

FACTORS INFLUENCING POOR SEXUAL HEALTH OUTCOMES IN RURAL U.S.
ADOLESCENTS

**Factors Influencing Poor Sexual Health Outcomes in Rural U.S. Adolescents: A Literature
Review**

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HPRB 5010: Research Design

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November 28, 2025

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Research Question

What factors contribute to poor sexual health outcomes in rural adolescents living in the United States?

Introduction

Sexual health is defined by The World Health Organization (WHO) as, “a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity,” (World Health Organization, 2025) Sexual health is fundamental to the well-being and health of not only individuals, but also families, couples, and the social and economic development of communities (World Health Organization, 2025). Positive attitudes about sexuality can create opportunities for pleasurable and safe sexual experiences and encounters (World Health Organization, 2025). The WHO defines that the ability to achieve sexual health is dependent on access to comprehensive sexuality education, knowledge of the risks and consequences associated with sex, access to health care, and an environment that affirms and promotes healthy sex ideals (World Health Organization, 2025).

Sexual health is not limited to sexual intercourse. This public health matter is all encompassing, as it includes orientation, gender, expression, relationships, pleasure, STIs, HIV, RTIs, cancer, infertility, pregnancy, dysfunction, violence, and harmful practices (World Health Organization, 2025). Sexual and reproductive health services are important for adolescent health. Many of these services are educational and preventative measures such as counseling to prevent risky behaviors and information on STIs and contraception (Center for Disease Control, 2025). Adolescents need comprehensive sexual education for delaying sexual activity, but sexually

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active adolescents benefit from education and access to contraception (Center for Disease Control, 2025).

Adolescence is often a time for many where childhood is transforming into adulthood. It is marked by significant physical, mental, intellectual, emotional, and social growth (U.S. Department of Health & Human Services, 2025). Adolescents go through puberty, begin to understand their autonomy, learn self-expression, and take on new roles and responsibilities. Adolescents also begin to form deeper emotional bonds at this time, and these can become romantic and/or sexual (U.S. Department of Health & Human Services, 2025). Sexual health is a crucial part of adolescents' overall health and well-being. Sexual health and education can help set the stage for healthy decisions and relationships in adulthood (U.S. Department of Health & Human Services, 2025).

Adolescents in the U.S. are diverse, and this diversity prompts their sexual health, knowledge, and health access to be diverse as well. The diversity in health and experiences is shaped by an interplay of individual, family, community, environmental, socioeconomic, and structural factors (U.S. Department of Health & Human Services, 2025). This means that adolescents' sexual health status and needs will vary, and that many endure inequitable access to sexual healthcare and services (U.S. Department of Health & Human Services, 2025)

National data, from the past 10 years, demonstrates a consistent disparity between rural and urban adolescents and their sexual health outcomes. In 2015, the CDC released a data brief detailing that teen birth rates in rural counties were around 30.9 births per 1,000 females between 15 and 19 years old (Center for Disease Control, 2016). However, it was found that urban counterparts reported substantially lower with 18.9 births per 1,000 in large urban counties (Center for Disease Control, 2016; The Washington Post, 2016). Additionally, 2017-2018 data

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shows that rural counties had an additional 7.8 births per 1,000 females between the ages of 15 and 19, compared to urban counterparts (Orimaye, 2021). Further, rural counties demonstrated higher levels of deprivation, health professional shortages, and worse outcomes (Orimaye, 2021).

These disparities between rural and urban adolescents suggest that adolescents' sexual behaviors may not be solely to blame. Addressing and examining the specific barriers in rural settings such as education, geography, and stigma, is essential to understanding these health outcomes and their potential resolves. This literature review aims to explore these barriers and ultimately uncover how they contribute to poor adolescent sexual health outcomes in the rural united states.

Methods

Online searches were performed utilizing the University of Georgia's library system and the database PubMed. The article selection process is demonstrated in *Table 1*.

Inclusion and Exclusion Criteria

To ensure that the articles referenced and utilized in this review were relevant and reliable, inclusion and exclusion criteria were as followed. Only peer-reviewed articles, articles pertaining to rural adolescent sexual health, and articles published within the last 10 years (2015-2025) were considered for this review's results section.

Rationale for chosen articles

Only two searches utilizing the Boolean phrases and keywords found in *Table 1*. were required to find research for this paper's results section. The first search round was conducted utilizing UGA Libraries online database on sexual health among rural U.S. adolescents. This first

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search helped in identifying this literature review's themes and answering the research question.

As observed in Table 1, the Boolean phrase "OR" was used to expand search results and the phrase "AND", was used to primarily narrow results down to only domestic articles. This approach ensured coverage of relevant and domestic literature while allowing for the exploration of various themes related to the research question. The second search round focused on obtaining the remaining articles for the results section. The second search utilized the online database PubMed. This second search was conducted to help find articles to address specific needs for the results section. For example, the paper was lacking information on some geographical barriers, therefore search terms were added to accommodate for that.

