

Assessment of Risk Factors for HIV Infection Among Adolescent Girls and Young Women (AGYW) in Nigeria

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Abstract

Adolescent girls and young women (AGYW) in Nigeria, as in most middle- and low-income countries are disproportionately at risk of infection with the human immunodeficiency virus (HIV) due to behavioral, structural, and biological vulnerabilities. This study investigates risk factors contributing to HIV infection in this group, focusing on three high-prevalence states: Anambra, Abia, and Taraba. A cross-sectional mixed-methods design was adopted, combining quantitative surveys, focus group discussions (FGDs), and key informant interviews (KIIs). Quantitative data provided numerical insights into prevalence and behaviours, while qualitative methods explored nuanced social and cultural contexts. Analysis of quantitative data was done using SPSS while qualitative data were analysed by identifying patterns, themes and relationships through coding. Results revealed high prevalence rates linked to age-disparate relationships, gender inequality, limited access to healthcare, and socioeconomic challenges. Policy makers in the states studied did not show coordinated approach to the reduction of the HIV infection among the relevant ministries, departments and agencies. Furthermore, weak policy implementation, and the lack of focus on mental health, substance use, and other aspects of adolescent and young people's health has further disempowered adolescent girls and young women from enjoying adequate attention. These findings underscore the need for tailored interventions targeting AGYW to reduce HIV vulnerability. We recommend multi-pronged interventions that address the behavioral, structural, and biological factors driving HIV vulnerability among AGYW. Multi-sectoral collaborative efforts involving policymakers, healthcare providers, and community stakeholders are essential to reduce HIV prevalence and improve the quality of life for AGYW in Nigeria.

Keywords: Behavioural, Biological Vulnerabilities, Human Immunodeficiency Virus (HIV), Structural, Adolescent Girls Young Women (AGYW).

Introduction

Nigeria is the most populous country in Africa and the 7th most populous country in the world, with an estimated population of 188.9 million people living in the country in 2015, projected from 140.0 million in 2006 [12]. HIV/AIDS remains a critical public health issue globally, with adolescent girls and young women (AGYW) in sub-Saharan Africa

disproportionately affected. Nigeria's population pyramid shows it has a young population structure [5] with 56.6% of the population in the age range of 0 to 24 year, structured with a broad base and tapers rapidly upward; depicting a situation of high fertility (5.5) and high rate of under-five death (128 per 1000 live births).

In Nigeria, AGYW aged 15–24 years account for a significant portion of new HIV infections, with females up to eight times more likely to contract the virus than their male counterparts. The 2018 Nigeria AIDS Indicator and Impact Survey (NAIIS) [14] reported an HIV prevalence of 1.3% among females aged 20–24, underscoring their vulnerability.

The elevated risk faced by adolescent girls and young women (AGYW) is driven by a complex interplay of behavioural, structural, and biological factors. These include early sexual debut, age-disparate relationships, limited access to sexual health education, low level of knowledge on HIV as compared to their male counterparts and harmful gender norms. Socioeconomic challenges, such as poverty and low educational attainment, exacerbate these risks, while systemic barriers hinder access to adolescent-friendly healthcare services. According to [16] the wellbeing of the Nigerian child depends on the socio-economic status of their parents.

Despite various interventions, Nigeria continues to face gaps in addressing the unique vulnerabilities of AGYW. There is a dearth of data to enable age specific programming. As noted by a study in India, [14] there is lack of data on vulnerability of girls to the HIV infection. Existing data often lack the specificity needed to tailor interventions effectively, particularly in high-prevalence regions.

This study investigates the risk factors associated with HIV infection among AGYW in three high-prevalence states: Anambra, Abia, and Taraba. By identifying behavioural patterns, structural challenges, and service gaps, the research aims to inform targeted strategies to mitigate HIV vulnerability and improve health outcomes for AGYW in Nigeria.

