

## Sexual Health Decisions Amongst Students of Some Tertiary Institutions in Lagos State, Nigeria

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### Abstract

The study examined sexual health decisions amongst students of some tertiary institutions in Lagos State, Nigeria. With a sample of three hundred students randomly selected using stratified sampling technique, the study showed that the age at sexual debut amongst these students is as low as 12 years. While many respondents (41.3%) got involved in early sex as a result of attraction to their partner, some (34.1%) were influenced by their peers. It was discovered that there is significant relationship between age at debut and circumstance leading to the sexual involvement ( $\chi^2 = 31.705$ ,  $p < 0.05$ ).

Feeling of guilt after the first sexual intercourse was found not to be significantly related to age at sexual debut ( $\chi^2 = 0.312$ ,  $p > 0.05$ ) and also involvement in unintended pregnancy is independent of age at sexual debut ( $\chi^2 = 11.396$ ,  $p < 0.05$ ). The gender of the respondent is not significantly related to age at first sexual intercourse ( $\chi^2 = 1.849$ ,  $p > 0.05$ ). About 86% of the predicted outcomes were found to be explained by the fitted regression line (Nagelkerke R square = 0.866) which showed that the probability that an individual student admitted into a tertiary institution in Lagos State is a function of many factors such as, Age of respondent, Gender of the respondent, Religion of the respondent, Ethnicity of the respondent, Current Educational attainment of the respondent, Current level at school, Respondents opinion about unprotected sexual involvement and many other factors.

**Key words:** Peers, sexual, behaviour, decisions, students

### Background

Worldwide, there had been research studies on adolescent sexual health decisions. Maskay and Juhasz (1983) explained that most young people are pressured to become involve in sexual activities

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such as earlier physical maturation with accompanying sexual desires, peer pressure, permissive societal attitude, access to birth control methods and abortion and mass media messages. He blames adults for failing to provide necessary information, guidance and support that will assist the youths in their sexual health decision.

According to Warren *et al* (1998) 'High rates of unwanted or unintended pregnancy and sexually transmitted diseases (STDs) including HIV infection, among adolescents are a major public health concerns that have created interest in trends in teenage sexual activity'.

Supporting the above positions, Okonkwo *et al* (2005) observed that high risk sexual behaviours are common in tertiary institutions in Nigeria. According to them, research on reproductive health of youths in Nigeria shows that such youths engage in risky behaviours such as, unprotected sex, multiple partners which results in unwanted pregnancy, illegal abortions, sexually transmitted disease (STD) among others. Tracing the root of early sexual debut among adolescents, Donenberg *et al.* (2003) explained that evidence shows family as the most fundamental influence on adolescent behaviour and that there are two dimensions of parenting associated with youths' sexual behaviour and attitudes. He listed them as affective factors and instrumental characteristics. According to them parent hostile and affectionless control and high overprotection were found to be linked to early sexual debut.

Rodgers (1999) observed that though studies have examined parent-child communication about sexuality as a cause of teen sexual initiation and attitudes but the results are inconclusive. Though Davis (2003) agree that a lot of socio-economic factors such as poverty, family distress, access to health care could contribute to sexual health decisions of youths, yet, she argued that youths who face prejudices and discrimination by virtue of their life experiences or family circumstances may be precipitated to take sexual risks.

Outlining the consequences of early sexual debut Gupta and Mahy (2001) blamed Sub-Saharan Africa as having the highest level of adolescent childbearing and HIV/AIDS infection in the world. According to them, early age sexual involvement comes with its own caveat and this include: greater

likelihood of unprotected intercourse and multiple partners, exposure to contraception over the reproductive span, high rate of maternal morbidity and mortality, truncated educational opportunities, lower future family income and larger completed family sizes which may lead to greater population growth.

