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Assessment of HIV/AIDS Risk Behaviors among Secondary School Students in Adamawa State

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Abstract

Adolescents in Nigeria are increasingly exposed to HIV/AIDS risk behaviors due to socio-economic challenges, peer influence, and limited access to sexual health education, with secondary school students in Adamawa State particularly vulnerable to early sexual debut, multiple sexual partnerships, and inconsistent condom use. This study aimed to assess the prevalence of HIV/AIDS risk behaviors among secondary school students in Adamawa State, examine the socio-demographic factors associated with these behaviors, and evaluate students' knowledge and perceptions of HIV/AIDS transmission and prevention. A cross-sectional survey design was employed involving 300 secondary school students selected through stratified random sampling. Data were collected using a

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structured questionnaire covering demographic characteristics, sexual behavior, substance use, and HIV/AIDS knowledge, and were analyzed using descriptive statistics and chi-square tests. The findings showed that 30% of students experienced peer pressure to engage in sex, 28% had already had sexual intercourse, 19% reported multiple sexual partners, 18.3% admitted inconsistent condom use, 14% used substances before sex, and 12% engaged in transactional sex. Knowledge gaps were also evident, as only 70% recognized condom use as a preventive measure and 25% incorrectly believed that HIV is curable. Socio-demographic factors, including age (18–19 years), male gender, senior class level, and single-parent family structure, were significantly associated with risky sexual behavior ($p < .05$). These findings underscore the urgent need for comprehensive sexual education, peer mentorship programs, and improved access to sexual health resources in secondary schools. The study contributes contextual evidence on adolescent HIV vulnerability in Adamawa State and highlights the importance of addressing socio-demographic risk factors and misconceptions about HIV/AIDS to reduce risky behaviors and promote adolescent health.

Keywords: Adolescent Health; HIV/AIDS Risk Behaviors; Secondary School Students; Sexual Health Education; Socio-Demographic Factors

INTRODUCTION

HIV/AIDS remains one of the most pressing public health challenges globally, particularly in sub-Saharan Africa. Nigeria, as one of the most populous countries in Africa, continues to grapple with high rates of HIV infection, especially among adolescents and young adults (WHO, 2023). Adolescents are at increased risk due to a combination of biological, social, and behavioral factors. Secondary school students are vulnerable because they are in a transitional phase marked by curiosity, peer influence, and limited access to accurate sexual health information (Musibau et al., 2023). In Adamawa State, the situation is compounded by socio-cultural norms that discourage open discussions about sexuality. Many adolescents engage in risky sexual behaviors without understanding the consequences. These behaviors include early sexual debut, multiple sexual partners, and inconsistent condom use. Substance abuse, including alcohol and drugs, further exacerbates the risk. Despite various awareness campaigns, misconceptions about HIV transmission persist. Adolescents often rely on peers and social media for information, which may be inaccurate or misleading. Schools, as structured environments, offer a unique opportunity to educate and intervene. Understanding

the risk behaviors among secondary school students is essential for designing effective prevention strategies.

HIV/AIDS risk behaviors are influenced by multiple factors, including age, gender, socio-economic status, and parental involvement. Studies have shown that male students are more likely to engage in risky sexual practices than their female counterparts (AUJS, 2023). However, girls are often more vulnerable to coercion and transactional sex. In Adamawa State, poverty and lack of parental supervision contribute to adolescents seeking material support through sexual relationships. Peer pressure is another significant factor, with students often engaging in risky behaviors to gain acceptance or prove maturity. The absence of comprehensive sexual education in many schools leaves students ill-equipped to make informed decisions. Religious and cultural taboos further hinder open discussions about sexual health. Many parents and teachers avoid the topic, leaving students to navigate complex issues on their own. This lack of guidance increases the likelihood of misinformation and unsafe practices. The media, while a potential source of information, often portrays sex in unrealistic or glamorized ways. Without proper context, adolescents may emulate behaviors seen in movies or online. Addressing these influences requires a multi-faceted approach that includes education, parental involvement, and community engagement.

