# High risk sexual behavior among adolescent senior secondary school students in Nigeria

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#### Abstract

**Background:** The consequences of high risk sexual practices (HRSP) are enormous among adolescent senior secondary school students. They therefore need to have sufficient knowledge of HRSP.

**Aim Objectives:** The study gauged the level of knowledge and perceptions of high risk sexual behavior among senior secondary school students in Ilorin, Nigeria with a view to improving their understanding of the current trends in HRSP.

This was a quantitative, cross-sectional, descriptive study of adolescent secondary school students in Ilorin East Local Government Area. Multi – stage sampling method involving 3 stages was used. A semi-structured interviewer administered questionnaire was used to obtain data. Informed consent of respondents was obtained. The data was analyzed using SPSS windows software package version 17.

**Results:** Majority, 305 (69.5%) of the students were between 16 – 20 years. The major source of information was from movies, 42.5%, and the internet, 24.7%. Twenty-three percent (23.1%) had poor knowledge of HRSP. Thirty-eight percent (38.1%) did not consider indiscriminate sexual intercourse as HRSP while 27.9% still believed that unprotected sexual practice is safe. Thirty-four percent (34.2%) did not know that sex with multiple partners is a HRSP while 34.4% did not know that oral –genital sex is unsafe. Over thirty-two (32.9%) perceived that engaging in sex made them mature among peers. Twenty-four (24.7%) did not perceive any danger in keeping multiple sexual partners while 15.3% would still engage in unprotected sex.

Conclusion: The students had relatively poor knowledge and perceptions of HRSP. Quite a number did not consider indiscriminate sexual intercourse as HRSP. An appreciable number did not perceive any danger in keeping multiple sexual partners or beingengaged in unprotected sex. Counselling on the dangers of HRSP should be a component of the school health services so as to curb the complications of HRSP in our secondary schools.

Keywords: Knowledge, attitude, perception, high risk sexual practices, Nigeria.

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#### Introduction

An adolescent is defined by the National Adolescent Health Policy in Nigeria as an individual between the ages of 10 and 24 years. This age group makes up one third of Nigeria's total population of 180 million<sup>1</sup> whereas the World Health Organisation (WHO)<sup>2</sup> defines an adolescent as an individual between ages 10 to 19 years. It is



the most turbulent stage of human development and it is characterized by indiscriminate sexual escapades.<sup>3</sup>

The National Family Health Survey (NFHS)<sup>4</sup> defines high risk sexual behavior as sexual intercourse with somebody who is neither a spouse nor a cohabitating partner.

Factors that predispose to high risk sexual practices are: early sexual debut, cultural practices, drug abuse and illiteracy. The mean age of 15 years for sexual debut has been reported in Nigeria.<sup>5</sup> Religion, government policies, socioeconomic status, place of residence, family, gender, constitute distant conceptual framework on adolescent sexual risk taking in Nigeria while the mass media, communication, peer influence, contraception, and early marriage constitute the proximal factors.

Adeyemo and colleagues' in their study indicated that female adolescents with higher religiosity scores were more likely to initiate sex at a later age. Studies have documented the association between socio-economic status and sexual behavior. High levels of family cohesion lead to bonding, and low levels of cohesion indicate poor family support, which could lead to a family dysfunction. Low family cohesion is associated with adolescent sexual risk behavior.

The Bello et al in their study<sup>10</sup> showed that the mean age of sexual initiation was 15±2.6years with more than a quarter (28.3%) of the respondents having sexual exposure and about 40 percent having more than one sexual partner and over a third had their first sexual exposure the same day they met the partner (37.6%).<sup>10</sup>

Multiple sex, is sexual intercourse with more than one partner. Homosexuality is romantic behaviour between members of the same sex. The most common terms for homosexual people are lesbian for women and gay for men. Two percent (2%) to 13% of the world's population are homosexual. Having multiple sex partners is a sexual risk taking behavior. Izugbara et al showed that respondents were aware that having multiple sex partners was a risk factor for several negative health outcomes, including contracting, sexually transmitted infections – STIs. The sexual sex