To select the final 21 articles, each title was assessed to determine if it seemed relevant and applicable to the topic of interest at face value. This initial selection process helped eliminate articles that were unrelated to the research question and helped narrow down the potential articles. Next, the abstract of each article was assessed to determine whether the research study could be applied to the research question. Articles were only selected if their abstract directly addressed the poor sexual health outcomes faced by rural U.S. adolescents. At this point in the search process, three main themes were identified for the literature review. These themes being education, geographic accessibility, and stigma/culture. Therefore, the methods and introduction sections of each article were then analyzed, to see if they specifically mentioned education, geographic barriers, and/or stigma. This step ensured that the selected articles provided insights specifically relevant to the research question and its themes. Finally, the results sections of each article were examined to look at the key findings and statistical reports related to rural U.S. adolescents' sexual health, only selecting articles with statistically significant findings. Following this, studies including only urban and/or foreign adolescents were excluded. Overall,

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this systematic approach led to the selection of the final 21 articles included in this review's results section.

Table 1. Search terms and yielded results

Search Rounds	Search Terms	Yielded Results	Selected Articles
Round 1	("rural") AND ("adolescents" OR "teenagers" OR "youth" OR "young people" OR "young adults") AND ("sexual health" OR "sexual behavior" OR "sexual risk" OR "sexual outcomes" OR "sexual education" OR "sexual health services") AND ("United States" OR "USA" OR "U.S.") AND ("risk factors" OR "barriers" OR "determinants")	185	11

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Round 2	(rural OR nonurban) AND (adolescen* OR teen* OR youth OR "young adult*" OR "young people") AND ("sexual health" OR "reproductive health" OR "sexual behavior*" OR "sexual educat*" OR "sexual risk*" OR "sexual health service*") AND ("United States" OR USA OR "U.S.") AND ("risk factor*" OR barrier* OR determinant* OR predictor* OR "social determinant*")	308	10
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Results

Adolescents living in rural communities within the United States experience several barriers that contribute to poor sexual health outcomes. These sexual health barriers seem to demonstrate a trend, and from the articles reviewed, three main themes were presented. Poor sexual education in rural communities, geographical inaccessibility, and stigma and culture all contribute greatly to poor sexual health outcomes for rural U.S. adolescents.

Education

Overall, adolescents in rural areas were found to be less likely to have received a form of formal and comprehensive sexual education, compared to urban counterparts (Ebersole, 2021). In several research studies that examined adolescents' recollections of their sexual education, they often recall only basic health information. The information typically taught was HIV/STI awareness, condoms, abstinence, and often had religious influences (Berglas, 2023; Currin, 2017). Other important sexual health topics such as LGBTQ+ health, relationships, and mental health are frequently low or nonexistent in the classroom (Berglas, 2023; Currin, 2017). Additionally, several studies have shown that these educational gaps push adolescents to seek information from their peers, social media, and even the internet (Berglas, 2025; Currin, 2017). Obtaining health information this way can be harmful as it often provides them with misinformation about sexual health.

Similarly, evidence from several studies indicates that traditional sex education is often insufficient. This is because the material tends to be limited to hygiene, abstinence-only curriculum, and centered on heterosexual relationships (Berglas, 2023; Currin, 2017; Stepahanie, 2024). Research has shown that adolescents and professionals believe that the educational curriculum and content should be more inclusive, by adding mental health, LGBTQ+, consent,

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gender equality, and life skills (Berglas, 2023). Including these themes in sexual education is important because it has been shown to improve knowledge and enhance confidence, decision making skills, and practice safe sexual behaviors (Stephanie, 2024). One study found that comprehensive sexual education significantly improved adolescents' sexual health knowledge, attitudes, and behavioral intentions (Stephanie, 2024). The adolescents demonstrated an increase in knowledge of anatomy, contraception, STI prevention, and improved attitudes toward consent, gender equality, and safe sexual practices after receiving comprehensive sexual education (Stephanie, 2024). After receiving a comprehensive educational intervention, behavioral intentions shifted as well; more adolescents reported planning to use contraception in the future and communicate effectively with partners post-intervention (Stephanie, 2024).

Sexual education in schools is important because schools are places that are trusted and accessible for distributing health information to adolescents. Additionally, it is important to provide ongoing education to keep the health topics current, and to help normalize conversations about sex (Berglas, 2023). Ongoing sexual education in school helps reinforce prior knowledge and addresses new subjects that become important as students age and develop (Berglas, 2023).

