

RISKY SEXUAL BEHAVIOUR AMONG ADOLESCENT GIRLS: DOES FEMALE GENITAL CUTTING HAVE A ROLE TO PLAY? EVIDENCE FROM THE 2013 NIGERIA DEMOGRAPHIC AND HEALTH SURVEY

By

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ABSTRACT

Series of empirical investigations have suggested that female adolescents are susceptible to risky sexual behaviour having considered many risk factors. None of these studies has made effort to examine the influence of female genital cutting (FGC) on adolescent risky sexual behaviour, hence this study. Employing 2013 Demographic and Health Survey, the study sample consisted of 3,633 adolescents who reported their genital cutting status and sexual behaviour. Data were analyzed using descriptive/bivariate and a two-model binary logistic regression. Results disclosed that adolescents with FGC experience had a non-significant 13% higher likelihood of engagement in risky sexual act than those without such experience ($p>0.05$). Odds of risky sexual behavior rise as age increases. Results further show that adolescents who were Christian, with no formal education, of poor background, who reside in rural areas and were from Northwestern part of the country have higher likelihood to experience risky sexual behaviour than their other respective counterparts.

Keywords: *Risky sexual behaviour, Female genital cutting, adolescents*

Introduction

The leaders and heirs of tomorrow are the youths of today. Presently, close to 2 billion people of the world population are youths aged 10-24 years. While no less than 32.0% of Nigeria population are youths, roughly 49% are adolescents aged 15-19 years (NPopC and ICF International, 2014), and it has been observed that by 2025, the number of Nigerian youths will exceed

57 million (World Population Prospects, 1999). Studies of human sexuality has shown that majority of this population are sexually active (CDC, 2015; Glasier et al, 2006) despite the fact that they are generally immature for motherhood, with less or no physical, physiological, mental and psychological readiness and preparedness. Adolescence sexuality is a major concern globally due to its numerous negative consequences. Their sexual activeness at these early ages subject them to many risks ranging from reproductive health challenges to general health morbidities and socio-economic vulnerability like Sexually Transmitted Infections (STI) (CDC, 2014), Human Immunodeficiency Virus (HIV) (CDC, 2014; Dixon-Mueller, 2009), unwanted/mistimed, complicated pregnancies and childbirth (Doyle, Mavedzenge, Plummer and Ross, 2012; Dixon-Mueller, 2008; Titilayo, 2008), teenage motherhood (Titilayo, Obiyan, Agunbiade, and Fasina, 2009; Hamilton, Martin, Osterman, *et al*, 2014), illegal abortion, school dropout, low self-esteem, low employment opportunities, low economic productivity and other socio-economic disadvantages in later life (Tawiah, 2002; Titilayo, Omisakin and Ogunfowokan, 2014) and many others.

Series of empirical investigations have attempted to explore the risk factors of these adolescents' involvement in sexual matters and have reported among others engagement in unprotected sex, low and inconsistent use of condoms, use of drug and alcohol, changing of sexual partners too often, having more than one partner in the same period as the risk factors that expose this group to this reproductive health danger. While many of these empirical investigations have suggested that early sexual debut, exchange of sex for gifts, lack of adequate knowledge before engaging in sexual relationship have made them susceptible to the risky sexual behavior (Bankole et al, 2004; Int'l Family Planning Perspectives, 2004; Sedgh, Bankole, Okonofua et al, 2009; Titilayo, 2010; Echendu, Joseph, Nkemakolam et al, 2011) and invariably fallen into its dangers, none of these studies till date has made any effort to examine the influence of female genital cutting (FGC) on adolescent risky sexual behaviour.

