20Sexual%20Violence%20Prevention,%20Abstinence,%20and%20Distribution%20of%20Condoms%20in%20Schools%20H-170.968?uri=%2FAMADoc%2FHOD.xml-0-993.xml
51. Johnson CW, Singh AA, Gonzalez M. "It's complicated": collective memories of transgender, queer, and questioning youth in high school. J Homosex. 2014;61(3):419–434. doi:10.1080/00918369.2013.842436 [PubMed: 24438341]
52. Bradford NJ, DeWitt J, Decker J, Berg DR, Spencer KG, Ross MW. Sex education and transgender youth: 'trust means material by and for queer and trans people'. Sex Educ. 2019;19(1):84–98. doi:10.1080/14681811.2018.1478808
53. Haley SG, Tordoff DM, Kantor AZ, Crouch JM, Ahrens KR. Sex education for transgender and non-binary youth: previous experiences and recommended content. J Sex Med. 2019;16(11):1834–1848. doi: 10.1016/j.jsxm.2019.08.009 [PubMed: 31585806]

54. Tordoff DM, Haley SG, Shook A, Kantor A, Crouch JM, Ahrens K. “Talk about bodies”: recommendations for using transgender-inclusive language in sex education curricula. Sex Roles. 2021;84(3):152–165. doi:10.1007/s11199-020-01160-y
55. Warwick RM, Araya AC, Shumer DE, Selkie EM. Transgender youths’ sexual health and education: a qualitative analysis. J Pediatr Adolesc Gynecol. 2022;35(2):138–146. [PubMed: 34619356]
56. Bronfenbrenner U. Toward an experimental ecology of human development. Am Psychol. 1977;32(7):513–531. doi:10.1037/0003-066X.32.7.513
57. DiClemente RJ, Salazar LF, Crosby RA, Rosenthal SL. Prevention and control of sexually transmitted infections among adolescents: the importance of a socio-ecological perspective—a commentary. Public Health. 2005;119(9):825–836. doi:10.1016/j.puhe.2004.10.015 [PubMed: 15913678]
58. Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. Field Methods. 2006; 18(1):59–82. doi:10.1177/1525822X05279903
59. Patton MQ. Qualitative Research and Evaluation Methods. Sage Publishing; 2002.
60. Resnick MD. Resilience and protective factors in the lives of adolescents. J Adolesc Health. 2000;27(1):1–2. doi:10.1016/S1054-139X(00)00142-7
61. VERBI Software. Maxqda. VERBI Software; 2018:2018.
62. Guest G, MacQueen KM, Namey EE. Applied Thematic Analysis. Sage Publishing; 2011.
63. Andrzejewski J, Pampati S, Steiner RJ, Boyce L, Johns MM. Perspectives of transgender youth on parental support: qualitative findings from the resilience and transgender youth study. Health Educ Behav. 2021;48(1):74–81. doi:10.1177/1090198120965504 [PubMed: 33106050]
64. Pampati S, Andrzejewski J, Steiner RJ, et al. “We deserve care and we deserve competent care”: qualitative perspectives on health care from transgender youth in the southeast United States. J Pediatr Nurs. 2021;56:54–59. doi:10.1016/j.pedn.2020.09.021 [PubMed: 33186863]
65. Johns MM, Zamantakis A, Andrzejewski J, Boyce L, Rasberry CN, Jayne PE. Minority stress, coping, and transgender youth in schools—results from the resilience and transgender youth study. J School Health. 2021;91(11):883–893. doi:10.1111/josh.13086 [PubMed: 34533210]
66. Katz-Wise SL, Reisner SL, Hughto JW, Keo-Meier CL. Differences in sexual orientation diversity and sexual fluidity in attractions among gender minority adults in massachusetts. J Sex Res. 2016;53(1):74–84. doi:10.1080/00224499.2014.1003028 [PubMed: 26156113]
67. Harden KP. A sex-positive framework for research on adolescent sexuality. Perspect Psychol Sci. 2014;9(5):455–469. doi:10.1177/1745691614535934 [PubMed: 26186753]
68. Hobaica S, Schofield K, Kwon P. “Here’s your anatomy…good luck”: transgender individuals in cisnormative sex education. Am J Sex Educ. 2019;14(3):358–387. doi:10.1080/15546128.2019.1585308
69. Pingel ES, Thomas L, Harmell C, Bauermeister JA. Creating comprehensive, youth centered, culturally appropriate sex education: what do young gay, bisexual, and questioning men want? Sex Res Soc Policy. 2013;10(4):293–301. doi:10.1007/s13178-013-0134-5
70. Fox J, Ralston R. Queer identity online: informal learning and teaching experiences of LGBTQ individuals on social media. Comput Hum Behav. 2016;65:635–642. doi:10.1016/j.chb.2016.06.009
71. DeHaan S, Kuper LE, Magee JC, Bigelow L, Mustanski BS. The interplay between online and offline explorations of identity, relationships, and sex: a mixed-methods study with LGBT youth. J Sex Res. 2013;50(5):421–434. doi:10.1080/00224499.2012.661489 [PubMed: 22489658]
72. Austin A, Craig SL, Navega N, McInroy LB. It’s my safe space: the life-saving role of the internet in the lives of transgender and gender diverse youth. Int J Transgend Health. 2020;21(1):33–44. doi:10.1080/15532739.2019.1700202 [PubMed: 33015657]
73. Kimmel A, Williams TT, Veinot TC, et al. ‘I make sure I am safe and I make sure I have myself in every way possible’: African-American youth perspectives on sexuality education. Sex Educ. 2013;13(2):172–185. doi:10.1080/14681811.2012.709840 [PubMed: 23585729]
74. Singh AA. Transgender Youth of Color and Resilience: Negotiating Oppression and Finding Support. Springer; 2013:690–702. doi:10.1007/s11199-012-0149-z