Anal sex is sexual acts involving the anus. It involves, pegging, anilingus, fingering and object insertion. Pegging is the form of practice whereby the female wears a penis-like object and inserts it into the anus of the female partner. Anilingus is oral stimulation of a person's anus. Fingering is the insertion of fingers into the sexual part-

ner's anus/vagina. The risks associated with these practices include trauma, ano-rectal fissures, rectal prolapse, infections and anal cancer.<sup>14</sup>

Oral sex is any sexual activity involving the stimulation of the genitalia by the use of the mouth and tongue.<sup>15</sup> Terms identified in this form of sexual practice are: cumillingus which is oral sex performed by females, fellatio refers to oral sex performed by males while anilingus refers to oral stimulation of a person's anus.

Transactional sexual relationship is a situation whereby gifts, (monetary/non-monetary) and services are given or collected in exchange for sex.<sup>16</sup> This is common in sub-Saharan Africa due to the extreme poverty in this region.<sup>17</sup> The threat of reproductive health hazards confronting the youth in Nigeria should be a focus of research and advocacy. The problem associated with youth sexuality, such as unprotected sexual activities and inability to negotiate safe sex become readily apparent.<sup>18</sup> This study is therefore aimed at assessing the level of knowledge of HRSB aswell as the perception of HRSP of secondary school students in Ilorin, North Central Nigeria.

## Methods

Ilorin is the state capital of Kwara State with an estimated population of 847,582 as at 2007. Ilorin metropolis consists of 3 local governments namely; Ilorin East, Ilorin West and Ilorin South which consist of 12, 12 and 11 wards respectively with numerous communities. Ilorin-East local government area has an area of 486 km² and a population of 204,310 as at 2006. Ilorin East has her headquarters in Oke-Oyi and consist of communities such as Apado, Sango, Sabo-Oke, Oke-Ose, Sobi, Maraba and Okelele among others.

This research was approved by the Ethical Committee of the Kwara State, the Kwara State Ministry of Education and the school authority. Informed consent of respondents was obtained. This was done through a section of the questionnaire in which respondents indicated their willingness to participate in the study voluntarily. Respondents were also made to understand that they could voluntarily withdraw at any time of the study.

There are 40 secondary schools in the local government area; 24 public and 16 private which have the population of senior secondary students of 8,952 and 1,170 respectively. These bring the total population of senior secondary school students in the local government area to 10,122. It is in this local government area that we have

prominent secondary schools such as Government Secondary School (GSS) Ilorin, Saint Anthony's Secondary School Ilorin, Cherubim and Seraphim (C&S) College Ilorin among others. The senior secondary school curriculum mandates biology as a compulsory subject for students and parts of the body and reproduction are areas covered in this subject. This gives the students a basic knowledge and understanding of the body and sexuality. The communication channels through which information is passed to the general public in Ilorin include newspapers, radio, television, billboards and postal. There are two major television stations in the city which are Nigerian Television Authority (NTA), Ilorin and Kwara Television. The prominent radio stations based in Ilorin include Radio Kwara, Midland FM, Royal FM and Unilorin FM. The major social settings that influence sexual behaviour of adolescents in Ilorin include the presence of popular beer parlors all around the local government area. Also, female sex workers are found in identified hotels and some are also found on the streets where they receive patronage. There are also night clubs and relaxation centers that host parties and settings that create avenues for many high risk sexual practices. These places and activities influence the perception of adolescents to sexual practices since they are aware of such avenues and also sometimes they see what goes on in such places. Also, this will affect perception of lifestyle modification towards health promotion.

It is also important, to note that the Kwara state ministry of Health and Kwara State Agency for Control of AIDS (KWASACA) carry out activities on HIV/AIDS such as awareness programmes and public sensitization on the mass media among other activities. The role of the activities of non-governmental organizations (NGOs) on HIV/AIDS has also been important in the prevention

and control of the disease in the local government areas and the state at large.