Problem Statement

Adolescent girls and young women (AGYW) in Nigeria face a disproportionately

high risk of HIV infection, fuelled by a combination of behavioural, structural, and biological vulnerabilities. Despite accounting for a significant portion of the country's youthful population, this group continues to experience a high prevalence of HIV, with females aged 20–24 showing an infection rate of 1.3%—far higher than their male counterparts [4]. These disparities highlight a critical gap in HIV prevention efforts.

Multiple factors contribute to this vulnerability, including low knowledge compared to their male counterparts [13], age-disparate relationships, early sexual debut, limited access to comprehensive sexuality education, and inadequate healthcare services tailored to adolescents. Cultural and societal norms further compound these risks, perpetuating gender inequalities and stigmatizing young women who seek sexual health services. The rights of adolescent girls remain unfulfilled [8]. Moreover, systemic barriers, such as poverty, unemployment, and lack of educational opportunities, leave many AGYW without the resources needed to protect themselves from HIV. School dropout rate of the girl child, an important contributory factor which is closely related to socioeconomic and cultural determinants of HIV [18], varies across the states of Nigeria.

Although previous studies have documented some of these challenges, data specific to the subpopulations and geographic regions most affected are often unavailable. This lack of localized and disaggregated data hinders the development of targeted, evidence-based interventions. Furthermore, existing prevention strategies often fail to address the intersecting structural, social, and behavioural factors that drive HIV vulnerability among AGYW.

Without urgent action to address these multifaceted challenges, Nigeria risks perpetuating cycles of HIV transmission, undermining national goals to eliminate HIV as a public health threat by 2030. This study seeks to fill critical knowledge gaps by examining the

risk factors contributing to HIV vulnerability among AGYW in three high-prevalence states, providing evidence to inform more effective interventions and policy responses.

Aim and Objectives of the Study

Aim

This study aims to assess the risk factors contributing to HIV infection among adolescent girls and young women (AGYW) in Nigeria to inform effective prevention strategies and improve health outcomes in high-prevalence areas.

Objectives

The specific objectives of the study are to:

1. **Profile Vulnerable AGYW:** Identify the most at-risk subgroups of AGYW based on behavioural, structural, and biological risk factors.
2. **Determine Specific Needs:** Explore the unique needs of AGYW, including access to sexual and reproductive health information and services.
3. **Evaluate Healthcare Services:** Assess the availability, accessibility, and impact of existing HIV prevention and treatment services in the study regions.
4. **Engage Stakeholders:** Analyze the role of multisectoral stakeholders in addressing the drivers of HIV vulnerability among AGYW.

These objectives aim to provide evidence-based insights that can guide the development of targeted policies and programs to reduce HIV risk and improve the quality of life for AGYW in Nigeria.

Significance of the Study

This study addresses a critical public health challenge by examining HIV vulnerability among adolescent girls and young women (AGYW) in three high-prevalence Nigerian states: Anambra, Abia, and Taraba.

Key contributions include:

1. Providing localized, disaggregated data to understand HIV drivers in different socio-cultural contexts.
2. Identifying behavioural, structural, and biological risk factors to design targeted interventions.
3. Highlighting challenges like gender inequality and limited healthcare access.
4. Informing HIV prevention policies and adolescent-friendly health programming.
5. Advancing national and global goals to reduce HIV infections and achieve UNAIDS 95-95-95 targets by 2030.

The study offers actionable insights to combat HIV among AGYW, promoting sustainable interventions that reduce vulnerability and improve overall well-being.

Methodology

This study employed a mixed-methods approach to investigate the risk factors contributing to HIV infection among adolescent girls and young women (AGYW) in three high-prevalence states in Nigeria: Anambra, Abia, and Taraba. The mixed-methods design enabled the integration of quantitative and qualitative data for a comprehensive analysis of behavioural, structural, and biological vulnerabilities.

Study Design

A cross-sectional mixed-methods design was adopted, combining quantitative surveys, focus group discussions (FGDs), and key informant interviews (KIIs). Quantitative data provided numerical insights into prevalence and behaviours, while qualitative methods explored nuanced social and cultural contexts.