75. Walton G. The hidden curriculum in schools: implications for lesbian, gay, bisexual, transgender, and queer youth. J Crit Soc Res. 2005;21:18–39.
76. Fields J, Gilbert J, Miller M. Sexuality and education: toward the promise of ambiguity. Handbook of the Sociology of Sexualities. Springer International Publishing/Springer Nature; 2015:371–387. doi:10.1007/978-3-319-17341-2_21
77. Bay-Cheng LY. The trouble of teen sex: the construction of adolescent sexuality through school-based sexuality education. Sex Educ. 2003;3(1):61–74. doi:10.1080/1468181032000052162
78. Coyle KK, Chambers BD, Anderson PM, Firpo-Triplett R, Waterman EA. Blended learning for sexual health education: evidence base, promising practices, and potential challenges. J Sch Health. 2019;89(10):847–859. doi:10.1111/josh.12821 [PubMed: 31397903]
79. Strasburger VC, Brown SS. Sex education in the 21st century. Obstet Gynecol. 2014;69(11):663–664. doi:10.1001/jama.2014.4789
80. Whitten A, Sethna C. What's missing? Anti-racist sex education! Sex Educ. 2014;14(4):414–429. doi:10.1080/14681811.2014.919911
81. Newcomb ME, Feinstein BA, Matson M, Macapagal K, Mustanski B. "I have no idea what's going on out there": Parents' perspectives on promoting sexual health in lesbian, gay, bisexual, and transgender adolescents. Sex Res Soc Policy. 2018;15(2):111–122. doi:10.1007/s13178-018-0326-0
82. Dickson E, Parshall M, Brindis CD. Isolated voices: perspectives of teachers, school nurses, and administrators regarding implementation of sexual health education policy. J Sch Health. 2020;90(2):88–98. doi:10.1111/josh.12853 [PubMed: 31813167]
83. Eisenberg ME, Madsen N, Oliphant JA, Sieving RE. Barriers to providing the sexuality education that teachers believe students need. J Sch Health. 2013;83(5):335–342. doi:10.1111/josh.12036 [PubMed: 23517001]
84. Trust for America's Health. Furthering the Adaptation and Implementation of LGBTQ-Inclusive Sexuality Education. Trust for America's Health; 2016.
85. Basch CE. Healthier students are better learners: a missing link in school reforms to close the achievement gap. J Sch Health. 2011;81(10):593–598. doi:10.1111/j.1746-1561.2011.00632.x [PubMed: 21923870]
86. American Psycholocgical Assocation. Guidelines for psychological practice with transgender and gender nonconforming people. Am Psychol. 2015;70(9):832–864. [PubMed: 26653312]
87. Massicotte LM. Implementing anti-racist strategies in the evidence-based sexuality education classroom. Am J Sex Educ. 2022;18:1–21. doi:10.1080/15546128.2022.2076758
88. Agénor M, Cottrill AA, Kay E, Janiak E, Gordon AR, Potter J. Contraceptive beliefs, decision making and care experiences among transmasculine young adults: a qualitative analysis. Perspect Sex Reprod Health. 2020;52(1):7–14. doi:10.1363/psrh.12128 [PubMed: 31977155]
89. Green ER. Shifting paradigms: moving beyond "trans 101" in sexuality education. Am J Sex Educ. 2010;5(1):1–16. doi:10.1080/15546121003748798
90. Sterzing PR, Gartner RE, Goldbach JT, McGeough BL, Ratliff GA, Johnson KC. Polyvictimization prevalence rates for sexual and gender minority adolescents: breaking down the silos of victimization research. Psychol Violence. 2019;9(4):419–430. doi:10.1037/vio0000123
91. Arrington-Sanders R, Harper GW, Morgan A, Ogunbajo A, Trent M, Fortenberry JD. The role of sexually explicit material in the sexual development of same-sex-attracted black adolescent males. Arch Sex Behav. 2015;44(3):597–608. doi:10.1007/s10508-014-0416-x [PubMed: 25677334]
92. McCann E, Keogh B, Doyle L, Coyne I. The experiences of youth who identify as trans* in relation to health and social care needs: a scoping review. Youth Soc. 2019;51(6):840–864. doi:10.1177/0044118x17719345
93. Clayton HB, Brener ND, Barrios LC, Jayne PE, Everett JS. Professional development on sexual health education is associated with coverage of sexual health topics. Pedagogy Health Promot. 2017;4(2):115–124. doi:10.1177/2373379917718562
94. Szucs LE, Rasberry CN, Jayne PE, et al. School district-provided supports to enhance sexual health education among middle and high school health education teachers. Teach Teach Educ. 2020;92:103045. doi:10.1016/j.tate.2020.103045