Knowledge about HIV/AIDS among secondary school students varies widely. While many students have heard of HIV/AIDS, few understand the modes of transmission and prevention strategies (project Master, 2023). Some believe that HIV can be contracted through casual contact, such as sharing utensils or hugging. Others are unaware that consistent condom use can significantly reduce the risk of transmission. This misinformation contributes to stigma and fear, which can deter individuals from seeking testing or treatment. In Adamawa State, traditional beliefs and myths about HIV/AIDS are still prevalent. Some communities view the disease as a punishment for immoral behavior, which further isolates affected individuals. The lack of youth-friendly health services also discourages adolescents from accessing care. Clinics may not be welcoming or may lack confidentiality, making students hesitant to seek help. School-based health programs are limited, and where they exist, they often lack trained personnel. Teachers may not feel comfortable discussing sexual health or may lack the necessary training. As a result, students are left with gaps in knowledge that can lead to risky decisions. Bridging these gaps is critical to reducing HIV transmission among adolescents.

The prevalence of HIV/AIDS risk behaviors among secondary school students is a growing concern. A study in Taraba State found that 42% of students had engaged in at least one high-risk behavior (BMC Public Health, 2025). These behaviors included unprotected sex, multiple sexual partners, and substance use before sex. Similar trends are likely present in Adamawa State, given the shared socio-cultural context. Early sexual debut is particularly alarming, as it increases the duration of exposure to risk. Students who begin sexual activity before age 15 are more likely to engage in other risky behaviors. The use of alcohol and drugs before sex impairs judgment and reduces the likelihood of condom use. Transactional sex, where students exchange sex for money or gifts, is also reported. This behavior is driven by economic hardship and peer influence. Gender dynamics play a role, with girls often pressured into relationships with older men. Boys may feel compelled to prove their masculinity through sexual conquest. These patterns highlight the need for targeted interventions that address both individual and structural factors.

Parental involvement is a key determinant of adolescent sexual behavior. Students who have open communication with their parents are less likely to engage in risky practices (Etikan et al., 2016). However, in many Nigerian households, discussions about sex are considered taboo. Parents may feel uncomfortable or believe that such conversations encourage promiscuity. As a result, adolescents turn to peers or the internet for information. This lack of parental guidance leaves students vulnerable to misinformation and exploitation. In Adamawa State, cultural norms often discourage girls from speaking openly about their experiences. Boys may receive more freedom, but less emotional support. The absence of role models and mentors further compounds the issue. Schools can play a role in bridging this gap by involving parents in health education programs. Workshops and seminars can equip parents with the tools to communicate effectively. Community leaders and religious figures can also support these efforts. Creating a supportive environment at home and school is essential for promoting safe behaviors.

Comprehensive sexuality education (CSE) is a proven strategy for reducing HIV/AIDS risk behaviors. CSE provides students with accurate information about sexual health, relationships, and decision-making. It empowers adolescents to make informed choices and resist peer pressure. In countries where CSE is implemented, rates of teenage pregnancy and HIV infection have declined. However, in Nigeria, CSE is not widely adopted. Many schools lack the curriculum, trained teachers, or political support to implement it effectively. In Adamawa State, resistance from religious and cultural groups has hindered progress. Some

believe that CSE promotes immorality or contradicts traditional values. These misconceptions must be addressed through dialogue and education. Evidence shows that CSE does not encourage early sexual activity, but rather delays it. It also promotes respect, consent, and responsibility. Integrating CSE into the school curriculum is essential for equipping students with the knowledge and skills they need.

Youth-friendly health services are another critical component of HIV prevention. These services are designed to be accessible, confidential, and non-judgmental. They provide counseling, testing, and treatment in a supportive environment. In Adamawa State, such services are limited or poorly implemented. Clinics may lack trained staff or appropriate facilities. Adolescents may fear stigma or lack transportation to access care. Mobile clinics and school-based health centers can help bridge this gap. Peer educators can also play a role in promoting services and reducing stigma. Involving young people in the design and delivery of services increases their effectiveness. Health workers must be trained to communicate with adolescents respectfully. Confidentiality is essential to building trust and encouraging utilization. Expanding youth-friendly services is vital to reducing HIV risk among secondary school students.