Studies such as Sieving *et al* (2002), suggest that despite the involvement of children in sexual play with same gender friends as a normative part of development, number of teens having sexual intercourse may be declining compared to the situation obtainable about a decade ago. Citing the example of the United States of America, Sieving *et al* (2002) submitted that in 1988, 53% of teenage females and 60% of males reported ever having sexual intercourse but by about 1998 only 50% female and 55% males reported the same even. However, they agreed that the early initiation into sex may not be declining because according to them, the same study shows that in 1988, 11 % of adolescent females who are 14 years of age and below have had sexual intercourse which increased to 19% by around 1998.

The involvement of teens in formal instructions about contraception may also have received a boost in the United States of America. Mosena (2007) reported that between 2003 and 2005, about 63 % of the teens reported the use of condom at last intercourse. According to her, in 2002, only 66% of males and 70% of females received formal instructions on contraception. This is a marked improvement from the situation in 1995 when 81% of the males and 87% of females were involved in the same exercise. How effective has the education of youths been in the abatement of risk behaviour?. Studies show that the prevalence of many risk behaviours has not declined despite endeavours to educate youths about the consequences of their actions (Western, 1996). According to him, the study showed that knowledge about the risks of AIDS seems not to have significant correlation to AIDS risk behaviour.

## **Materials and Methods**

### **The Study Area**

This section examines the study population. The focus is on four of the twenty local government's areas in Lagos State, Nigeria statutorily recognized by the 1999 constitution of the Federal Republic of Nigeria.

Lagos State was created on May 27,1967,by Decree Number 14, which merged the then Federal Capital of Nigeria with the old colony province of the then Western Region of Nigeria to form a new state. The State lies approximately between longitudes 2°42'East and 3°42'East and latitudes 6°22'North and 6°52'North.It is bounded in the South by the Guinea coast about 180km along the Atlantic Coastline, in the West by the Republic of

Benin and in the North and East by Ogun State (Odumosu *et al*, 1999).

It has a total area of 3,577 sq km about 22 per cent of which is water. (Oke *et al.*, 2000). Despite its position as the smallest State in the Federation in terms of land mass, occupying only about 0.4 per cent of the area of Nigeria, it has gone through series of administrative transformations into a frontline position amongst the thirty-six states making up the Federation of Nigeria.

Lagos State with a population of 9,013,534 million, distributed as 4,678,020 males and 4,335,514 females), is the most urbanized state in Nigeria. In 1963, the population of Lagos State was 1,444,000 with 603,000 males and 591,000 females. This grew to 5,725,116 in 1991 with a male population of 3,010,604 and 2,714,512 females. The population density of Lagos State is 2,455 (National Population Commission, 2006)

### **Population and Sample**

This study examined the sexual health decisions among students of tertiary institutions in Lagos State. Principally, it focused on tertiary educational institutions in the state, such as : College of education, Polytechnic and Colleges of Technology, Technical Colleges and Universities. The study considers only the population of students in government established schools such as The University of Lagos, Lagos State University, Lagos State College of Education, Lagos State Polytechnic, Yaba College of Technology and Federal College of Technical Education. There are a couple of private tertiary institutions but the choice of government colleges is because they have been in existence long before the year 2000 when policy changes by the government created enabling environment for the establishment of private tertiary institutions in Nigeria.

A sample size of three hundred students was selected from the six tertiary institutions using stratified random sampling with each school representing a stratum.

### **Data Collection Instrument**

The questionnaire used consists of two parts. The first part is about demographic details such as age, gender, education, religion, ethnicity and level at school. The second part was used to extract information such as: Respondents opinion about unprotected sexual involvement, Does the respondent know a friend who indulges in unprotected sex?, Has the respondent ever been involved in unprotected sex?, Has the respondent ever had unintended pregnancy?, Availability of abortion facilities within the proximity of the respondent , What the respondent(female) will do to an unintended pregnancy, What the respondent (male) will do to an unintended pregnancy, Number of partners/lovers, Respondents opinion about the attitude of having multiple partners/lovers, The Desirability of having coitus

with multiple partners, Knowledge about friend who exchange sex for money, Whether the respondent has ever exchanged sex for money, How the first sexual experience occurred, Whether the respondent felt guilty after the first sexual experience, Whether the respondent ever had sexually transmitted disease

