Vol.7 Iss.3 2026 Communication & Education Review
https://doi.org/10.37420/j.cer.2026.041

Visualization Study of the Literature on School-Based Sexual Education

Zhao Hang, Wang Ya*
Faculty of Teacher Education, Aba Teachers College, Sichuan, Wenchuan, China
Corresponding author, E-mail: 20179611@abtu.edu.cn

Abstract:
To explore the hot issues and developing trend of the research of school-based sexual education, and to provide a mirror and reference for the research on school-based sexual education in China. In the past decade, totally 1717 effective documents included in the "Web of Science" core set database were used as research objects, and CiteSpace V software was used for visual analysis. The data collection time was March 8, 2025. At present, the publications in this field were mainly in the United States(383), Brazil(227), Australia(136), South Africa(108), et al; the top three research institutions were "Univ Auckland in New Zealand" (24), "Univ KwaZulu Natal in South Africa" (22), "Australia Deakin Univ" (18); the high-impact journal was "Journal of Adolescent Health"; the main authors were "Goldman J D G ""Louisa Allen""Dennis A Francis", et al. the most frequent cited authors were "Kirby D""UNESCO""Michel Foucault", et al; the field has been developed on the basis of "Sociology of Education", "Artistic Psychology", "Sports and Health", "Environmental and Ecological Statistics", and "Linguistics", and has been integrated in the last three years; high frequency keywords including "sex education" "adolescent" "sexuality" "education" were more common. mutant words including "Sexuality" "America" "Africa" were more common. The research hotspots on school-based sexual education during the past decade include discourse framing of school-based sexual education , expression of different stakeholders, supply-side and demand-side demands. School-based sexual education among Africa , "LGBTQ", teacher training, cross-fertilization of disciplines will be a hot research topic in the future.

Keywords:
Student health care services; Sexual education; Research

1 Introduction

In international human rights law, the concept of inclusive relationships and sexuality education has been firmly established [1]. Robust global evidence demonstrates the positive effects of sexuality education on children, adolescents, and social development [2]. School-based sexuality education refers to sexuality education practices conducted within the school context, distinct from other direct sexual learning experiences, and operates as a belief framework characterized by distinct national ideological features. School sexuality educators, grounded in a thorough understanding of the unique principles of sexuality education (and its avoidance), employ sex and reproductive education, relationship education, and other relevant pedagogical

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

methods to transmit to learners the indirect structural dimensions of sexualized and gendered bodies, identities, and behaviors—including sexual feelings, desires, and behaviors—as well as sexual knowledge, skills, and information, thereby facilitating school-based sexuality education practices that promote sexual and reproductive health [3]. Presently, nearly every country has developed implementation systems for sexuality education adapted to schools, students, and teachers [4]. In India, the implementation of school-based sexuality education has remained a highly controversial social issue [5]; in South Africa, where 8.7% of young people are living with HIV, schools face considerable pressure in implementing sexuality education [6]; in Kenya, Senegal, and Zambia, school sexuality education is actively working to terminate the detrimental effects of child marriage customs on girls [7]; in Uganda, school sexuality education is addressing diverse sexual and reproductive health needs among adolescents and providing youth-friendly curriculum services [8]; in Sweden [9] and the United States [10], the sexual and reproductive health of youth with intellectual disabilities has been incorporated into school sexuality education systems; in Ghana, Cambodia, and Ethiopia, menstrual hygiene management for female students has received significant attention [11]; in Peru and Guatemala and other Latin American countries, Comprehensive Sexuality Education (CSE) is being promoted across all levels and types of schools to facilitate the realization of adolescent sexual and reproductive health and rights [12]; and in eleven low-income countries across Africa and Asia, school-based comprehensive sexuality education curricula are currently being implemented [13]. However, the development status and quality of school sexuality education vary considerably among countries and organizations worldwide.

In China, Chairman Mao Zedong advocated for the inclusion of a birth control course in secondary schools at the Third Plenary Session of the Eighth Central Committee in 1957, which is considered the inception of sexuality education in new China [14]. In 1960, Premier Zhou Enlai formally declared that adolescents needed to "popularize scientific knowledge of sexuality" [15]. By 1988, sexuality education content was officially incorporated into the school curriculum and subsequently developed into age-appropriate prevention strategies [16]. In 2008, the Ministry of Education issued the Guidelines for Health Education in Primary and Secondary Schools, requiring all schools to "provide 6–7 hours of health education per semester" and "ensure that no less than 6 hours in three years of junior secondary education and no less than 4 hours in three years of senior secondary education are allocated to HIV/AIDS prevention and sexual health education" [17]. In the Hong Kong Special Administrative Region of China, the school-based "Sex Education and AIDS Prevention Programme" enables students to acquire sufficient knowledge regarding contraception and condom use [18]. In the Taiwan region of China, medical schools are committed to providing effective courses on sexual health and wellness for nursing students [19]. Nevertheless, the incidence of unintended pregnancy among Chinese youth is increasingly rising, and the age of sexual debut is progressively declining. The Internet [20] has become the most important channel for Chinese adolescents to access sexual information (including false and violent sexual content). According to data from the China Health Statistics Yearbook published in recent years, more than 6.5 million abortion cases occur annually [21], nearly half of which involve young people under 25 years of age [22]. Another meta-analysis report on sexual behavior among Chinese youth indicates that the rates of unintended pregnancy and abortion in this population are 15.1% and 10.8%, respectively; as many as 53.6% of young people reported not using condoms during their most recent sexual intercourse [23]. Only 55.6% of adolescents claimed to have received formal sexuality education from schools or parents [24]. While a series of national laws, regulations, and policy documents supporting the implementation of sexuality

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

education in schools have promoted the healthy development of school sexuality education in China, the field continues to face numerous challenges, including outdated conceptualizations, insufficient class hours, inadequate teaching staff, scarce teaching materials, weak research foundations, and sensitive topical issues [25].

This study employs CiteSpace V software to conduct a visualized analysis of literature on school sexuality education research published in the Web of Science Core Collection from 2011 to 2024, identifying research hotspots, analyzing the knowledge base, developmental trajectory, and research frontiers in this field, with the aim of providing reference and insights for the high-quality development of school sexuality education in China.

2 Data Source and Methods

2.1 Data Source

This study constructed the following search query in the Web of Science Core Collection: ("school* AND sex* AND edu*") OR ("school* AND sex* AND teach*"). The time span was set from 2011 to 2024, with the search field designated as "Topic," and data were retrieved on March 8, 2025. A total of 1,782 publicly published documents in the field of school sexuality education were obtained. After deduplication processing using CiteSpace V software, 1,717 valid documents were retained for analysis.

2.2 Methods

Using CiteSpace V software, the literature was imported into the system in standard format. The time span was set from 2011 to 2024, with the time slice set to "1 year." Corresponding algorithms, nodes, and matching thresholds were configured accordingly. By examining the distribution of publications across different countries and institutions, highly cited journals, and prolific authors and cited authors in school sexuality education research over the past decade, this study elucidates the principal knowledge structures of this field. Furthermore, through analysis of document co-citation, related disciplines, keywords, and their burst detection, this study identifies the knowledge base, research hotspots, and frontiers in this field, thereby predicting future research trajectories.

