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*Global Journal of Health Science*

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# Socio-Demographic, Economic and Psychological Correlates of Risky Sexual Behaviour Among Sexually Active Young People in Nigeria

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Received: March 25, 2020 Accepted: April 10, 2020 Online Published: May 29, 2020

doi:10.5539/gjhs.v12n8p9

URL: <https://doi.org/10.5539/gjhs.v12n8p9>

## Abstract

This study sought to identify the socio-demographic, economic, and psychological factors associated with risky sexual behaviour among sexually active youths in Nigeria with the view to providing more empirical information for the development of more effective interventions to improve safe-sex practices and the sexual health of the young people in Nigeria. The study analyzed the male and female datasets extracted from the 6<sup>th</sup> round of the Nigeria Multiple Indicator Cluster Survey data (MICS) (n=7,909) using descriptive statistics and multiple binary logistic regression to achieve the study objectives and test hypothesis. The results showed that 66% of the youths have had sex before reaching 18 years, 77% had unprotected sex, and 32% have had more than one-lifetime sexual partner. The significance of the association between socio-demographic (age, sex, marital status, ever fathered/mothered, awareness of AIDS, ethnicity, residence, and region), economic factors (employment status and wealth index), and risky sexual behaviour differ by the category of risky sexual behaviour. Overall psychological factor (satisfaction with life) was a significant correlate of the lifetime number of sexual partners. This study concludes that socio-demographic, economic, and psychological factors were predictive of risky sexual behaviour among young people in Nigeria. However, the significance of these predictors differs by type of risky sexual behaviour. The study recommends that more effective sexual health interventions must also address the prevalent psychological risk factors among young people in Nigeria- apart from different background characteristics- which could predispose them to risky sexual practices.

**Keywords:** risky, sexual behaviour, sexually active, young people, Nigeria

## 1. Introduction

Globally there has been an exponential increase in the numerical size of young people. Young people constitute about a fifth of the global population (Sekoni & Soyano, 2014; UNDESA, 2018). Sub-Saharan Africa has been implicated as a significant contributor to the rising global population size, given the regions' widening base of her population pyramid.

A more in-depth examination of the population statistics in Africa reveals that Nigeria- the most populous country in Africa- has a large and teeming population of young people as a result of years of an increasing rate of natural increase and high fertility rate (NBS, 2017) resulting in high population momentum. This high fertility is not unconnected with the teeming population of sexually active young people who constitute the population exposed to risky sexual practices with a higher risk of having unwanted pregnancy and procuring a clandestine and unsafe abortion. Therefore, risky sexual practices among young people in Nigeria presents a disheartening situation that portends a significant threat to the sexual and reproductive health of many young people in Nigeria (Imaledo, Peter-Kio, & Asuquo, 2012; Odeigah et al., 2019; Odimegwu, Somefun, & Chisumpa, 2019) and in Sub-Saharan Africa where the burden of HIV infection is highest (Kharsany & Karim, 2016).

Studies on sexual health among young people in recent years are awash with findings that reflect the striking level

of sexual activity among young people, many of whom had their sexual debut and had become sexually active at an early age (Manjula & Dutt, 2017). For instance, more than 40% of youths in Nigeria have ever had sex. Besides, data on the timing of last sexual intercourse among these young people also showed that more than 30% of those aged between 15-19 had last sexual intercourse in the last four weeks compared to 59% of those aged between 20-24 in the same period (NPopC & ICF Macro, 2014); while the average age at sexual initiation among females and males are 17.2 and 21.7 respectively (NPopC & ICF Macro, 2018). It has been observed that young people across the world struggle with risky sexual behaviour which takes different forms such as having multiple partners, having risky casual or unknown sexual partners, early sexual initiation, engaging in transactional sex, forced sexual intercourse, having sex under the influence of alcohol or other stimulating substances, having sex immediately after watching pornographic media and having unprotected sexual intercourse (Aliza Lodz et al., 2019; Berhan & Berhan, 2015; Odeigah et al., 2019; Sekoni & Soyawo, 2014; Tarkang, Pencille, Amu, Komesour, & Lutala, 2019; Urassa, Moshiri, Chalamilla, Mhalu, & Sandstrom, 2008; Wendland et al., 2018). Unfortunately, in most cases, these actions result in deleterious health outcomes among which are HIV/AIDS and other sexually transmitted infections (STIs), unplanned pregnancies and unsafe abortions (Chawla & Sarkar, 2019; Pinyopornpanish et al., 2017). Again, empirical evidence holds that about 33% of New Infections for HIV in 2017 are among young people within the age of 15-24 (UNAIDS, 2018).

In view of these deleterious effects of risky sexual behaviours (among adolescents and youths in Nigeria) as well as its negative implication for achieving the UN Sustainable Development Goal (SDG) three, which focuses on promotion of health and well-being (UNDP, 2015), understanding the determinants of sexual behavior among young people would be of great benefit to the development of programs and interventions for the prevention and treatment of sexually transmissible infections (STIs) (Nguyen, Subasinghe, Wark, Reavley, & Garland, 2017). Despite the vast amount of studies geared towards investigating and understanding risky sexual behaviours among young people, understanding the processes linking risky sexual behaviours with its predictors remains limited in Nigeria. Previous studies have identified numerous factors associated with risky sexual behaviours among young people including age and gender, with men having higher odds of engaging in unprotected sexual intercourse (Abosetugn, Zergaw, Tadesse, & Addisu, 2015; Ganczak, Czubinska, Korzen, & Szych, 2017; Hadish, Mao, Gong, Hadish, & Tesfamariam, 2017; Noubiap et al., 2015; Sambisa, Curtis, & Stokes, 2010; Sekoni & Soyawo, 2014; Shek, 2013). Besides, the relationship status of an individual has also been found to significantly predict sexual behaviour; single people have higher chances of having unprotected sex (Ganczak et al., 2017; Hadish et al., 2017). Studies have also found that the use of alcohol and substances like tobacco and marijuana is associated with risky sexual behaviour among young people (Chawla & Sarkar, 2019; Wendland et al., 2018; Yaw Amoateng, Kalule-Sabiti, & Arkaah, 2014).

Studies have also found that socio-economic status, living conditions, educational attainment, and ethnocultural factors are some of the factors that are associated with risky sexual behaviours among young people (Berhan & Berhan, 2015; Wendland et al., 2018; Yi et al., 2014). Furthermore, the extent of the influence of peer pressure on young people's engagement in risky sexual behaviours has also received scholarly attention (Cherie & Berhane, 2012). Yet, few studies—in Australia and Poland—have identified the psychological associates of risky sexual behaviours among young people (Nguyen et al., 2017).

In Nigeria and some other developing countries, little is known about the linkage between the self-reported level of happiness and satisfaction with life and the risk of engaging in risky sexual behaviour among young people in Nigeria considering the highly prevalent life-threatening risky sexual practices among them. Hence, this study identified the socio-demographic, economic, and psychological factors associated with risky sexual behaviours among sexually adolescents and youths in Nigeria. This study provided more empirical evidence needed for developing more impactful social and behaviour change communication (SBCC) interventions to address the risky sexual practices that have continued to subvert the sexual and reproductive health of young people in Nigeria.