This was a cross-sectional, descriptive study of secondary school students in Ilorin-East local government area. Ten senior secondary students selected for the study were given interviewer administered questionnaire in order to acquire information on the knowledge, attitude and perception of high risk sexual practices.

The minimum sample size used was determined using the Andrew Fischer's<sup>19</sup> formula for studying population greater than 10,000, degree of accuracy desired, which is set at 0.05, standard normal deviation which is set at 1.96 which corresponds to the 95% confidence level. Prevalence of a factor within the study population (63% - percentage of adolescents found to be already sexually active in Ilorin by Araoye and Fakeye)<sup>20</sup>. The calculated sample size was 400. However, 450 was used to increase the power. Multistage sampling method involving 3 stages was used.

Stage one – There are forty (40) secondary schools in Ilorin-East local government area. Simple random sampling was used to select 10 schools out of the 40 secondary schools. This was done through balloting. The population of the senior secondary students in each of the selected schools was gotten during the advocacy visit. Proportionate allocation of respondents sampled in each of the 10 schools selected was done using the population of the schools, to estimated total population and sample size for the study.

**Stage two** – The class of the schools exist as natural strata. Stratified random sampling was used to determine the number of students sampled in each of the classes and arms of the selected schools. The senior secondary is divided into levels (SSI, SSII and SSIII). Also, proportionate allocation of respondents from each level was used. Total Population of Senior Secondary School Students in the 10 Schools Sampled was 6348. The Sample Size was 450

SCHOOL	Number of SS1	Number of SS2	Number of SS3	Total number of Students
	Students	Students	Students	
School 1	372	329	98	799
School 2	111	142	90	343
School 3	345	340	200	885
School 4	57	54	31	142
School 5	283	374	279	936
School 6	111	129	90	320
School 7	248	274	122	644
School 8	417	306	196	919
School 9	307	269	93	669
School 10	307	277	97	681
Total	2558	2494	1296	6348

Total Population of Senior Secondary School Students = 6348.

The Sample Size = 450

Total number of students in each school is shown in the table above

Formula:

Total number of students in each school Total Population of senior secondary school students × sample size

# Total Population of senior secondary school students

Stage three—Simple random sampling was done to select the respondents from each of the schools and class levels. A semi-structured interviewer administered questionnaire was used as the instrument to obtain data from the respondents. The questionnaire was in three sections viz: Demographic data of the respondents, assessment of the knowledge of respondents of high risk sexual practices and assessing the perception of respondents to high risk sexual practices. Respondents were also made to understand that they could voluntarily withdraw at any time of the study. Data collected were strictly confidential.

Quantitative data was collected through the use of semistructured interviewer administered questionnaire. The data sheets were sorted, collated and coded. Data entry was carefully done. The analysis of data collected was done using SPSS windows software package version 17. The responses were coded after the collection of the raw data and were correctly analyzed based on the objectives of the study. Chi-square was used to test significance level.. Results obtained were presented as percentage and in the form of tables and charts. The total package of the analysis is a reflection of the broad objectives of the study as well as the socio-demographic data of the respondents at the level of significance at P = 0.05.

The specific objectives identified the socio-demographic variable of respondents, the level of knowledge of high risk sexual behavior as well as the perception towards high risk sexual behavior among secondary schools in Ilorin.

#### Results

Table 1 shows the socio-demographic characteristics of respondents. Majority 305 (69.6%) of the respondents were between ages 16-20 years. The male among the respondents were 254 (58.0%) while the female accounted for 184 (42%) respondents. The predominant religious groups were found to be Christianity and Islam accounting for 50.0% and 49.3% of respondents respectively. The Yorubas were the predominant ethnic group accounting for 342 (78.1%). The other ethnic groups found among respondents classified under 'Others'include Ebira, Isoko, Ishekiri, Nupe, Fulani and Baruba. The family sizes of majority (65.1%) of the respondents were found to be 6-10 people.

Table 1: frequency distribution of respondents showing socio-demographic data.