Female genital cutting is an age long traditional practice and procedure that involves partial or total removal of parts or all of the female genital organs for cultural or non-medical purposes (Slanger, 2002), World Health Organization (WHO) sees FGC as all procedures involving partial or total removal of the external female genitalia or any injury to them for socio-cultural and non-therapeutic reasons (WHO, 2007). Despite the acclaimed unhealthy practice of FGC, one principal reason or rationale behind the age long practice and procedure of FGC is that it attenuates sexual feeling

(Bodunrin, 1999; and Adedokun, Oduwole, Orosanya et al. 2006 in Kolawole and Anko Van, 2010) and reduces sexual urge (Ankomah, Mamman-Daura, Omoregie, Anyanti, 2011; WHO, 2007; Carr, 1997; Oyefara, 2014) thereby checkmating nymphomaniac attitude and character. It has been argued that FGC is a good preventive means or control for masturbation and hypersexuality in early life for girls (Duffy, 1989; Eke, Kanu and Nkanginieme, 1999). It was widely believed that circumcised girls and women would be less promiscuous than their counterparts who never went through the procedure of circumcision (Odimegwu and Okemgbo, 2000; NPC and Macro, 2009).

That no scientific evidence has proven that women who have undergone FGC are less promiscuous than those who have not experienced FGC procedure as argued in literature and that delaying sexual initiation among adolescents and unmarried young people is a critical preventive reproductive and general health strategy to prevent or reduce engagement in risky sexual behaviour, with the aid of 2013 Nigeria Demographic and Health Survey (NDHS) dataset this study thus set to investigate the relationship between female genital cutting status and engagement in early sexual debut (risky sexual behaviour) among adolescents in Nigeria.