3 Results

3.1 Countries and Institutions

In CiteSpace, "Country" and "Institution" were selected as node types. The Pathfinder algorithm was employed, with thresholds defined as (2, 2, 20), (4, 3, 20), and (4, 3, 20). Visualized maps were generated to analyze the distribution of publications across different countries and institutions. (1) At the national level, research capacity in school sexuality education is primarily concentrated in the United States, Brazil, Australia, South Africa, and other countries (see Table 1). Over the past decade, the United States ranked highest in publication output with 383 articles, accounting for 22.31% of the total; Brazil followed with 227 articles (13.22%); Australia ranked third with 136 articles (7.92%). Subsequently, the rankings were South Africa (108 articles, 6.29%), the United Kingdom (86 articles, 5.01%), Canada (72 articles, 4.19%), Spain (50 articles,

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

2.91%), the Netherlands (44 articles, 2.56%), New Zealand (37 articles, 2.15%), and Sweden (32 articles, 1.86%). Meanwhile, centrality analysis revealed that the United States achieved a centrality score of 0.48, occupying a pivotal position in this research field, followed by the United Kingdom, Australia, and other countries. During this period, China contributed 24 publications, representing 1.4% of the total, which did not rank among the top ten, with a centrality of 0.02.

Table 1. Top 10 Countries by Publication Output in School Sexuality Education Research

Rank	Country	Publications (n)	Percentage (%)	Centrality
1	United States	383	22.31	0.48
2	Brazil	227	13.22	0.06
3	Australia	136	7.92	0.09
4	South Africa	108	6.29	0.07
5	United Kingdom	86	5.01	0.20
6	Canada	72	4.19	0.05
7	Spain	50	2.91	0.05
8	Netherlands	44	2.56	0.07
9	New Zealand	37	2.15	0.01
10	Sweden	32	1.86	0.06

(2) At the institutional level, core institutions are predominantly universities (see Table 2). Over the past decade, the University of Auckland, located in the largest city of New Zealand, ranked first in publication output with 24 articles. Australia has four universities ranked among the top 10, among which Deakin University contributed 18 publications with a centrality of 0.03, occupying a pivotal position in this research field within the country. Additionally, both the United States and South Africa have two universities each ranked among the top 10; the two U.S. universities both achieved a centrality of 0.01, while the two South African universities both recorded a centrality of 0. No research institutions from China have entered the top 10. Only Chung Shan Medical University (Taiwan), City University of Hong Kong, Beijing Normal University, and Renmin University of China contributed 3 publications each, while The Education University of Hong Kong, Chinese Center for Disease Control and Prevention, Beijing LGBT Center, China Family Planning Association, and The Chinese University of Hong Kong each contributed 1 publication.

Table 2. Top 10 Institutions by Publication Output in School Sexuality Education Research

Institution	Country	Publications (n)	Percentage (%)	Centrality
Univ Auckland	New Zealand	24	1.40	0.01
Univ KwaZulu Natal	South Africa	22	1.28	0.00
Deakin Univ	Australia	18	1.05	0.03
Stellenbosch Univ	South Africa	14	0.82	0.00
Columbia Univ	United States	13	0.76	0.01
Univ Minnesota	United States	12	0.70	0.01
La Trobe Univ	Australia	12	0.70	0.00
Univ Estadual Paulista	Brazil	11	0.64	0.00
Monash Univ	Australia	11	0.64	0.03
Griffith Univ	Australia	11	0.64	0.00

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

3.2 Highly Cited Journals

In CiteSpace, "Cited Journal" was selected as the node type. The Pathfinder algorithm was employed, with thresholds defined as (3, 3, 20), (6, 6, 30), and (6, 6, 30). A journal co-citation visualization map was generated (Figure 1) to analyze highly cited journals in school sexuality education research. A total of 25 journals received more than 100 citations. Table 3 presents the top 10 journals by citation frequency. Journal of Adolescent Health ranked highest with 471 citations and also demonstrated relatively high centrality (0.06). Notably, THESIS exhibited a centrality of 0.16, substantially exceeding that of other journals, identifying it as a pivotal journal in this field.

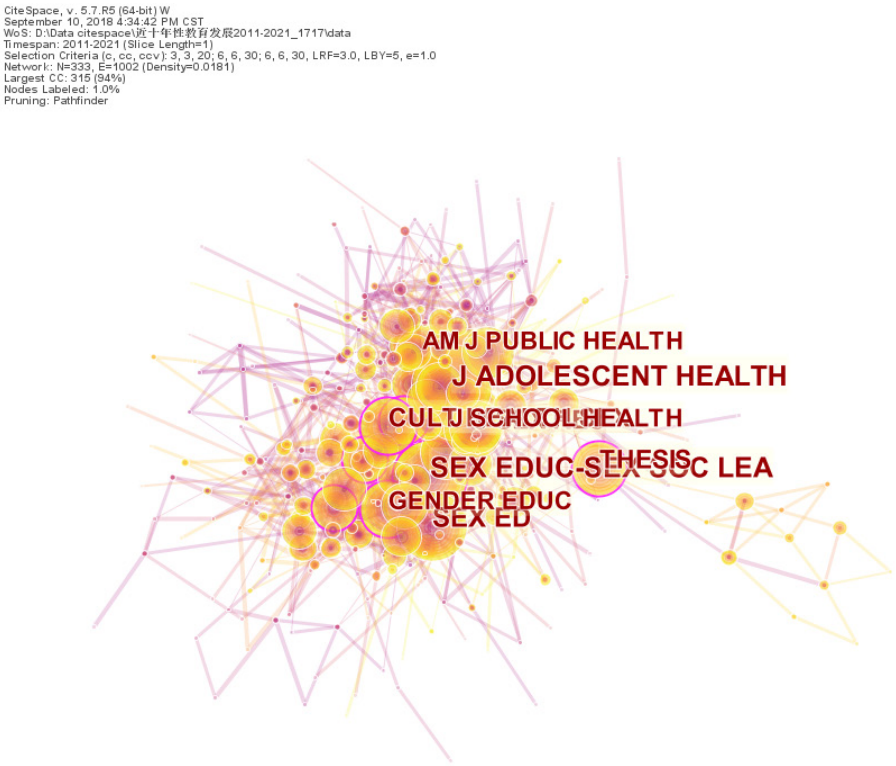


Figure 1. Distribution of Highly Cited Journals in School Sexuality Education Research

Table 3. Top 10 Most Cited Journals in School Sexuality Education Research

Rank	Journal	Citations	Centrality	Impact Factor
1	J Adolescent Health	471	0.06	7.397
2	Sex Educ-Sex Soc Learn	416	0.13	2.863
3	J Sex Educ	303	0.03	4.883
4	THESIS	232	0.16	3.145
5	J Sex Res	207	0.08	4.453
6	Cult Health Sex	195	0.13	2.154
7	J School Health	187	0.06	2.667
8	Gender Educ	181	0.10	2.235
9	Am J Public Health	179	0.07	11.561
10	Lancet	170	0.02	202.731

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

3.3 Prolific Authors and Highly Cited Authors

In CiteSpace, "Author" and "Cited Author" were selected as node types. The Pathfinder algorithm was employed, with thresholds defined as (2, 2, 15), (4, 3, 20), and (4, 3, 20). An author collaboration visualization network map was generated (Figure 2). Table 4 presents the prolific authors and highly cited authors in this field over the past decade. In this domain, connections between clusters are relatively dense, with numerous international researchers engaged in diverse research directions. Among the multiple academic communities formed, Australian scholars and their domestic teams predominate, while transnational academic exchanges remain relatively limited.