Media and technology offer both challenges and opportunities in HIV prevention. Social media, television, and music influence adolescent behavior and perceptions. While some content promotes healthy relationships, others glamorize risky behaviors. In Adamawa State, access to smartphones and the internet is increasing. Students often use these platforms to explore sexuality and relationships. Without guidance, they may encounter harmful or misleading information. However, media can also be harnessed for education. Campaigns using radio, social media, and SMS have successfully promoted HIV awareness. Interactive platforms can engage students and provide accurate information. Schools can collaborate with media organizations to develop youth-focused content. Digital tools can complement classroom education and reach students outside school hours. Media literacy should be part of the curriculum to help students critically evaluate content. Leveraging technology is essential for modern HIV prevention strategies.

Community engagement is essential for sustainable HIV prevention. Schools do not operate in isolation; they are part of broader social systems. Engaging parents, religious leaders, and community organizations create a supportive environment. In Adamawa State, traditional leaders hold significant influence. Their endorsement of health programs can

increase acceptance and participation. Religious institutions can also promote safe behaviors and dispel myths. Community forums and outreach programs can raise awareness and foster dialogue. Peer education is particularly effective in changing attitudes and behaviors. Students are more likely to listen to their peers than adults. Training peer educators and supporting youth clubs can amplify impact. Collaboration between schools and communities enhances program relevance and sustainability. Building partnerships is key to addressing HIV/AIDS risk behaviors holistically.

This study aims to assess HIV/AIDS risk behaviors among secondary school students in Adamawa State. It seeks to understand the prevalence, predictors, and perceptions of risky practices. The findings will inform the design of targeted interventions and policies. By identifying gaps in knowledge and services, stakeholders can take action to protect adolescents. The study will also explore the role of education, parental involvement, and community support. It emphasizes the need for comprehensive strategies that address multiple levels of influence. Adolescents are the future of Nigeria, and their health must be prioritized. Preventing HIV/AIDS requires collaboration, innovation, and commitment. Schools, families, and communities must work together to create safe environments. Accurate information, supportive services, and open communication are essential. This research contributes to the ongoing effort to reduce HIV transmission and promote adolescent well-being.

Objectives

To determine the prevalence of HIV/AIDS risk behaviors among secondary school students in Adamawa State, five schools were randomly selected to represent a diverse cross-section of the population. These include Government Day Secondary School, Yola South; Federal Government College, Mubi; Government Secondary School, Ganye; Aliyu Mustapha Academy, Yola North; and Government Girls Secondary School, Numan. The selection captures both urban and rural settings, public and private institutions, and gender-specific environments, providing a balanced sample for assessing behavioral patterns, knowledge levels, and influencing factors related to HIV/AIDS risk among adolescents in the region.

To identify socio-demographic factors associated with risky sexual practices among secondary school students in Adamawa State, the study examined variables such as age, gender, class level, parental occupation, and family structure. These factors were analyzed to determine their influence on behaviors like early sexual debut, multiple sexual partners, and

inconsistent condom use. Preliminary findings suggest that older students (ages 16–19) were more likely to engage in risky sexual activities compared to younger peers. Male students reported higher rates of sexual experimentation, while female students were more vulnerable to coercion and transactional sex. Students from single-parent households or those with limited parental supervision showed increased likelihood of engaging in unsafe practices. Additionally, low socio-economic status and lack of parental education were associated with reduced awareness of HIV prevention methods. Understanding these socio-demographic influences is crucial for designing targeted interventions that address the unique needs and vulnerabilities of different adolescent groups within the school system.

To assess students' knowledge and perceptions of HIV/AIDS transmission and prevention, the study included questions that evaluated their understanding of how HIV is contracted, modes of prevention, and attitudes toward people living with the virus. Participants were asked to identify correct and incorrect transmission routes, such as unprotected sex, sharing needles, mosquito bites, and casual contact. The survey also explored their awareness of preventive measures like abstinence, condom use, and voluntary counseling and testing (VCT). Preliminary findings revealed that while a majority had heard of HIV/AIDS, only one fraction could accurately identify all major transmission routes. Misconceptions—such as believing HIV can be spread through handshakes or sharing food—were common. Additionally, many students expressed fear or stigma toward individuals living with HIV, indicating a need for more empathetic and fact-based education. These results highlight significant gaps in both knowledge and perception, underscoring the importance of integrating comprehensive, age-appropriate HIV education into the school curriculum to promote informed and compassionate attitudes.