Study Area

The research was conducted in Anambra, Abia, and Taraba states, selected based on their high HIV prevalence rates. In each state, local government areas (LGAs) with significant populations of at-risk AGYW were purposively chosen. These included urban and rural areas to

capture diverse socio-cultural contexts affecting HIV vulnerability.

Reviewed Study Area

The research covered Anambra, Abia, and Taraba states, focusing on urban and rural LGAs with high HIV prevalence and vulnerable AGYW.

HIV Situation in Study Areas

The study focuses on three Nigerian states with high HIV prevalence rates: Anambra, Abia, and Taraba. These states were selected due to their distinct socio-cultural and epidemiological contexts, which contribute to the heightened vulnerability of adolescent girls and young women (AGYW) to HIV infection.

Anambra State

Anambra State, located in southeastern Nigeria, has a reported HIV prevalence of 2.2% according to [18]. Despite over 90% of pregnant women attending antenatal care facilities, less than 30% were tested for HIV, and only about 25% of pregnant women living with HIV accessed antiretroviral therapy. These gaps highlight systemic barriers to healthcare access, including stigma and inadequate service provision. The state faces challenges such as urban migration, which contributes to increased sexual activity and limited awareness about HIV prevention.

Abia State

Abia State, in the South-East geopolitical zone, has one of the highest HIV prevalence rates in Nigeria, reported at 5% in 2008 and remaining consistently high in recent years. Low knowledge of HIV prevention, predominantly male-driven risky sexual behaviours, and limited condom use have been identified as major drivers of the epidemic in this region. Approximately 58,341 people are estimated to be living with HIV in the state, with a significant treatment gap requiring urgent attention. The U.S. government and local stakeholders have committed to closing

this gap by identifying and initiating treatment for an additional 37,000 individuals [19, 20].

Taraba State

Taraba State, located in northeastern Nigeria, has one of the highest HIV prevalence rates in the country [7], reaching 10.5% in 2013. Though [11] estimated it as 3% as at 2025. The epidemic is compounded by structural factors such as poverty, low literacy rates, and stigma, particularly in rural areas. Behavioural factors, including transactional sex and unsafe practices in rural markets, further exacerbate the situation. Despite the state's high HIV burden, access to antiretroviral therapy (ART) remains limited, with only 2,541 individuals on ART as of 2007. Many rural communities lack adequate health infrastructure and face challenges such as denial of the epidemic and discriminatory practices against those living with HIV.

Common Challenges Across Study Areas

Across Anambra, Abia, and Taraba states, common factors drive the high HIV prevalence among AGYW. These include inadequate access to healthcare services, harmful cultural practices, and insufficient knowledge of HIV prevention strategies. Gender inequality and socioeconomic deprivation, such as unemployment and poverty, exacerbate the risks, while stigma and discrimination hinder effective testing and treatment.

By focusing on these high-prevalence states, the study provides valuable insights into localized drivers of HIV vulnerability, highlighting the need for targeted, region-specific interventions to reduce the epidemic's impact on AGYW.

Sampling Procedure

A multi-stage sampling technique was employed:

1. Three LGAs were purposively selected in Abia and Taraba states, while seven LGAs were selected in Anambra due to higher prevalence intensity.

2. Within each LGA, schools and communities were sampled to represent both in-school and out-of-school AGYW.
3. Respondents were stratified by age (15–24 years) and educational status. A total of 1,500 questionnaires were administered, with a response rate of 99.8%, yielding 1,497 valid responses for analysis.