Socio-demographic Characterisitcs (n=438)	Frequency	Percentage (%)
Age group in years		
10-15	131	29.9
16-20	305	69.6
21-24	2	0.5
Class of Respondents		
SSI	175	40.0
SSII	172	39.3
SSIII	91	20.7
Gender		
MALE	254	58.0
FEMALE	184	42.0
Religion of Respondents		
CHRISTIANITY	219	50.0
ISLAM	216	49.3
OTHERS	3	0.7
<b>Ethnic Distribution</b>		
YORUBA	342	78.1
HAUSA	25	5.7
IGBO	20	4.6
OTHERS	51	11.6
Family Size		
1-5	118	26.9
6-10	285	65.1
11-ABOVE	35	8.0

Mean Age  $\pm$  S.D. = 16.23  $\pm$ 4.75 Median = 16.31 Mode = 16

Table 2 shows that 167 (38.1%) did not consider indiscriminate sexual intercourse as HRSP while 61.9% were aware of condom use. Also, (117) 26.7% did not know that multiple sex partners is a HRSP. A proportion of 122 (27.9%) did not know that unprotected sex with a partner of unknown status was a HRSP. Respondents' knowledge of anal sex as a HRSP showed that 150 (34.2%) did not

know that anal sex is a HRSP. Homosexuality was not known to be a HRSP by 156 (35.7%). The proportion of respondents that did not know that oral-genital sex is a HRSP was 151 (34.4%). A proportion of 305 (69.9%) and 308 (70.3%) knew that giving and receiving sex in exchange for money/gift/service are HRSP. Three hundred and five (69.6%) knew that sex for money was a HRSP.

# Knowledge of respondents on high risk sexual practices

Table 2- frequency distribution of respondents' knowledge on high risk sexual practices

High risk sexual practice	Frequency	Percentage (%)	
(N = 438)		<b>3</b> ( )	
Indiscriminate Sexual Intercourse			
Yes	271	61.9	
No	167	38.1	
Sex without using Condom			
Yes	328	61.9	
No	167	38.1	
Multiple Sex Partners			
Yes	321	73.3	
No	117	26.7	
Unprotected sex			
Yes	316	72.1	
No	122	27.9	
Anal Sex			
Yes	288	65.8	
No	150	34.2	
Homosexuality			
Yes	282	64.4	
No	156	35.7	
Genito-oral Sex			
Yes	287	65.5	
No	151	34.4	
Sex for Money/Gifts/Service			
Yes	305	69.6	
No	133	30.4	
Money/Gift/Services for Sex			
Yes	308	70.3	
No	130	29.7	

Knowledge of respondents on high risk sexual practices

Table 3 shows the proportion of respondents who correctly answered 7-10 questions on risky sexual practices.

Table 3 - frequency distribution of respondents' knowledge score on high risk sexual practices

Score	Frequency (Percentage)	<b>Cumulative Percentage</b>
Poor Knowledge (0-3)	101(23.1)	23.1
Fair Knowledge (4-6)	52 (11.9)	34.9
Good Knowledge (7-10)	285 (65.1)	100.0
Total	438(100.0)	

One hundred and one (23.1%) had poor knowledge. Table 4 shows the frequency distribution of respondents' perception toward HRSP. One hundred and forty four (32.9%) felt engaging in sex makes one to be considered as mature among peers while 208 (47.5%) felt there was no spiritual attachment to sex. There were 56 (12.8%) of respondents who could be friends with homosexual colleagues. Most of the respondents 333 (73.7%) con-

sidered it to be shameful to pay or collect money/service in exchange for sex while 108 (24.7%) did not perceive any danger in keeping multiple sexual partners. Also, 67 (15.3%) would still engage in unprotected sex if opportunity presented. Majority 387 (88.7) agreed that unbridled sex freedom should not be allowed while 353 (80.5%) believed that students caught in any form of sexual practice should be severely punished.