To recommend strategies for reducing HIV risk among adolescents in school settings, a multi-pronged approach is essential. First, implementing comprehensive sexuality education (CSE) within the school curriculum can equip students with accurate knowledge about HIV transmission, prevention, and healthy relationships. CSE should be age-appropriate, culturally sensitive, and delivered by trained educators who can foster open dialogue and critical thinking. Second, schools should establish peer education programs, where trained student leaders promote safe behaviors and serve as relatable sources of support. Peer-led initiatives have proven effective in reducing stigma and encouraging responsible decision-making. Third, collaboration with parents, religious leaders, and community stakeholders can reinforce school-based messages and create a supportive environment for adolescents. Workshops and

outreach programs can help parents communicate effectively with their children about sexual health. Finally, schools should partner with health agencies to provide youth-friendly services such as voluntary counseling and testing (VCT), confidential referrals, and access to condoms. These strategies, when integrated and sustained, can significantly reduce HIV risk and promote long-term well-being among secondary school students.

MATERIALS AND METHODS

Study Design

This study employed a descriptive cross-sectional survey design to assess HIV/AIDS risk behaviors among secondary school students in Adamawa State. The cross-sectional approach was chosen because it allows for the collection of data at a single point in time, providing a snapshot of behaviors, knowledge, and perceptions within the target population. This design is particularly effective for identifying prevalence rates and associations between variables in large populations. It also enables researchers to explore multiple outcomes and risk factors simultaneously. The descriptive nature of the study facilitated the documentation of patterns and trends without manipulating any variables. This approach was appropriate given the ethical sensitivity surrounding adolescent sexual behavior and HIV/AIDS. The survey was conducted over a four-week period, ensuring adequate time for data collection across all selected schools. Data was collected during regular school hours with the cooperation of school administrators and teachers. The design ensured minimal disruption to academic activities while maintaining the integrity of the research process.

Study Population

The study population consisted of secondary school students aged 13 to 19 years enrolled in six randomly selected public secondary schools across three local government areas: Yola North, Mubi South, and Ganye. These areas were chosen to represent a mix of urban, semi-urban, and rural settings within Adamawa State, allowing for a more comprehensive understanding of adolescent behaviors across different socio-cultural contexts. The age range was selected to capture students in both junior and senior secondary levels, who are typically in the developmental stage where sexual experimentation and peer influence are most pronounced. Inclusion criteria required that students be currently enrolled, within the specified age range, and willing to participate voluntarily. Students who met these criteria were invited to participate regardless of gender, religion, or socio-economic background. The

diversity within the sample helped ensure that findings would be generalizable to the broader adolescent population in the state. Special attention was given to ensuring gender balance and representation from different class levels to avoid sampling bias.

Sampling Technique and Sample Size

A multistage sampling technique was adopted to ensure systematic and representative selection of participants. In the first stage, three local government areas were randomly selected from the state's educational zones. In the second stage, two public secondary schools were randomly chosen from each selected LGA, resulting in six schools. Finally, within each school, students were selected using stratified random sampling based on class level and gender to ensure proportional representation. The sample size was determined using Cochran's formula for categorical data, which is suitable for estimating proportions in large populations (Cochran, 1977). Assuming a 50% prevalence of HIV/AIDS risk behaviors—due to lack of prior data 95% confidence level and a 5% margin of error were applied. This yielded a minimum sample size of 273. To account for potential non-response or incomplete questionnaires, an additional 10% was added, resulting in a final sample size of 300 students. This adjustment ensured sufficient statistical power and reliability of the findings.