On one hand, collaborations among prolific authors are primarily concentrated within Australian universities (see Table 4). Specifically: (1) The team of Goldman Juliette D. G. and Collier-Harris Christine A from the School of Education and Professional Studies, Griffith University, Queensland, Australia, focuses on children and adolescents' sexual and reproductive safety, pre-service learning and teaching of puberty/sexuality education for primary school teachers, professional standards for sexuality education teachers, and the localization of UNESCO's International Technical Guidance on Sexuality Education. (2) The team of Bernadette Duffy, Fotinatos Nina, Smith Amanda, and Burke Jenene from Ballarat Community Health Centre, School of Health Sciences, Federation University Australia (formerly University of Ballarat), School of Education, and Family Planning Victoria, conducts research on sexuality education provision by primary school teachers in their state, including teaching outsourcing, curriculum development, and learning opportunities. (3) The team of Jones Tiffany, Gray Emily, Harris Anne, Hillier Lynne, and Mitchell Anne from the School of Education, University of New England; School of Education, RMIT University; Faculty of Education, Monash University; and La Trobe University, investigates human rights protection for GLBTIQ teachers in schools, diverse sexuality education and anti-bullying programs for LGBTQ students, policies and school attitudes toward bisexual students, and school-based youth HIV prevention funding initiatives. (4) The team of De Castro Leão, Andreza Marques, Ribeiro, Costa, and Ana Paula Leão from São Paulo State University (UNESP), Brazil, examines the legitimacy and visibility of school sexuality education, sexuality education curriculum and pedagogy, and professional training for sexuality educators. (5) The team of Tsai Li-Ya, Huang Cheng-Yi, Liao Wen-Chun, Tseng Tsui-Hwa, Lai Te-Jen, Lee She-Uan, Yen Wen-Jiuan, and Li Chi-Rong from Chung Shan Medical University (Graduate Institute of Medical Science, School of Nursing, Department of Psychiatry, Chung Shan Medical University Hospital) and Chang Gung University School of Nursing, Taiwan, China, focuses on the role and significance of sexual care education for nursing students and Sexual Health Care (SHC) interventions.

On the other hand, among highly cited authors with citation frequency ≥ 100, the World Health Organization (WHO), United Nations Educational, Scientific and Cultural Organization (UNESCO), and scholars from the United States, France, and New Zealand constitute the core highly cited author group (see Table 4). The article "The Effectiveness of Sex Education and HIV Education Interventions in Schools in Developing Countries" by Kirby D., Obasi A., and Laris B. A. from ETR Associates, Scotts Valley, United States, and the University of Liverpool, United Kingdom, published in the 2006 WHO Technical Report Series, has been cited 169 times. The article "International Technical Guidance on Sexuality Education: An Evidence-Informed Approach for Schools, Teachers and Health Educators," included in Volume I of UNESCO's Rationale for

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

Sexuality Education (2009), Priority Coordination Section, HIV and AIDS Division, has been cited 164 times. French philosopher and historian Michel Foucault's The History of Sexuality (Histoire de la sexualité), originally published in 1980 and republished in 2005, has been cited 94 and 159 times respectively. Judith Butler from the Department of Comparative Literature, University of California, Berkeley, United States, has accumulated 164 citations for her two works: Gender Trouble: Feminism and the Subversion of Identity (1990) and Undoing Gender (2004). The WHO report Preventing Early Pregnancy and Poor Reproductive Outcomes Among Adolescents in Developing Countries: Evidence-Based Guidelines (2012), which proposed recommendations for preventing early pregnancy and adverse reproductive outcomes, has been cited 149 times. Allen L. from the Faculty of Education, University of Auckland, New Zealand, published the article "'It's not who they are, it's what they are like': Reconceptualising Sexuality Education's 'Best Educator' Debate" in Sex Education (2009), arguing that peers are the most suitable candidates for delivering school-based sexuality education, which has been cited 123 times.

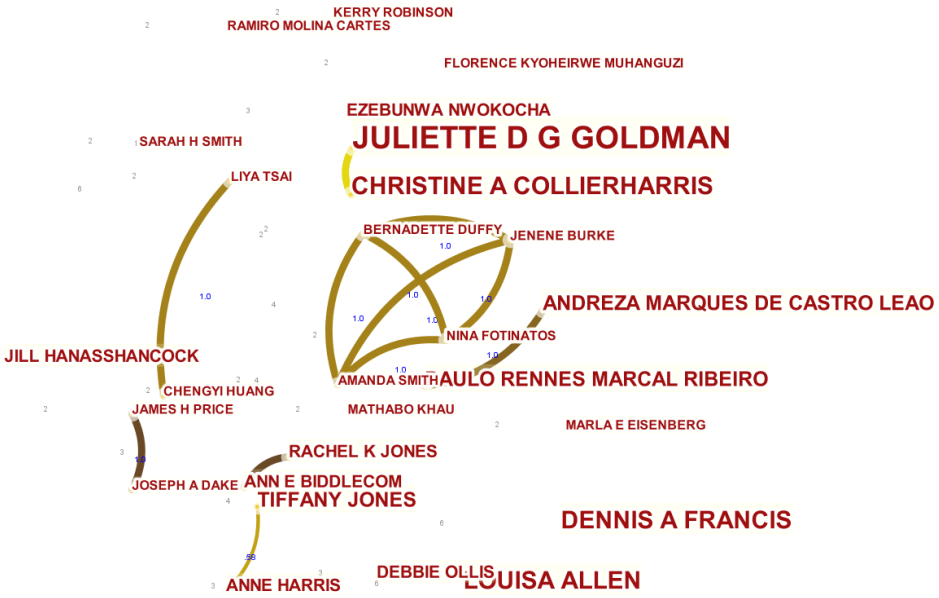


Figure 2. Knowledge Map of Prolific Author Collaboration in School Sexuality Education Research

Table 4. Top 10 Prolific Authors and Highly Cited Authors in School Sexuality Education Research

Category	Author	Publications (n)	Centrality
Prolific Authors	Juliette D. G. Goldman	11	0.14
	Louisa Allen	6	0.04
	Dennis A. Francis	6	0.00
	Jill Hanass-Hancock	6	0.01
	Tiffany Jones	6	0.02
	Christine A. Collier-Harris	6	0.01
	Venkatraman Chandramouli	5	0.01
	Paulo Rennes Marçal Ribeiro	4	0.01
	Andreza Marques De Castro Leão	4	0.01
	Anne Harris	3	0.01

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

Highly Cited Authors	Kirby D.	169	0.12
	UNESCO	164	0.04
	Foucault Michel	160	0.01
	Butler J.	159	0.31
	World Health Organization	149	0.22
	Allen L.	123	0.05
	Michel Foucault	94	0.08
	Epstein D.	88	0.07
	Fine M.	80	0.21
	Kirby D.	76	0.07

3.4 Co-citation Analysis of References

In CiteSpace, "Cited Reference" was selected as the node type. The Pathfinder algorithm was employed, with thresholds defined as (2, 1, 14), (2, 3, 20), and (2, 3, 20). A key literature visualization network map was generated (Figure 3).

