



# Perceptions, Experiences, and Needs of Adolescents About School-Based Sexual Health Education: Qualitative Systematic Review

Shefaly Shorey<sup>1</sup> · Crystal Min Siu Chua<sup>1</sup>

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## Abstract

Adolescents are particularly vulnerable to poor sexual health outcomes such as sexually transmitted diseases, sexually transmitted infections, human immunodeficiency virus, and unintended pregnancy. While school-based sexual health education (SBSHE) can address adolescents' needs, they are often insufficient. Hence, their perception of SBSHE should be explored to improve current education. This review aims to consolidate the available evidence on perceptions, experiences, and needs of adolescents about SBSHE. Six electronic databases were searched from their inception date till June 2022. The included studies were assessed using the method of the Critical Appraisal Skills Program tool, and findings were meta-synthesized using Sandelowski and Barroso (2007). This review was registered via the International Prospective Register of Systematic Reviews. Overall, 51 studies were included, and three themes were identified: (1) teachings of SBSHE and its impact, (2) adolescents' preferred approach to SBSHE, and (3) importance of engaging and safe SBSHE. In conclusion, adolescents had mixed reactions toward SBSHE. They expressed the need for inclusivity (gender identity and racial, ethnic, and cultural groups). Having a “safe space,” well-trained educators, and interactive approaches were important and hence should also be considered. More qualitative studies from different geographical regions are needed. Diverse topics (e.g., mutual consent, sexual abuse, and violence) should also be discussed. The use of multiple educators (e.g., schoolteachers, specialist teachers, and peers) should also be deliberated in future SBSHE research. Findings from this review should be triangulated by evaluating the perceptions of various stakeholders (e.g., educators, adolescents, and SBSHE administrators).

**Keywords** Adolescents · School-based sexual health education · Sexual health education · Qualitative systematic review

## Introduction

During adolescence (age 10–19 years old), young people experience a critical time of transition. Hence, they are susceptible to a myriad of health risks, including sexual health issues (World Health Organization, 2018a). Adolescents may often lack knowledge of sexual health and are vulnerable to sexual ill health, such as sexually transmitted diseases (STDs), sexually transmitted infections (STI), human immunodeficiency virus (HIV), unintended pregnancy, unsafe abortion, abusive or exploitative sexual relationships (Berglas et al., 2014).

School-based sexual health education (SBSHE) has the potential to reach many adolescents from diverse backgrounds (Sundaram et al., 2016). It is an important platform to educate adolescents on sexual health (e.g., education on STD) and enhances their well-being (e.g., communication, body image, development of healthy relationships, and understanding of consent and sexual rights). There are four main approaches to SBSHE: abstinence, comprehensive, rights-based, and relationship-based sexual health education. These models have one component in common; educating adolescents about the risk of sexual activities (HIV, AIDS, unwanted pregnancies); however, their approaches remained different. Abstinence-based SBSHE encourages restraint from sexual activity outside of a committed adult relationship (notably marriage), and comprehensive SBSHE, often relies on harm reduction or disease prevention that promotes abstinence while also promoting safe sexual practices for sexually active adolescents (Berglas et al., 2014). In recent years, two other SBSHE (relationship-based and rights-based SBSHE) has

✉ Shefaly Shorey  
nurssh@nus.edu.sg

<sup>1</sup> Alice Lee Centre for Nursing Studies, Yong Loo Lin School of Medicine, National University of Singapore, Level 2, Clinical Research Centre, Block MD11, 10 Medical Drive, Singapore 117597, Singapore

been developed. Rights-based SBSHE reinforces the sexual rights of adolescents, gender equality, and sexual and reproductive health, to enable them to deal with their sexuality in a responsible way (Berglas et al., 2014). Relationship-based SBSHE emphasized sexual communication, trust, intimacy, and sexual pleasure as important elements in aiding adolescents to assess their readiness for sex, evaluate the benefits and risks associated with different types of sex, and use methods to prevent sexual health issues (Hensel et al., 2018). Prior research has found that more SBSHE across countries, including those in low- and middle-income countries, are shifting from abstinence-based SBSHE to other approaches (Berglas et al., 2014). Despite the developments of SBSHE, current research has shown that adolescents' needs for sexual health knowledge remained unmet (Waling et al., 2020, 2021). Findings from a recent Cochrane review showed that SBSHE improved knowledge of sexual health and reduced risk-taking behavior; however, it is unknown whether there is an association between SBSHE and the number of STI or unintended pregnancies among adolescents (Mason-Jones et al., 2016). Additionally, findings from other qualitative studies reported that adolescents felt deprived of opportunities to learn and discuss sexual health openly and felt that SBSHE was unrealistic (Hilton, 2003; Hirvonen et al., 2021; Zanatta et al., 2016).

To support adolescents' sexual health, a thorough understanding of their experiences and perspectives on SBSHE is warranted. However, only one qualitative review on SBSHE was published five years ago (Pound et al., 2016). This review examined the SBSHE experience of children and young adults aged 6–25 years, and most of the included studies were from high-income countries. There is a need for a qualitative systematic review solely on adolescents as they are vulnerable to poor sexual health, and they have a right to sexual health information that allows them to make autonomous decisions on their sexual health and well-being. Therefore, this qualitative review will focus on adolescents and their views of SBSHE. This can help give context, nuances, and an opportunity to understand their experiences through their voices. Involving the views of those who received SBSHE, and employing their ideas are considered good policy-making practices that can pave way for sexual health education that is tailored to the needs of adolescents and appropriate for their age group (Setty & Dobson, 2022).

## Method

### Aims

This review aims to consolidate the available evidence on perceptions, experiences, and needs of adolescents on SBSHE.

## Search Strategy

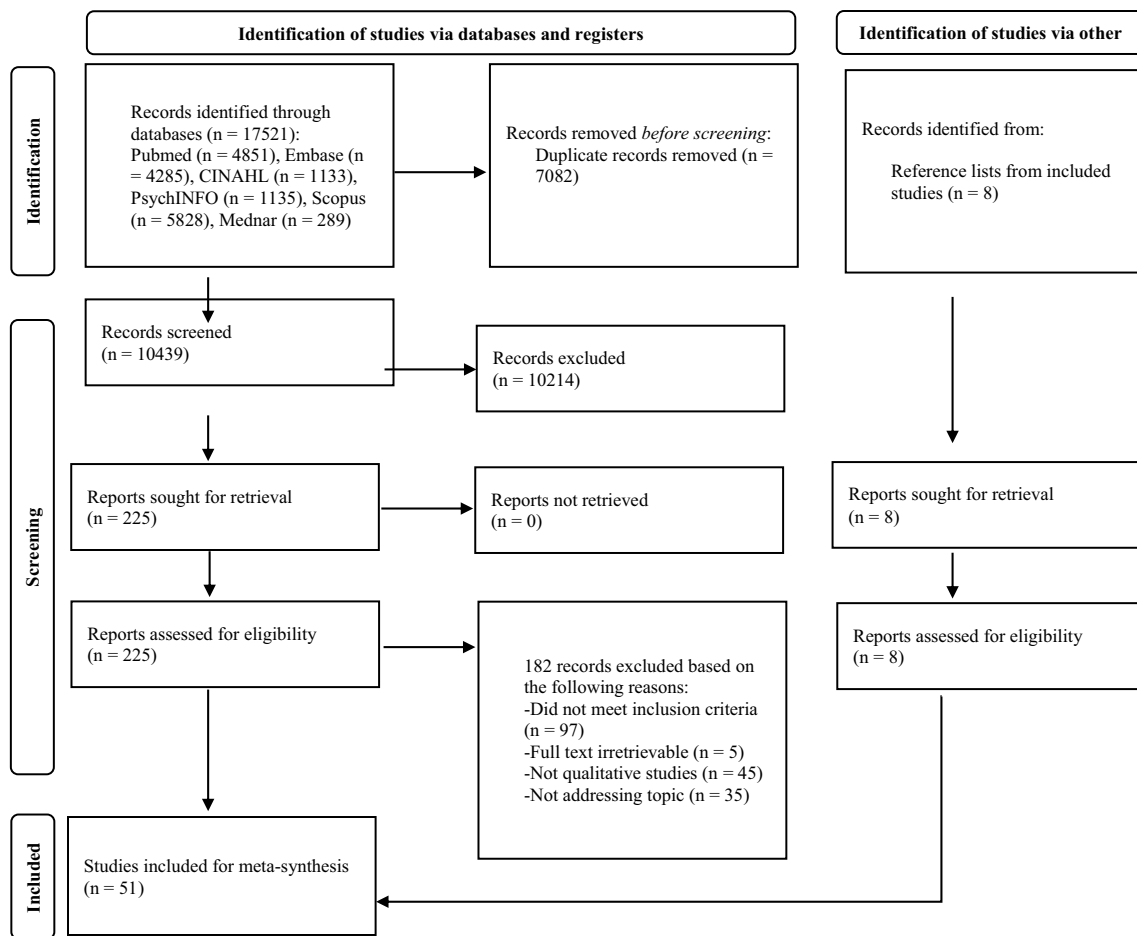
Both published and unpublished studies were identified by utilizing the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) (Fig. 1) and reported according to the PRISMA Checklist (Supplementary File 1). To obtain the relevant studies, a three-step approach was adopted: (1) systematic search of selected electronic databases, (2) manual search of reference lists of relevant studies, and (3) discussion and mutual consensus among reviewers. Firstly, a preliminary search was conducted on PubMed. After this search, the strategy was reviewed by a university librarian and then applied to six electronic databases: CINAHL, PubMed, Embase, PsychINFO, Scopus, and Mednar (gray literature) from inception until June 2022 (Supplementary File 2). Results from this search strategy were imported into Endnote Software, and duplicate studies were removed using the software's in-built functions. Subsequently, two reviewers (CC and SS) screened the titles and abstracts, followed by the full texts for eligibility. The reference lists of the included studies were manually searched for relevance. Lastly, any discrepancies that arose were discussed between the two reviewers until a consensus was reached. This review was registered on the International Prospective Register of Systematic Reviews (PROSPERO): CRD42021236507.