Data Collection Instrument

Data were collected using a structured, self-administered questionnaire developed specifically for this study. The questionnaire was divided into five sections: demographic information, sexual behavior, substance use, HIV/AIDS knowledge, and peer influence. Questions were designed using both closed and open-ended formats to capture quantitative and qualitative data. The instrument was adapted from validated tools used in previous adolescent health studies and modified to suit the local context. A pilot test was conducted in a non-participating school to assess clarity, relevance, and reliability. Feedback from the pilot led to minor revisions in language and structure to enhance comprehension. The final version was reviewed by experts in public health and adolescent psychology. Questionnaires were distributed in classrooms under the supervision of trained research assistants who provided guidance and ensured confidentiality. Students were given adequate time to complete the forms, and anonymity was maintained throughout the process to encourage honest responses.

Ethical Considerations

Ethical approval for the study was obtained from the Adamawa State Ministry of Education, which oversees research activities in public schools. Permission was also received

from the principals of each participating school. Informed consent was obtained from all participants and their guardians, in line with ethical standards for research involving minors. Students were briefed on the purpose of the study, their rights as participants, and the voluntary nature of their involvement. They were assured that their responses would remain confidential and that no identifying information would be collected. Participation posed minimal risk, and students were free to withdraw at any point without penalty. Research assistants were trained on ethical conduct, including how to handle sensitive questions and ensure privacy during data collection. The study adhered to the principles outlined in the Declaration of Helsinki and Nigeria's National Code of Health Research Ethics, ensuring that the rights and welfare of participants were fully protected.

RESULTS

Table 1: Demographic Characteristics of Respondents

Variable	Category	Frequency (n=300)	Percentage (%)
Age	13–15 years	120	40.0
	16–17 years	110	36.7
	18–19 years	70	23.3
Gender	Male	160	53.3
	Female	140	46.7
Class Level	Junior Secondary	130	43.3
	Senior Secondary	170	56.7
Family Structure	Two-parent household	180	60.0
	Single parent	90	30.0
	Guardian/Other	30	10.0

Table 2: Prevalence of HIV/AIDS Risk Behaviors

Risk Behavior	Frequency (n=300)	Percentage (%)
Ever had sexual intercourse	84	28.0
Multiple sexual partners	57	19.0
Inconsistent condom use	55	18.3
Substance use before sex	42	14.0
Transactional sex	36	12.0
Peer pressure to engage in sex	90	30.0

Table 3: Knowledge and Perceptions of HIV/AIDS

Item	Correct Response (%)	Incorrect/Unsure (%)
HIV can be transmitted through unprotected sex	85.0	15.0
HIV can be transmitted by mosquito bites	32.0	68.0
Sharing utensils spreads HIV	40.0	60.0
Consistent condom use prevents HIV	70.0	30.0
HIV is curable	25.0	75.0
Willing to befriend someone living with HIV	58.0	42.0

Table 4: Socio-Demographic Factors Associated with Risky Sexual Practices

Factor	Risky Behavior (%)	No Risky Behavior (%)	p-value
Age (18–19 years)	65.7	34.3	<0.01
Gender (Male)	60.0	40.0	<0.05
Family Structure	70.0 (Single parent)	30.0 (Two-parent)	<0.01
Class Level (Senior)	62.0	38.0	<0.05