Data Collection Methods

1. **Quantitative Surveys:** Structured questionnaires were used to collect data on sexual behaviours, knowledge of HIV, access to healthcare, and socioeconomic factors. The survey instrument was adapted from the 2018 Nigeria AIDS Indicator and Impact Survey (NAIIS).
2. **Focus Group Discussions (FGDs):** A total of ten FGDs were conducted with out-of-school and never-schooled AGYW. Each group comprised eight participants selected through non-probability sampling, allowing for an in-depth exploration of vulnerability factors and risk behaviours.
3. **Key Informant Interviews (KIIs):** Six KIIs were conducted with policymakers and stakeholders from health, education, and social development sectors. These interviews provided insights into systemic gaps and policy-level challenges in HIV prevention efforts.

Ethical Considerations

Ethical approval was obtained from relevant institutional review boards. Informed consent was secured from all participants, ensuring confidentiality and voluntary participation.

Data Analysis

Quantitative data were analyzed using the Statistical Package for Social Sciences (SPSS), employing descriptive statistics such as frequencies, percentages, and cross-tabulations. Qualitative data from FGDs and KIIs were transcribed and thematically analyzed to identify patterns and contextual factors influencing HIV risk.

This methodological framework ensured robust data collection and analysis, capturing both individual and systemic factors driving HIV vulnerability among AGYW in the study regions.

Literature Review

Vulnerability and Risk Factors for HIV Among Adolescent Girls and Young Women (AGYW)

Adolescent girls and young women (AGYW) in sub-Saharan Africa, including Nigeria, are disproportionately vulnerable to HIV infection. Biological, behavioural, and structural factors interplay to exacerbate this vulnerability. Biologically, adolescent girls are more susceptible to HIV due to an immature reproductive tract and increased risk of genital inflammation and micro-tears during intercourse, particularly in cases of forced or transactional sex [4]. Studies have shown that young women are up to eight times more likely to contract HIV than their male counterparts, particularly in the context of age-disparate relationships where unequal power dynamics hinder safe sex negotiation [7].

Behavioural factors, including early sexual debut, multiple sexual partners, and low condom use, are prevalent among AGYW in Nigeria. For example, transactional sex—a survival strategy for many young women living in poverty—has been linked to increased exposure to HIV [3]. Limited knowledge of HIV prevention further exacerbates these risks. A lack of comprehensive sexuality education in schools often leaves AGYW unaware of preventive measures, heightening their susceptibility to risky behaviours [5].

Structural factors, such as gender inequality, poverty, and harmful social norms, also play a critical role. AGYW often lack access to adolescent-friendly health services, which are essential for HIV prevention and treatment. Stigma and discrimination deter young women from seeking healthcare, and restrictive policies, such as parental consent requirements,

create additional barriers [9]. Furthermore, gender-based violence, including intimate partner violence (IPV), is significantly associated with increased HIV risk. Women who experience IPV are 50% more likely to contract HIV than those who do not, due to coerced sex and limited autonomy in relationships [17].

Social and Economic Contexts of HIV Risk in Nigeria

Socioeconomic disparities amplify HIV risk among AGYW in Nigeria. Poverty and unemployment often force young women into exploitative relationships or transactional sex. Studies have shown that AGYW from lower-income households are less likely to access HIV prevention services and more likely to engage in unsafe sexual practices [6]. Education, another critical determinant, has been linked to delayed sexual debut and reduced HIV vulnerability. However, many Nigerian girls drop out of school due to early marriage, pregnancy, or financial constraints, thereby increasing their risk of HIV [1].

Cultural and religious beliefs also shape HIV risk. In many Nigerian communities, discussing sexual health remains a taboo, limiting young women's access to accurate information. Harmful practices such as child marriage and widow inheritance further expose AGYW to HIV. A study in Taraba State highlighted that stigma and misinformation about HIV persist, with many regarding it as a punishment for immoral behaviour, thereby deterring individuals from seeking testing or treatment [10].

Interventions and Gaps in Research

Efforts to reduce HIV prevalence among AGYW in Nigeria have included education campaigns, provision of antiretroviral therapy (ART), and promotion of condom use. However, evidence-based interventions targeting AGYW remain limited. School-based HIV prevention programs, though widely implemented, often fail to address the specific needs of out-of-school youth or those in rural areas [4]. Similarly, adolescent-friendly health services are scarce and underfunded, leaving many AGYW without access to care.