## **2. Methods**

### *2.1 Study Location*

The geographic domain for the study was Nigeria. Nigeria is the most populous country in Africa, with over 180 million people clustering around 18 years of age (Bolarinwa, 2019). According to the 2018 Nigerian Demographic and Health Survey report, the median age at first sexual intercourse among men and women in Nigeria are 21.7 and 17.2 respectively while more young men aged 15-24 (than young women in the same age-group) have had multiple sexual partners in the last one year and used condom in their final sexual intercourse (NPopC & ICF Macro, 2018).

## 2.2 Research Methodology

The study analyzed secondary cross-sectional data. The male and female survey data were extracted from the 2016–17 Nigeria Multiple Indicator Cluster Survey (MICS), combined and analyzed in line with the study objectives. The survey was the fifth round jointly conducted by the National Bureau of Statistics (NBS) and the United Nations Children Fund (UNICEF) to provide indicators of child mortality, child health, child and maternal nutrition, reproductive health, water, and sanitation, etc. The survey methodology involved a two-stage random sampling technique and a weighting factor to adjust for under and oversampling.

## 2.3 Inclusion Criteria

Sexually active male and female, young people aged 15–24 were of interest in the study ( $n = 7,909$ ). Thus, the female and male datasets were extracted, merged, and analyzed.

## 2.4 Variables

The outcome variables were age at first sexual intercourse, number of lifetime sexual partners, and condom use (in the first and second last sexual intercourses). The explanatory variables were socio-demographics (age, sex, marital status, ever fathered/mothered any children, ethnicity, residence, and zone) economic characteristics (level of education, awareness of AIDS, working status, and wealth index), and ratings of overall happiness and satisfaction with life. Indicators of psychological factors were self-reported levels of happiness and satisfaction with life. Respondents were asked to rank the level of their overall happiness and satisfaction using the 5-point Likert scale (which ranged from very happy to very unhappy for happiness, while the scale ranged from very satisfied and very happy unsatisfied).

The variable age was dichotomized as 15–19 and 20–24 years, respectively. Variable sex was reclassified as male (0) and female (1); marital union/status was reclassified as never married (0) and ever-married (1); ever fathered/mothered any children was reclassified as never fathered/mothered (code 0) and ever fathered/mothered (1); ever heard of AIDs was reclassified as never heard (0) and ever heard (1); level of education was reclassified as none (0), primary level (code 1); secondary and higher as “at least secondary” (2) and nonformal (3). Employment status was derived as working (0) and not working (1); Zone was reclassified as “north (0) and south (1). The wealth index was derived using the Principal Component Analysis from variables on each household’s assets of interest. The resulting index, which was later divided into five ordinal quintiles (20% each): richest (5), richer (4), middle (3), poorer (2) and poorest (1).

## 2.5 Data Analysis

A weighted tabulation of all the respondents’ socio-demographics, economic characteristics, and ratings of happiness and satisfaction with life was done. A weighted multiple binary logistic regression models fitted at different stages using Odds ratios (ORs) and the probability of type 1 error of 5% was also performed. The first stage (model 1) examined the relationship between all socio-demographic and economic variables on each indicator of risky sexual behaviour; the second stage examined the relationship between psychological factors and each indicator of risky sexual behaviour. The full model estimated the marginal effects of all the variables. All the analyses were performed with STATA version 14.

The multiple logistic regression is expressed as

$$Y_{ij} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + e_i \quad (1)$$

Where

$Y_{ij}$  = log-odds of risky sexual behaviour (i.e. condom use in first and last sex, etc.)

$\beta_0$  = Intercept (Average log-adds of risky sexual behaviour)

$\beta_1, \beta_2$  = Coefficients for explanatory variables

$X_1, X_2$  = Explanatory variables (socio-demographic, economic and psychological factors)

$e_i$  = Error terms

The 2016-17 Nigerian Multiple Indicator Cluster Survey datasets are freely available. Therefore, no ethical approval was required. However, approval for use was obtained from <https://mics.unicef.org/surveys> before analysis.

### 3. Results

Table 1. Distribution of respondents by risky sexual behavior

Age at first sexual intercourse	Freq.	Percent
Adult	1,869	33.8
Minor	3,665	66.2
<b>Total</b>	<b>5,534</b>	<b>100.0</b>
<b>Lifetime number of sex partners</b>		
One partner	5,273	67.5
Multiple	2,539	32.5
<b>Total</b>	<b>7,812</b>	<b>100.0</b>
<b>Contraceptive use in first and last sexual intercourse</b>		
Used at least once	1,756	22.5
Never utilized	6,062	77.5
<b>Total</b>	<b>7,818</b>	<b>100.0</b>

Table 1 presents the distribution of the respondents (in 15-24 years and sexually active) by risky sexual behaviour. More than two-thirds of the respondents had sex for the first at below 18 years of age (66%) had only one partner in their life (67%) respectively while majority (77%) of the respondents said they never utilized any contraceptive methods the first and the last time they had sexual intercourse.

Table 2. Distribution of respondents by socio-demographic and economic characteristics

Socio-demographic & Economic characteristics	Freq.	Percent
<b>Age</b>		
15-19	2,472	31.3
20-24	5,437	68.7
<b>Total</b>	<b>7,909</b>	<b>100.0</b>
<b>Sex</b>		
Male	1,254	15.9
Female	6,655	84.1
<b>Total</b>	<b>7,909</b>	<b>100.0</b>
<b>Marital Status</b>		
Never married	2,452	31.0
Ever married	5,452	69.0
<b>Total</b>	<b>7,904</b>	<b>100.0</b>
<b>Ever fathered/ mothered any children</b>		
Fathered/mothered any children	3,337	42.2
Never fathered/mothered children	4,567	57.8
<b>Total</b>	<b>7,904</b>	<b>100.0</b>

<b>Education</b>		
None	1,779	22.5
Primary	889	11.2
At least secondary	3,867	48.9
Nonformal	1,374	17.4
<b>Total</b>	<b>7,909</b>	<b>100.0</b>
<b>Working Status</b>		
Working	2,009	25.5
Not working	5,875	74.5
<b>Total</b>	<b>7,884</b>	<b>100.0</b>
<b>Wealth quintile</b>		
Poorest	1,503	19.0
Poorer	1,801	22.8
Middle	1,692	21.4
Richer	1,486	18.8
Richest	1,427	18.0
<b>Total</b>	<b>7,909</b>	<b>100.0</b>
<b>Ethnicity</b>		
Hausa	3,863	48.9
Igbo	703	8.9
Yoruba	849	10.7
Others	2,493	31.5
<b>Total</b>	<b>7,909</b>	<b>100.0</b>
<b>Residence</b>		
Urban	2,174	27.5
Rural	5,735	72.5
<b>Total</b>	<b>7,909</b>	<b>100.0</b>
<b>Zones</b>		
North	5,583	70.6
South	2,326	29.4
<b>Total</b>	<b>7,909</b>	<b>100.0</b>
<b>Ever heard of AIDS</b>		
Heard	6,605	83.6
Never heard	1,296	16.4
<b>Total</b>	<b>7,901</b>	<b>100.0</b>

Table 2 presents the distribution of respondents by socio-demographic and economic characteristics. Above two-thirds of the respondents (69%) were in the age group 20-24. Majority of the respondent were females (84%); more than two-thirds (69%) were ever married; slightly below two-thirds (58%) had ever fathered or mothered any children; a slight below half of the respondents had at least a secondary education; majority were not working (74%); less than half of the respondents were in poor and rich with 42% and 37% respectively. Besides, a slight below half (49%) of the respondents were of the Hausa tribe; majority were rural residents (72%). Majority (71%) resided in the northern region of Nigeria and ever heard of AIDS (84%).