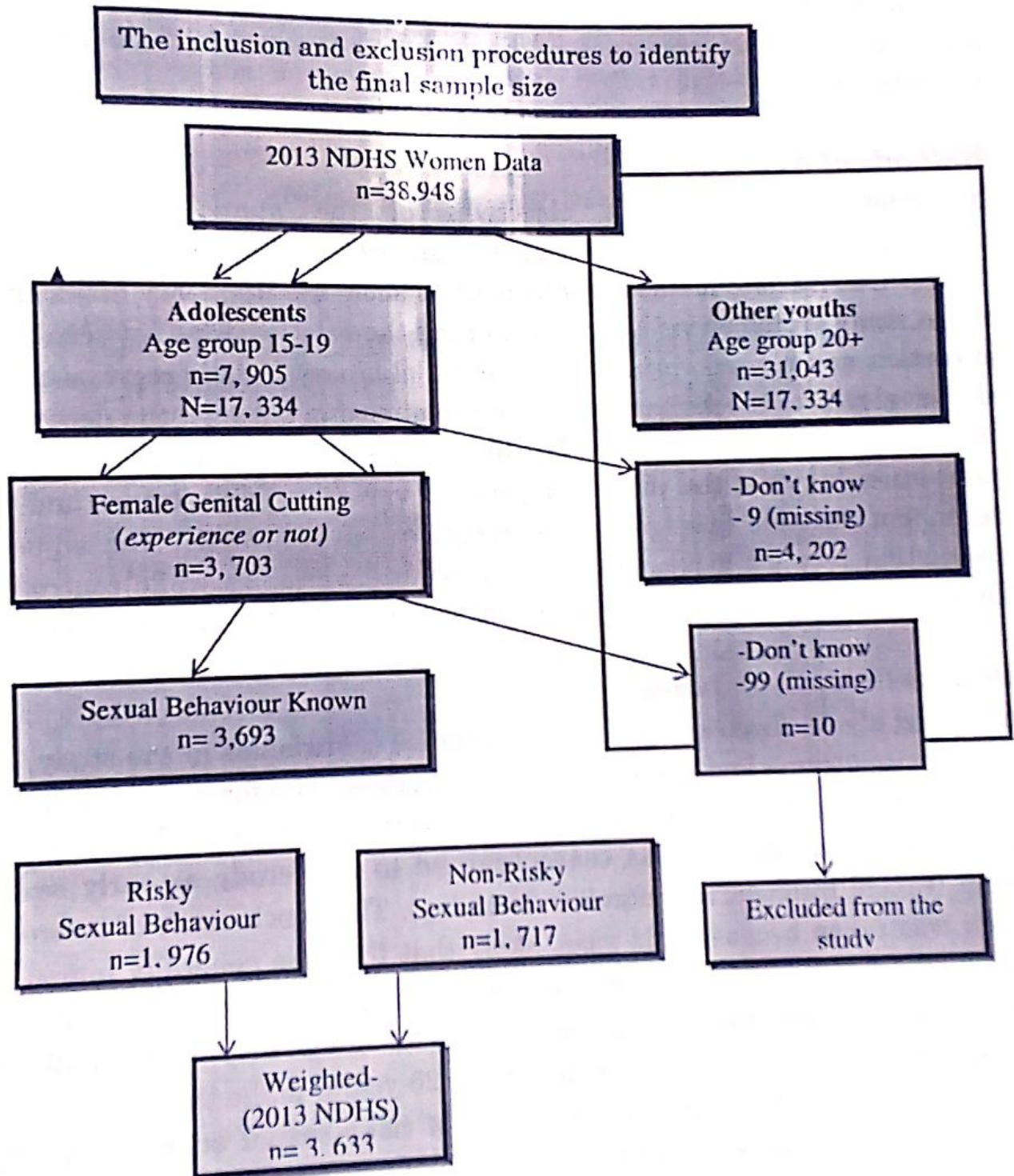
Material and Methods

Data source

Nigeria Demographic and Health Surveys (NDHS) 2013 series is a follow-up-survey of the 1990, 1999, 2003 and 2008 NDHS. It consists of 38,948 nationally sampled reproductive ages (15-49 years) women. Sequel to the aim of designing measure for the levels, patterns, and trends of demographic, health and socio-economic indicators, the NDHS provide up-to-date information on the population, health and socio-economic situation of the country. Specifically, NDHS questionnaires collected information on the maternal, child and household health, socio-economic and demographic characteristics, and individual sexual experience and birth history, among others. In examining the incidence of FGC and sexual behaviour within and across the six geo-political zones of the country, 2013 NDHS asked respondents whether or not they were circumcised and age at first sexual experience among other questions. Although the total national respondents for 2013 NDHS were 38,948 but anationally representative weighted sample of 3,633 was obtained from the data for this present study. The extracted target sample populations (3,633) were all adolescents (15-19 years) as at the time of the survey, who reported their genital cutting status (experience or not experience) and who also reported their sexual behaviour (risky or not

risky). We excluded respondents who were older than 19 years, those who did not report their genital cutting status and/or those who did not report their sexual behavior even if they were still adolescents as at the time of the survey. The remaining data were weighted in order to remove any error of sampling randomization and representativeness biases and this gave us the 3,633 respondents for the study analysis (See Figure 1 for inclusion and exclusion procedures).

Figure 1: Derivation of study population



Ethical consideration

The Institutional Review Board of ICF International, Inc. reviewed and approved the data used for this analysis. The Institutional Review Board of ICF International complied with the United States Department of Health and Human Services regulations for the protection of human research subjects. The ethical approval and clearance was equally obtained by MEASURE DHS from National Ethics Committee of the country. Informed consent both verbal and written was also obtained from all the individual respondents before the commencement of the interview and data collection. Respondents have the right and opportunity to opt out of the interview at any point. No trace of identification of the respondents was left in the process of the data collection.

Methods of Analysis

In order to achieve the objectives of the study, we employed descriptive/bivariate and binary logistic regression analytical techniques. The descriptive/bivariate method was utilized to show the frequency distribution of the study variables vis-à-vis determining the relationships between some important and related variables. A two-model binary logistic regression was also employed to check the multivariate relationship between the dependent and the independent variables. The first model is to reveal the unadjusted association between the main independent variable (FGC status) and the dependent variable (engagement in risky sexual behaviour). The adjusted association between dependent and independent variables while controlling for some socio-demographic variables was examined in the second model.