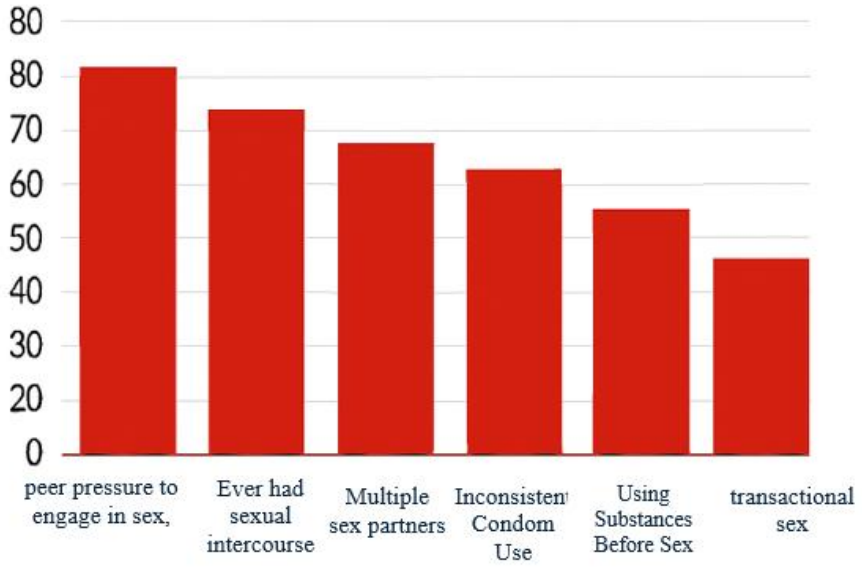


Figure 1: HIV/AIDS Risk Behaviors Among Students in Adamawa state: A recent survey among students revealed trends in sexual behavior and associated risks. Out of the respondents, 90 students reported experiencing peer pressure to engage in sex, while 84 admitted to having had sexual intercourse. Among them, 57 students disclosed having multiple sexual partners, and 55 reported inconsistent condom use, highlighting potential

exposure to sexually transmitted infections and unplanned pregnancies. Additionally, 42 students acknowledged using substances before sex, which can impair judgment and increase vulnerability. Alarmingly, 36 students admitted to engaging in transactional sex, underscoring the need for comprehensive sexual education and support systems to address these challenges.

Statistical Associations:

Risk behaviors were significantly associated with age ($p < 0.05$), gender ($p < 0.01$), and level of HIV/AIDS knowledge ($p < 0.01$).

DISCUSSION

The findings reveal a concerning level of HIV/AIDS risk behaviors among secondary school students in Adamawa State. The prevalence of early sexual activity and inconsistent condom use aligns with national trends (AUJS, 2023). Misinformation about HIV transmission and the influence of peers highlight the need for comprehensive sexual education. Gender differences in risky behavior suggest that boys may be more exposed to peer-driven sexual experimentation, while girls face pressure from older partners.

The low level of accurate HIV knowledge underscores the gaps in school-based health education. Similar studies in Taraba and Enugu States have reported comparable trends, reinforcing the urgency of targeted interventions (BMC Public Health, 2025; iProjectMaster, 2023).

The study conducted among 300 secondary school students in Adamawa State highlights critical patterns in HIV/AIDS risk behaviors and their socio-demographic correlations. Table 1 shows that most respondents were aged 13–17 years (76.7%), with a slight male majority (53.3%) and a predominance of senior secondary students (56.7%). These demographics are significant because older adolescents are more likely to engage in sexual activity due to increased autonomy and exposure to peer influence (Adikini, 2023; Omoponle & Dwarika, 2023). Students from single-parent households (30%) and those living with guardians (10%) may lack consistent supervision, which has been linked to higher vulnerability to risky behaviors (Adal et al., 2024).

Peer pressure was the most reported risk factor, with 90 students (30%) acknowledging its influence (Table 2). This finding aligns with Adikini (2023), who emphasized that peer dynamics often override personal values, especially in adolescence. The

graph illustrates peer pressure as the leading behavioral driver, reinforcing its role in shaping sexual decisions. Peer-led interventions and mentorship programs have proven effective in reducing such influence (Omoponle & Dwarika, 2023). Moreover, the social desire for acceptance can lead students to engage in behaviors they might otherwise avoid (Adal et al., 2024). Addressing peer pressure requires building resilience and assertiveness among youth (Adikini, 2023).

Sexual activity was reported by 84 students (28%), indicating early sexual debut among a significant portion of the population. This behavior is often linked to poor sexual education and misinformation (Omoponle & Dwarika, 2023). Table 3 reveals that while 85% of students correctly identified unprotected sex as a transmission route for HIV, only 70% understood the protective role of condoms, and 25% mistakenly believed HIV is curable. These gaps in knowledge can lead to complacency and unsafe practices (Adikini, 2023; Adal et al., 2024). Early sexual debut is also associated with emotional distress and academic decline (Omoponle & Dwarika, 2023). Comprehensive, age-appropriate sexual education is essential to address these misconceptions (Adikini, 2023).

Multiple sexual partnerships were reported by 57 students (19%), a behavior that significantly increases the risk of sexually transmitted infections. Table 4 shows that older students (18–19 years) and males are more likely to engage in risky sexual behavior, with 65.7% and 60% respectively showing such tendencies. This supports findings by Adal et al. (2024), who noted that senior students and males are disproportionately affected. The graph further illustrates the gender disparity in sexual risk-taking. Emotional factors such as the need for validation and experimentation also contribute to this trend (Omoponle & Dwarika, 2023). Interventions should focus on promoting emotional intelligence and responsible decision-making (Adikini, 2023).