Node 1: UNESCO (2018). "Comprehensive Sexuality Education: A Foundation for Life and Love Campaign." International Technical Guidance on Sexuality Education. This document was cited 57 times, with a burst value of 5.12.

Node 2: Haberland, N., et al. (2015). "Sexuality Education: Emerging Trends in Evidence and Practice." Journal of Adolescent Health. This article was cited 34 times, with a burst value of 4.53.

Node 3: Pound, P., et al. (2016). "What Do Young People Think About Their School-based Sex and Relationship Education? A Qualitative Synthesis of Young People's Views and Experiences." BMJ Open. This article was cited 22 times, with a burst value of 4.0.

Node 4: Haberland, N. A., et al. (2015). "The Case for Addressing Gender and Power in Sexuality and HIV Education: A Comprehensive Review of Evaluation Studies." International Perspectives on Sexual and Reproductive Health. This article was cited 17 times, with a burst value of 4.15.

Node 5: World Health Organization (2015). "Standards for Sexuality Education in Europe: A Framework for Policy Makers, Educational and Health Authorities and Specialists." Standards for Sexuality Education in Europe. This document was cited 16 times, with a burst value of 3.59.

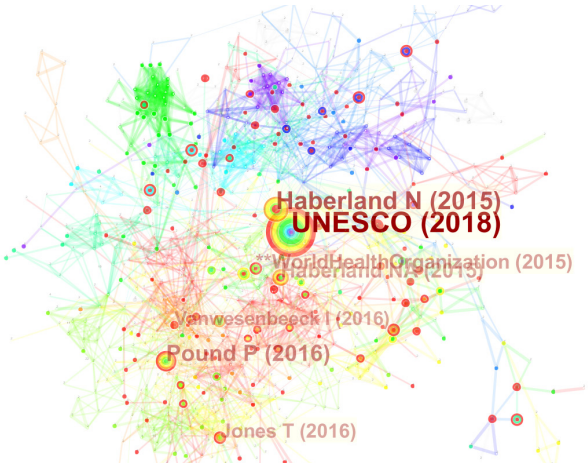


Figure 3. Distribution of Co-cited References in School Sexuality Education Research

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

3.5 Related Disciplines

In CiteSpace, "Category" was selected as the node type. The Pathfinder algorithm was employed, with the time slice set to 2 years and thresholds defined as (2, 1, 10), (2, 3, 20), and (2, 3, 20). Data were filtered using "Top 20 per slice," and a visualization network map of related disciplines was generated (see Table 5). Disciplines with substantial centrality include Sociology, Psychology, Preventive Medicine and Public Health, Education, Child and Adolescent Health and School Health, Family Education, Rehabilitation Medicine, and Obstetrics and Gynecology. Over the past decade, new disciplines have continuously integrated into school sexuality education research. As of March 8, 2025, a total of 21 disciplinary categories have been incorporated into this field. Table 5 presents the new disciplines that entered this research field after 2011 and their years of integration. Specifically, disciplines that newly entered in 2013 primarily include Rehabilitation Medicine, Clinical and Counseling Psychology, and Social Medicine and Health Administration; those entering in 2015 primarily include Control Science and Technology, and Urology and Nephrology; those entering in 2017 primarily include Sociology of Education, Art Psychology, and Sports Health Science; and those entering in 2021 and 2024 primarily include Environmental and Ecological Statistics, and Linguistics, respectively.

Table 5. Disciplines Integrated into School Sexuality Education Research, 2011–2024

Year	Discipline	Centrality	Year	Discipline	Centrality
2011	Education	0.30	2013	Rehabilitation Medicine	0.14
	Preventive Medicine and Public Health	0.48		Clinical and Counseling Psychology	0.02
	Sociology	0.95		Social Medicine and Health Administration	0.06
	Psychology	0.77			
	Child and Adolescent Health and School Health	0.24	2015	Control Science and Technology	0.08
	Nursing	0.08		Urology and Nephrology	0.00
	Family Education	0.18	2017	Sociology of Education	0.00
	Pediatrics	0.03		Art Psychology	0.00
	General and Internal Medicine	0.08		Sports Health Science	0.08
	Obstetrics and Gynecology	0.10	2021	Environmental and Ecological Statistics	0.00
	Biomedical Engineering	0.06	2024	Linguistics	0.00

3.6 Keywords and Burst Terms

In CiteSpace, "Keyword" was selected as the node type. The Pathfinder algorithm was employed, with thresholds defined as (2, 2, 20), (4, 3, 20), and (4, 3, 20). A keyword co-occurrence visualization network map was generated (Figure 4). Keyword analysis revealed a total of 371 keywords, among which 146 had centrality values greater than 0, and 29 keywords appeared with a frequency of 50 or more. These included: "sexuality/sex/sexual education," "adolescent/young people/young adult/teenager/teen," "sexuality/sex," "education," and others. As shown in Table 6, sexuality education for adolescents of different genders in schools has consistently remained a research hotspot in this field. As research on school sexuality education continues to deepen globally, issues related to sexuality education—including health, behavior, attitudes, knowledge, and HIV/AIDS—have increasingly garnered attention. Meanwhile, teachers and students from diverse gender

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

orientations, parents (particularly mothers), and women have also become focal subjects of school sexuality education. Current research is actively advancing in areas such as the implementation of comprehensive sexuality education curricula and instruction in schools, parental involvement in children's sexuality education, sexually transmitted infections and prevention related to HIV, pornography resistance, and the promotion of adolescent health.

Furthermore, burst detection analysis of keywords was conducted using CiteSpace. The configuration parameters for the "Burstness" detection model were set as follows: $F(x)=\alpha e-\alpha x$, $\alpha 1/\alpha 0=2.0$, $\alpha i/\alpha i-1=1.0$, $\gamma[0,1]=0.4$. This analysis identified 20 burst terms with high burst values in school sexuality education research over the past decade (see Table 7). By reviewing the literature associated with these high-burst-value terms, this study explores the cutting-edge domains that have characterized school sexuality education research in recent years.

Table 6. Keywords with Frequency ≥ 50 in School Sexuality Education Research, 2011–2024

Keyword	Frequency	Centrality	Keyword	Frequency	Centrality
Sexuality education	545	0.05	HIV/AIDS prevention/ education	79	0.02
Adolescents	492	0.08	Parents	77	0.01
Sexuality	530	0.1	Reproductive health	77	0.04
Education	283	0.01	United States	75	0.07
Gender	243	0.02	Children	71	0.05
Schools	208	0.01	Programs	70	0.03
Health	152	0.03	Women	68	0.09
Behavior	138	0.02	Curriculum	67	0.04
HIV/AIDS	129	0.05	Experience	66	0.03
Attitudes	115	0.02	Sexual health	63	0.02
Knowledge	89	0.03	Communication	60	0.02
Risk	86	0.01	Intervention	58	0.03
Teachers	84	0.03	Pregnancy	55	0.04
Students	84	0.04	Policy	53	0.06
Homosexuality	83	0.03			