Description of variables

As stated above, there are two main categories of variables in the study, the dependent/outcome and the independent variables. The former being sexual behaviour (engagement in risky or non-risky sexual act). Risky sexual behaviour of adolescents was conceptualized in this study as early sexual debut (sexual intercourse before 20th birthday). The bench mark of before 20 years was taken because it is most likely that they are generally immature for motherhood, with less or no physical, physiological, mental and psychological readiness and preparedness for pregnancy and childbirth. Being sexual active at these ages (less than 20 years) make them susceptible to all the vices and adverse consequences of risky sexual engagement. The sexual behaviour variable was then categorized into two as mentioned above; risky if respondent reported ever experienced first sex (coded as 1 in the

analysis) and non-risky if never engaged in sex as at the time of the survey (coded as 0 in the analysis). The independent variable was divided into two categories (main and control). Female genital cutting status (FGC)(experience or not experience) was the main independent variable. Respondents who experience FGC were coded as 1 and 0 if otherwise. The other control or confounding variables were as follows present age of respondents, place of residence, educational attainment, religion, wealth and region of residence.

Results

As indicated in Figure 2, early sexual debut was experienced by almost half 48.4 percent of the sampled population. Figure 3 shows the graphical representation of lifetime number of sexual partner. Majority (84.2%) of sexually exposed respondents had just one partner while others (15.8%) had multiple partners. According to figure 4, about 33.0 percent of the respondents had experienced female genital cutting while others (67.1%) had not.

Figure 2: Distribution of respondents by sexual behaviour (measured by age at first sex)