95. Centers for Disease Control and Prevention. School Health Profiles 2020: Characteristics of Health Programs among Secondary Schools. Centers for Disease Control and Prevention; 2022.

96. Meyer EJ, Leonardi B. Teachers' professional learning to affirm transgender, non-binary, and gender-creative youth: experiences and recommendations from the field. Sex Educ. 2018;18(4):449–463. doi:10.1080/14681811.2017.1411254

97. National Education Assocation. Legal Guidance on Transgender Students Rights. National Education Association; 2016.

98. Pollitt AM, Ioverno S, Russell ST, Li G, Grossman AH. Predictors and mental health benefits of chosen name use among transgender youth. Youth Soc. 2021;53(2):320–341. doi:10.1177/0044118x19855898

99. Marquéz R. Queer latina/o(x) youth education: a community-based education model to queer of color praxis. Equity Excell Educ. 2019;52(4):396–408. doi:10.1080/10665684.2019.1696255

100. Brockenbrough E. Becoming queerly responsive: culturally responsive pedagogy for black and Latino urban queer youth. Urban Educ. 2014;51(2):170–196. doi:10.1177/0042085914549261

101. Proulx CN, Coulter RWS, Egan JE, Matthews DD, Mair C. Associations of lesbian, gay, bisexual, transgender, and questioning-inclusive sex education with mental health outcomes and school-based victimization in U.S. high school students. J Adolesc Health. 2019;64(5):608–614. doi:10.1016/j.jadohealth.2018.11.012 [PubMed: 30691941]

102. Blake SM, Ledsky R, Lehman T, Goodenow C, Sawyer R, Hack T. Preventing sexual risk behaviors among gay, lesbian, and bisexual adolescents: the benefits of gay-sensitive hiv instruction in schools. Am J Public Health. 2001;91(6):940–946. doi:10.2105/ajph.91.6.940 [PubMed: 11392938]

103. Garofalo R, Kuhns LM, Reisner SL, Biello K, Mimiaga MJ. Efficacy of an empowerment-based, group-delivered HIV prevention intervention for young transgender women: the project lifeskills randomized clinical trial. JAMA Pediatr. 2018;172(10):916–923. doi:10.1001/jamapediatrics.2018.1799 [PubMed: 30105381]