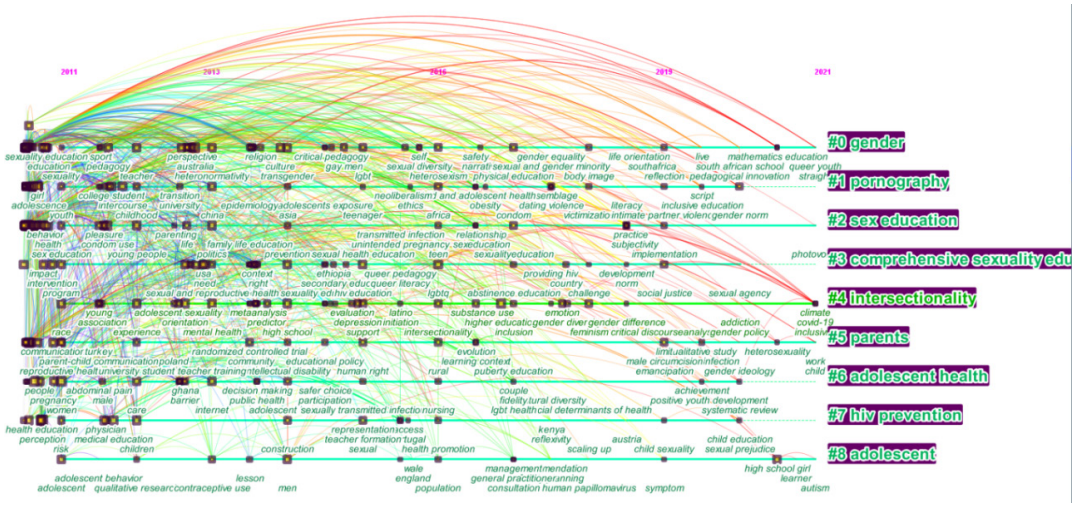


Figure 4. Research Hotspots in School Sexuality Education, 2011–2024

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

Table 7. Burst Terms with Weights and Duration in School Sexuality Education Literature

Burst Term	Burst Weight	Start Year	End Year	Burst Term	Burst Weight	Start Year	End Year
Sexual behavior	6.46	2011	2015	Decision-making	2.62	2014	2016
Age	3.36	2011	2012	Homosexuality	3.72	2015	2017
Media	3.29	2011	2015	Puberty	2.88	2015	2017
Information	2.85	2011	2013	Gay men	2.88	2015	2016
Condom use	3.02	2012	2014	Health promotion	3.1	2016	2017
Adults	2.7	2012	2013	Physical education	2.75	2017	2019
United States	4.63	2013	2017	Africa	4.65	2018	2019
Conceptions	3.69	2013	2015	Infectiousness	3.4	2018	2021
Internet	3.22	2013	2015	Victimization	2.61	2018	2024
HIV prevention	3.21	2013	2015	Implementation	3.75	2019	2024

4 Discussion

The United States, Brazil, Australia, South Africa, the United Kingdom, Canada, Spain, the Netherlands, New Zealand, and Sweden represent the core research forces in school sexuality education over the past decade, having accumulated substantial academic achievements in this field. Analysis reveals that the construction of discursive frameworks for school sexuality education, the examination of diverse stakeholders, and the demands from both supply and demand sides of school sexuality education have constituted the primary research hotspots in this domain, continuing to deepen amidst ongoing theoretical innovation and practical evolution in school sexuality education. Looking ahead, research focusing on regions such as Africa, sexual minority student populations, teacher professional development, and interdisciplinary integration will represent the future trajectories of school sexuality education research.

4.1 Discussion on the Construction of Discursive Frameworks for School Sexuality Education

The distinct national ideological attributes of school sexuality education render the construction of its discursive frameworks critical to the development of school health initiatives, exerting sustained influence on the orientation of school sexuality education for the present and foreseeable future. (1) Conservative discourse frameworks for school sexuality education, prevalent in Australia, New Zealand, the United Kingdom, and the United States, emphasize transmission-oriented approaches to sexual behavior. These frameworks advocate for the conceptualization of children as asexual, the notion of sex as distant or inaccessible, natural reproductive metaphors to safeguard childhood sexual innocence, bodily hygiene, sexual morality, biological science/biological essentialism, premarital abstinence education, and Christian/ex-gay redemption ideologies. (2) Liberal discourse frameworks for school sexuality education, dominant in Australia, the United States, and certain African nations, emphasize the teaching of personal choice and the development of sexual skills and knowledge. These frameworks promote sexual liberation, comprehensive sexuality education, sexual risk and preparedness, effective relationships and sexuality education, clarification of controversial sexual issues and values, and liberal feminist perspectives. (3) Critical discourse frameworks for school sexuality education, advanced in Japan, Germany, Italy, and France, advocate for student collective action grounded in

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

alternative sexual behavior principles to rectify marginalized sexual issues. These frameworks promote state socialist sexual politics, sexual revolutionary socialism/radical Freudianism, radical feminism, anti-discrimination/anti-harassment, sexual inclusion/social justice, safe and supportive spatial/caring communities, gay liberation, and postcolonial perspectives . (4) Postmodern discourse frameworks for school sexuality education, concentrated primarily in France and other European nations, theoretically examine frameworks and positions regarding sexuality, gender, and sexual behavior [26]. These frameworks advocate poststructuralism, post-identity feminism, multicultural education, pluralistic education, and inclusive homosexuality education. Over the past decade, diverse countries have engaged in multifaceted discussions on the construction of discursive frameworks for school sexuality education, drawing upon conservative, liberal, critical, and postmodern perspectives, continuously constructing and innovating these frameworks.

4.2 Analysis of Diverse Stakeholders in School Sexuality Education

Over the past decade, various stakeholders—including governments, schools, families, teachers, and peers—have demonstrated increasing attention to school sexuality education. Their distinct expressions of interests and demands have become increasingly pronounced, evolving into a significant research hotspot in this field.

4.2.1 Expressions from the School Level

As adolescent sexual relationships gradually become established, the necessity for schools to provide sustained sexuality education support throughout adolescence has been substantiated. For children and young people experiencing early puberty and living and learning within rapidly transforming socio-techno-economic environments, school-based sexuality and reproductive health instruction is imperative for their lifelong health. Simultaneously, school sexuality education plays an active role in terminating child marriage customs and providing girls with enhanced and more equitable opportunities. The content of school sexuality education encompasses: personal safety, puberty and sexual development, gender, diversity and equity, relationships, power, media and institutions, sexual and reproductive health, and well-being, as well as access to accurate contraceptive methods, the realization of sexual and reproductive health rights, and the provision of youth-friendly services addressing diverse sexual and reproductive health needs of young students. Empirical research has demonstrated the direct associations between these content areas and students' sexual and reproductive health outcomes [27]. Furthermore, within the school context, standardized sexuality education curricula—whether as standalone subjects comprising indirect student life experience knowledge from school entry through adolescence, or integrated into learning domains such as science, health, humanities, and technology—benefit student engagement in social-emotional learning and the achievement of holistic physical and mental development. Schools actively articulate demands regarding the significance, content, and curricular formalization of student sexuality education.