## Inclusion and Exclusion Criteria

The inclusion criteria for this review were: (1) studies exploring the perceptions, experiences, or needs of school-going adolescents aged 10 to 19 years old; (2) studies evaluating the intervention of any SBSHE, and (3) studies of qualitative design or mixed-method studies with qualitative content that can be extracted. Due to logistical constraints, only studies written in English were included. Studies were excluded if: (1) participants were not adolescents, or were not school students at the time of the data collection (2) participants did not receive SBSHE, and (3) they were not qualitative or mixed-method studies.

## Quality Appraisal

The two reviewers (CC and SS) performed the quality assessment for the included studies using the 10-item Critical Appraisal Skills Program (CASP) checklist to comprehensively appraise the: (1) aims and objectives, (2) methodology, (3) study design, (4) sampling method, (5) data collection, (6) reflexivity of the research, (7) ethical considerations, (8) data analysis, (9) rigor of results, and (10) significance of the studies. By rating each item using "Yes" (three points), "Can't tell" (two points), and



**Fig. 1** PRISMA flow diagram

“No” (one point), the maximum score attainable was 30 points. The score of the included studies ranged from 24 to 30 points and had an average of 27.9 points (Supplementary File 3) and interrater reliability of 92.7%. The purpose of CASP was not to assign meaning to the score but to increase the rigor of synthesis (Sale & Hawker, 2005). Therefore, all studies were included in this review regardless of their CASP score. Overall, the majority of the studies used the appropriate measures for most of the items on CASP. However, reflexivity, which is the relationship between the researcher and the interviewed participants, remained unclear in many of the included studies.

## Data Extraction

The authors developed a data extraction table that was used to extract details (e.g., study aim, methodology, and findings) (Table 1). Additionally, both first-order constructs (e.g., the quotations of adolescents) and the second-order constructs (e.g., primary authors’ interpretations of findings) were extracted from each study. The two reviewers (CC and SS)

conducted the data extraction independently. Any discrepancies were resolved between the two reviewers until consensus was achieved.

## Synthesis

Data synthesis, including meta-summary and meta-synthesis, was completed using Sandelowski and Barroso’s two-step approach (Sandelowski & Barroso, 2007). Meta-summary was done by extracting, separating, grouping, and abstracting text findings and quotations in the study into summarized statement sets. Similar statements were then combined into codes. Next, a meta-synthesis was performed. The codes consisting of adolescents’ perceptions, experiences, and needs were inductively grouped into main themes and subthemes by comparing them across included studies using thematic analysis by the two reviewers, independently. Then, the themes were further meta-synthesized into more comprehensive and higher-order novel concepts with deeper insights into SBSHE among adolescents. Triangulation was maintained throughout the synthesis by comparing synthesized themes

**Table 1** Characteristics of the included studies

Study (year), country	Aim	Program Description	Methodology	Results
Abel (2006), New Zealand	To understand the perception of sex education in schools for New Zealand students	Setting: Christchurch Secondary school SexEd: General perception of SBSHE in New Zealand	Study design: Descriptive Qualitative Research Methods: Semi-structured interviews and focus groups; thematic analysis Sample size: 42 Age: 14–15	Overall There is a need for sex education programs to put greater effort into developing skills of assertiveness, communication, and empowerment
Achora et al. (2018), Eastern Africa; Uganda	To explore the experiences and perceptions on school-based sexuality education in rural primary schools	Setting: 4 rural mainstream primary schools SexEd: Abstinence-only HIV/AIDS prevention	Study design: Descriptive Qualitative Research Methods: Semi-structured interviews and focus groups; constant comparative analysis Sample size: 48 Age: 12–19	6 themes Meaning of SBSHE Dominant concepts about the content taught Benefits of SBSHE Information on SBSHE Challenges of SBSHE Suggestions for change
Ado and Mensah (2015), South Africa; KwaZulu-Natal province	To explore the adolescents' engagement through sexuality and HIV- and AIDS-related education via Life Orientation learning	Setting: 16 public mainstream secondary schools SexEd: Life Orientation learning—Curriculum HIV/AIDS prevention	Study design: Ethnography Methods: Semi-structured interviews; thematic analysis Sample size: 190 Age: 14–18	2 themes Individual influence Interpersonal influence
Ado and Mensah (2015), USA	To identify factors influencing the implementation of the HIV/AIDS curricula in Ivorian sixth-grade classrooms	Setting: 9 public mainstream middle schools SexEd: Abstinence-only HIV/AIDS prevention curriculum	Study design: Descriptive Qualitative Research Methods: Semi-structured interviews; thematic analysis Sample size: 63 Age: 11–12	2 themes Influence of cultural beliefs Influence of personal and religious beliefs
Al-Iryani et al. (2013), Yemen	To understand factors that facilitate or inhibit school peer education in Muslim setting	Setting: 27 public and semi-public mainstream high schools SexEd: Peer education for HIV prevention	Study design: Descriptive Qualitative Research Methods: In-depth interviews and focus groups; thematic analysis Sample size: 86 Age: 15–17	6 themes Students' experiences of the intervention Acceptance of the program by parents and students Addressing high-risk behavior and condoms in a classroom setting Addressing high-risk behavior and condoms out of the classroom setting Difficulties faced during implementation
Allen (2005), New Zealand	Define how young people conceptualize 'effective' sex education	Setting: 15 private and public schools SexEd: General perception of SBSHE in New Zealand	Study design: Descriptive Qualitative Research Methods: Open-ended structured questionnaire; thematic analysis Sample size: 1180 Age: 16–19	3 themes How classroom activity is structured The nature of the subject matter Teacher's comfort and competency

Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Brüll et al. (2016), Germany	To investigate whether cultural background would affect the preference for educational games promoting safer sex	Setting: 2 mainstream vocational schools SexEd: Digital gaming for comprehensive education for HIV/AIDS prevention	Study design: Descriptive Qualitative Research Methods: Semi-structured focus groups; thematic analysis Sample size: 13 Age: 18–19	6 themes General look at the game General feel of the game Representation of the player Content covered Important topic Specific aspects
Chirwa-Kambole et al. (2020), Zambia	To identify factors that facilitate the comprehensive sexual and reproductive health education youth clubs in rural schools	Setting: 8 mainstream rural schools SexEd: Fortnightly youth club for comprehensive sexuality education for unwanted pregnancy prevention	Study design: Qualitative Case Study Methods: Focus groups; thematic analysis Sample size: 68 Age: 13–18	3 themes Support from parents Facilitation Change in behavior
Cornelius et al. (2012), USA	To examine African-American adolescents' perceptions of a mobile cell phone-enhanced intervention for HIV prevention	Setting: Conducted in a University setting SexEd: 3-month text boosters for HIV/AIDS prevention education	Study design: Descriptive Qualitative Research Methods: Focus groups; Krueger and Casey's (2000) method of analysis Sample size: 11 Age: 13–18	Overall Adolescents benefited from the MCP-enhanced approach and were receptive to the idea of developing an MCP-based intervention
Denner et al. (2005), USA	To offer suggestions to integrate service learning into a program to reduce sexual risks among alternative school students	Setting: Alternative school SexEd: Service-learning activities integrated into HIV prevention education in 14 sessions (about 26 h)	Study design: Descriptive Qualitative Research Methods: Semi-structured interviews and focus groups; thematic analysis Sample size: 101 Age: Mean 16.6	4 themes Find appropriate service learning sites Create staff support Maintain appropriate student participation and behavior Enhance student reflections on the service-learning experience
Didion et al. (2004), USA	To describe the personal impact of the "In Your Care" pregnancy prevention intervention program using the Baby Think It Over infant simulator	Setting: Four mainstream public rural and suburban high schools SexEd: Abstinence-only teen pregnancy prevention workshop (video on parenting responsibilities, class discussion, journal writing) and weekend infant simulator	Study design: Descriptive Qualitative Research Methods: Focus groups; Colaizzi's (1978) method of analysis Sample size: 36 Age: 16–17	5 themes Parenting reality Feelings Family relationships Behavioral impact Caregiver role expectations
Djuwitaningsih and Setyowati (2017), Philippines	To discern female adolescents' knowledge, attitudes, and views on health media based on reproductive health applications	Setting: Unidentified schools in West Java SexEd: Application-based reproductive health education for pregnancy prevention	Study design: Descriptive Qualitative Research Methods: In-depth interviews; analysis not specified Sample size: Not specified Age: 15–19	Overall The study highlights the need for reliable, accessible, and personal sources of information

Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Ezer et al. (2019), Australia	To understand the views of school-based sex education among general Australian students	Setting: High schools, social media platforms, community groups SexEd: General perception of SBSHE in Australia	Study design: Descriptive Qualitative Research Methods: Open-ended questionnaires; thematic analysis Sample size: 2193 Age: 15–17	7 themes Usefulness and relevancy Timing, sufficiency and duration Content Student knowledge, attitudes and beliefs School type Teacher effectiveness Beyond the classroom
Haruna et al. (2018), Tanzania	To investigate the use of game-based learning and gamification to improve the sexual health education of adolescent students	Setting: Mainstream public secondary school SexEd: Comparison between game-based learning, gamification, and traditional sexual health education teaching methods	Study design: Descriptive Qualitative Research Methods: Focus groups; thematic analysis Sample size: 21 Age: 11–15	4 themes Motivation Attitude Knowledge Engagement
Hilton (2007), UK	Explore what boys want to learn from sex and relationship education classes and how they want to be taught	Setting: 8 public and private secondary schools SexEd: General perception of SBSHE in the UK	Study design: Grounded Theory Methods: Focus groups; content and thematic analysis Sample size: 307 Age: 16–17	Overall The research found that in most areas boys are not being taught what they want to know. The areas of feelings and emotions, sexuality, sexual techniques, sexually transmitted infections, pornography and the effects of the 'boy culture' are not being addressed sufficiently, or in some cases at all
Hilton (2003), UK	To explore the preferences of boys regarding the characteristics of teachers of sex education	Setting: Private and public secondary schools SexEd: General perception of SBSHE in the UK	Study design: Descriptive Qualitative Research Methods: Open-ended questionnaire and focus groups; analysis not specified Sample size: 24 Age: 16–17	Overall Unless boys work with teachers they respect and trust they will continue to have little time for this area of the curriculum, to the detriment of their future relationships
Hirst (2004), UK	To investigate the experience of young people's sexuality and sexual health learning	Setting: Suburban mainstream secondary school SexEd: Health education and sexual reproductive health	Study design: Descriptive Qualitative Research Methods: Unstructured focus groups; analysis not specified Sample size: 15 Age: 14–16	Overall Study highlights the need to include conscious and awareness raising, the opportunity for reflection and debate, enhanced young people's view on non-judgmental and meaningful advice and guidance are possible in formal learning contexts

Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Hirvonen et al. (2021), UK	To investigate opportunities and challenges of using social media to facilitate peer-to-peer sharing of sexual health messages	Setting: 6 primary schools SexEd: Peer-led SBSHE intervention	Study design: Mixed-method Research Methods: 11 semi-structured paired interviews and focus groups; thematic analysis Sample size: 42 Age: 14–16	6 themes Variable engagement with Facebook Reassurance Legitimated and augmented web-based posts Recipients of messages are sometimes receptive but do not necessarily engage visibly on social media Preferences for message design and content Preferences for social media versus offline interactions
Jarpe-Ratner et al. (2022), USA	To identify lessons learned for implementing SBSHE	Setting: 4 primary schools SexEd: General perception of SBSHE in the USA	Study design: Mixed-method Research Methods: Focus groups; thematic analysis Sample size: 31 Age: 11–18	5 themes Opportunities Guideline to support transgender and gender non-conforming students Inclusive curriculum Signs and symbols of support Genders and sexualities alliance
Javadnoori (2012), Iranian	To explore adolescents' experiences and perceptions towards sexual health education in Iranian schools	Setting: 8 private and public high schools SexEd: General perception of SBSHE in Iran	Study design: Descriptive Qualitative Research Methods: Semi-structured interviews and focus groups; content analysis Sample size: 57 Age: 14–18	Overall Lack of obligations and priority Sexual reticence, evading, and censor Scaring adolescents about sexual issues Inconsistency of sex education with adolescents' needs Unqualified educators and lack of appropriate educational materials
Kemigisha et al. (2019), Uganda	To evaluate the effectiveness of a Comprehensive Sexuality Education intervention for very young adolescents in Uganda	Setting: 4 urban and rural public and private primary schools SexEd: Comprehensive sexuality education curriculum of 11 lessons for HIV/AIDS and pregnancy prevention	Study design: Descriptive Qualitative Research Methods: In-depth interviews and focus groups; thematic analysis Sample size: 20 Age: mean 12.1	Overall Comprehensive Sexuality Education provided age-appropriate information that was beneficial, such as dispelling fears and anxiety in dealing with puberty changes, recognition of risks and how they can be avoided
Layzer (2017), USA	To evaluate youth participants' perspectives on a peer education program to gain insight into program effectiveness	Setting: 7 suburban or rural public secondary schools SexEd: Peer education program to provide comprehensive sexuality education for HIV/AIDS and pregnancy prevention	Study design: Descriptive Qualitative Research Methods: Focus groups; thematic analysis Sample size: 116 Age: 14–15	3 themes Exposure to New Information on Sexual Health Appealing to Multiple Learning Styles Comparing Teen Peer Education Program to Other Sources of Sexuality Education

Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Layzer (2014), USA	To evaluate the effectiveness of peer education program for sex education	Setting: 4 public secondary schools SexEd: Peer education program to provide comprehensive sexuality education for HIV/AIDS and pregnancy prevention	Study design: Grounded Theory Methods: Observations and focus groups; constant comparative analysis Sample size: 60 Age: 14–15	Overall Youth participants attributed high value to the experience, noting that the sexual health information they received was both new and important for their lives and that they felt they learned it better from their peers than from instruction in traditional health classes. The majority of participants reported that the program helped them across a range of areas related to both social well-being and sexual health
Lee et al. (2016) USA	To explore essential components of an effective educational program	Setting: 1 secondary school SexEd: STI prevention	Study design: Descriptive Qualitative Research Methods: Focus groups; thematic analysis Sample size: 11 Age: 13–17	7 themes Humor Fear Empowered decision-making Peer educators Self-protection Knowledge and information on STIs Consistency of the sexual health education
Lester and Allan (2006), UK	To examine teenage perceptions of sex education, access to services, and attitudes relevant to STI	Setting: 3 schools SexEd: General perception of SBSHE in the UK	Study design: Grounded Theory Methods: Focus groups; constant comparative analysis Sample size: 32 Age: 14–15	Overall Sex education is variable, too little and too late. The need for continuous collaboration on information provision between service providers and education authorities
Likupe et al. (2021), Malawi	To explore the barriers faced in delivering sexual and reproductive health education	Setting: 12 private and public primary schools SexEd: Perception of SBSHE in Malawi	Study design: Descriptive Qualitative Research Methods: Focus groups; thematic analysis Sample size: 133 Age: 10–19	6 themes Over-emphasis on abstinence An uncondusive learning environment Existence of sexual practices linked to becoming of age rites Peer pressure Lack of sexual and reproductive health reinforcement by parents Inadequate training for teachers



Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Lupton and Tulloch (1996), Australia	To examine students' responses to their school-based HIV/AIDS and sexuality education programs	Setting: Secondary schools SexEd: School-based HIV/AIDS and sexuality education	Study design: Descriptive Qualitative Research Methods: Focus groups; analysis not specified Sample size: 138 Age: 16–17	Overall Students' valorizing of openness, trust, and expertise in the face of embarrassment and their perception of surveillance and their fears of lack of confidentiality characterize their experience of HIV/AIDS and sexuality education
Malinowski (2003), USA	To explore adolescent girls' personal experience with an infant simulator that had to be cared for over a period of 1 to 2 weeks	Setting: Mainstream Catholic secondary school SexEd: Female-only Pregnancy prevention using the baby stimulator	Study design: Phenomenology Methods: Interviews; Colatizzi's (1978) method of analysis Sample size: 9 Age: 16–17	3 themes A parenting journey incorporating intellectual, emotive, and physical faculties Recognizing the illusionary nature of previously held ideas about parenting an infant Offering counsel based on the Baby Think It Over experience
Manda et al. (2021), Malawi	To explore the experiences of very young adolescent girls in a sexuality education program	Setting: 2 primary schools SexEd: Peer support and social networks	Study design: Descriptive Qualitative Research Methods: Interviews; thematic analysis Sample size: 23 Age: 12–14	6 themes Reasons for joining the clubs with a desire to learn about SBSHE as a motivation for joining the clubs Influence on gender norms and roles Influence on child abuse practices Influence on life skills and social networks Support to go back to school Influence of clubs on sexual and reproductive health knowledge acquisition and behaviors
Maticka-Tyndale et al. (2007), Kenya	Examined the impact of a primary-school HIV education initiative on the knowledge, self-efficacy, and sexual and condom use activities of upper primary-school pupils in Kenya	Setting: 8 primary schools SexEd: Abstinence-only based on social learning theory with role modelling, the practice of desired behaviors and activities for building self-efficacy included together with didactic instruction	Study design: Descriptive Qualitative Research Methods: In-depth interviews; thematic analysis Sample size: 40 Age: 11–16	Overall Results support the conclusions that the existing infrastructure is adequate for the national roll-out of the program; that the program has its most beneficial effect on sexually inexperienced youth and should therefore be implemented with the youngest age groups possible; and that gains are gender specific, with boys reporting increased condom use while girls are more likely to decrease or delay sexual activity

Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Merrill et al. (2018), South Africa; Gauteng province	To identify perceptions of the program structure, implementation, effectiveness, and potential for improvement	Setting: 3 primary school SexEd: Female-only soccer play and sexual violence and reproductive health ten 2-h sessions taking place on school grounds after school hours twice-a week for five weeks. With SMS functions	Study design: Descriptive Qualitative Research Methods: In-depth interviews and focus groups; thematic analysis Sample size: 18 Age: 11–16	4 themes Short term outcomes Intervention implementation Mechanisms of impact Contextual factors that facilitate or impede intervention delivery
Mturi and Bechuke (2019), South Africa; Mahikeng province	Investigate the effectiveness of existing life orientation programs in South Africa	Setting: 5 rural or urban primary and secondary schools SexEd: General perception of SBSHE for girls in Africa	Study design: Descriptive Qualitative Research Methods: Semi-structured interviews; thematic analysis Sample size: 39 Age: 13–19	5 themes situation of life orientation in schools understanding of life orientation and its content understanding of the curriculum of sex education challenges faced by schools in teaching sexuality education opinion of learning sexuality education through life orientation
Mukoma et al. (2009), South Africa; Western Cape province	To evaluate the intervention of theory and evidence-based school HIV/AIDS intervention	Setting: 12 schools SexEd: Comprehensive sexuality education of 16 lessons based on the Theory of Planned Behavior	Study design: Descriptive Qualitative Research Methods: Semi-structured interviews; thematic analysis Sample size: 122 Age: 14	6 themes Fidelity of implementation Acceptability of interventions Implementation strategies Parental involvement Experience in the intervention Gender difference
Nelson et al. (2016), USA	To explore the effectiveness of the Storytelling Empowerment HIV StoryBook intervention for HIV prevention	Setting: 4 middle school SexEd: Abstinence-focus Storytelling for Empowerment HIV StoryBook using the ecodevelopment framework (Szapocznik & Coatsworth, 1999)	Study design: Grounded Theory Methods: Semi-structured interview and focus groups; thematic analysis Sample size: 23 Age: mean 12.2	3 themes Relationship Delivered Curriculum Embodied Curriculum
Njue et al. (2009), Kenya	Explore the constraints of implementing AIDS education in public schools in Kenya	Setting: 21 primary and 9 secondary schools SexEd: Abstinence HIV/AIDS prevention	Study design: Descriptive Qualitative Research Methods: Focus groups; thematic analysis Sample size: 715 Age: 12–18	3 themes System and school-level constraints Teacher-level constraints Student-level constraints

Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Nwokocho et al. (2015), Nigeria	To examine the scope, delivery and challenges of Family Life and HIV education implementation	Setting: 4 urban, private, rural, and religious school SexEd: Sexed based on Structural Functionalism, Rational Choice, and Differential Association theories	Study design: Descriptive Qualitative Research Methods: In-depth interviews and focus groups; thematic analysis Sample size: 76 Age: 12–18	Overall Effective implementation of FLHE will go a long way to ensuring that young people in Nigeria are equipped with the necessary information to enable them to exhibit the right attitude and behavior toward sexual issues
O'Higgins (2010), Ireland	To explore whether young people could make a meaningful contribution to curriculum development in sexual health	Setting: 13 public schools in urban and rural areas SexEd: General perception of SBSHE in Ireland	Study design: Participative Qualitative Research Methods: group discussions and presentations; group-level analysis Sample size: 394 Age: 15–18	Overall The importance that sex education allows them access to factual information. The issues that they wished to gain knowledge on ranged from how to establish healthy respectful, communicative relationships, knowing how babies are made, when one's ready physically and emotionally for sex, how to put a condom on, whom to go to for information and how best to talk about sexual issues. They wanted to be taught by people whom they can trust to deliver information accurately, confidentially and with confidence
Ott et al. (2003), USA	Examines how adolescent peer educators communicate HIV prevention message	Setting: Alternative high school SexEd: Peer-led HIV/AIDS prevention	Study design: Ethnography Methods: Semi-structured interviews; concept analysis Sample size: 12 Age: 15–18	3 themes Similar beliefs about HIV transmission and risk reduction across groups Different, but strong, altruistic roles among staff and peer education Difference in HIV risk perception across the three groups

Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Pendergrass et al. (2016), USA	To collect data on the PlayForward interactive videogame acceptability and real-life implementation strategies	Setting: School SexEd: Playforward video game intervention	Study design: Descriptive Qualitative Research Methods: Semi-structured interviews; thematic analysis Sample size: 14 Age: 12–15	4 themes Stakeholder groups expressed that the topics of sex, alcohol, and drugs were not being taught in an educational setting Stakeholder groups saw a videogame as a viable option to teach about sex, alcohol, and drugs Stakeholder groups thought that the videogame would fit well into other settings, such as after-school programs or community organizations Some stakeholder groups highlighted additional tools that could help with implementation, such as manuals, homework assignments, and group discussion questions
Ramalepa et al. (2022), South Africa; Madibeng province	To develop implementation guidelines of the policy on prevention and management of learner pregnancy in schools	Setting: Primary and secondary schools SexEd: Pregnancy prevention	Study design: Exploratory and Descriptive Qualitative Research; Methods: In-depth interviews; content analysis Sample size: 17 Age: 15–18	5 themes Factors influencing learner pregnancy School is not a place for pregnant learners Nurses' participation and involvement in schools Available support structures and available learning opportunities Learners reflected that they lacked support from the schools regarding learner pregnancy prevention and management The majority of them agreed that nurses should come to schools to assist with reproductive health matters such as learner pregnancy
Rehm (2011), USA	To elicit student perceptions about the effectiveness of the state-approved sex education program, Game Plan, in impacting their attitudes toward teen pregnancy	Setting: 1 high school in a Pennsylvania school district SexEd: Game Plan sex education program	Study design: Descriptive Qualitative Research Methods: Interviews; content analysis Sample size: 30 Age: 13–15	Overall Game Plan sex education was not effective in preventing teen pregnancy or reducing other at-risk behaviors

Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Smith et al. (2011), USA	explored the experiences and perceived benefits of students who participated in an abstinence-plus sex education program	Setting: 4 cities of high school SexEd: abstinence-plus sex education program	Study design: Descriptive Qualitative Research Methods: Open-ended questionnaire; thematic analysis Sample size: 1130 Age: mean 14.3	3 themes What students would like to learn about STD What did they like about the abstinence-focus program What did the student dislike about the abstinence-focus program
Smith (2015), USA	To explore teens' perspectives of sexuality education and the similarity or the difference in meanings internalized by girls and boys	Setting: 2 public high schools SexEd: General perception of SBSHE in the USA	Study design: Descriptive Qualitative Research Methods: Interviews; thematic analysis Sample size: 63 Age: 14–17	Overall Students perceive sex education's lessons through the amplification of fear-based, stigmatizing messages about pregnant teens and those suffering from STI. Students make sex education meaningful first through adults' perceptions of risk that overshadow students' own perceptions of risk, and second through anticipations of their own adulthood, while the majority of students at both schools lacked knowledge about consent, boys at the low-ranked school were particularly vulnerable to this lapse, as well as to stereotypes of the hypersexual teen
Sorhaindo et al. (2016), UK	To examine the lived experiences of young women participating in the program to contribute to a clearer understanding of the intervention process and potential mechanisms	Setting: High school SexEd: Classroom curriculum focused on child development, effective parenting skills, anger management, sexuality and relationships	Study design: Phenomenology Methods: Participant observations, focus groups, paired and individual interviews; phenomenological analysis Sample size: 20 Age: 13–15	3 themes Being challenged Connecting and engaging with adults in the program Learning about yourself
Strange and Oakley (2003), UK	To examine young people's views on sex education	Setting: co-educational secondary schools SexEd: General perception of SBSHE in the UK	Study design: Descriptive Qualitative Research Methods: Focus group; content analysis Sample size: 90 Age: 15–16	2 themes Views on mixed or single sex education The “gendering” of sex education
Waling et al. (2020), Australia	To explore Australians' wants out of their sex education and what they suggest would be most valuable for future programs in Australia	Setting: Unspecified number of schools SexEd: Relationship and sexuality education	Study design: Descriptive Qualitative Research Methods: Open-ended questionnaire; thematic analysis Sample size: 8263 Age: 14–18	2 themes Positive experience with sex education Negative experience of sex education

Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Waling et al. (2021), Australia	To explore what students in Australia desire from their sex education programs	Setting: Unspecified number of schools SexEd: Relationships and sexuality educations	Study design: Descriptive Qualitative Research Methods: Open-ended questionnaire; thematic analysis Sample size: 8263 Age: 14–18	5 themes more discussions concerning STIs, BBVs and associated sexual health matters such as reproduction LGBTIQ+ inclusive education that RSE is delivered by qualified educators discussions of consent and relationships; discussions of pleasure, sex positivity, and mechanics of sex
Widman et al. (2016), USA	To evaluate the effectiveness of ProjectHeartforGirls.com, an interactive web-based program designed to improve sexual communication skills and reduce the risk of HIV/STDs among adolescent girls	Setting: High school SexEd: Adolescent girls Reasoned Action Model (Fishbein & Ajzen, 2010) and fuzzy-trace theory (Reyna, 2008; Reyna & Brainerd, 2011)	Study design: Descriptive Qualitative Research Methods: Semi-structured interview; thematic analysis Sample size: 25 Age: 16–19	Overall Perception of abstinence and dating were highly varied and difficult in initiating sexual health discussion, texting was a central route of communication information used were incorporated into Project Heart for Girls intervention
Ybarra et al. (2014), Uganda	Explore the effectiveness of developed and tested CyberSenga, an Internet-based, comprehensive sexuality education program	Setting: all-boys, mixed-sex private Muslim, mixed-sex public secondary schools SexEd: CyberSenga sessions	Study design: Descriptive Qualitative Research Methods: Focus groups; content analysis Sample size: Not specified Age: 13–19	4 themes Abstinence Condom use Problem solving Communication
Yoo et al. (2004), USA	Explore the effectiveness of The Adolescent Family Life Program, an abstinence-only teen pregnancy prevention program	Setting: 5 rural middle and high schools SexEd: Peer sexuality education called The Adolescent Family Life Program, an abstinence-only teen pregnancy prevention program	Study design: Descriptive Qualitative Research Methods: Semi-structured interviews and focus groups; Spradley's (1979) method of analysis Sample size: 68 Age: mean 14.6	Overall The use of peer mentors was reaffirmed as valuable; however, the quality of peer mentoring was questioned and was a major issue for improvement. Other issues included: starting sexuality education in earlier grades, updating curricula and materials, offering more interactive classes, and improving peer mentor training. and using teacher input to improve the educational aspects of the program. Qualitative assessments provided valuable insights for future improvement in abstinence-only programs

Table 1 (continued)

Study (year), country	Aim	Program Description	Methodology	Results
Zanatta (2016), Brazil	To explore if taboos, social inter-dictions, and prejudice affect sexuality education in an itinerant school?	Setting: An itinerant school SexEd: General perception of SBSHE in Brazil	Study design: Descriptive Qualitative Research Methods: semi-structured focus groups; content analysis Sample size: 18 Age: 12–18	4 themes The biologization of sexuality Non-transversality of sexuality education in the itinerant school The oppression of students' desire to know about sexuality Non-transversality of sexuality education in the itinerant school

## SBSHE School-Based Sexual Health Education

with each study to unravel a novel understanding of SBSHE among adolescents.

## Results

### Characteristics of the Included Studies

As depicted in the PRISMA flowchart (Fig. 1), 17,529 articles were retrieved. Duplicates ( $n = 7082$ ) were removed using Endnote. Following the screening of the titles and abstracts from the remaining 10,439 articles, 225 articles remained for full-text assessment; this subsequently resulted in the inclusion of 43 studies. After the addition of another eight studies from these included studies, 51 studies were included. Forty-seven studies were unique, while four studies had repeated participants; they were included as they provided different analyses and insights (Hilton, 2003, 2007; Waling et al., 2020, 2021). The majority of the included studies were qualitative study designs, while the remaining two were mixed-method study designs (Hirvonen et al., 2021; Jarpe-Ratner et al., 2022). These studies were conducted in North America ( $n = 18$ ; the USA and Brazil), Africa ( $n = 15$ ; Uganda, Tanzania, Kenya, Nigeria, Zambia, and other provinces in Africa), Europe ( $n = 10$ ; UK, Ireland, Germany), Asia ( $n = 3$ ; Yemen, Philippines, and Iran), and Oceania ( $n = 5$ ; Australia and New Zealand) (Table 1).