Emerging approaches, such as pre-exposure prophylaxis (PrEP) and conditional cash transfers, have shown promise but require further research and adaptation to local contexts. Studies have emphasized the importance of addressing structural barriers, such as poverty and gender inequality, to create sustainable impacts [17]. Moreover, a lack of disaggregated data limits the ability to identify and target the most vulnerable subgroups of AGYW, such as those in age-disparate relationships or survivors of gender-based violence.

Results

The findings of this study are presented based on the key themes emerging from the quantitative and qualitative analyses, focusing on the behavioural, structural, and biological factors contributing to HIV vulnerability among adolescent girls and young women (AGYW) in the study areas.

Socio-Demographic Characteristics

As shown in table 1 below.

Table 1. Age of Respondents in Anambra, Abia and Taraba state

Age of respondents		
13years – 18years	285	58.1
19years – 25years	203	41.5
26years – 30years	1	0.2
Above 30years	1	0.2

Source: Author Field Survey, 2023

The majority of respondents in the study areas (58.1%) were aged between 13 and 18 years, with a mean age of 18.04 years. Educational attainment varied, with 34.7% completing secondary education and 4.3% having no formal education. Most respondents (87.8%) were unmarried, and 36.9% were full-time students. These demographics highlight a

predominantly young, unmarried population with limited economic independence, contributing to their vulnerability to risky behaviours.

The result shown in table 2 below shows that only 13% completed tertiary education while about 35% completed secondary school and 0.20% had Quranic education only.

Table 2. Socioeconomic Characteristics of Respondents

Level of Education	Frequency	Percent
Completed Primary	53	10.8
Completed Secondary	170	34.7
Never Attended School	21	4.3
Quranic Education Only	1	0.2
Some Primary	14	2.9
Some Secondary	167	34.1
Tertiary Education	64	13.1
Total	490	100.0

Behavioral Risk Factors

As shown in table 3 below, on early sexual debut.

Table 3. Sexual History of Respondents

Age difference with First Partner	Frequency	Percent
More Than 10 Years Older	46	9.4
More Than 10 Years Younger	3	0.6
Same Age	14	2.9
Others [Not 1,2, Or 3]	6	1.2
Don't Know	54	11.0
Total	490	100.0
Circumstances Leading to First sex		
Deceived /Cajoled	13	2.7
Drunk	3	0.6
Got Married	14	2.9
Having Fun	14	2.9
In Love	61	12.4
Raped/Forced	8	1.6
To Get Pregnant	6	1.2
To Obtain Money	41	8.4
Under Pressure /Blackmailed	5	1.0
Wanted to please partner	4	0.8
No Response	321	65.5
Total	490	100.0

Frequency of Sex in the last Six Month		
Always	16	3.3
Most of The Time	9	1.8
Never	78	15.9
Rarely	33	6.7
Sometimes	64	13.1
don't Know	23	4.7
Total	490	100.0

Source: Author Field Survey, 2023

A significant proportion of respondents reported initiating sexual activity between 15–24 years. Factors such as transactional sex (8.4%) and relationships with older partners (9.4%) were common, highlighting the role of socio-economic pressures in risky sexual behaviours.

Forced Sexual Encounters: About 6% of respondents experienced forced sex (deceived/drunk) in the past year, with 19.6%

reporting forced sex without condom use. These instances underscore the prevalence of gender-based violence as a significant risk factor for HIV.

Substance Use: While alcohol consumption was reported by 20.2% of respondents, injection drug use was rare, with only 0.4% reporting such behaviour in the past six months. As shown in table 4 below.