Table 4 – frequency distribution of respondents' perception towards high risk sexual practices

Indifferent	No (%)	Yes (%)	Response
(%)			
17 (3.9)	277 (63.4)	144 (32.9)	Engaging in sex makes one to be
			considered matured among peers.
9 (2.1)	373 (85.2)	56 (12.8)	Can be friends with an homosexual
21 (4.8)	208 (47.5)	209 (47.7)	Spiritual attachment to sex
10 (23)	126 (28.8)	302 (68.9)	Sex is avoidable
13 (3.0)	102 (23.3)	323 (73.7)	It is a shameful thing to pay or collect
			money/service in exchange for sex
11 (2.5)	108 (24.7)	319 (72.8)	There is danger in multiple sex partners
16 (3.6)	355 (81.1)	67 (15.3)	Will engage in unprotected sex if
			opportunity presents
9 (2.1)	76 (17.4)	353 (80.5)	Any student caught in any form of sexual
			practice should be severely punished
3 (0.7)	387 (88.4)	48 (11.0)	Freedom to engage in sex should be
			allowed in the school
)	387 (88.4)	48 (11.0)	

The table 5 shows the Chi-Square tests of the relationship between age, sex, socio-demographic variables and level of knowledge on HRSP. The result of the test using a significance level of 0.05 shows that gender was found to be in a statistically significant (P-value < 0.005) relationship with high risk sexual practices.

The major sources of information on high risk sexual practices among respondents was movies which accounted for 42.5% of the respondents while 24.7% got the information from the internet.

Table 5 – frequency distribution and chi-square significance of respondents on knowledge level on high risk sexual practices and socio-demographic characteristics

Variables	Poor	Fair knowledge	Good	Chi-square	P-value
	Knowledge (%)	(%)	knowledge	value	
			(%)		
Age					
10-15	4 (3.1)	42 (32.1)	85 (64.8)	7.143	0.129
16-20	3 (1.0)	72 (23.6)	230 (75.4)		
21-24	0 (0.0)	0 (0.0)	2 (100.0)		
Gender					
Male	3 (1.2)	77 (30.3)	174 (68.5)	6.180	0.045
Female	4 (2.2)	37 (20.1)	143 (77.7)		
Level of knowledge on HSRP					
Poor	2 (2.0)	33 (32.7)	66 (65.3)	4.731	0.316
Fair	0 (0.0)	15 (28.8)	37 (71.2)		
Good	5 (1.8)	66 (23.2)	214 (75.0)		

# Discussion

This study assessed the knowledge and perception of high risk sexual practices among respondents sampled from 10 senior secondary schools in Ilorin-East Local Government of Kwara State. Out of the 450 respondents sampled 438 questionnaires were valid and completed. The response rate was 97.3%.

Majority of the students were between 16-20 years and with a mean age of 16.23+4.75. The expected age for the students in the senior secondary level of education was between 13 and 19 years. This is a reflection that they were relatively young and sexually active. This was confirmed by the National Demography Health Survey (NDHS) which revealed that nearly half (48.6%) of adolescents aged 15-19 were sexually active (NDHS, 2008).<sup>21</sup>

The study showed that males are more prone to high risk sexual behavior than females. This is because their libido is generally greater than that of females and continues even to old age while that of female diminishes as they get older. This made Hoffman,<sup>22</sup> Kirby<sup>23</sup> and Dryfoss<sup>24</sup> state that interventions that use attitude change to change behavior may be more effective among females than among males. Osarenren<sup>25</sup> also stated that young men have a very strong passion about sex and they try to satisfy themselves quite indiscriminately.

The respondents were found to be mainly of the Yoruba extraction which is a reflection of the ethnic distribution of the Ilorin populace according to census and previous studies.<sup>26</sup>

The family sizes of respondents were found to be predominantly 6-10 people (65.1%). There has been previous studies that conform to this finding. <sup>27,28</sup> The family as a unit of care can mitigate adolescent problems. High levels of family cohesion lead to bonding and low levels of

cohesion indicate poor family support, which could lead to a family dysfunction. Family members also exert influence on adolescents through their own modeling of risk behavior and through shared core family processes.