Table 3. Distribution of respondents by psychological indicators (life satisfaction and happiness)

<b>Satisfaction with life overall</b>	<b>Freq.</b>	<b>Percent</b>
Satisfied	6,948	88.1
Neither	674	8.5
Unsatisfied	271	3.4
<b>Total</b>	<b>7,893</b>	<b>100.0</b>
<b>Estimation of overall happiness</b>		
Happy	7,212	91.4
Neither	459	5.8
Unhappy	219	2.7
<b>Total</b>	<b>7,890</b>	<b>100.0</b>

Table 3 shows the distribution of the respondents by their levels of overall satisfaction and happiness with their lives. Majority of the respondents claimed they were satisfied (88%) and were happy (91%) with their lives, respectively.

Table 4. Socio-demographic, economic and psychological factors, and age at first sexual intercourse

<b>Predictors</b>	<b>Model 1</b>			<b>Full Model</b>		
	<b>AOR (Model 1)</b>	<b>P&gt; t </b>	<b>95% CI</b>	<b>AOR (Full Model)</b>	<b>P&gt; t </b>	<b>95% CI</b>
<b>Age</b>						
15-19 (RC)						
20-24	0.11	0.01*	0.09 to 0.14	0.11	0.01*	0.09 to 0.14
<b>Sex</b>						
Male (RC)						
Female	1.17	0.16	0.94 to 1.45	1.19	0.11	0.96 to 1.48
<b>Marital status</b>						
Never married (RC)						
Ever married	0.45	0.01*	0.35 to 0.57	0.44	0.01*	0.34 to 0.57
<b>Ever fathered/ mothered any children</b>						
Never fathered/mothered (RC)						
Ever fathered/mothered	3.60	0.01*	2.87 to 4.50	3.60	0.01*	2.87 to 4.52
<b>Ever heard of AIDS</b>						
Never heard (RC)						
Ever heard	1.21	0.07	0.98 to 1.49	1.20	0.08	0.98 to 1.48
<b>Level of education</b>						
None (RC)						
Primary	1.12	0.46	0.82 to 1.54	1.12	0.47	0.82 to 1.54
At least secondary	0.49	0.01*	0.37 to 0.65	0.49	0.01*	0.37 to 0.66
Nonformal	1.40	0.04*	1.01 to 1.94	1.40	0.04*	1.02 to 1.94

<b>Employment status</b>						
Working (RC)						
Not working	1.21	0.02*	1.03 to 1.43	1.20	0.03*	1.02 to 1.42
<b>Wealth index</b>						
Poorest (RC)						
Poorer	0.90	0.41	0.71 to 1.15	0.91	0.44	0.72 to 1.16
Middle	0.77	0.05	0.59 to 1.00	0.77	0.05	0.59 to 0.99
Richer	0.62	0.01*	0.48 to 0.81	0.62	0.01*	0.47 to 0.81
Richest	0.45	0.01*	0.33 to 0.61	0.45	0.01*	0.33 to 0.61
<b>Ethnicity</b>						
Hausa (RC)						
Igbo	0.67	0.02*	0.48 to 0.94	0.68	0.02*	0.48 to 0.95
Yoruba	0.73	0.05	0.53 to 1.00	0.73	0.06	0.52 to 1.01
Others	0.88	0.23	0.70 to 1.09	0.88	0.27	0.71 to 1.10
<b>Type of place of residence</b>						
Urban (RC)						
Rural	0.99	0.98	0.83 to 1.20	0.99	0.95	0.82 to 1.20
<b>Region</b>						
North (RC)						
South	1.07	0.51	0.87 to 1.32	1.08	0.47	0.87 to 1.33
<b>Overall satisfaction with life</b>						
<b>Model 2</b>						
Satisfied (RC)	-					
Neither	0.99	0.97	0.75 to 1.31	1.02	0.85	0.80 to 1.30
Unsatisfied	0.66	0.05	0.41 to 1.00	0.95	0.80	0.65 to 1.38
<b>Overall happiness with life</b>						
Happy (RC)						
Neither	0.93	0.49	0.75 to 1.14	1.08	0.64	0.79 to 1.46
Unhappy	0.73	0.05	0.54 to 1.00	0.68	0.26	0.35 to 1.33

Base outcome = "adult"; COR = Crude Odds Ratio; AOR = Adjusted Odds Ratio. P<0.05.

Table 4 presents the multivariable analyses - examining the relationship between socio-demographic and economic factors and age at first sexual intercourse. It also shows results for satisfaction and happiness with life and age at first sexual intercourse. In Model I, only age, marital status, ever fathered/mothered, level of education, employment status, wealth index, and ethnicity respectively had significant relationships with age at first sexual intercourse. Respondents aged 20–24 -compared to those aged 15–19 years- were eighty-nine percent less likely to have had first sex at minor age-group (OR= 0.11; CI = 0.09 to 0.14; P<0.05). Female respondents -compared to the males- were seventeen percent more likely to have had first sex at minor age-group (OR= 1.17; CI = 0.94 to 1.45; P>0.05). The ever-married were fifty-five percent less likely to have had first sex at minor ages (OR= 0.45; CI = 0.35 to 0.57; P<0.05) compared to those who never married. Those that ever fathered/mothered children were four times as likely to have had first sex at minor ages (OR= 3.60; CI = 2.87 to 4.50; P<0.05) relative to those who never fathered or mothered children.

Respondents who had heard of AIDS were twenty-one percent more likely to have had first sex at minor ages (OR= 1.21; CI = 0.98 to 1.49; P>0.05) relative to those who said they never heard about AIDS. Those with primary education were twelve percent more likely to have had first sex at minor ages (OR= 1.12; CI = 0.82 to 1.54; P>0.05) relative to those who had no education while those who had at least a secondary school education were fifty-one



percent less likely to have had first sex at minor age-group (OR= 0.49; CI = 0.37 to 0.65;  $P<0.05$ ) and those who had nonformal education were forty percent more likely to have had first sex at minor ages (OR= 1.40; CI = 1.01 to 1.94;  $P<0.05$ ) relative to those who had no education. In terms of wealth index, there was a dose-response relationship between wealth index and age at first sexual intercourse such that the higher the wealth index the lower the likelihood of having first sex at minor ages. Respondents who reported they were not working were twenty-one percent more likely to have multiple lifetime sexual partners (OR= 1.21; CI = 1.02 to 1.42;  $P<0.05$ ) compared to those working. Compared those respondents in the poorest category, those that belonged to the poorer categories were ten percent less likely to have had first sex at minor ages (OR= 0.90; CI = 0.71 to 1.15;  $P>0.05$ ); the middle group was associated with a twenty-three percent increase in the likelihood of having first sex at minor ages (OR= 0.77; CI = 0.59 to 1.00;  $P<0.05$ ); the richer group yielded a thirty-eight percent increased likelihood of having first sex at minor ages (OR= 0.62; CI = 0.48 to 0.81;  $P<0.05$ ) and the richest group yielded a fifty-five percent increased likelihood of having first sex at minor ages (OR= 0.45; CI = 0.33 to 0.61;  $P<0.05$ ).