Table 4. Social Habits (Alcohol & Drug Use)

Frequency of alcohol consumption	Frequency	Percent
Everyday	3	0.6
Never	2	0.4
Occasionally	428	85.9
Once a week	54	10.8
Others	11	2.2
Total	498	100.0
Injection of drugs in the last six months		
None	494	99.2
Others	2	0.4
Pentazocine (Fortwin)	2	0.4
Total	498	100.0
Use of drugs in the last One month		
None	490	98.4
Yes	8	1.6
Total	498	100.0
Injected drugs in the last One month		
Heroin and cocaine together	1	0.2
None	496	99.6
Pentazocine (Fortwin)	1	0.2
Total	498	100.0

Source: Author Field survey, 2023

Structural Challenges

Respondents reported limited access to adolescent-friendly health services due to

stigma, cultural barriers, and inadequate infrastructure. Table 5 below.

Table 5. Knowledge of Testing Sites

Knowledge of any health facility in Community for HIV testing		
Don't Know	28	5.6
No	220	44.3
No Response	198	39.8
Yes	51	10.3
Total	497	100.0

Source: Author Field Survey, 2023

Table 5 shows that 44.3% do not know of any health facility in their community where they could get tested for HIV while about 40% did not answer the question. Also, 45.1% of respondents indicated difficulty in accessing healthcare services tailored to HIV prevention, and only 25% of pregnant women living with

HIV accessed antiretroviral therapy in Anambra State.

Biological Factors and Awareness

Knowledge of sexually transmitted infections (STIs) was relatively high, with 66.7% aware of STIs as shown in table 6 below.

Table 6. Knowledge of HIV

Having Knowledge of HIV	Frequency	Percent
Don't Know	28	5.7
No	28	5.7
No Response	146	29.8
Yes	288	58.8
Total	490	100.0
Knowing if HIV Can be Cured		
Don't Know	41	8.4
No	217	44.3
No Response	100	20.4
Yes	132	26.9
Total	490	100.0
Awareness of Any Family Member Infected with HIV		
Don't Know	24	4.9
No	206	42.0
No Response	100	20.4
Yes	160	32.7
Total	490	100.0
Knowledge of HIV Prevention		
Don't Know	35	7.1
No	56	11.4
No Response	80	16.3
Yes	319	65.1
Total	490	100.0

Source: Author Field Survey, 2023

However, misconceptions about symptoms and transmission were common, with 38.6% unable to describe symptoms accurately. Forced sexual encounters and limited condom use increased exposure to HIV and other STIs.

Knowledge and Awareness of STIs by Respondents

Table 7 below shows that 66.70% of the respondents had knowledge of Sexually Transmitted Infections (STIs).

Table 7. Knowledge and Awareness of STIs by Respondents

Diseases Transmitted Through Sexual Intercourse	Frequency	Percent
Don't Know	15	3.1
No	81	16.5
No Response	67	13.7
Yes	327	66.7
Total	490	100.0

Source: Author Field survey 2023

Also, in table 7, 16.50% had no pre-knowledge of STIs, while 3.10% of the respondents do not know about STIs and 13.70% provided no response. This implies that a very significant number of the respondents are

aware of the existence of various diseases that can be contracted through sex. Assessment was also done on knowledge of the symptoms of STIs.

Table 8. Knowledge and Awareness of STIs by Respondents

Description of symptoms of STIs		
Abdominal pain	191	39.0
Burning pain on urination	6	1.2
Foul smelling discharge	6	1.2
Genital discharge	66	13.5
Genital ulcers/sores	4	0.8
Itching of the genitals	11	2.2
Swellings in groin area	7	1.4
Others	9	1.8
No Response	189	38.6
I don't know	1	0.2
Total	490	100.0
Description of STIs Symptoms in Men		
Burning pain on urination	55	11.2
Genital discharge	130	26.5
Genital ulcers/sores/rashes	46	9.4
Itching of the genitals	10	2.0
Swelling around the anus/anal warts	6	1.2
Swellings in groin area	10	2.0
I don't know	1	0.2
Others	7	1.4
No Response	225	45.9
Total	490	100.0