The cumulative knowledge on high risk sexual practices was 65.1% which is consistence with previous studies.<sup>29</sup> About, 23.1% of respondents still have poor knowledge of high risk sexual practices which show that a proportion of secondary school students still need to be educated on high risk sexual practices. The relatively high knowledge about these high risk sexual practices should not be sufficient reason to stop discussing the perceived high level of unsafe sexuality behavior among secondary school students.<sup>27,30</sup> Therefore, there is need to review health education strategies towards ensuring not only knowledge but also practice of safe sexual behaviour.

One third of the respondents did not consider indiscriminate sexual intercourse as HRSP. This is lower than two thirds recorded by Akanle and co-workers.<sup>31</sup> Majority of the respondents know that unprotected sex is unsafe hence the need to be protected during sex. In this study two thirds were aware of condom use. This is comparable to the study of Folayan et al,<sup>32</sup> but a departure from the study by Asekun – Olarinmoye and colleagues<sup>27</sup> who reported that there was no much difference between those using condom and those who didnot.

The level of knowledge on sex for money, gifts and services being HRSP was higher than that in the study by Odu and colleagues<sup>33</sup> in South West Nigeria where one third of the respondents received gifts or services for sex. The study established that it is shameful to pay or collect money/services in exchange for sex. At the national level, about 10 percent of females and 26 percent of males aged 15-24 years engaged in transactional sex in 2005.34 Wusu et al.,<sup>29</sup> found that factors influencing involvement in transactional sex include poverty, broken homes, peer influence and desire to make cheap money. The data from this study suggest that most students who engaged in transactional sex rarely used measures of protection such as condoms and most of the partners who engaged students in risky sexual behaviour were of higher social and economic status.<sup>34</sup> This inequality in social and economic status makes it very difficult for the students to negotiate safe sex, hence increasing their vulnerability to sexually transmitted infections (STIs) and HIV.34

The knowledge on genito-oral sex as HRSP was higher, hence better off than that of the study of Morhason–Bello<sup>10</sup> in Nigeria where half of the respondents practiced oral sex. Folayan et al,<sup>32</sup> found out that oral sex was practiced by 15.1% male and 23.5% female adolescents. Male to male oral sex was reported by 7.6% adolescents while 12.0% adolescents reported female to female anal sex. Similarly, Folayan et al, also found out that anal sex was practiced by 5.6% males and 3.4% female. Male to male anal sex practice was reported by 2.2% adolescents; male to female anal sex was reported by 5.9% adolescents and female to female anal sex was reported by 0.8% adolescents. More than 11.6% males engaged in heterosexual anal sex.

Similar, multiple sex partners were recorded as HRSP by more than one third of the respondents. This is an improvement in knowledge over the two third of the respondents who practiced multiple sex in a study in South West Nigeria. The study shows that there is danger in multiple sexual partners.

Majority agreed that unbridled sex freedom should not be tolerated and those caught in any form of HRSP should be severely punished. This is in conformity with previous studies. <sup>16</sup> This is an example of right perception that helps in preventing HRSP among secondary school students.

There are a number of sources through which information is received by the public. Higher proportion of respondents in this study identified that their major source of information on high risk sexual practices was movies and internet. Quite a considerable proportion also got information from friends and classmates. This finding is consistence with previous studies which found that movies, friends and internet are the major sources where information about high risks sexual practices were obtained.<sup>35</sup> In some studies, school mates were key sources of information about sexual practices across the classes: some respondents in the entry class (77.9%), 65.7% in the mid-class and 78% in the exit class reported that they got information about sexual practices from their school mates. More than half of the respondents in the exit class (58.3%) reported that their source of information about sexual practices was the Internet.<sup>13</sup>

#### Conclusion

The knowledge and perception of HRSP among ado-

lescents in senior secondary school in Ilorin East Local Government is poor. There are still quite a number of students who could not identify some of the high risk sexual practices while others held wrong perceptions about these practices. Therefore, there is need for health education on high risk sexual practices among these students.

## Conflict of interest

None.

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