Compared to the Hausa ethnic group, those respondents of Igbo extraction were thirty-three percent less likely to have had first sex at minor ages (OR= 0.67; CI = 0.48 to 0.94;  $P<0.05$ ); being a Yoruba yielded a twenty-seven percent increase in the likelihood of having first sex at minor ages (OR= 0.73 CI = 0.53 to 1.00;  $P=0.05$ ) and belonging to other ethnic groups yielded a twelve percent decrease in the likelihood of having first sex at minor ages (OR= 0.88; CI = 0.70 to 1.90;  $P>0.05$ ). Relative to those who never fathered or mothered children, ever fathering/mothering a child was associated with four times increase in the likelihood of having first sex at minor ages (OR= 3.60; CI = 2.87 to 4.50;  $P<0.05$ ). Rural area residents were 1% less likely to have had first sex at minor ages (OR= 0.99; CI = 0.83 to 1.20;  $P>0.05$ ) relative to urban residents. Southern region residents were 7% more likely to have had first sex at minor ages (OR= 1.07; CI = 0.87 to 1.32;  $P>0.05$ ) compared to those in the north.

In the full model, only age, marital status, ever fathered/mothered, level of education, employment status, wealth index, and ethnicity respectively had significant relationships with age at first sexual intercourse. Respondents aged 20-24 years- compared to those aged 15-19 years- were eighty-nine percent less likely to have had first sex at minor age (OR= 0.11; CI = 0.09 to 0.14;  $P<0.05$ ). Female respondents -compared to the males- were nineteen percent more likely to have had first sex at minor ages (OR= 1.19; CI = 0.96 to 1.48;  $P>0.05$ ). The ever married were fifty-six percent less likely to have had first sex at minor ages (OR= 0.44; CI = 0.34 to 0.57;  $P<0.05$ ) compared to those who never married. Those that ever fathered/mothered children were four times as likely to have had first sex at minor ages (OR= 3.60; CI = 2.87 to 4.52;  $P<0.05$ ) relative to those who never fathered or mothered children.

Respondents who had heard of AIDS were twenty-one percent more likely to have had first sex at minor ages (OR= 1.20; CI = 0.98 to 1.48;  $P>0.05$ ) relative to those who said they never heard about AIDS. Relative to those with no education, those with primary education were twelve percent more likely to have had first sex at minor ages (OR= 1.12; CI = 0.82 to 1.54;  $P>0.05$ ); those who had at least a secondary school education were fifty-one percent less likely to have had first sex at minor ages (OR= 0.49; CI = 0.37 to 0.66;  $P<0.05$ ) and those who had nonformal education were forty percent more likely to have had first sex at minor ages (OR= 1.40; CI = 1.02 to 1.94;  $P<0.05$ ). Respondents who reported they were not working were twenty-one percent more likely to have multiple lifetime sexual partners (OR= 1.21; CI = 1.03 to 1.43;  $P<0.05$ ) compared to those working. Compared to those respondents in the poorest category, the poorer were nine percent less likely to have first sex at minor ages (OR= 0.91; CI = 0.72 to 1.16;  $P>0.05$ ), the middle group was associated with a twenty-three percent increase in the likelihood of having first sex at minor ages (OR= 0.77; CI = 0.59 to 0.99;  $P=0.05$ ), the richer group attracted a thirty-eight percent increased likelihood of having first sex at minor ages (OR= 0.62; CI = 0.47 to 0.81;  $P<0.05$ ); and the richest group yielded a fifty-five percent increased likelihood of having first sex at minor ages (OR= 0.45; CI = 0.33 to 0.61;  $P<0.05$ ).

Compared to the Hausa ethnic group, those respondents of Igbo extraction were thirty-two percent less likely to have had first sex at minor ages (OR= 0.68; CI = 0.48 to 0.95;  $P<0.05$ ); those of the Yoruba extraction yielded a twenty-seven percent increase in the likelihood of having first sex at minor ages (OR= 0.73 CI = 0.52 to 1.01;  $P>0.05$ ) and belonging to other ethnic groups yielded a twelve percent decrease in the likelihood of having first sex at minor ages (OR= 0.88; CI = 0.71 to 1.10;  $P>0.05$ ). Relative to those who never fathered/ mothered children, ever fathering/mothering a child was associated with four times increase in the likelihood of having first sex at minor ages (OR= 3.60; CI = 2.87 to 4.52;  $P<0.05$ ). Residents of rural areas were 1% less likely to have had first sex at minor ages (OR= 0.99; CI = 0.82 to 1.20;  $P>0.05$ ) relative to the urban residents. Those residing in the south were 8% more likely to have had first sex at minor ages (OR= 1.08; CI = 0.87 to 1.32;  $P>0.05$ ) compared to those in the north.

Respondents who were indifferent (neither satisfied nor unsatisfied)- compared to those who were satisfied with their lives were one percent less likely to have had sex at minor ages (OR= 0.99; CI = 0.75 to 1.31; P>0.05) while respondents who felt dissatisfied with their lives were thirty-six percent less likely to have had sex at less than 18 years old (OR= 0.64; CI = 0.41 to 1.00; P>0.05). Similarly, Respondents who were indifferent - compared to those who were happy with their lives- were seven percent less likely to have had sex for the first time at minor ages (OR= 0.93; CI = 0.75 to 1.14; P>0.05) while respondents who claimed they were unhappy with life were twenty-seven percent less likely to have had sex at minor ages (OR= 0.73; CI = 0.54 to 1.00; P>0.05).

In the full model, there was 2% increase in the likelihood of having first sex at minor ages among respondents who felt indifferent (neither satisfied nor unsatisfied) (OR= 1.02; CI = 0.80 to 1.30; P>0.05) compared to those who felt satisfied. There was a 5% decrease in the likelihood of having first sex at minor ages among respondents who felt dissatisfied with their lives (OR= 0.95; CI = 0.65 to 1.38; P>0.05) compared to those who felt satisfied. Respondents who were indifferent were associated with eight percent increase in the likelihood of having first sex at minor ages (OR= 1.08; CI = 0.79 to 1.46; P>0.05), while those who were unhappy with their lives were thirty-two percent less likely to have had first sex at minor ages (OR= 0.68; CI = 0.35 to 1.33; P>0.05) relative to those who felt happy.