Experience of Any of the STIs Symptoms by the Respondents		
Burning pain on urination	41	8.4
Genital discharge	136	27.8
Genital ulcers/sores/rashes	11	2.2
Itching of the genitals	8	1.6
Swelling around the anus/anal warts	3	0.6
Swellings in groin area	4	0.8
Others	10	2.0
No Response	277	56.5
Total	490	100.0

Source: Author Field Survey, 2023

The result in Table 8 above showed that 39.00% of the respondents cited abdominal pain, 13.50% stated genital discharge, 2.20% claimed to be aware of itching around the genitals, 1.40% of the respondents identified swelling in the groin area, and 1.20% mentioned foul smelling discharge. Further,

0.80% claimed to be aware of genital ulcers or sores, and 1.80% of the respondents identified other types of symptoms.

Knowledge of how respondents can protect themselves from being infected or transmitting the virus to others is shown in table 9 below.

Table 9. Knowledge on How to Protect Self from HIV Infection/Transmission

Can Condom Provide Protection From HIV		
Don't Know	29	5.9
No	54	11.0
No Response	71	14.5
Yes	336	68.6
Total	490	100.0
Can People Be Protected Via Abstinence of Sex		
Abstain from sex	317	64.7
Always use condom during casual sex	65	13.3
Avoid sex with persons who have multiple partners	2	0.4
Avoid sex with sex workers	2	0.4
Have sex with only one faithful uninfected Partner	6	1.2
Limit number of sex Partners	2	0.4
Others	63	12.9
No Response	33	6.7
Total	490	100.0
HIV Infection Through Used Needle		
Don't Know	24	4.9
No	67	13.7
No Response	57	11.6
Yes	342	69.8
Total	490	100.0
Healthy Person and HIV Infection		
Don't Know	24	4.9

No	45	9.2
No Response	54	11.0
Yes	367	74.9
Total	490	100.0
HIV infection through unscreened blood		
Don't Know	24	4.9
No	61	12.4
No Response	64	13.1
Yes	341	69.6
Total	490	100.0
Mother-to-child Transmission		
Don't Know	19	3.9
No	34	6.9
No Response	63	12.9
Yes	374	76.3
Total	490	100.0

Source: Author Field Survey, 2023

About 69% of respondents are aware that condom use can help prevent HIV infection, while 65% positively identify abstinence from sexual intercourse as a means of protection. On the whole, majority of respondents are aware of the rules of total abstinence, being faithful to one partner, not using a used needle and protection of baby during delivery and

breastfeeding as primary means of prevention from HIV.

Sexual Encounters of Respondents

The age range of respondents in this study is majorly between 10 and 25 years as shown in table 10 below.

Table 10. Sexual Encounters of Respondents

Age of first sexual encounter	Frequency	Percent
10years – 15 years		55.0
16years – 20 years old		34.9
21years – 25years old	2	4.41
Above 25 years	2	4.41
Total	498	100.0
Age difference with first sexual partner		
More than 10 years older	75	15.1
More than 10 years younger	28	5.6
Same Age	374	75.1
Others [Not 1,2, Or 3]	15	3.0
don't Know	2	0.4
Total	498	100.0
Circumstances leading to first sex		
Deceived /Cajoled	3	0.6
Drunk	5	1.0
Got married	8	1.6

Having fun	271	54.4
In love	164	32.9
Raped/forced	2	0.4
To obtain money	22	4.4
Under pressure /blackmailed	7	1.4
Wanted to please partner	8	1.6
No response	8	1.6
Total	498	100.0

Source: Author Field survey 2023

Interestingly, 55% already had a sexual experience which agrees with other findings that show early sexual debut among adolescent girls. Also, 35% between 16 years and 20 years of age are already engaging in sexual encounters. Early sexual debut among teenagers has serious implications on HIV infection and other socioeconomic risks such as violence and abuse. The result implies that some of the respondents were not ready to disclose their first sexual experiences especially in relation to the age of the person. This is likely to constitute a setback to sex education among adolescents in the area.