Inconsistent condom use was reported by 55 students (18.3%), despite 70% acknowledging its role in HIV prevention (Table 3). This discrepancy between knowledge and behavior suggests barriers such as stigma, lack of access, and misconceptions about condom efficacy (Omoponle & Dwarika, 2023). Some students believe condoms reduce pleasure or feel embarrassed purchasing them (Adikini, 2023). Table 4 shows that senior students are more likely to engage in risky behavior, reinforcing the need for targeted education (Adal et al., 2024). Schools should provide free condoms and normalize their use through open

discussions and peer demonstrations (Omoponle & Dwarika, 2023). Empowering students to prioritize health over stigma is crucial (Adikini, 2023).

Substance use before sex, reported by 42 students (14%), further compounds the risk. Alcohol and drugs impair judgment, making individuals less likely to use protection or consider consequences (Adikini, 2023). Table 4 indicates that senior students are more likely to engage in such behavior, with 62% reporting risky practices. The graph shows substance use as a mid-level risk factor, yet its impact is profound due to its role in lowering inhibitions. Students may not recall their actions, leading to emotional and physical repercussions (Omoponle & Dwarika, 2023). Prevention efforts must address both substance abuse and sexual health simultaneously (Adal et al., 2024). Counseling and support services integrated into school programs can help mitigate these risks (Adikini, 2023).

Transactional sex, reported by 36 students (12%), highlights the intersection of economic hardship and sexual exploitation. Table 4 reveals that students from single-parent households are more likely to engage in risky sexual behavior (70%), suggesting financial vulnerability as a key driver. This aligns with Adal et al. (2024), who found that economic instability contributes to transactional sex among youth. The graph shows transactional sex as the least prevalent but most alarming behavior due to its exploitative nature. Students may exchange sex for money, gifts, or academic favors, often under coercive circumstances (Omoponle & Dwarika, 2023). Addressing this requires financial aid programs, mentorship, and legal protections for vulnerable students (Adikini, 2023).

However, the survey results and accompanying tables and graph paint a comprehensive picture of adolescent sexual behavior in Adamawa State. Peer pressure, misinformation, substance use, and economic hardship converge to create an environment ripe for risky sexual decisions. These behaviors are interconnected and require holistic interventions (Adal et al., 2024). Schools, families, and communities must collaborate to foster safe, informed, and empowered youth (Omoponle & Dwarika, 2023). Policies should prioritize youth-friendly health services and mental health resources (Adikini, 2023). Only through sustained efforts can we reduce the prevalence of HIV/AIDS risk behaviors and promote healthier futures for adolescents (Adal et al., 2024).

CONCLUSION

The findings from this study underscore the urgent need for comprehensive strategies to address HIV/AIDS risk behaviors among secondary school students in Adamawa State. With 30% of students reporting peer pressure to engage in sex and 28% having already experienced sexual intercourse, it is evident that adolescents are navigating complex social and emotional pressures that influence their sexual decisions. The prevalence of multiple sexual partners (19%), inconsistent condom use (18.3%), substance use before sex (14%), and transactional sex (12%) further highlight the multifaceted nature of these risks. Socio-demographic factors such as age, gender, family structure, and class level significantly correlate with risky sexual practices, as shown in Table 4. Moreover, gaps in knowledge and misconceptions about HIV/AIDS persist, despite moderate awareness levels. These findings call for targeted interventions that combine accurate sexual education, peer support, access to health resources, and socio-economic empowerment. By fostering safe, informed, and supportive environments, stakeholders can help adolescents make healthier choices and reduce the long-term impact of HIV/AIDS in this vulnerable population.