Some studies have found that sexual education through school alone is insufficient. It was found that parental connectedness, family communication, and social support have a strong influence on whether adolescents can apply what they have learned from their sexual health education effectively (Curry, 2024; Ritchwood, 2015). Several studies found positive relationships between higher sexual self-efficacy and parental connectedness/communication and the effective use of contraception (Curry, 2024; Ritchwood, 2015). Similarly, one study found that planning to remain sexually abstinent until the end of high school was associated with higher agency for sexual refusal, and more communication with parents about relationships (Imburgia,

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2025). These findings help demonstrate the importance of education, as well as adolescents' connections and environments (Curry, 2024).

It was found that comprehensive and inclusive sexual health education benefits all adolescents, regardless of gender, socio-economic background, or sexual orientation (Stephanie, 2024). Having educational programs that address and include marginalized populations (LGBTQ+ youth, those from lower SES backgrounds, etc.) would also help reduce disparities in knowledge, and in turn help with increasing rural adolescents in these groups' participation in safer sexual practices.

Geographical Barriers & Accessibility

Adolescents living in rural areas often face geographical barriers in accessing sexual health services. These barriers often consist of longer travel distances to clinics, limited availability of healthcare providers, limited contraception prescriptions, and fewer local and community prevention programs (Clausen, 2023; Geske, 2016; Yarger, 2017). For example, one study found that traveling more than 20 miles to receive an HIV test significantly reduces the likelihood of testing (Clausen, 2023). This demonstrates how distance often impacts utilization of health services for rural adolescents. Additionally, it was found that LGBTQ+ adolescents in rural areas had access to fewer resources than those in urban areas overall (Sallabank, 2023). Some adolescents in rural counties had no LGBTQ+ friendly resources available to them at all (Sallabank, 2023).

There are also geographic disparities within the rural healthcare system itself. Rural healthcare providers often report discomfort in discussing sexual health, offering sexual risk counseling, or prescribing HIV prevention methods like PrEP to adolescents (Owens, 2023). Having limited, comfortable and trained providers, and cultural norms against sexuality, often

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limits adolescents' access to sexual healthcare. These limitations often increase potential risk and lower sexual health outcomes.

Geographic barriers have also linked rural areas to higher rates of teen pregnancy and STI exposure (Kozhimannil, 2015; Orimaye, 2021; Thompson, 2018). In several research studies, rural adolescents reported higher sexual activity, more lifetime sexual partners, and lower use of preventive services, which may demonstrate their limited local health services and resources available to them (Kozhimannil, 2015; Orimaye, 2021; Thompson, 2018). Even when results demonstrated that contraceptive use was similar between rural and urban adolescents, rural adolescents often had more barriers to obtaining prescriptions and accessing family planning services overall (Geske, 2016; Yarger, 2017).

Geographic barriers and rurality often intersect with structural barriers, such as poverty, health professional shortages, and community deprivation. Counties with higher levels of deprivation or healthcare provider shortages tend to have significantly higher adolescent birth rates and limited access to preventive sexual healthcare services (Kozhimannil, 2015; Orimaye, 2021). Adolescents in higher poverty schools were also more likely to be currently sexually active, have more lifetime partners, and less likely to have used birth control before their last sexual encounter (Underwood, 2021). Additionally, urban adolescents were significantly less likely to be sexually active compared to rural counterparts (Underwood, 2021). These findings demonstrate that the geographic barriers alone do not determine the poor outcomes, but they often amplify those existing structural barriers.

Stigma & Cultural Barriers

Many rural adolescents report that discussions about sex feel shameful or taboo, specifically discussions about LGBTQ+ behaviors, relationships, or issues (Barral, 2020; Currin,

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2017). Cultural norms in rural communities often discourage communication between rural adolescents and their parents or healthcare providers (Barral, 2020). This lack of communication limits access to accurate sexual health information (Barral, 2020). Additionally, it is believed that parents experiencing discomfort stems from a lack of sexual knowledge and education themselves (Berglas, 2025). Closely connected rural communities can exacerbate these issues, because the fear of judgment or family dishonor can prevent adolescents from seeking contraception or healthcare (Barral, 2020).

Stigma can contribute to gaps in knowledge, because adolescents may avoid asking questions or accessing resources. Several studies have found that when sexual health information is limited or insufficient, youth often turn to peers, social media, or the internet to answer their questions (Berglas, 2025; Currin, 2017). Research has also shown that stigma is linked to lower usage of preventive services, including contraception prescriptions, HIV/STI testing, and PrEP, especially in rural areas where community taboos are very common (McKenney, 2017; Owens, 2024).

Rural adolescents who identify as LGBTQ+, often experience stigma from both their community and their healthcare providers (Bishop et al., 2025; Owens, 2024). This can result in rural LGBTQ+ adolescents' experiencing discomfort, avoiding sexual healthcare, limited provider engagement, and decreased use of contraception or HIV prevention methods (Bishop et al., 2025; Owens, 2024). Additionally, stigma can interact with the previously mentioned geographic barriers, and prompt LGBTQ+ adolescents in rural areas to become especially vulnerable to poor health outcomes.