Table 5. Sociodemographic, economic and psychological factors, and number of lifetime sexual partners

Predictors	Model 1			Full Model		
	AOR (Model I)	P> t	95% CI	AOR (Full Model)	P> t	95% CI
<b>Age</b>						
15-19 (RC)						
20-24	2.16	0.01*	1.86 to 2.51	2.16	0.01*	1.85 to 2.51
<b>Sex</b>						
Male (RC)						
Female	0.38	0.01*	0.31 to 0.46	0.38	0.01*	0.31 to 0.45
<b>Marital status</b>						
Never married (RC)						
Ever married	0.41	0.01*	0.33 to 0.52	0.42	0.01*	0.33 to 0.53
<b>Ever fathered/mothered any children</b>						
Never fathered/mothered (RC)						
Ever fathered/mothered	1.25	0.05	1.01 to 1.57	1.25	0.06	0.99 to 1.57
<b>Ever heard of AIDS</b>						
Never heard (RC)						
Ever heard	0.77	0.03*	0.61 to 0.99	0.77	0.03*	0.60 to 0.97
<b>Level of education</b>						
None (RC)						
Primary	1.89	0.01*	1.43 to 2.52	1.90	0.01*	1.43 to 2.53
At least secondary	1.51	0.01*	1.13 to 2.03	1.51	0.01*	1.12 to 2.02
Nonformal	1.07	0.69	0.78 to 1.46	1.07	0.66	0.78 to 1.47
<b>Employment status</b>						
Working (RC)						
Not working	0.91	0.26	0.78 to 1.07	0.92	0.28	0.78 to 1.07

<b>Wealth index</b>						
Poorest (RC)						
Poorer	1.42	0.01*	1.10 to 1.83	1.41	0.01*	1.09 to 1.83
Middle	1.25	0.08	0.97 to 1.61	1.24	0.09	0.97 to 1.60
Richer	1.51	0.01*	1.12 to 2.05	1.52	0.01*	1.12 to 2.05
Richest	1.27	0.13	0.93 to 1.72	1.27	0.12	0.93 to 1.73
<b>Ethnicity</b>						
Hausa (RC)						
Igbo	2.72	0.01*	1.99 to 3.70	2.68	0.01*	1.97 to 3.66
Yoruba	1.52	0.01*	1.12 to 2.06	1.52	0.01*	1.12 to 2.06
Others	2.36	0.01*	1.90 to 2.93	2.36	0.01*	1.89 to 2.94
<b>Type of place of residence</b>						
Urban (RC)						
Rural	1.07	0.49	0.88 to 1.32	1.08	0.47	0.88 to 1.32
<b>Region</b>						
North (RC)						
South	2.45	0.01*	2.02 to 2.97	2.42	0.01*	1.99 to 2.94
<b>Overall satisfaction with life</b>						
<b>Model 2</b>						
Satisfied (RC)	-					
Neither	1.29	0.03*	1.02 to 1.63	1.13	0.32	0.89 to 1.43
Unsatisfied	1.51	0.04*	1.01 to 2.25	1.42	0.04*	1.02 to 1.98
<b>Overall happiness</b>						
Happy (RC)						
Neither	1.13	0.27	0.91 to 1.41	1.07	0.65	0.80 to 1.42
Unhappy	2.20	0.01*	1.64 to 2.95	1.09	0.72	0.68 to 1.73

Base outcome = "multiple sexual partners"; COR = Crude Odds Ratio; AOR = Adjusted Odds Ratio. \*P<0.05.

Table 5 presents the multivariable analyses - examining the relationship between the socio-demographic factors, economic factors, and number of lifetime sexual partners on the one hand and the relationship between happiness and satisfaction with life and number of lifetime sexual partners on the other hand.

In model I, age, sex of respondents, marital status, level of education, wealth index, and ethnicity had significant relationships with age at first sexual intercourse. Respondents aged 20–24- compared to those aged 15-19 years- were twice as likely to have multiple lifetime sexual partners (OR= 2.16; CI = 1.86 to 2.51; P<0.05). Female respondents -compared to the males- were sixty-two percent less likely to have multiple lifetime sexual partners (OR= 0.38; CI = 0.31 to 0.46; P<0.05). The ever married were fifty-nine percent less likely to have multiple lifetime sexual partners (OR= 0.41; CI = 0.33 to 0.52; P<0.05) compared to those who never married. Respondents who ever heard about AIDS were twenty-three percent less likely to have multiple lifetime sexual partners (OR= 0.77; CI = 0.61 to 0.99; P<0.05).

Those that ever fathered/mothered children were twenty-five percent more likely to have multiple lifetime sexual partners (OR= 1.25; CI = 1.01 to 1.57; P>0.05) relative to those who never fathered or mothered children. Respondents who had heard of AIDS were twenty-three percent more likely to have multiple lifetime sexual partners (OR= 0.77; CI = 0.61 to 0.99; P<0.05) relative to those who never heard about AIDS. Relative to those without education, respondents with primary education were eighty-nine percent more likely to have multiple lifetime sexual partners (OR= 1.89; CI = 1.43 to 2.52; P<0.05), those who had at least a secondary school education were fifty-one percent less likely to have multiple lifetime sexual partners (OR= 1.51; CI = 1.13 to 2.03; P<0.05) and those with nonformal education were seven percent more likely to have multiple sexual partners (OR=

1.07; CI = 0.78 to 1.46;  $P > 0.05$ ). Compared to those respondents in the poorest category, those that belonged to the poorer categories were forty-two percent more likely to have multiple lifetime sexual partners (OR= 1.42; CI = 1.10 to 1.83;  $P < 0.05$ ), the middle group was associated with a twenty-five percent increase in the likelihood of having multiple lifetime sexual partners (OR= 1.25; CI = 0.97 to 1.61;  $P > 0.05$ ), the richer group attracted a fifty-one percent increase in the likelihood of having multiple lifetime sexual partners (OR= 1.51; CI = 1.12 to 2.05;  $P < 0.05$ ) and the richest group attracted a twenty-seven percent increase in the likelihood of having multiple lifetime sexual partners (OR= 1.27; CI = 0.93 to 1.72;  $P > 0.05$ ).

Compared to the Hausa ethnic group, those respondents of Igbo extraction were three times more likely to have multiple lifetime sexual partners (OR= 2.72; CI = 1.99 to 3.70;  $P < 0.05$ ), the Yorubas had a fifty-two percent increase in the likelihood of having multiple lifetime sexual partners (OR= 1.52 CI = 1.12 to 2.06;  $P < 0.05$ ) and other ethnic groups had a two-fold increase in the likelihood of having multiple lifetime sexual partners (OR= 2.36; CI = 1.90 to 2.93;  $P < 0.05$ ). Relative to those who never fathered/mothered children, ever fathering/mothering a child was associated with twenty-five percent increased likelihood of having multiple lifetime sexual partners (OR= 1.25; CI = 1.01 to 1.57;  $P > 0.05$ ). Residents in rural areas were 7% more likely to have multiple lifetime sexual partners (OR= 1.07; CI = 0.88 to 1.32;  $P > 0.05$ ) relative to the urban residents. Residents in the south were twice as likely to have multiple lifetime sexual partners (OR= 2.45; CI = 2.02 to 2.97;  $P < 0.05$ ) compared to those residing in the north.

In the full model, age, sex, marital status, level of education, employment status, wealth index, and ethnicity had significant relationships with multiple lifetime sexual partners. Respondents aged 20-24 years- compared to those aged 15-19 years- were twice as likely to have multiple lifetime sexual partners (OR= 2.16; CI = 1.85 to 2.51;  $P < 0.05$ ). Female respondents -compared to the males were sixty-two percent more likely to have multiple lifetime sexual partners (OR= 0.38; CI = 0.31 to 0.45;  $P < 0.05$ ). The ever married were fifty-eight percent less likely to have multiple lifetime sexual partners (OR= 0.42; CI = 0.33 to 0.53;  $P < 0.05$ ) compared to those who never married. Those that ever fathered/mothered children were twenty-five percent more likely to have multiple lifetime sexual partners (OR= 1.25; CI = 0.99 to 1.57;  $P > 0.05$ ) relative to those who never fathered or mothered a child.