Findings were meta-synthesized to identify three main themes: (1) teachings of SBSHE and its impact, (2) adolescents' preferred approach to SBSHE, and (3) importance of engaging and safe SBSHE.

### Teachings of School-Based Sexual Health Education and Its Impact

SBSHE provided to the adolescents in this review was not in-depth across different regions. Many participants were misinformed, and more adolescents wanted to learn about contraception. The topic of unwanted pregnancies was often geared toward female students, and they wished that their male counterparts were more involved.

### Content Coverage and Mixed Views on School-Based Sexual Health Education

**Human Biology and Reproduction** Adolescents, in this review, regardless of region, reported learning about human biology and reproduction (Achora et al., 2018; Chirwa-Kambole et al., 2020; Kemigisha et al., 2019; Merrill et al., 2018) being covered in the SBSHE. Yet, not all were knowledgeable about human development (Adams Tucker et al., 2016; Djuwitaningsih & Setyowati, 2017; Hirst, 2004). Several ado-

lescents were also misinformed, with one student reporting that “dating someone who is 10 years older than you” would cause “damages in your womb” (Adams Tucker et al., 2016).

**Understanding of Sexually Transmitted Diseases** From the included studies, many struggled to identify the differences between HIV and AIDS (Lupton & Tulloch, 1996). Students verbalized the lack of knowledge about STIs as highlighted by one such student “Any sex education we received at school was purely about diseases...don’t know very much about STIs...” (Ezer et al., 2019). There was also confusion on the modes of transmission between STIs, HIV, and AIDs (Adams Tucker et al., 2016; Lupton & Tulloch, 1996; Waling et al., 2020), or where to get tested (Smith et al., 2011). Furthermore, some adolescents had misconceptions, with one student stating that having sex “on your period” may lead to “guys get[ting] certain diseases” (Adams Tucker et al., 2016).

**Consequences of Unwanted Pregnancies** It was common for adolescents in this review to recall learning about strategies to prevent unwanted pregnancies (e.g., abstinence or practicing safe sex). Focus on preventing such pregnancies was especially common in SBSHE conducted in Africa, given the high number of unwanted pregnancies reported in these areas (Achora et al., 2018; Adams Tucker et al., 2016; Chirwa-Kambole et al., 2020; Kemigisha et al., 2019; Likupe et al., 2021; Malinowski & Stamler, 2003; Manda et al., 2021; Mturi & Bechuke, 2019). Understanding the consequences of pregnancy such as greater health risks and parenthood responsibilities has also “changed other people’s decisions” and “keep them in school” (Achora et al., 2018). As women traditionally bear the brunt of childrearing, adolescents felt that the emphasis on unwanted pregnancies was often targeted at girls. They hoped that their male peers would be equally involved as unwanted pregnancies were “not just one person’s responsibility” (Malinowski & Stamler, 2003).

**Awareness of Safe Sex** Some adolescents in Western and African regions in this review mentioned that SBSHE specifically increased their awareness of condoms, and contraceptive methods to prevent HIV and unintended pregnancy (Ezer et al., 2019; Layzer et al., 2014; Manda et al., 2021; Maticka-Tyndale et al., 2007; Merrill et al., 2018; Nelson et al., 2016; Smith, 2015; Ybarra et al., 2014). Conversely, many others displayed minimal knowledge of condoms or contraceptives (Abel & Fitzgerald, 2006; Djuwitaningsih & Setyowati, 2017; Hilton, 2007; Lester & Allan, 2006; Mturi & Bechuke, 2019; Rehm, 2011). Several adolescents recalled being advised to use condoms, but some were not educated on how to use them (O’Higgins & Gabhainn, 2010). Additional forms of contraception such as birth control or emergency pills were less discussed (Hilton, 2007; Rehm, 2011).

## Timing and Sufficiency of School-Based Sexual Health Education

Adolescents in Western, African, and Asian regions in this review often felt that it was conducted too late (Ezer et al., 2019; Hirst, 2004; Javadnoori et al., 2012; Lester & Allan, 2006; Mturi & Bechuke, 2019; O’Higgins & Gabhainn, 2010; Strange et al., 2003; Waling et al., 2020) and some “already had sex” (Strange et al., 2003) before attending it. Overall, adolescents felt that punitive measures and general statements overly simplified their SBSHE. As aptly reported by a student, SBSHE enforced “don’t do it, and that was it” (Ezer et al., 2019), often disregarding the nuance and intricacies of sexual negotiation (Layzer et al., 2017; Maticka-Tyndale et al., 2007; Widman et al., 2016; Ybarra et al., 2014). However, many struggled with sexual negotiation, fearing negative reactions or sexual violence from their partners, with one adolescent sharing that “he [boyfriend] can still beat you if you say no...” (Maticka-Tyndale et al., 2007). Adolescents who had unanswered questions on sexual health sought information from peers (Ezer et al., 2019; Hirst, 2004; Lester & Allan, 2006; Smith, 2015; Waling et al., 2020, 2021), and with the rise of technology, many adolescents have turned to the Internet and social media (Djuwitaningsih & Setyowati, 2017; Ezer et al., 2019; Waling et al., 2021).

## Adolescents’ Preferred Approach to School-Based Sexual Health Education

This theme highlighted the approach to sex education that adolescents preferred. Some adolescents raised concerns about enforcing sexual abstinence and using scare tactics in SBSHE. Others have provided broader topics for consideration, and they also hoped that SBSHE would be inclusive of all gender and ethnic categories (Table 2).

## Controversies with Abstinence-Only and Scare Tactics in School-Based Sexual Health Education

Abstinence-only and scare tactics approaches were practiced across various countries. However, the adolescents in this review had opposing views on these approaches. Some adolescents felt that scare tactics through “disturbing” visuals were effective in deterring unwanted pregnancies (Lee et al., 2016; Smith, 2015). Others felt that SBSHE should not be “about scaring kids out of having sex” but should focus on “teaching them good healthy habits to have controlled, consenting sex” (Waling et al., 2020). Some participants felt that the enforcement of abstinence caused them to “think twice about having sex” (Chirwa-Kambole et al., 2020; Denner et al., 2005; Didion & Gatzke, 2004; Nwokocha et al., 2015; Ott et al., 2003; Ybarra et al., 2014). This sentiment was common among countries in South Africa or older studies



**Table 2** Themes and subthemes

Themes	Subthemes
Teachings of school-based sexual health education and its impact	Content coverage and mixed views on school-based sexual health education Timing and sufficiency of school-based sexual health education
Adolescents' preferred approach to school-based sexual health education	Controversies with abstinence-only and scare tactics in school-based sexual health education Broader topics for considerations Importance of diversified school-based sexual health education
Importance of engaging and safe school-based sexual health education	Engaging and up-to-date sessions Availability of a safe space to learn sexual health education

conducted in the USA. However, according to studies published in recent times, more felt that “it wasn’t useful at all” (Ezer et al., 2019) as this approach assumed they would have sex after marriage (Ezer et al., 2019; Maticka-Tyndale et al., 2007; Mturi & Bechuke, 2019; Rehm, 2011; Waling et al., 2021).

### Broader Topics for Considerations

**Relationships and Sexual Negotiation** Adolescents in all regions often wished to learn more about intimate relationships and building healthy relationships with their partners (Abel & Fitzgerald, 2006; Allen, 2005; Didion & Gatzke, 2004; Hilton, 2007; Mturi & Bechuke, 2019; O'Higgins & Gabhainn, 2010; Smith, 2015; Waling et al., 2021). In addition, they would also like to learn how to improve their negotiation skills to seek consent, engage in safe sex, and get tested for STDs with their partners (Abel & Fitzgerald, 2006; Waling et al., 2021). Some adolescents wanted to know more about sexual practices and pleasures, as well as how to engage in these practices safely (Allen, 2005; Brüll et al., 2016; Hilton, 2007; O'Higgins & Gabhainn, 2010; Smith et al., 2011; Waling et al., 2021).