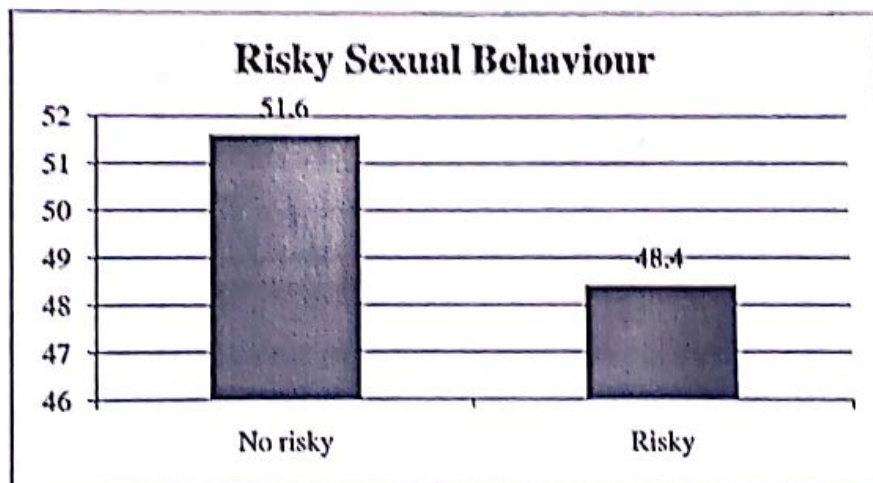


Figure 3: Distribution of respondents by number of lifetime sexual partner

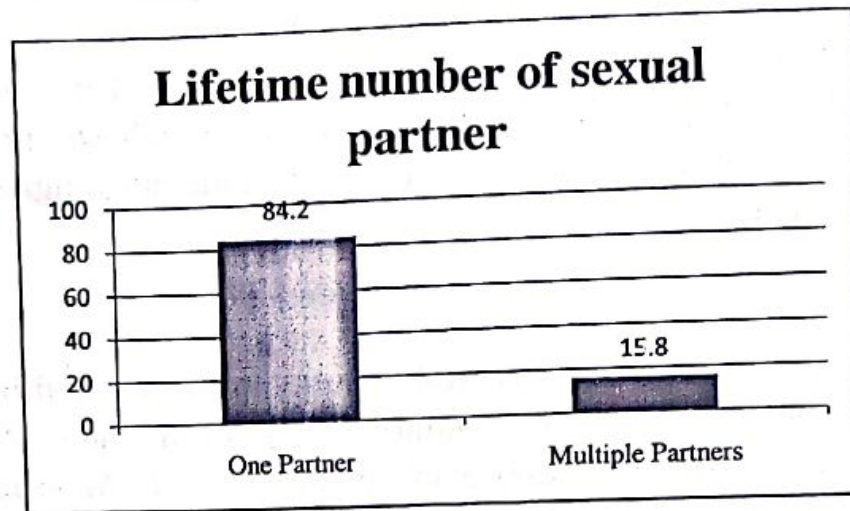


Figure 4: Distribution of respondents by experience of Female Genital Cutting

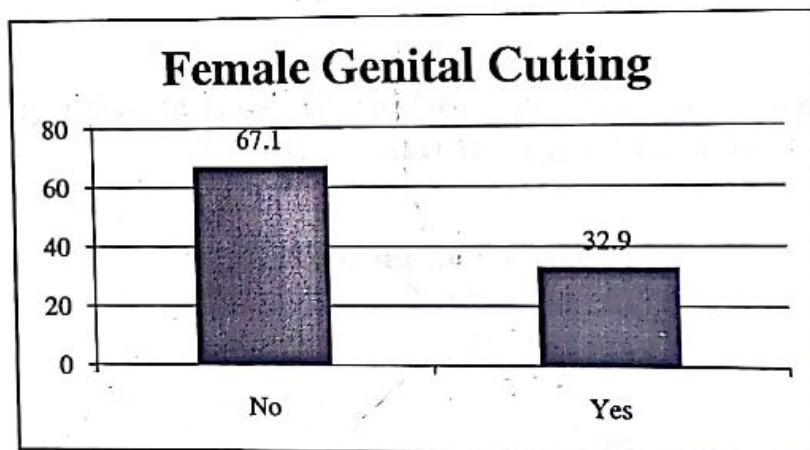


Table 1: Bivariate relationship between sexual behavior and socio-demographic characteristics

Background Characteristics	Sexual Behaviour		Total (%) n=3633	χ^2 test; p-value
	No Risky	Risky		
FGC				
No	1212 (49.7)	1226 (50.3)	2437 (100)	4.16; 0.04
Yes	663 (55.4)	533 (44.6)	1196 (100)	
Age				66.2; 0.00
15	582 (75.0)	194 (25.0)	775 (100)	
16	428 (65.8)	223 (34.2)	651 (100)	
17	342 (50.9)	329 (49.1)	671 (100)	
18	330 (36.6)	573 (63.4)	903 (100)	
19	182 (30.5)	439 (69.5)	631 (100)	
Place of residence				142.1; 0.00
Urban	1116 (69.2)	497 (30.8)	1613 (100)	
Rural	758 (37.5)	1262 (62.5)	2020 (100)	
Educational level				132.3; 0.00
No education	162 (16.4)	830 (83.6)	992 (100)	
Primary	179 (43.9)	228 (56.1)	407 (100)	
Secondary	1484 (68.9)	668 (31.1)	2152 (100)	
Higher	50 (60.7)	32 (39.3)	82 (100)	
Religion				67.2; 0.00
Christian	1157 (65.4)	613 (34.6)	1771 (100)	
Islam	693 (38.2)	1119 (61.8)	1811 (100)	
Traditional/Others	22 (61.0)	14 (39.0)	36 (100)	
Wealth Status				64.3; 0.00
Poorest	131 (20.9)	495 (75.1)	626 (100)	
Poorer	253 (35.8)	454 (64.2)	706 (100)	
Middle	411 (55.8)	326 (44.2)	737 (100)	
Richer	525 (65.6)	276 (34.4)	801 (100)	
Richest	1875 (72.7)	208 (27.3)	763 (100)	
Region of residence				38.5; 0.00
North central	196 (68.9)	88 (31.1)	284 (100)	
North east	199 (39.4)	307 (60.6)	506 (100)	
North west	300 (28.0)	773 (72.0)	1073 (100)	
South east	418 (67.8)	199 (32.2)	617 (100)	
South south	350 (60.3)	230 (39.7)	580 (100)	
South west	411 (71.8)	162 (28.2)	572 (100)	