Respondents who had heard of AIDS were twenty-three percent more likely to have multiple lifetime sexual partners (OR= 0.77; CI = 0.60 to 0.97;  $P < 0.05$ ) relative to those who never heard about AIDS. Relative to those with no education, those with no primary education were twice as likely to have multiple lifetime sexual partners (OR= 1.90; CI = 1.43 to 2.53;  $P < 0.05$ ), those who had secondary school education were fifty-one percent more likely to have multiple lifetime sexual partners (OR= 1.51; CI = 1.12 to 2.02;  $P < 0.05$ ), and those who had nonformal education were seven percent more likely to have multiple lifetime sexual partners (OR= 1.07; CI = 7.08 to 1.47;  $P > 0.05$ ). Respondents who reported they were not working were eight percent less likely to have multiple sexual partners (OR= 0.91; CI = 7.08 to 1.07;  $P > 0.05$ ) compared to those working. Compared to the poorest category, the poorer were forty-one percent more likely to have multiple sexual partners (OR= 1.41; CI = 1.09 to 1.83;  $P < 0.05$ ); middle group were twenty-four percent more likely to have multiple lifetime sexual partners (OR= 1.24; CI = 0.97 to 1.60;  $P > 0.05$ ), the richer group were fifty-two percent more likely to have multiple lifetime sexual partners (OR= 1.52; CI = 1.12 to 2.05;  $P < 0.05$ ) and the richest were twenty-seven percent more likely to have multiple lifetime sexual partners (OR= 1.27; CI = 0.93 to 1.73;  $P > 0.05$ ).

Compared to the Hausa ethnic group, those respondents of Igbo extraction were thrice as likely to have multiple lifetime sexual partners (OR= 2.68; CI = 1.97 to 3.66;  $P < 0.05$ ); the Yorubas had fifty-two percent increase in the likelihood of having multiple lifetime sexual partners (OR= 1.52; CI = 1.12 to 2.06;  $P < 0.05$ ) while other ethnic groups yielded a two-fold increase in the likelihood of having multiple lifetime sexual partners (OR= 2.36; CI = 1.89 to 2.94;  $P < 0.05$ ). Residents in the rural areas were 8% more likely to have multiple lifetime sexual partners (OR= 1.08; CI = 0.88 to 1.32;  $P > 0.05$ ) relative to the urban residents. Residents in the south were twice as likely to have multiple lifetime sexual partners (OR= 2.42; CI = 1.99 to 2.94;  $P < 0.05$ ) compared to those in the north.

Respondents who were indifferent (neither satisfied nor unsatisfied) compared to those who were satisfied with their lives were twenty-nine percent more likely to have multiple lifetime sexual partners (OR= 1.29; CI = 1.02 to 1.63;  $P < 0.05$ ) while respondents who felt dissatisfied with their lives were fifty-one percent more likely to have multiple lifetime sexual partners (OR= 1.51; CI = 1.01 to 2.25;  $P < 0.05$ ). Similarly, respondents who were indifferent compared to those who were happy with their lives were thirteen percent more likely to have multiple lifetime sexual partners (OR= 1.13; CI = 0.91 to 1.41;  $P > 0.05$ ) while respondents who claimed they were unhappy with life were twice as likely to have multiple sexual partners (OR= 2.20; CI = 1.64 to 2.95;  $P < 0.05$ ).

In the full model, only satisfaction was significantly related to lifetime number of sexual partners such that there was a thirteen percent increase in the likelihood of having multiple lifetime sexual partners among indifferent

respondents (neither satisfied nor unsatisfied) (OR= 1.13; CI = 0.89 to 1.43; P>0.05) compared to those who felt satisfied, while there was a forty-two percent increase in the likelihood of having multiple lifetime sexual partners among respondents who felt dissatisfied with their lives (OR= 1.42; CI = 1.02 to 1.98; P<0.05) compared to those who felt satisfied. Respondents who felt indifferent were seven percent more likely to have multiple sexual partners (OR= 1.07; CI = 0.80 to 1.42; P>0.05), while those who were unhappy with their lives were nine percent more likely to have multiple sexual partners (OR= 1.09; CI = 0.68 to 1.73; P>0.05) relative to those who felt happy.

Table 6. Sociodemographic, economics and psychological factors, and condom use (in first and last sexual intercourse)

Predictors	Model 1			Full Model		
	AOR (Model I)	P> t	95% CI	AOR (Full Model)	P> t	95% CI
<b>Age</b>						
15-19 (RC)						
20-24	0.84	0.06	0.70 to 1.00	0.84	0.06	0.70 to 1.00
<b>Sex</b>						
Male (RC)						
Female	1.56	0.01*	1.27 to 1.93	1.57	0.01*	1.27 to 1.93
<b>Marital status</b>						
Never married (RC)						
Ever married	5.83	0.01*	4.52 to 7.52	5.87	0.01*	4.54 to 7.59
<b>Ever fathered/mothered any children</b>						
Never fathered/mothered (RC)						
Ever fathered/mothered	1.28	0.04*	1.01 to 1.63	1.27	0.05	1.00 to 1.62
<b>Ever heard of AIDS</b>						
Never heard (RC)						
Ever heard	1.55	0.01*	1.11 to 2.17	1.52	0.01*	1.09 to 2.11
<b>Level of education</b>						
None (RC)						
Primary	0.60	0.03*	0.38 to 0.96	0.60	0.03*	0.38 to 0.95
At least secondary	0.39	0.01*	0.25 to 0.61	0.40	0.01*	0.26 to 0.61
Nonformal	1.62	0.10*	0.92 to 2.87	1.62	0.09	0.92 to 2.88
<b>Employment status</b>						
Working (RC)						
Not working	1.25	0.01*	1.04 to 1.50	1.26	0.01*	1.05 to 1.51
<b>Wealth index</b>						
Poorest (RC)						
Poorer	0.78	0.21	0.53 to 1.15	0.79	0.22	0.53 to 1.16
Middle	0.65	0.03*	0.44 to 0.96	0.65	0.03*	0.44 to 0.96
Richer	0.43	0.01*	0.29 to 0.65	0.43	0.01*	0.29 to 0.65
Richest	0.32	0.01*	0.21 to 0.49	0.32	0.01*	0.21 to 0.49

<b>Ethnicity</b>						
Hausa (RC)						
Igbo	0.37	0.01*	0.26 to 0.53	0.37	0.01*	0.26 to 0.53
Yoruba	0.57	0.02*	0.40 to 0.81	0.56	0.01*	0.40 to 0.80
Others	0.51	0.01*	0.43 to 0.73	0.56	0.01*	0.43 to 0.73
<b>Type of place of residence</b>						
Urban (RC)						
Rural	1.18	0.17	0.93 to 1.51	1.18	0.17	0.93 to 1.51
<b>Region</b>						
North (RC)						
South	1.03	0.80	0.81 to 1.32	1.03	0.79	0.81 to 1.32
<b>Overall satisfaction with life</b>						
<b>Model 2</b>						
Satisfied (RC)	-					
Neither	0.96	0.79	0.71 to 1.30	0.98	0.92	0.72 to 1.34
Unsatisfied	0.67	0.03*	0.47 to 0.96	1.04	0.84	0.71 to 1.51
<b>Overall happiness</b>						
Happy (RC)						
Neither	1.02	0.87	0.80 to 1.30	1.20	0.32	0.84 to 1.72
Unhappy	0.60	0.01*	0.44 to 0.82	0.99	0.96	0.63 to 1.54

Base outcome = "Utilized"; COR = Crude Odds Ratio; AOR = Adjusted Odds Ratio. \*P<0.05.