4.2.2 Expressions from the Teacher Level

Teachers are committed to fostering student healthy development and life, positive values, enduring beneficial outcomes, inquisitive attitudes, critical reflection, and equitable action, while cultivating students' respect for others, responsibility, creativity, and socially just solutions. Teachers express willingness to deliver

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

comprehensive relationships and sexuality education to students. Consequently, high-quality, professionally trained sexuality education teachers and practitioners play critically important roles in the school sexuality education process. Currently, teachers face the predicament of receiving minimal or no initial training in this domain during pre-service education, resulting in professional inadequacy to meet the developmental requirements of school sexuality education. This manifests as: teachers' lack of confidence in teaching "sensitive" topics such as "menstruation, nocturnal emissions, and sexual intercourse"; and inability to reconcile the contradictory positions of abstinence-only and comprehensive sexuality education approaches [28]. The mismatch between teachers' professional development, occupational competency, and the developmental demands of school sexuality education necessitates further resolution and enhancement of teachers' demands for high-quality, specialized professional advancement.

4.2.3 Expressions from the Family Level

Families advocate for schools to provide safe, age-appropriate, non-discriminatory, and participatory sexuality education environments suitable for the digital age. Parent-child sexual communication serves as a protective factor for adolescent sexual and reproductive health and contributes to HIV prevention. Parental involvement in junior secondary comprehensive sexuality education can effectively delay the initiation of sexual behavior among secondary school students, with particular significance for boys, as family activities can encourage parents to engage in earlier and more frequent conversations with their sons [29]. However, in countries where the roles of schools and families in sexuality education remain inadequately defined, the socio-political willingness to delay, neglect, or refuse family involvement in school sexuality education is particularly pronounced, impeding the positive role of families and affecting families' effective participation in their children's sexual and reproductive health development. The voices from families require supplementation and refinement in the forthcoming stage.

4.2.4 Expressions from the Government Level

School sexuality education constitutes a significant decision-making framework that manifests national ideology and governing authorities' philosophies, through which governments articulate their interests via policy formulation and resource provision. Under the guidance of heteronormative sexuality education concepts that serve mainstream American national interests, the National Prevention Strategy and Healthy People 2020 were promulgated, elevating "reproductive and sexual health" for American students and other populations as a critical domain for improving quality of life. School sexuality education standards and curriculum design embed heteronormative ideologies, while the Virginia Family Life Education Curriculum Standards concretize the government's ambivalent political stance toward LGBTQ sexual minority groups—a disoriented expression aspiring to reconstruct racialized norms deemed appropriate and healthy for American citizens. Simultaneously, financial support serves as a crucial instrument for governing authorities' interest articulation. Since 2011, the United States government has sustained funding for pre-service teacher training and sexual and reproductive health information provision, despite only 9 out of 52 states/districts demonstrating demand for contraceptive information. At the senior secondary level, which constitutes the focus of pre-service teacher training, funding neglects primary school teacher preparation [30], manifesting a "profound disjuncture" between political expression under distinct political orientations and practical demands. The dynamic equilibrium between governmental interest articulation and practical demands in school sexuality education will

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

constitute a research hotspot in the forthcoming stage.

4.2.5 Expressions from the Peer Level

As co-beneficiaries and direct participants in school sexuality education, peers can effectively activate "interlocking" mechanisms through creating mutual assistance scenarios for peer communication and sharing in school sexuality education, providing conditions and opportunities for the tacit acquisition of sexual and reproductive health-related knowledge, and maximizing the satisfaction of young students' shared sexuality education needs and interests. Empirical research has confirmed that professionally trained sexuality education teachers are not the "best educators" for school sexuality education; peers are identified as the optimal candidates for delivering sexuality education within school contexts [31], capable of effectively maximizing the effectiveness of school sexuality education.

4.3 Demands from the Supply and Demand Sides of School Sexuality Education

4.3.1 Demands from the Supply Side of School Sexuality Education

Demands from the supply side of school sexuality education primarily encompass research on the supply of professional teacher training from higher education institutions, supportive policy supply from governments, participation supply from social organizations, and harmless information supply from the internet.

First, regarding the supply of professional teacher training from higher education institutions. For universities—as providers of teacher education for school sexuality education—the mandatory integration of comprehensive relationships and sexuality education into pre-service teacher education curricula results from the combined effects of child rights protection, mandatory requirements from research reports, and the legitimization of school sexuality education status. Universities have indeed been confirmed to play critical roles in ensuring that future teachers are equipped with the theory and practice of sexuality education, as well as teaching content, methods, and skills. However, over the past decade, the supply of teacher training courses and certification resources for school sexuality education has remained relatively insufficient. Currently, although Australia has established a set of generic professional standards for teachers, committing to provide abundant resources for teacher education providers of school sexuality education, data from 2011 revealed that 51% of university teacher education programs did not incorporate sexuality education-specific training content, and among those that did, only 9% included several hours of sexuality education content. By 2014, only three Australian universities offered preparatory courses in sexual and reproductive health. In the United States, "teacher training is the most important indicator" has been emphasized in determining sexuality education curriculum themes and comprehensive directives , prompting a series of initiatives: developing a set of preparation standards for sexuality education teachers, adjusting sexuality health education curricula for medical students in North America, and establishing national preparation standards for sexuality education teachers at all levels through the Future of Sex Education Initiative [32], actively cultivating pre-service teachers' sexuality education teaching capabilities through theory, methodology, teaching practice, content, skill development, and assessment decision-making. Schools actively implement policy demands to provide effective teacher education talent supply. However, 57% of equivalent pre-service education programs fail to offer certification content in health education. While universities implement and respond to government

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

policies, committing to the active supply of high-quality talent cultivation for school sexuality education, mechanisms for policy responsiveness and coordination remain inadequately established. The empowerment and capacity-building of school sexuality education teacher training mechanisms, as well as the legitimization recognition of talent cultivation outcomes, require further streamlining and completion, which will also constitute a research hotspot in the forthcoming stage.

Second, regarding demands for participation supply from social organizations. Social organizations provide intellectual resource support for school sexuality education through offering professional practice standards, intervention program recommendations, and community cooperation models. The World Association for Sexual Health (WAS) approved a set of nine international professional practice standards for sexuality educators and sexual health promotion services in 2009. These standards provide intellectual resource support for promoting professional degree education and postgraduate education recognized by education or health sciences, including content such as "accessing, interpreting, and applying information to continuously improve sexuality education and educational methods" and "implementing effective and safe teaching and learning". Similarly, the World Health Organization and the German Federal Centre for Health Education have provided intervention program recommendations for school sexuality education, vigorously advocating that countries or organizations "make decisions in consultation with national-level education/health departments", adopting top-down procedures to implement national or large-scale, mandatory, comprehensive, and positive school sexuality education programs, correctly and prudently incorporating bullying, discrimination, and sexual violence into sexuality education content, formulating and enhancing school sexuality education initiatives, and actively providing support for improving communication skills and adolescent health for children and young people. Meanwhile, strengthening school-community cooperation and establishing cooperative models for school sexuality education contribute to providing students with sexual and reproductive health knowledge, promoting more progressive attitudes toward girls and women among students, and reducing identification with hegemonic masculine ideologies [33]. How to deeply explore and sustainably leverage the role of social organizations in assisting school sexuality education standard formulation, program reform, and model optimization will become a research hotspot in the forthcoming stage.