Table 1 shows the bivariate results between the socio-demographic characteristics and sexual behaviour. Firstly, FGC experience is significantly associated with sexual behaviour among adolescent ($\chi^2=4.155$; $p<0.05$). About 45 percent girls with FGC experience are sexually exposed. The rate of risky sexual behavior is directly proportional to age (15 to19); i.e. as age increases, sexual intercourse exposure also increases. Results indicate that one out of four (25%) respondents at age 15 had had sex, while about 70 percent of those

aged 19 were already exposed to sex. Respondents' age is significantly associated with risk sexual behavior ($\chi^2=66.2$; $p<0.05$). Adolescents that are sexually exposed in the rural settings (62.5%) doubled those that reside in urban areas (30.8%). However, respondents that had had sex as at the time of survey were found highest among those with no formal education and the least proportion among those with tertiary education. Statistically, sexual exposure is significantly related to place of residence ($\chi^2=142.1$; $p<0.05$) and educational level ($\chi^2=132.3$; $p<0.05$). It is evidently clear that more Muslims than Christians adolescents (61.8% and 34.6% respectively) had sexual intercourse; and statistical significant relationship was established between religion affiliation and adolescents' sexual experience ($\chi^2=67.2$; $p<0.05$).

A consideration of wealth status disclosed that majority of adolescents in the poorest category (75.1%) had engaged in risky sexual behavior; followed by those at poorer category (64.2%); least proportion of respondents sexually exposed in this category were those in richest category (27.3%). Significant association exist between wealth status and sexual engagement ($\chi^2=64.3$; $p<0.05$). In comparison, adolescents in the North western sub-region had highest proportion of risky sexual experience in the country(72.0%); followed by 60.6 percent of the Northerners; while in southern regions, respondents that reside in south south area (39.7%) had more population of sexual exposure adolescents than those in the remaining southern regions in Nigeria. There is significant relationship between regional residency and risky sexual behavior ($\chi^2=38.5$; $p<0.05$).

Table 2: Multivariate analysis predicting Risk sexual behavior through FGC, socio-economic and demographic factors

	Unadjusted		Adjusted	
	Model 1	95% CI	Model 2	95% CI
FGC Experience				
No	RC		RC	
Yes	0.790**	[0.687,0.909]	1.130	[0.933-1.369]
Region of residence				
North central			RC	
North east			1.982***	[1.350-2.908]
North west			2.840***	[1.953-4.128]
South east			1.128	[0.782-1.628]
South south			2.451***	[1.733-3.466]
South west			1.501*	[1.050-2.147]
Age				
15			RC	
16			2.560***	[1.931-3.395]
17			5.405***	[4.095-7.134]
18			9.616***	[7.364-12.557]
19			18.190***	[13.534-24.447]
Place of residence				
Urban			RC	
Rural			1.827***	[1.504-2.219]
Religion Affiliation				
Christianity			RC	
Islam			0.810	[0.607-1.080]
Other			0.329*	[0.120-0.904]
Educational Attainment				
No education			RC	
Primary			0.312***	[0.222-0.438]
Secondary			0.126***	[0.091-0.176]
Tertiary			0.120***	[0.066-0.218]
Wealth Index				
Poorest			RC	
Poorer			0.873	[0.633-1.204]
Middle			0.792	[0.562-1.115]
Richer			0.687*	[0.480-0.985]
Richest			0.547**	[0.369-0.811]

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
 RC=Reference Category (1.000)

Table 2 shows the odds estimate of risky sexual behavior predicted through FGC experience, socio-economic and demographic factors. In model 1 (unadjusted relationship between FGC experience and risky sexual

behaviour), odds of risky sexual behavior was slightly lower among those that had FGC (OR=0.790; CI=0.687-0.909; $p<0.05$) compared to their counterpart who had no FGC experience. Since FGC status cannot interact with sexual behaviour alone without the other confounding variables, in the adjusted model, estimate and prediction of FGC on risky sexual engagement differs from the first model after other confounding factors were introduced (Model 2). Results disclosed that adolescents with FGC experience had a non-significant 13% higher likelihood of engagement in risky sexual act than those without such experience ($p>0.05$).