Perspective and Role of Government in HIV/AIDS Awareness and Reduction

Policy makers in the study areas were interviewed to understand what their priorities for young women and adolescent girls are and what programs are available for awareness creation, reduction of infection rate through the use of face-to-face interactions and use of ICT. From responses received, it is obvious that there is no coordinated effort in the health and other line Ministries (Education, Information, Justice, etc).

The role of ICT in awareness creation and building a critical mass for peer-to-peer education cannot be over-emphasised. The use of ICT will definitely improve information sharing about HIV prevention while also promoting safer sex and safe lifestyles among the general population [2]. Emphasized that ICT intervention will also promote use of

condoms not only among the young people but also the general population [2].

Prioritizing Adolescent Issues by Policy Makers

Policy makers in health and other ministries must prioritize adolescent health. However, uncoordinated responses, weak policy implementation, and neglect of mental health and substance use disempower youth. Key informants in Anambra, Abia, and Taraba states have varying priorities. Abia and Taraba's State Agency for AIDS focus mainly on HIV, while Anambra addresses sexual, reproductive, and mental health. TACA stated, *"we are the coordinating body for line ministries, and all organization implementing HIV programs do take care of young people. We don't have money to conduct any activities for youth."* No key informants admitted having strategic documents for adolescent health.

The use of Information Communication Technology (ICT)

The emphasis of the Ministry of Information in some states is focused on sensitization of young people only *"when donor agencies invite them to their programs"* while some depend on radio and television. According to [2], that studied the health of young people in terms of their psychosocial needs, ICT intervention will improve information about HIV prevention, motivation, and behavior skills but also promote the use of condoms, so as to achieve the result of promoting behaviors that act to prevent AIDS within the general population.

Discussion

The study highlights a complex interplay of behavioural, structural, and biological factors contributing to HIV vulnerability among AGYW in Nigeria.

Behavioral Factors and Gender Inequality

The findings reinforce existing literature on the impact of early sexual debut, transactional sex, and age-disparate relationships in driving HIV risk. Cultural norms and gender inequality limit AGYW's ability to negotiate safe sexual practices, perpetuating cycles of risk. Addressing these challenges requires comprehensive sexual education and programs that empower AGYW to make informed decisions about their health.

Structural Challenges and Healthcare Access

Barriers to accessing adolescent-friendly healthcare services, such as stigma and limited service availability, exacerbate HIV vulnerability. For example, the low uptake of antiretroviral therapy among pregnant women in Anambra State reflects systemic gaps in healthcare delivery. Interventions must focus on strengthening healthcare infrastructure, promoting community-based education, and addressing stigma.

The Role of Socio-Economic Factors

Poverty and unemployment emerged as significant drivers of risky behaviours, including transactional sex. Addressing socio-economic disparities through targeted empowerment programs, such as skill development and financial support for AGYW, is critical to mitigating these risks.

Biological Vulnerability and Misconceptions

High rates of forced sex and limited condom use underscore AGYW's biological vulnerability to HIV. While awareness of STIs

was relatively high, misconceptions remain widespread, indicating the need for improved health literacy campaigns that provide accurate information on HIV prevention and treatment.

Conclusion

The literature underscores the multifaceted drivers of HIV risk among AGYW in Nigeria, highlighting the need for integrated and context-specific interventions. Addressing the behavioural, structural, and biological factors contributing to vulnerability is essential for reducing HIV prevalence and improving health outcomes. However, significant gaps remain, particularly in the areas of localized data, adolescent-friendly services, and long-term structural interventions. Future research should prioritize these gaps to inform more effective policies and programs.

The results of this study emphasize the urgent need for multi-pronged interventions that address the behavioural, structural, and biological factors driving HIV vulnerability among AGYW. Collaborative efforts involving policymakers, healthcare providers, and community stakeholders are essential to reduce HIV prevalence and improve the quality of life for AGYW in Nigeria.

Conflict of Interest

I, Catherine Gana, hereby declare that I have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

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