Third, regarding demands for supportive policy supply from governments. Some countries, with support from international organizations, participate in implementing, integrating, and evaluating national curricula and programs to provide positive personal development and sustainable welfare for entire populations. They prioritize youth participation in sexual and reproductive health program formulation as a priority rights agenda item for people's livelihood projects. Sweden and the United States provide sufficient policy support for sexuality education for intellectually disabled youth aged 16–21 in public schools, strengthening the sexual and reproductive health of intellectually disabled youth. Governments in 11 low-income countries in Africa and Asia provide funding support for children and adolescents to access Comprehensive Sexuality Education (CSE). The North Carolina state government provides high school courses related to the Teen Prevention Education Program (Teen PEP) peer sexuality education project, transmitting highly reliable information related to social welfare and sexual health. Governments in countries such as Sweden establish continuous programs and support systems for teaching comprehensive relationships and sexuality education in schools. However, government surveys on relationships and sexuality education in schools conducted in the United Kingdom, Ireland, the United States, Australia, New Zealand, Canada, Japan, Iran, Brazil, and Sweden reveal concern-

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

ing current states of relationships and sexuality education for young people. Young males are eager to conceal sexual ignorance, while young females risk sexual harassment if they participate. Governments appear to struggle with accepting the reality of this sexually active youth population, resulting in a disconnect between government-provided sexuality education support policies and the needs of many young people. Although relationships and sexuality education constitute a critical government initiative for protecting young people and improving their sexual health rights, the absence of its current statutory status leads to policy guidelines lagging behind public demands. One-third of school sexual and reproductive health policies provided by the UK government have been assessed as very poor quality. Young people report that government-provided relationships and sexuality education policies may even be negative, gendered, and heteronormative. They express dislike for government-provided relationships and sexuality education policy guidelines due to vague policy boundaries, lack of privacy, and insufficient supportive provisions [34].

Fourth, regarding demands for harmless information supply from the internet. Adolescents rely on the internet as a source of sexual health information [35]. The virtual world constructed by the internet raises relatively new and complex issues concerning the safety and privacy of adolescents and young people; maintaining synchronization between core understandings of school sexuality education and these changes is critically important. Calls for strengthening internet filters and privacy options to protect against harmful information for those who may encounter harassment, threats, or attacks from individuals met online are increasingly intense. Providing harmless information for online students has become an important component of school sexuality education advocacy, urgently requiring the internet to supply harmless sexual and reproductive health information for students.

4.3.2 Demands from the Demand Side of School Sexuality Education

Demands from the demand side of school sexuality education primarily encompass two dimensions: the demand for professional curriculum development in school sexuality education and the specific needs of diverse student populations.

On one hand, demands for and evaluation of professional curriculum development. Various countries have strengthened sexuality education-related curriculum development to meet student needs. The United States has established Social and Emotional Learning (SEL) programs, the United Kingdom has implemented Social and Emotional Aspects of Learning (SEAL) curricula], Australia has offered family planning courses for senior secondary schools, and New Zealand has developed Health and Physical Education curricula. African countries have provided Black students with courses accessing sexuality-related information through explicit Sexuality Education Materials (SEM), including internet, video, and print resources. Beyond strengthening curriculum development, schools have incorporated innovative teaching methods and formats into sexuality education curriculum development. Research has explored the content and functions of sexual drama in school sexuality education curricula, positioning it as a resource for girls' sexuality education; however, within the constraints of senior secondary institutional structures, this approach has reinforced traditional gender norms and limited the scope of effective sexual information access [36]. Concurrently, scholars have examined sexuality education content and values embedded in biology, physical education, and other subjects and textbooks. Transgender students' embodied experiences of abandonment, exclusion, rejection, and harassment in heteronormative school environments—particularly in physical education classes—have paradoxically

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

been interpreted as potentially subverting the dominance of heteronormative systems in school environments to some extent, demonstrating the potential of transgender student populations to disrupt such consciousness through physical education. In biology textbooks, content metaphorically conveying "heteronormativity" and "natural gender secret identities" has been scrutinized and analyzed, with research findings advocating for full consideration and protection of learners from oppressive teaching materials. Schools actively provide diverse curricula and teaching resources for student sexuality education. Finally, rights-based sexuality education curricula have demonstrated positive effects on adolescent sexual health behaviors and psychosocial development one year post-participation [37].

On the other hand, research on school sexuality education needs of diverse populations, including LGBTQ groups, female students, and university students.

First, research on school sexuality education for LGBTQ populations. Globally, social, cultural, and political issues concerning lesbian, gay, bisexual, and transgender (LGBT) populations have become salient characteristics of 21st-century life, transforming all institutions and organizations, including educational institutions. LGBTQ populations encounter significant barriers in accessing clinically and culturally competent health services, resulting in inequalities between heterosexual/bisexual and LGBTQ populations regarding stigma and discrimination, sexual behavior and dysfunction, sexual history collection, and LGBTQ-specific health and health disparities. Transgender primary school students fear school sexuality educators. School teachers often express violence through punitive behaviors conveyed via derogatory language, escalating to virulent reactionary hatred, generating intensely negative experiences of school sexuality education among gay youth. Works transcending established knowledge production frameworks in LGBTQ education research have expanded to redefine relevant queer studies academic institutions within educational domains. Currently, sexuality education materials provided by schools inadequately address LGBTQ population needs, with numerous materials criticized as disenfranchising this population. Scholarly responses to this situation include: tailoring sexuality and reproductive health websites serving LGBTQ populations, and enabling LGBTQ youth to experience school education addressing gender and sexual diversity [38].

Second, research on school sexuality education needs of female student populations. Low-income countries such as Ghana, Cambodia, and Ethiopia provide assistance for female students' menstrual hygiene management. Effective guidance for adolescent girls' healthy sexual behavior involves: positioning sexualization not merely as context; identifying missing discourse on gender inequality as central to their discussions; and explaining how theory and interpretation in feminist research methodologies necessitate—and differ from—surface readings of life experience narratives. Simultaneously, alternative engagement with girls through technology, media activism, and participatory practices provides alternative pathways for adolescent girls' sexual behavior [39].

Finally, university student population needs have also been incorporated into school sexuality education research scope. Investigations into male university students' attitudes toward sex, commitment, and casual sexual relationships [40] reveal that diverse pre-university experiences and exposures influence risks for penetrative assaultive sexual behavior during university. Pre-university training in refusal skills for unwanted sexual behavior and comprehensive sexuality education constitute effective strategies for preventing sexual assault in university. Successful pre-university prevention should supplement prevention efforts following students'

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

university entry, with sexual assault prevention needing to commence even earlier.

Funding

This study is a research output of the Interdisciplinary Integration Research Team for Teacher Education at Aba Teachers College (No.: AS-KCTD2026-20).

References

[1] Munoz, V. (2010). Report of the United Nations Special Rapporteur on the right to education (Document A/65/162). General Assembly.

[2] Ponzetti, J., et al. (2016). Evidence-based approaches to sexuality education: A global perspective (pp. 110–112). Routledge.

[3] Jones, T. (2011). A sexuality education discourses framework: Conservative, liberal, critical, and post-modern. American Journal of Sexuality Education, 6(2), 133–175.

[4] Goidman, J. D. G., & Collier-Harris, C. A. (2017). Three quality professional documents to guide teachers for puberty, relationships and sexuality education. Pastoral Care in Education, 35(2), 65–76.