By region of residence, having North central of Nigeria as the reference category, adolescents in the North western were statistically more likely (OR=2.840; CI=1.953-4.128) to be exposed to risky sexual behavior than other regional residents and least found among South easterners (OR=1.128; CI=0.782-1.628). Odds of risky sexual behavior rise as age increases. Results further show that rural residents were significantly 1.827 times more likely to exhibit risky sexual behavior than their counterparts (Urban residents). However, adolescents that were Christian and those with no formal education (OR=1.000) had a higher likelihood to experience risky sexual act than their other respective counterparts. In addition, respondents in richest category had least odds of risky sexual behaviour than other categories of wealth status.

Discussion

Based on the data sourced from the most recent nationally representative survey of 2013 Nigeria Demographic and Health Survey (NDHS) we examined the relationship between female genital cutting and risky sexual behaviour among adolescents girls aged 15-19 years. The nationally representative weighted sample of 3,633 extracted from NDHS were all adolescents (15-19 years) as at the time of the survey, who reported their genital cutting status (experience or not experience) and who also reported their sexual behaviour (risky or not risky). We excluded the following categories of respondents from the study analysis: those who were older than 19 years, those who did not report their genital cutting status and/or those who did not report their sexual behaviour regardless of the age as at the survey period. The fact that we utilized a secondary data for the study could have subjected our results to some limitations among which are firstly, the analysis may have excluded some important aspect or variables that would have brought out a clearer understanding of FGC and risky sexual behaviour. On another note, the use of cross-sectional survey could limit the possibility

of the study in establishing causality among various variables employed in the study. Regardless of these limitations, our study found close to half (48.4%) of the respondents had had sexual debut which implies a predominately risky sexual behaviour society. The high prevalence of early sexual debut as found in this present study is comparable with previous reports in literature most especially in other sub-Saharan African countries of Benin, Cameroon, Gabon, Madagascar, Tanzania Bangladesh, Nicaragua and Nepal and Zimbabwe where high levels of adolescent childbearing are also found in (The Alan Guttmacher Institute, 2002; Sohail et al, 2003; O'Toole et. al., 2007; Warenius et. al. 2007; Viana et. al., 2007;Titilayo, Agunbiade and Okanlawon, 2009).Early sexual experience (before the 20th birthday)has always been seen as having negative consequences on women and the society at large. It facilitates high fertility, contributes to poor reproductive health outcome and thereby equally contributes immensely to rapid population growth. About 16% of the study respondents had multiple sexual partners and 33% reported having undergone FGC. This also is a very risk factor for sexually transmitted diseases (STIs) and HIV/AIDs.

It was shown that risky sexual behaviour was directly proportionate to adolescents' ages, that is, as age increases; prevalence of risky sexual intercourse among the respondents also increases. We also found that risky sexual exposure was higher among the rural adolescent residents than the urban adolescents residents, being exposed to risky sexual behaviour was common among the adolescents with no formal education than those with either little or more education. Religion affiliation was also found to be a significant predictor of risky sexual exposure among adolescents in Nigeria. It was evidently higher among adolescents Muslims than their Christians counterparts. All these findings were in line with what Sohail and his colleagues found among women in Bauchi, Enugu and Oyo States of Nigeria (Sohail et al, 2003).Our study also reveals that wealth status is another significant socio-economic factor to reckon with in the discussion of risky sexual behaviour among adolescent. We found that the prevalence of risky sexual behaviour was higher among all the categories of the poor adolescents than the middle class or the rich adolescents in the study area. The economic situation in the country could be a better explanation for this trend. Adolescents' region of residence was equally observed as having a significant influence of exposure to risky sexual behaviour. There is significant relationship between regional residency and risky sexual behavior

Conclusions

Our study reveals a shaky relationship between FGC status and risky sexual behaviour. FGC was not a very strong or significant predictor for risky sexual behaviour, so therefore, it is not enough to continue the practice of FGC with the rationale that it is a good preventive means or control for hyper-sexuality in girls and thereby will make them less promiscuous because of the belief that it attenuates or reduces sexual urge in them. Government and other national and international stake holders must intensify actions against FGC in Nigeria.

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