104. Philliber A. The IN·clued program: a randomized control trial of an effective sex education program for lesbian, gay, bisexual, transgender, queer, and questioning youths. J Adolesc Health. 2021;69(4):636–643. doi:10.1016/j.jadohealth.2021.04.002 [PubMed: 33994311]

105. Advocates for Youth. Rights, Respect, Responsibility: A K-12 Sexuality Education Curriculum. Advocates for Youth; 2015. https://3rs.org/3rs-curriculum/

106. Craig SL, McInroy LB, D'Souza SA, et al. Influence of information and communication technologies on the resilience and coping of sexual and gender minority youth in the United States and Canada (project #queery): mixed methods survey. JMIR Res Protoc. 2017;6(9):e189. doi:10.2196/resprot.8397 [PubMed: 28958984]

107. Andrzejewski J, Rasberry CN, Mustanski B, Steiner RJ. Sexual and reproductive health web sites: an analysis of content for sexual and gender minority youth. Am J Health Promot. 2020;34(4):393–401. doi:10.1177/0890117119899217 [PubMed: 31928056]

108. Steinke J, Root-Bowman M, Estabrook S, Levine DS, Kantor LM. Meeting the needs of sexual and gender minority youth: formative research on potential digital health interventions. J Adolesc Health. 2017;60(5):541–548. doi:10.1016/j.jadohealth.2016.11.023 [PubMed: 28108088]

109. Dubin SN, Nolan IT, Streed CG Jr, Greene RE, Radix AE, Morrison SD. Transgender health care: improving medical students' and residents' training and awareness. Adv Med Educ Pract. 2018;9:377–391. doi:10.2147/AMEP.S147183 [PubMed: 29849472]

110. MacKinnon KR, Ng SL, Grace D, Sicchia SR, Ross LE. Protocols as curriculum? Learning health advocacy skills by working with transgender patients in the context of gender-affirming medicine. Adv Health Sci Educ. 2020;25(1):7–18. doi:10.1007/s10459-019-09899-0

111. Dixon R, Gilbert T, Soto M, Gathings J, DiPonio S. Centering racial justice in sex education: strategies for engaging professionals and young people. Sex Ed Collaborative White Paper. 2021. https://static1.squarespace.com/static/6070a914e4165207aa8c8c04/t/62bc6fa633eb5e740cbdfd60/1656516535715/SEC_report_final.pdf

112. Future of Sex Education Initiative. National Sex Education Standards: Core Content and Skills. 2nd ed. Future for Sex Education Inititat; 2020.

BOX 1

Interview questions about the sexual health education experiences of transgender and gender diverse youth in the southeastern United States

- Have you had/did you have sexual health education or “sex ed” in middle or high school?
  - If yes, how did that help you?
  - What, if anything, did you learn in sex ed that helps you be the healthiest version of yourself?
  - What, if anything, about your sex ed class got in the way of you being you the healthiest version of yourself?
  - To what extent was gender discussed in your sex class? Gender identity or transgender issues?
  - How did your sex ed class make you feel? What about it made you feel this way?
- If you could design your dream sex ed class, what would it look like?
  - What topics would be covered? Who would teach it?
  - If your sex ed looked this way, how could it help you be the healthiest version of yourself?
- Where else do you get information about sexual health? How useful has this information been for you?

TABLE 1

Demographic characteristics of participants in our study dedicated to the sexual health education experiences of transgender and gender-diverse youth in the southeastern United States ($N = 33$).

	Participants ($N = 33$)	
Characteristic	***n***	**%**
Gender identity		
Female/transgender female/woman	14	42
Male/transgender male/man	11	33
Gender fluid/non-binary/non-conforming/agender	8	24
Assigned sex at birth		
Female	16	49
Male	17	51
Age at recruitment		
15–17	2	6
18–21	12	36
22–24	19	58
Sexual orientation		
Straight/heterosexual	9	27
Bisexual	5	15
Pansexual	5	15
Queer	4	12
Gay/homosexual	3	9
Attracted to men	2	6
Asexual	1	3
Attracted to women	1	3
Lesbian	1	3
Transsexual	1	3
Other	1	3
Ethnicity		
Non-Latinx	31	94
Latinx	2	6
Race		
Black	18	55
White	13	39
Multiracial	2	9