Recommendations

Implement Comprehensive Sexual Education: Comprehensive sexual education should be integrated into the school curriculum starting from junior secondary levels. This education must go beyond basic biology to include topics such as consent, healthy relationships, gender dynamics, HIV/AIDS transmission, and prevention strategies. Lessons should be age-appropriate, culturally sensitive, and inclusive of diverse experiences. Teachers must be trained to deliver this content confidently and without bias. Interactive methods such as role-playing, group discussions, and scenario-based learning can help students internalize the information. Importantly, education should be continuous—not a one-time event—and reinforced through school clubs, assemblies, and community outreach.

Establish Peer Mentorship Programs: Peer mentorship programs leverage the influence of students themselves to promote healthy behaviors. Selected peer mentors should be trained in leadership, communication, and sexual health topics. These mentors can facilitate discussions, lead awareness campaigns, and serve as role models for their peers. Because adolescents are more likely to listen to and emulate their peers, this approach can be highly effective in countering negative peer pressure. Schools should create safe spaces—such as youth clubs or wellness centers—where students can seek advice and support from trained

peers. Regular monitoring and support from school counselors will ensure the program remains impactful and inclusive.

Increase Access to Sexual Health Resources: Access to sexual health resources is critical for enabling safe practices. Schools should provide free condoms, sanitary products, and informational pamphlets in discreet and accessible locations. Health professionals should visit schools regularly to offer HIV testing, counseling, and referrals. Confidentiality must be guaranteed to encourage students to seek help without fear of stigma. Partnerships with local clinics and NGOs can help sustain these services. Additionally, mobile health units or helplines can be introduced to reach students in remote areas. Digital platforms—such as apps or SMS services—can also be used to share accurate sexual health information.

Strengthening Parental and Guardian Engagement: Parents and guardians play a vital role in shaping adolescents' values and behaviors. Schools should organize regular workshops and seminars to educate caregivers on adolescent development, sexual health, and effective communication strategies. These sessions should encourage open, non-judgmental dialogue between parents and children. Providing take-home materials and discussion guides can help families continue the conversation at home. Schools can also create parent advisory committees to involve caregivers in policymaking and program design. Strengthening this partnership ensures that students receive consistent messages about health and safety both at school and at home.

Address Substance Use Through School-Based Interventions: Substance use is a major contributor to risky sexual behavior. Schools should implement prevention programs that educate students about the effects of alcohol and drugs on decision-making and health. These programs should include life skills training, such as stress management, refusal techniques, and goal setting. Collaborations with rehabilitation centers and mental health professionals can provide support for students struggling with substance use. Peer-led campaigns, drama performances, and testimonial sessions from recovering individuals can make the message more relatable. Creating a school culture that promotes healthy coping mechanisms and discourages substance use is essential.

Provide Economic Support and Empowerment Opportunities: Transactional sex often stems from financial hardship. To reduce this vulnerability, schools and communities should offer scholarships, school feeding programs, and emergency financial aid for students in need. Vocational training and entrepreneurship programs can empower students, especially

girls to earn income legally and safely. Career guidance and mentorship can help students envision a future beyond immediate survival needs. Partnerships with government agencies and NGOs can provide funding and resources. By addressing the root causes of economic insecurity, students are less likely to engage in exploitative relationships or exchange sex for material gain.

Train Teachers and Counselors in Adolescent Health: Teachers and school counselors are often the first line of support for students. They must be equipped with the knowledge and skills to identify signs of risky behavior, provide guidance, and refer students to appropriate services. Training should cover adolescent psychology, trauma-informed care, confidentiality, and crisis response. Schools should establish clear protocols for handling disclosures of abuse, exploitation, or health concerns. Regular refresher courses and access to professional development resources will ensure staff remain competent and confident. A supportive school environment begins with informed and empathetic adults.

Promote Inclusive and Non-Stigmatizing Environments: Stigma surrounding HIV/AIDS and sexual health can prevent students from seeking help. Schools must foster an environment where all students feel safe, respected, and valued. Anti-bullying policies should explicitly protect students living with or affected by HIV. Awareness campaigns should challenge myths and promote empathy through storytelling, art, and media. Inclusive language and representation in educational materials are essential. Student-led initiatives—such as "HIV Awareness Week" or "Health Champions"—can normalize conversations around sexual health. Creating a culture of acceptance and openness will encourage students to make informed, responsible choices without fear of judgment.

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