As previously mentioned, supportive and inclusive school environments can help reduce stigma, but many adolescents have reported limited education on inclusive sexual health

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materials due to taboos and stigma. Due to this, rural communities are lacking safe spaces for stigmatized issues to be addressed and taught to adolescents (Berglas, 2025; Currin, 2017).

Discussion

Rural adolescents experience unique barriers to sexual health and healthcare in the United States. This is greatly due to lack of comprehensive sexual education, geographic barriers, and social stigma in the community. Rural communities were found to have limited sexual health education, and this oftentimes pushed adolescents to seek out information elsewhere. Rural communities were also found to experience both geographical and structural barriers. These barriers often limited rural adolescents' abilities to get services and tests. Additionally, rural communities were found to push a lot of stigma and cultural taboos on adolescents. This resulted in adolescents and providers experiencing discomfort, as well as marginalized communities such as LGBTQ+ youth not getting services or information that they need.

Implications for practice

As discussed in this review, school and community programs are very good outlets for helping address adolescent sexual health issues. As previously noted, sexual education within schools is important because schools are places that are seen as safe and accessible for adolescents getting health information (Berglas, 2023). Additionally, ongoing school-based education is important because it helps reinforce prior knowledge and addresses new health topics that become important as adolescents age (Berglas, 2023). Unfortunately, as the results section addressed, school sexual education is often limited and insufficient and lacks inclusive materials (Berglas, 2025; Currin, 2017; Curry, 2024; Ritchwood, 2015). These issues demonstrate the need for more inclusive, sufficient, and comprehensive school-based health programs.

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An example of successful implementations of school-based health centers was in a 2022, Colorado study. In several suburban Colorado communities school-based health centers were introduced, and 30 sexually active individuals between the ages of 15 to 21 were interviewed (Westbrook, 2022). Participants were asked to reflect on their experiences and access to sexual health services. After the study was conducted, adolescents reported support for school-based access to contraceptives due to the convenience, low cost, and greater privacy compared to out-of-school providers, especially in rural areas (Westbrook, 2022). This study's implementations demonstrate the feasibility and potential effectiveness of future school-based sexual health centers for adolescents in rural areas.

Additionally, rural adolescents face barriers to sexual healthcare beyond the school setting. Due to the geographic and structural barriers faced by rural adolescents, the integration of mobile health clinics could be extremely beneficial. Many adolescents experience longer travel distances to clinics, limited availability of healthcare providers, limited contraception prescriptions, and fewer local and community prevention programs (Clausen, 2023; Geske, 2016; Sallabank, 2023; Yarger, 2017). One study in this review found that traveling more than 20 miles to receive an HIV test significantly reduces the likelihood of testing (Clausen, 2023). Additionally, some rural areas have no LGBTQ+ friendly resources available further demonstrating the need for mobile or traveling clinics that can bring specialized, confidential, and youth-friendly services into underserved communities.

In a study conducted in Cape Town, South Africa, adolescent patients were presented with a mobile clinic and then invited to participate in an acceptability study after using the mobile clinic. The mobile clinic records during the study period were compared with the records of adolescents attending four clinics in the same community. After the study was conducted, 90%

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rated their mobile clinic experience as better or much better than conventional clinics (Smith, 2019). In fact, the mobile clinic, compared to conventional clinics, attracted more younger patients and yielded more HIV diagnoses (Smith, 2019). Due to the high ratings of acceptability, and the preference for mobile clinics over conventional clinics, the applicability of mobile clinics should be examined as part of future programs for improving U.S. rural adolescent sexual health.

These research studies support the implementations of school-based health centers and mobile health clinics as potential effective strategies for helping access and reducing disparities in rural adolescent sexual health. For future practice, rural communities may implement similar programs to address some of the common disparities addressed in this review.

Limitations

This review's search strategies are not lacking in limitations. This review's results section only includes 21 references of research studies. Of these 21 references, many use self-report data and survey responses from adolescents. This can potentially prompt recall errors, biases, and responses altered by perceived social desirability. The studies utilized often examine a very specific subpopulation of rural adolescents, and this can make it difficult to generalize the findings and results to all rural adolescent communities. Additionally, some specific information on structural barriers and religious norms were omitted due to search terms and strategies.

Conclusion

In conclusion rural adolescents need comprehensive sexual education, access to services, and less stigma around sex in their communities. Several studies have highlighted the effectiveness of school-based initiatives and programs that eliminate physical barriers for rural U.S. adolescents. By evaluating the unique pressures and needs of rural adolescents, public health professionals can find and implement programs to improve their sexual health.

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