A student admitted into tertiary institution in Nigeria, including Lagos State is expected to have

attained a minimum age 16 years before the first enrolment ( Ayo et al.,2007), ). Apart from general descriptive analysis of the sexual behaviour of this set of students in tertiary institutions, the study aims at constructing a model based on sample result which could be used to calculate the probability that a student on the first day of admission into the tertiary institution in Lagos State has ever been involved in sexual activities.

**The Model**

Let

$$Y_i = \begin{cases} 0 & \text{if the individual had sexual intercourse before reaching age 16 years} \\ 1 & \text{otherwise} \end{cases}$$

we predict  $P(Y_i)$ , which is the probability that Y occurs for the  $i^{th}$  student.

$$P(Y_i) = \frac{1}{e^{b_0 + \sum_{i=1}^{21} b_i X_i}}$$

- and  $X_1$  Age of respondent)
- $X_2$  Gender of the respondent
- $X_3$  Religion of the respondent)
- $X_4$  Ethnicity of the respondent
- $X_5$  Current Educational attainment of the respondent
- $X_6$  Current level at school
- $X_7$  Respondents opinion about unprotected sexual involvement
- $X_8$  Does the respondent know a friend who indulges in unprotected sex?
- $X_9$  Has the respondent ever been involved in unprotected sex?
- $X_{10}$  Has the respondent ever had unintended pregnancy?
- $X_{11}$  Availability of abortion facilities within the proximity of the respondent
- $X_{12}$  What the respondent(female) will do to an unintended pregnancy
- $X_{13}$  What the respondent(male) will do to an unintended pregnancy
- $X_{14}$  Number of partners/lovers
- $X_{15}$  Respondents opinion about the attitude of having multiple partners/lovers
- $X_{16}$  The Desirability of having coitus with multiple partners
- $X_{17}$  Knowledge about friend who exchange sex for money
- $X_{18}$  Whether the respondent has ever exchanged sex for money

- X<sub>19</sub> How the first sexual experience occurred
- X<sub>20</sub> Whether the respondent felt guilty after the first sexual experience
- X<sub>21</sub> Whether the respondent ever had sexually transmitted disease

What the above model is suggesting is that given  $X_i$ ,  $i=1,2,3,4,\dots,21$ , then we can calculate the probability that an individual (student) has an early ( $\leq 16$  years) sexual debut.

The appropriateness of this model is informed by the dichotomous nature of  $Y_i$ , the dependent variable for which the ordinary linear regression model is inappropriate (Field, 2005).

**Results**

About 50 % of those who had their sexual debut before age 16 years had it before the age of 12 years while 34.1% of the respondents have their first sexual intercourse after 18 years but below 23 years.. Amongst those who had their sexual debut before age 16 years, 23.4% claimed they were forced to do it, 41.3% claimed that it was by mutual agreement between them and their partner while 23.8% could not remember how it happened. However, the result shows that age at first intercourse is significantly related to circumstance of the first intercourse ( $\chi^2 =31.705$ ,  $p<0.05$ ).Over 50% of those who had their sexual debut before the age of 16, felt guilty after the intercourse while the figure is 46.8 % for those who did after the age of 16. Guilt after the first sexual experience is found not to be significantly related to age at debut ( $\chi^2 = 0.312$ ,  $p>0.05$ ). It is worthy of mention that 41.9% of those who had their first sex before age 16 continued to do so thereafter but only 33.3% did so regularly while 5% of them abstain thereafter. About 57.0% of those who had their debut after age 16 continuously had sex after their first experience but only 24.7% did so regularly while 9.8% abstain.