Table 6. presents the multivariable analysis examining the relationship between the socio-demographic factors, economic factors, and condom use (in first and last sexual intercourse). Also, it presents the relationship between happiness and satisfaction with life and condom use.

Only sex of respondents, marital status, ever fathered/mothered any children, ever heard of AIDS, level of education, employment status, wealth index, and ethnicity respectively had significant relationships with condom use at first and last sexual intercourse. Respondents aged 20-24- compared to those aged 15-19 years- were sixteen percent less likely to have used condom (OR= 0.84; CI = 0.70 to 1.00; P>0.05). Female respondents -compared to the males- were fifty-six percent more likely not to have utilize condom (OR= 1.56; CI = 1.27 to 1.93; P<0.05). The ever married were six times more likely not to have utilized condom (OR= 5.83; CI = 4.52 to 7.52; P<0.05) compared to those who never married. Those that ever fathered/mothered children were twenty-eight percent more likely not to have utilized condom (OR= 1.28; CI = 1.01 to 1.63; P>0.05) relative to those who never fathered or mothered children.

Respondents who ever heard about AIDS were forty-five percent more likely not to have utilized condom (OR= 1.55; CI = 1.11 to 2.17; P<0.05) compared to those who never heard. Those with only primary education were forty percent less likely not to have utilized condom (OR= 0.60; CI = 0.38 to 0.96; P<0.05) relative to those who had no education; those who had at least a secondary school education were sixty-one percent less likely not to have utilized condom (OR= 0.39; CI = 0.25 to 0.61; P<0.05) relative to those who had no education, and those who had nonformal education were sixty-two percent more likely not to have utilized condom (OR= 1.62; CI = 0.92 to 2.87; P>0.05) relative to those who had no education. Those weren't working were twenty-five percent more likely not to have utilized condoms compared to those not working (OR= 1.25; CI = 1.04 to 1.50; P<0.05).

Compared to the poorest category, the poorer were twenty-two percent less likely not to have utilized condom (OR= 0.78; CI = 0.53 to 1.15; P>0.05); the middle group was associated with a thirty-five percent increase in the likelihood of non-use of condom (OR= 0.65; CI = 0.44 to 0.96; P<0.05), the richer group were associated with a fifty-seven percent increase in the likelihood of non-use of condom (OR= 0.43; CI = 0.29 to 0.65; P<0.05) and being in the richest group was associated with a sixty-eight percent increase in the likelihood of non-use of condom (OR= 0.32; CI = 0.21 to 0.49; P<0.05). Compared to the Hausa ethnic group, the Igbos were sixty-three percent more likely not to have utilized condom (OR= 0.37; CI = 0.26 to 0.53; P<0.05), the Yorubas were forty-three

percent more likely not to have used a condom (OR= 0.57 CI = 0.40 to 0.81;  $P<0.05$ ) and other ethnic groups were forty-nine percent more likely not to have used a condom (OR= 0.51; CI = 0.43 to 0.73;  $P<0.05$ ). Residents in the rural areas were eighteen percent more likely not to have utilized condoms (OR= 1.18; CI = 0.93 to 1.51;  $P>0.05$ ) relative to the urban residents. Those respondents that resided in the southern part of the country were three percent more likely not to have utilized condom (OR= 1.03; CI = 0.81 to 1.32;  $P>0.05$ ) compared to their counterparts in the north.

There was a statistically significant association between satisfaction and condom utilization. There was four percent decrease in the likelihood of non-use of condom among respondents who felt indifferent (neither satisfied nor unsatisfied) (OR= 0.96; CI = 0.71 to 1.30;  $P>0.05$ ) compared to those who felt satisfied, while there was a thirty-three percent decrease in the likelihood of non-use of condom among respondents that were dissatisfied with their lives (OR= 0.67; CI = 0.47 to 0.96;  $P<0.05$ ) compared to the satisfied. Among the respondents who were indifferent, there was two percent increase in the likelihood of non-use of condom (OR= 1.02 CI = 0.80 to 1.30;  $P>0.05$ ), while those who were unhappy with their lives were forty percent less likely not to have utilized condom (OR= 0.60; CI = 0.44 to 0.82;  $P<0.05$ ) relative to those who felt happy.

In the full model, sex, marital status, ever heard of AIDS, level of education, employment status, wealth index, and ethnicity had significant relationships with condom use. Respondents aged 20-24 years compared to those aged 15-19 years were sixteen percent less likely not to have used a condom (OR= 0.84; CI = 0.70 to 1.00;  $P>0.05$ ). Female respondents -compared to the males- were fifty-seven percent more likely not to have used a condom (OR= 1.57; CI = 1.27 to 1.93;  $P<0.05$ ). The ever married were six times more likely not to have utilized condom (OR= 5.87; CI = 4.54 to 7.59;  $P<0.05$ ) compared to those who never married. Those that ever fathered/mothered children were twenty-seven percent more likely not to have utilized condom (OR= 1.27; CI = 1.00 to 1.62;  $P>0.05$ ) relative to those who never fathered or mothered children.

The group of respondents who had heard of AIDS was fifty-two percent more likely not to have utilized condom (OR= 1.52; CI = 1.09 to 2.11;  $P<0.05$ ) relative to those who said they never heard about AIDS. Relative to the uneducated, those having only primary education were forty percent less likely not to have utilized condom (OR= 0.60; CI = 0.38 to 0.95;  $P<0.05$ ), those who had at least a secondary school education were sixty percent less likely not to have utilized condom (OR= 0.40; CI = 0.26 to 0.61;  $P<0.05$ ); and those who had nonformal education were sixty-two percent more likely not to have utilized condom (OR= 1.62; CI = 0.92 to 2.88;  $P>0.05$ ). The working group was twenty-six percent more likely not to have utilized condoms (OR= 1.26; CI = 1.05 to 1.51;  $P<0.05$ ) compared to the non-working group.

Compared to the poorest category, the poorer was twenty-one percent less likely not to have utilized condom (OR= 0.79; CI = 0.53 to 1.16;  $P>0.05$ ), the middle group was associated with a thirty-five percent decrease in the likelihood of non-use of condom (OR= 0.65; CI = 0.44 to 0.96  $P<0.05$ ), the richer group were fifty-seven percent less likely not to have used a condom (OR= 0.43; CI = 0.29 to 0.65;  $P<0.05$ ), the richest group were sixty-eight percent less likely not to have used a condom (OR= 0.32; CI = 0.21 to 0.49;  $P<0.05$ ). Compared to the Hausa ethnic group, the Igbos were sixty-three percent less likely not to have used a condom (OR= 0.37; CI = 0.26 to 0.53;  $P<0.05$ ), the Yorubas were forty-four percent less likely to have not used a condom (OR= 0.56; CI = 0.40 to 0.80;  $P<0.05$ ) and others in other ethnic groups were forty-four percent less likely not to have utilized condom (OR= 0.56; CI = 0.43 to 0.73;  $P<0.05$ ). Residents in the rural areas were eighteen percent more likely not to have utilized condoms (OR= 1.18; CI = 0.93 to 1.51;  $P>0.05$ ) relative to the urban residents. Those residing in the south were three percent more likely not to have utilized condoms in the first and last sexual intercourse (OR= 1.03; CI = 0.81 to 1.32;  $P>0.05$ ) compared to those in the north.