[5] East, L. J., & Orchard, T. R. (2014). Somebody else's job: Experiences of sex education among health professionals, parents and adolescents with physical disabilities in Southwestern Ontario. Sexuality and Disability, 32(3), 335–350.

[6] Francis, D. A., & De P. R. (2014). Teacher perspectives on abstinence and safe sex education in South Africa. Sex Education, 14(1), 81–94.

[7] Petroni, S., Steinhaus, M., Gregowski, A., et al. (2017). New findings on child marriage in Sub-Saharan Africa. Annals of Global Health, 83(5-6), 781–790.

[8] Atuyambe, L. M., Kibira, S. P. S., Mulogo, E. U., et al. (2015). Understanding sexual and reproductive health needs of adolescents: Evidence from a formative evaluation in Wakiso district, Uganda. Reproductive Health, (3), 12–22.

[9] Löfgren-Mårtenson, L. (2012). "I want to do it right!" A pilot study of Swedish sex education and young people with intellectual disabilities. Sexuality and Disability, 30(2), 209–225.

[10] Barnard-Brak, L., Schmidt, M., Richman, D., et al. (2014). Predictors of access to sex education for children with intellectual disabilities in public schools. Intellectual and Developmental Disabilities, 52(2), 85–97.

[11] Olmstead, S. B., Billen, R. M., Fincham, F. D., et al. (2013). Sex, commitment, and casual sex relationships among college men: A mixed-methods analysis. Archives of Sexual Behavior, 42(4), 561–571.

[12] Keogh, S. C., Stillman, M., Leong, E., et al. (2018). Challenges to implementing national comprehensive sexuality education curricula in low- and middle-income countries: Case studies of Ghana, Kenya, Peru and Guatemala. PLOS ONE, 13(7), 11–24.

[13] Vanwesenbeeck, I., Westeneng, J., Zorge, R., et al. (2016). Lessons learned from a decade implementing comprehensive sexuality education in resource poor settings: The World Starts With Me. Sex Education, 16(5), 471–486.

[14] Tong, L. (2021). Review on the 100 years of development of sexology and sex education under the leadership of the Communist Party of China. Chinese Journal of Human Sexuality, 30(11), 3.

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

[15] Aresu, A. (2009). Sex education in modern and contemporary China: Interrupted debates across the last century. International Journal of Educational Development, 29(5), 532–541.
[16] United Nations Educational, Scientific and Cultural Organization. (2012). Review of policies and strategies to implement and scale up sexuality education in Asia and the Pacific. UNESCO.
[17] National Health and Family Planning Commission of People's Republic of China. (2015, July 15). Notice to establish the HIV epidemic report system in colleges. Retrieved April 21, 2024, from http://www.moe.gov.cn/jyb_xxgk/moe_1777/moe_1779/201512/t20151221_225594.html
[18] Yip, P. S. F., Zhang, H. P., Fan, S., et al. (2013). Sex knowledge, attitudes, and high-risk sexual behaviors among unmarried youth in Hong Kong. BMC Public Health, 13, 29–34.
[19] Li-Ya, T., Cheng, Y. H., Wen, C. L., et al. (2013). Assessing student nurses' learning needs for addressing patients' sexual health concerns in Taiwan. Nurse Education Today, 33, 152–159.
[20] Burki, T. (2016). Sex education in China leaves young vulnerable to infection. The Lancet Infectious Diseases, 16(1), 26.
[21] National Health and Family Planning Commission. (2017, May 2). Chinese health statistics yearbook (2009-2013). Retrieved April 21, 2022, from http://www.nhfpc.gov.cn/zwgkzt/tjnj/list.shtml
[22] Wu, S. C., & Qiu, H. Y. (2010). Induced abortion in China: Problems and interventions. Acta Academiae Medicinae Sinicae, 32(5), 479–482.
[23] Yu, X. M., Guo, S. J., & Sun, Y. Y. (2013). Sexual behaviors and associated risks in Chinese young people: A meta-analysis. Sexual Health, 10(5), 424–411.
[24] Li, C. Y., Cheng, Z. X., Tang, K., et al. (2017). The relationships of school-based sexuality education, sexual knowledge and sexual behaviors – a study of 18,000 Chinese college students. Reproductive Health, 14, 14–25.
[25] Gu, X. (2020). Introduction. Chinese Journal of School Health, 41(10), 1440.
[26] GLSEN. (2005). The GLSEN lunchbox 2, revised edition: A comprehensive training program for ending anti-LGBT bias in schools. Gay, Lesbian, Straight Education Network, 341–350.
[27] Humphrey, N., Lendrum, A., & Wigelsworth, M. (2013). Making the most out of school-based prevention: Lessons from the Social and Emotional Aspects of Learning (SEAL) programme. Emotional and Behavioural Difficulties, 18(3), 248–260.
[28] Francis, D. A., & DePalma, R. (2014). Teacher perspectives on abstinence and safe sex education in South Africa. Sex Education, 14(1), 81–94.
[29] Grossman, J. M., Tracy, A. J., Erkut, S., et al. (2014). Protective effects of middle school comprehensive sex education with family involvement. Journal of School Health, 84(11), 739–747.
[30] Goldman, J. D. G. (2008). Responding to parental objections to school sexuality education: A selection of 12 objections. Sex Education, 8(4), 415–438.
[31] Allen, L. (2009). 'It's not who they are it's what they are like': Reconceptualising sexuality education's 'best educator' debate. Sex Education, 9, 33–49.
[32] FoSEI (Future of Sex Education Initiative). (2014, July 1). National teacher preparation standards for sexuality education. Retrieved May 1, 2022, from www.futureofsexed.org/documents/teacher-standards.pdf
[33] Grose, R. G., Grabe, S., & Kohfeldt, D. (2014). Sexual education, gender ideology, and youth sexual empowerment. Journal of Sex Research, 51(7), 742–753.
[34] Pound, P., Langford, R., & Campbell, R. (2016). What do young people think about their school-based

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

sex and relationship education? A qualitative synthesis of young people's views and experiences. BMJ Open, 6(9), 51–59.
[35] Jones, R. K., & Biddlecom, A. E. (2011). Is the Internet filling the sexual health information gap for teens? An exploratory study. Journal of Health Communication, 16(2), 112–123.
[36] Miller, S. A. (2016). "How you bully a girl": Sexual drama and the negotiation of gendered sexuality in high school. Gender & Society, 30(5), 721–744.
[37] Rohrbach, L. A., Berglas, N. F., Constantine, N. A., et al. (2015). A rights-based sexuality education curriculum for adolescents: 1-year outcomes from a cluster-randomized trial. Journal of Adolescent Health, 57(4), 399–406.
[38] Francis, D. A. (2017). Homophobia and sexuality diversity in South African schools: A review. Journal of LGBT Youth, 14(4), 359–379.
[39] Tolman, D. L. (2012). Female adolescents, sexual empowerment and desire: A missing discourse of gender inequity. Sex Roles, 66(11-12), 746–757.
[40] Olmstead, S. B., Billen, R. M., Fincham, F. D., et al. (2013). Sex, commitment, and casual sex relationships among college men: A mixed-methods analysis. Archives of Sexual Behavior, 42(4), 561–571.

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)