Amongst those who had their first experience before age 16, 38.1% had sexually transmitted disease. This is 37.9 % amongst those who had it after age 16. More than 28% of those who had their first experience before 16 attributed their action to attraction and love for their partner while 33.3 % ascribed it to peer influence. In similar manner 33.8% of those who had their debut after 16, claimed to have done so because of attraction and love for their partner while 31.5 % attributed it to peer influence. Age at debut has no significant relationship to reason for engaging in sex ( $\chi^2 =5.758$ ,  $p>0.05$ ).

Over 51% of those who had their first experience before age 16 and 45.1% of those who did so after 16 would not make the same mistake if they have to do it all over again. The first experience led to undesired pregnancy amongst 28.3% of those who did so before 16 years and 11% amongst those who did so after 16 years. However, the result shows that unwanted pregnancy is independent of age at sexual debut ( $\chi^2 =11.396$ ,  $p< 0.05$ ). Slightly over 40% of male adolescent and 59.4% of the female had their first sex before age 16 while 50.2% of the male and 49.8% of the female had it after. There is no significant relationship between age at first intercourse and gender of the adolescent ( $\chi^2 =1.849$ ,  $p>0.05$ ).

Religion seems not to play a significant role in determining age at sexual debut ( $\chi^2 =0.126$ ,  $p>0.05$ ).Amongst those who are Christians, 16.2 % had their first intercourse before the age of 16 years. This is just 5.5% amongst Muslims. Also, 3.8% of those in 100 to 200 level in school had their first intercourse before sixteen. This is 13.2% amongst those in 300 to 400 levels. The level of the student at school is found not to be significantly related to their sexual debut ( $\chi^2 =0.822$ ,  $p>0.05$ ).

**Table 1**

**Dependent Variable Encoding**

Original Value	Internal Value
After 16	0
before or at16	1

Source: Survey, 2009

Table 1 shows that ‘‘before or at 16’’ is been used as the predicted outcome. The model summary shows that about

**Table2**

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	22.922 <sup>a</sup>	.645	.866

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Table 2 shows that about 86 percent of the variation in the predicted outcome (whether the sexual debut of the student is before or at age 16 years) is explained by the fitted logistic model (Nagelkerke R square =0.866). ‘‘What the adolescent will do with unintended pregnancy’’ has the highest Wald estimate of 5.818 and this makes it the most important variable in the model. This is followed by ‘‘Marital status’’, ‘‘age at debut’’,

‘‘How the first sexual experience happened’’ and ‘‘Level at School’’ with Wald estimates of 4.353, 3.010, 2.830 and 2.494 respectively. These are followed by other variables such as How easy it is for adolescent to procure abortion services ( 1.838), Whether the adolescent ever exchanged sex for money (1.820) and Whether the adolescent felt guilty after engaging in the first intercourse (1.185).

**Table 3**

**Classification Table <sup>a</sup>**

Observed		Predicted		
		Had sex before age 16 or not		Percentage Correct
		After 16	before or at16	
Step 1	Had sex before age 16 or not	38	1	97.4
	After 16 before or at16	2	28	93.3
	Overall Percentage			95.7

a. The cut value is .500

The Classification Table (Table 3) shows how good the model is for the purpose of prediction. The overall accuracy of our model to predict the

probability that  $Y_i$  occurs for the  $i$ th student is 95.7%. Also, the sensitivity of the model is 97.4% and positive predictive value of 95%.

**Table 4**

**Hosmer and Lemeshow Test**

Step	Chi-square	df	Sig.
1	6.084	8	.638

The Hosmer and Lemeshow Test is a test of goodness of fit of the model.. Here  $P > 0.05$ , The model for calculating the probability that  $Y_i$  occurs for the  $i$ th student is therefore