There was a statistically significant association between satisfaction and condom utilization. There was two percent decrease in the likelihood of non-use of condom among respondents who felt indifferent (neither satisfied nor unsatisfied) (OR= 0.98; CI = 0.72 to 1.34;  $P>0.05$ ) compared to those who felt satisfied, while there was a four percent increase in the likelihood of not utilizing condom among respondents who were dissatisfied with their lives (OR= 1.04; CI = 0.71 to 1.51;  $P>0.05$ ) compared to those who felt satisfied. Happiness was not associated with condom utilization in the first and last sexual intercourse. Among the respondents who were indifferent, there was twenty percent increase in the likelihood of non-use of condom (OR= 1.20 CI = 0.84 to 1.72;  $P>0.05$ ), while those who were unhappy with their lives were one percent less likely not to have utilized condom (OR= 0.99; CI = 0.63 to 1.54;  $P>0.05$ ) relative to those who felt happy.

#### 4. Discussion

The study revealed that socio-demographic factors exhibited striking differences in relationship with risky sexual behaviour. Specifically, young people in older age-group (20-24) were likely to have more lifetime sexual partners

but were less likely to have had sex at younger ages. Also, while females were less prone to having high lifetime sexual partners (Mlambo, Peltzer, & Chirinda, 2016), they were more likely to have had unprotected sex (in the first and last sexual intercourse). That suggests a high tendency to keep a few trusted sexual partners with whom young females believe they can continue to enjoy unprotected sex (Odimegwu & Somefun, 2017), thinking they are safe. Previous studies also revealed that unmarried youths who are not into marital vow have greater chances of engaging in risky sexual behaviour (Chawla & Sarkar, 2019; Hadish et al., 2017; Wendland et al., 2018). However, what passes for risky sexual behaviour could be examined through the lens of marital status as suggested by this study in which ever-married young people were more likely to not use protection (during their first and last sexual intercourse) probably because of their desire for children. Also, the high tendency among ever-married young people to keep low number of sexual partners in their lifetime may be attributed to the high (moral-based) disregard for extra-marital affairs or the decision of some to limit their access to out-of-wedlock sexual activities.

In terms of ethnicity, it has been established that ethnicity plays a crucial role in the practice of risky sexual behaviour (Odimegwu & Somefun, 2017). This is evident in the findings that, compared to the Hausas/Fulanis, young people of Yoruba and Igbo extractions (and other ethnic groups) were less likely to engage in unprotected sex. A plausible explanation for is that these categories of young people (i.e., Yoruba, Igbo, and others) must have been educated and knowledgeable enough about using protection, and they leverage the benefits of protection (against sexually transmitted infections and unwanted pregnancies). Also, their knowledge of how to prevent contracted STIs -through protected sex- could have increased their lack of fear in have more sexual partners. Only the Igbos were less likely to have had their first sexual experience at younger ages, which further emphasis the extent to which ethnicity account for variation in sexual behaviour (Imaledo et al., 2012) owing to some inherent and contextual ethnic factors that are beyond the scope of the study.

Furthermore, it was discovered that the economic characteristics of individuals play a vital role in determining risky sexual behaviour among young people. However, socio-economic variables do not predict three indicators of risky sexual behaviour similarly. For instance, while having either primary or at least secondary education yields a less likelihood of having unprotected sex (non-use of condom in the first and last sexual intercourse) which is a positive sexual behaviour (Odimegwu et al., 2019), it is associated with increasing propensity to have high lifetime sexual partners and having sex at young in the case of being exposed to nonformal education. Similarly, the richer the young people are, the less likely they are to use protection but more likely to have multiple sexual partners in their lifetime. Also, the odds of engaging in unprotected sex and having first sex at younger ages were higher among the non-working group making non-participation in economic activities a prominent risk factor for risky sexual practices among young people. Being aware of AIDs didn't translate to reduced indulgence in unprotected sex but brought about a reduction in the risk of having more sexual partners. This suggests a tendency to indulge in unprotected sex, which makes less than two sexual partners as ideal and logical.

As earlier stated, the relationship between psychological factors and risky sexual behaviour among sexually active young people in Nigeria is not one that is overly replete in public health literature in Nigeria. Hence, this study established that self-reporting low level of satisfaction with life is associated with high lifetime multiple sexual partners among young people in Nigeria. This suggests that the influence of psychological factors may differ by the type of risky sexual behaviour just like what is obtainable in a study conducted in America where self-esteem among adolescents significantly determine their exposure to risky sexual behaviour (Kerpelman, McElwain, Pittman, & Adler-Baeder, 2016). Nevertheless, this doesn't eschew the fact that psychological factors are indispensable predictor of risky sexual behaviour as seen in Australia and Poland, where psychological factors also have a significant impact on the life of individuals apart from their sexual behaviour. Specifically, in the study in Poland, lower self-esteem was a predictor of unprotected sexual intercourse. In Australia, individuals experiencing psychological distress possess an increasing tendency to adopt risky sexual behaviours (Ganczak et al., 2017; Nguyen et al., 2017), while perceived self-esteem among adolescents is found to be a significant correlate with their practice of risky sexual behaviour. Furthermore, one study among Mexican adolescents has found that self-efficacy is linkable sexual risk behaviour of young people while this scenario also plays out in Iran where it was found that personality pattern is a significant predictor of risky sexual behaviours (Palacios, 2018; Samadypoor & Kord Tamini, 2016).

## 5. Conclusion

The fact that the link between psychological factors and risky sexual behaviour among young people in Nigeria has not received the much-needed attention makes this study an important one in developing interventions that address the high penchant for more sexual partners (among the young people) by targeting their psychology in terms of their subjective perceptions about their lives and well-being. Also, this study identified the significant



socio-demographic, economic factors associated with the different indicators of risky sexual behaviour among young people, which will further inform evidence-based programmatic interventions. This study has provided empirical information which- by implication- would further help in tackling the spread of Sexually Transmitted Infections and other fatal outcomes of risky sexual practices in the country. This would accelerate steps towards achieving good health and well-being in Nigeria by the year 2015 in accordance with the Sustainable Development Goal (SDG) three.

### Recommendation

Apart from considering socio-demographic and economic factors among young people in Nigeria that exposes them to risky sexual practices, the study recommends that psychological risk factors should be also be given utmost priority in sexual health programmes (through social and behavioural change communication approach) to effectively tackle the menace of risky sexual practices and its negative consequences which could jeopardize all efforts to achieve good health and well-being (i.e., Sustainable Development Goal Three) in Nigeria.

### Acknowledgments

None.

### Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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