**Dealing with Peer Pressure** Others requested help to navigate peer pressure that emphasized sexual relations to “prove” themselves (Abel & Fitzgerald, 2006; Likupe et al., 2021; O'Higgins & Gabhainn, 2010; Smith et al., 2011). For example, male adolescents in this review were conscious of how much their sex is influenced by the prevailing masculinity culture. They wanted strategies for saying no, in a sense that allowed them not to appear foolish or ‘chicken’ (Hilton, 2007). Overall, many adolescents in this review wanted to learn about consent, and understand what constitutes healthy and unhealthy relationships (e.g., topics surrounding sexual abuse and partner violence) (Ezer et al., 2019; Manda et al., 2021; O'Higgins & Gabhainn, 2010; Waling et al., 2021).

### Importance of Diversified School-Based Sexual Health Education

The adolescents highlighted the need to diversify SBSHE by including practices from different sexualities and cultures surrounding sexual health education. Many LGBT participants expressed their frustrations with the heteronormativity of their SBSHE. The exclusion of LGBTs limited their knowledge of engaging in safe sex thus causing them to ignore “safe sex” precautions (Ezer et al., 2019; Jarpe-Ratner et al., 2022). Cultural minorities were also disheartened that they were not adequately represented in SBSHE (Hirst, 2004; Waling et al., 2021). As one African-American adolescent expressed: “Never ever [have I seen any African-American people featured in sexual [ity] education]...They're always White.”(Hirst, 2004). This strong emphasis on diversity among gender identity and ethnicity is common in the Western context (e.g., in the USA and Australia).

### Importance of Engaging and Safe School-Based Sexual Health Education

The use of engaging elements for SBSHE was important for participants. Additionally, having a safe space to learn with competent educators was essential. Outside experts, more visuals, and narratives for immersive learning were welcomed.

### Engaging and Up-To-Date Sessions

**More Discussions and Interactions** Adolescents, regardless of gender, enjoyed “more discussion in class” (Allen, 2005) and small discussion groups with friends (Allen, 2005; Strange et al., 2003), families, and educators (Allen, 2005; Cornelius et al., 2012; Hilton, 2003; Merrill et al., 2018; Nelson et al., 2016; O'Higgins & Gabhainn, 2010; Strange et al., 2003). Both young and older adolescents felt that interacting or listening to personal stories from those affected by HIV or unwanted pregnancies were deemed to convey a stronger message (Adams Tucker et al., 2016; Ado & Mensah, 2015;

Allen, 2005; Lupton & Tulloch, 1996; O'Higgins & Gabhainn, 2010; Rehm, 2011; Smith et al., 2011).

**Engaging Visuals** Others would like SBSHE to be less repetitive and more engaging through visuals such as prints, videos, diagrams, and slide shows (Al-Iryani et al., 2013; Hilton, 2007; Nwokocha et al., 2015; O'Higgins & Gabhainn, 2010). In recent years, studies conducted in the USA have incorporated technologies such as animations and video games were incorporated into SBSHE since they were deemed visually appealing or entertaining (Layzer et al., 2017; Pendergrass et al., 2016; Widman et al., 2016). Similarly, other high-income countries had incorporated the use of anonymous text messaging, avatar-based games (Brüll et al., 2016; Widman et al., 2016), computer-based learning, or game-based learning which has gained popularity among the participants (Allen, 2005; Cornelius et al., 2012; Haruna et al., 2018; Nwokocha et al., 2015). Adolescents who received only text-based SBSHE highlighted that face-to-face interactions were still important (Cornelius et al., 2012).

#### Availability of a Safe Space to Learn Sexual Health Education

**Ability to Freely Express Themselves** Adolescents in this review wanted to receive SBSHE in a private (Allen, 2005; Brüll et al., 2016; Hilton, 2003; Lester & Allan, 2006; Maticka-Tyndale et al., 2007; Merrill et al., 2018; Pendergrass et al., 2016; Widman et al., 2016; Zanatta et al., 2016) and safe (Adams Tucker et al., 2016; Chirwa-Kambole et al., 2020; Jarpe-Ratner et al., 2022; Merrill et al., 2018; Smith, 2015; Waling et al., 2020) environment. They would like to “feel free” to express themselves without the fear of judgment (Chirwa-Kambole et al., 2020).

**Relaxed and Respectful Environment** Adolescents enjoyed SBSHE in a relaxed and informal setting (Adams Tucker et al., 2016; Manda et al., 2021; Merrill et al., 2018; Mturi & Bechuke, 2019) as it made learning “easier than other courses” (Haruna et al., 2018) without having to “stress yourself” (Adams Tucker et al., 2016). Safe space to learn sexual health education was jeopardized by disruptive adolescents who “laugh[ed] and gigg[ed]” (Haruna et al., 2018), “made jokes” or disrespected others (Adams Tucker et al., 2016; Didion & Gatzke, 2004; Haruna et al., 2018; Lupton & Tulloch, 1996; Mukoma et al., 2009; Smith, 2015; Smith et al., 2011; Strange et al., 2003). Disruptions in SBSHE were often caused by rowdy male students as a means of publicly demonstrating their masculinity with jokes about sexuality (Hirst, 2004; Lupton & Tulloch, 1996; Mukoma et al., 2009).

**Having Competent Educators** To provide a safe space, the types of SBSHE educators mattered as well. While some adolescents felt that peer educators were more relatable (Ezer et al., 2019), others preferred unfamiliar adults so that adolescents could receive non-biased information and could freely ask questions (Chirwa-Kambole et al., 2020; Lester & Allan, 2006). Many adolescents in this review were uncomfortable when they were taught by familiar faces (Allen, 2005) as they felt that their existing relationships with their educators were “too close” (Allen, 2005). Doctors, nurses, and qualified counselors were preferred by the participants in various regions, and among both young and older adolescents. This was because professionals were deemed more knowledgeable, and more likely to uphold confidentiality (Achora et al., 2018; Ado & Mensah, 2015; Brüll et al., 2016; Hilton, 2003, 2007; Javadnoori et al., 2012; Lupton & Tulloch, 1996; Mturi & Bechuke, 2019; Njue et al., 2009; O'Higgins & Gabhainn, 2010; Ramukumba et al., 2020; Waling et al., 2021). Adolescents benefited from SBSHE when educators were knowledgeable (Abel & Fitzgerald, 2006; Adams Tucker et al., 2016; Chirwa-Kambole et al., 2020; Ezer et al., 2019; Hilton, 2003; Jarpe-Ratner et al., 2022; Likupe et al., 2021; Lupton & Tulloch, 1996; Mturi & Bechuke, 2019; Nwokocha et al., 2015; Smith et al., 2011; Strange et al., 2003; Waling et al., 2020) and confident to teach about sexual health (Adams Tucker et al., 2016; Ado & Mensah, 2015; Ezer et al., 2019; Javadnoori et al., 2012; Likupe et al., 2021; Njue et al., 2009; Smith, 2015; Strange et al., 2003; Waling et al., 2020).

**Having Educators That They Can Trust** Regardless, participants were more receptive to educators that they “can trust” (Hilton, 2007), which was important in ensuring a safe space. Key factors to upkeep trust include keeping confidential information and refraining from gossip (Adams Tucker et al., 2016; Didion & Gatzke, 2004; Hilton, 2007; Lupton & Tulloch, 1996; Merrill et al., 2018; Njue et al., 2009; Sorhaindo et al., 2016; Waling et al., 2021; Yoo et al., 2004). Adolescents wished to be “treated with respect” and not “belittled” by their educators (Adams Tucker et al., 2016; Chirwa-Kambole et al., 2020; Lester & Allan, 2006; Smith et al., 2011; Sorhaindo et al., 2016; Yoo et al., 2004). Conversely, adolescents in this review felt judged or punished by their educators when their educators were deemed not trustable and had their thoughts “repeated to their parents” (Adams Tucker et al., 2016; Hilton, 2003; Hirst, 2004; Njue et al., 2009; Smith, 2015; Yoo et al., 2004).