$$P(Y_i) = \frac{1}{1 + e^Q} \text{ where}$$

$Q = -26.645 + 3.508*(Age\ of\ respondent) - 5.280*(Gender\ of\ the\ respondent) + 3.391*(Religion\ of\ the\ respondent) - 0.731*(Ethnicity\ of\ the\ respondent) - 4.402 (Current\ Educational\ attainment\ of\ the\ respondent) - 8.614 (Current\ level\ at\ school) + 26.954 (Respondents\ opinion\ about\ unprotected\ sexual\ involvement) - 0.894 (Does\ the\ respondent\ know\ a\ friend\ who\ indulges\ in\ unprotected\ sex?) + 1.579 (Has\ the\ respondent\ ever\ been\ involved\ in\ unprotected\ sex?) + 4.199(Has\ the\ respondent\ ever\ had\ unintended\ pregnancy) - 6.975*(Availability\ of\ abortion\ facilities\ within\ the\ proximity\ of\ the\ respondent) + 11.447 *(What\ the\ respondent\ (female)\ will\ do\ to\ an\ unintended\ pregnancy) +$

$15.278*(What\ the\ respondent(male)\ will\ do\ to\ an\ unintended\ pregnancy) + 3.462 *(Number\ of\ partners/lovers) - 4.283*(Respondents\ opinion\ about\ the\ attitude\ of\ having\ multiple\ partners/lovers) - 20.564*(the\ Desirability\ of\ having\ coitus\ with\ multiple\ partners) - 1.975 (Knowledge\ about\ friend\ who\ exchange\ sex\ for\ money) - 7.938*(Whether\ the\ respondent\ has\ ever\ exchanged\ sex\ for\ money) + 2.371*(How\ the\ first\ sexual\ experience\ occurred) - 5.881*(Whether\ the\ respondent\ felt\ guilty\ after\ the\ first\ sexual\ experience) + 6.810*(Whether\ the\ respondent\ ever\ had\ sexually\ transmitted\ disease)).....equation(1)$

The study shows that many of the adolescents had their sexual debut as early as age 12 years and some others before the celebration of their eighteenth birthday. About 66% of those below the age of 18 years have had sex before reaching that age. Only 50% of those below the age of 16 years felt guilty after their first experience compared to 46.85 amongst those who did after that age. However, age was found not to be significantly related to the feeling of guilt as a result of engaging in the act.

The study also shows that once engaged in sexual activity, only about 33% of the respondents who are below 16 years continue to do so regularly after their first experience while as low as 24.7% continued to do so amongst those who had their sexual debut after age 16 years. Reasons for engaging in sex the age the respondents did vary. While some of the respondents did so willingly, either due to peer influence (33.3% ) or attraction for their lovers (31.5%) . Some claimed that they were forced to do so. Expectedly, having unintended pregnancy is not significantly related to the age of the respondent. Moreover, religious affiliation does not determine early involvement in sexual activities.

Twenty one predictor variables were used to fit the logistic regression model , which if fitted to predict the probability that Y occurs for the *i*th students was found to be a good fit. The overall accuracy of the model was found to be 95.7% with a positive predictive value of 95%.

### Discussion

Studies on involvement in sexual activities at early age for adolescent is not new (see Davis, 2003; Donenberg et al.,2003;Gupta and Mahy,2001;Mosena, 2007;Okonkwo et al., 2005;Rodgers,1999 and Warren et al.,1998).A number of factors such as curiosity, early physical maturation, peer influence, lack of parental guidance and control, societal attitude, easy accessibility to birth control and so on have been blamed for the situation but what is of great concern to researchers is the attendant health risk associated with these behaviour. Particularly in our study area where tradition and culture still prevail, youth who have unintended pregnancy try to abort and some of them die in the process. There are many associated health risks such as HIV/AIDS pandemic and other sexually transmitted diseases that come with unprotected coitus. It is interesting that despite abundant education on this issue through electronic and print media, the involvement of youth in early age sexual activities seems not to be on the decline.

Early initiation of youths into sexual, particularly those below the age of 12 years which this study found to be common in our study area may be attributable to the lack of attention given to these

youths by their working parents who leave home in the morning for work but would normally not return home until the later part of the night.

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