## Discussion

This review consolidated the adolescents' perceptions, experiences, and needs about SBSHE, and the findings were represented in three main themes: (1) teachings of

SBSHE and its impact, (2) adolescents' preferred approach to SBSHE, and (3) importance of engaging and safe SBSHE. The types of SBSHE and students' experiences and needs of SBSHE are highlighted in this discussion.

The adolescents' expectations of sexual and reproductive health from the included studies indicated that they yearned for a holistic sexuality education approach that promotes conscious, healthy, and consensual choices in relationships and sexuality. Yet, many adolescents from the included studies were frustrated with their SBSHE which did not address these topics. Hence, despite the global increase in policies that promote comprehensive sex education, the experiences described by the adolescents in this review were not in line with United Nations Educational Scientific and Cultural Organization (UNESCO) SBSHE guidelines (UNESCO, 2018). These significant gaps between policies and practical implementation need to be addressed. It is also noteworthy that despite the highest number of HIV-positive cases among adolescents from regions such as Africa, Asia, and Latin America (Chi et al., 2011), available studies from these regions were limited. Hence, future research should strive to provide a global representation of adolescents' perspectives on SBSHE.

Our review found that the recently included studies, those published after 2015, had sought to address broader topics ranging from mutual consent to sexual contact, sexual abuse to partner violence. This is a commendable move toward UNESCO's guidelines to provide a more comprehensive SBSHE for adolescents (UNESCO, 2018). However, many participants expressed that SBSHE had often remained superficial and missed the intricacies of relationship building. Similarly, Burkett and Hamilton (2012) (Burkett & Hamilton, 2012) reported that SBSHE did not provide realistic accounts of relationships and negotiations in terms of sexual encounters. Hence, due to the complexity of adolescent relationships, the future SBSHE needs to move past the simplistic notions of "just say no" (Maticka-Tyndale et al., 2007) and include applicable topics on relationship building, sexual consent, sexual abuse, and partner violence (Coy et al., 2016). SBSHE guidelines by UNESCO recommend that adolescents be taught to be able to distinguish between healthy and unhealthy sexual relationships, and the different ways of expressing love as one matures (UNESCO, 2018). Recent studies have reported that critical in-class discussions during sexual health education can provide opportunities for discussions and educate youths about unfamiliar and sensitive content (Malo-Juvera, 2012; Osman, 2021). For example, the use of "young adult literature" during English and Language Arts lessons had been shown to successfully teach adolescents a variety of skills, including understanding sexual health topics related to sexual consent, sexual abuse, and partner violence (Palmer & Hirsch, 2022). The findings suggested

that the learned skills and knowledge promoted critical thinking and thus could enable adolescents to navigate their relationships in the future (Malo-Juvera, 2012; Palmer & Hirsch, 2022).

UNESCO guideline recommends that SBSHE be diversified and includes teachings about gender identity and respect for different identities (UNESCO, 2018). However, the findings of our review emphasized that SBSHE was not comprehensive and inclusive for adolescents who were LGBT and/or ethnic minorities. This coincided with a recent survey, reporting that 44% of non-heterosexual young women found their SBSHE not useful (Sundaram et al., 2016). Like another study (Harrison et al., 2016), the adolescents in this review raised the need for gender inclusivity in SBSHE. Research has shown that inclusive sexual health education reduces homophobic bullying and harassment and increases the perception of safety among LGBT students (Goldfarb & Lieberman, 2021). This is supported by a 2015 survey of 1232 gay and straight adolescent students in the USA which found that inclusive SBSHE was associated with a higher perception of safety and lower levels of harassment (Snapp et al., 2015). Another study has also demonstrated that this approach reduces homophobic and transphobic bullying (Gegenfurtner & Gebhardt, 2017).

Unique to our review, the adolescents highlighted that the SBSHE must also be taught within the larger context of intersectionality and transcend beyond gender identity and also racial and ethnic/cultural groups. Hence future SBSHE curricula could consider including and evaluating these suggestions.

Adolescents from this review valued having a "safe space" to learn about sexual health and sexuality. They emphasized the need for a trusting relationship with the educators. Conversely, adolescents were less receptive when they felt judged, punished, or had their confidentiality breached. These highlighted the need for future SBSHE to take into consideration program content, program venue, and the training of educators. Previous literature has also reported the need to set ground rules to build trust with students so that they can participate freely in conversations on sexual health (Goldfarb & Lieberman, 2021). To ensure confidentiality, educators could consider using anonymous question boxes, online polls, or forums to receive questions that adolescents may find embarrassing or unsafe to ask openly in a classroom (Green et al., 2015; World Health Organization, 2018b). While adolescents in this review have shown preferences for "outside experts" to conduct the SBSHE, not all schools have the resources to acquire professional services in this aspect. Hence, having dedicated teachers (e.g., specialist sexual health education teachers) who are certified and trained in teaching sexual health, and do not have a direct student–teacher relationship with adolescents could be a cost-saving and viable solution (Pound et al., 2016).

There is a myriad of teaching methods developed for SBSHE. Congruent with other research, the studies in this review reported that interactive approaches were utilized in SBSHE to promote sexual health (Leung & Lin, 2019). From our review, it is evident that these interactive components (e.g., group discussions, storytelling, and game-based learning) were compelling for the youths in this review. Rather than having teachers as the ‘directors’ of the learning process in SBSHE, UNESCO recommends that future SBSHE should develop interactive strategies to engage the learners. This can encourage active participation and allow adolescents to critically think about their own lives and sexual health (UNESCO, 2018). Some SBSHE in this review included technology-based approaches (e.g., text messaging or avatar-based games). These approaches can conceal the identities of users, thus providing adolescents with a “safe space” to discuss and ask questions on sexual health anonymously without the fear of judgment. However, the use of technology needs to be carefully monitored by schools to ensure that the sexual content is age-appropriate for adolescents, factual, and controlled (McCarty-Caplan, 2013).

### Limitations

This review has some limitations. Firstly, only studies written in English were included; hence, relevant studies in other languages may have been excluded. Secondly, in many of the included studies, the relationship between the researcher and their participants was rarely mentioned, questioning the rigor of the included studies. Lastly, most of the included studies were conducted in North America, Africa, and Europe, with limited studies in countries like Asia and Latin America. Despite these limitations, the findings of the review have provided in-depth insights into the students’ experiences and needs of SBSHE, complementing existing quantitative research and paving the way for a higher quality SBSHE for adolescents.

### Future Implications

For a global representation, future research should examine the SBSHE in other countries, especially those with a high prevalence of HIV-positive adolescents beyond Africa (e.g., Asia and Latin America). There is also a need for diverse and inclusive teachings on mutual consent, sexual abuse, and partner violence in the SBSHE curricula. Moreover, intersectionality, crossing gender identity, racial groups, and ethnic/cultural groups should also be considered during these sessions. Educators must also be educated to provide a safe and trusting environment for adolescents. Additionally, our review adds to the growing number of research that has highlighted the importance of interactive approaches to appeal to youths. Align with this, future SBSHE should consider

implementing interactive and technology-based pedagogies when teaching sexual health. Future research should explore the use of different educators in providing SBSHE (e.g., peers, and healthcare providers). Lastly, future research should also triangulate the perceptions of teachers, peer educators, and administrators with adolescents’ views, which would provide a more holistic understanding of SBSHE.

### Conclusion

This review consolidated qualitative evidence around the experiences, perceptions, and needs of adolescents about the SBSHE. To fulfill the requirements of adolescents, the SBSHE curriculum needs to cover aspects such as consent, and sexual violence. Furthermore, SBSHE must also be inclusive and equipped with well-trained educators. Areas of future research should also extend to evaluating the effectiveness of different types of educators, and conducting more research in countries like Asia or Latin America. By taking into consideration the experiences and needs of adolescents, we can better develop the SBSHE that is useful and relevant to them.

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**Data Availability** The data that support the findings of this study are available at reasonable request from the corresponding author.

### Declarations

**Competing interest** No conflict of interest has been declared by the author(s).

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