



## Exposure to Parental Violence and Self-Reported Sexual Violence among Unpartnered Adolescent Girls in Nigeria: Evidence from a National Survey

David Aduragbemi Okunlola<sup>a,b</sup>, Oluwatobi A. Alawode<sup>c</sup>, Olabisi T. Jegede<sup>d</sup> and Khadijat Adeleye<sup>e</sup>

<sup>a</sup>Department of Sociology, College of Social Sciences and Public Policy, Florida State University, Tallahassee, Florida, USA; <sup>b</sup>Viable Knowledge Masters, Abuja, Nigeria; <sup>c</sup>Department of Sociology and Criminology & Law, University of Florida, Gainesville, Florida, USA; <sup>d</sup>Department of Epidemiology and Medical Statistics, University of Ibadan, Oyo State, Nigeria; <sup>e</sup>Elaine Marieb College of Nursing, University of Massachusetts, Amherst, Massachusetts, USA

### ABSTRACT

**Objectives:** Despite the high prevalence of sexual violence among young and adolescent women in Nigeria, there is a paucity of studies on the extent of sexual violence among adolescent girls, especially unpartnered girls, and the role of parental violence. This study assesses the prevalence of self-reported sexual violence and the influence of exposure to parental violence among unpartnered adolescent girls (aged 15–19) in Nigeria.

**Methods:** The women's data ( $n = 5,145$ ) from the 2013 and 2018 Nigeria Demographic and Health Surveys were pooled and analyzed with descriptive analysis and multinomial logistic regressions.

**Results:** Of all adolescent girls, 5.65% had ever experienced sexual violence, 94.09% said they never did, and 0.26% did not respond. Adolescent Girls exposed to parental violence were more likely to have ever experienced sexual violence than the unexposed girls (aRRR = 1.90; 95% CI: 1.29–2.79).

**Conclusion:** Interventions to prevent sexual violence among adolescent girls should sensitize parents on the potential negative implications of parental violence for their daughters' wellbeing.

### ARTICLE HISTORY

Received 25 June 2023  
Revised 27 September 2023  
Accepted 25 October 2023

### KEYWORDS

Parental violence;  
adolescent girls; sexual  
violence; Nigeria

### Introduction

Sexual violence denotes any sexual or other acts perpetrated against a person with force or directed at their sexuality, irrespective of the victim's relationship with the perpetrator (WHO, 2019). In Nigeria, where there are over 21 million adolescent girls aged 10–19 (Department of Economic and Social Affairs (DESA), 2017), 26% of adolescent girls (aged 13–24) have experienced sexual violence (Nguyen et al., 2021). Many of these cases tend to be unreported by adolescent girls to avoid feeling guilty, shame, and the social stigma associated with being a victim of sexual violence (Nguyen et al., 2021). Adolescent girls who experience sexual violence are at risk of sexually transmitted infections (STIs), unwanted pregnancy, unsafe abortion, and other sexual and reproductive health issues (Hoft & Haddad, 2017; Lang et al., 2011; Wagman et al., 2009). Also,

they are at risk of adverse psychological implications such as depression, suicidal thoughts, and damaged self-esteem (Iyanda et al., 2021; Li et al., 2016; Marcos et al., 2020; Oksanen et al., 2021).

Being married is highly revered in Nigeria—it is viewed as a marker of responsibility and maturity in most cultures (Nduonofit & Nwala-Cadger, 2015). Marriage places expectations on women, including marital or sexual fidelity (Smith, 2010). The expectations are culturally and religiously backed, thus limiting women's involvement in extra-marital affairs. The honor that marriage confers often discourages men from making love and sexual advances toward married women. Owing to moral expectations, most cultures believe that sexual intercourse should only occur within marriage. It is not far-fetched that various sexual practices and risky sexual behaviors are more prevalent among unmarried

women, especially unmarried adolescent girls in Nigeria (Adedini et al., 2021).

In Nigeria, a recent study found that unmarried adolescent girls are more likely to use condoms inconsistently (or not use any modern contraceptive), engage in multiple sexual partnerships, and have sex before 18 years than other unmarried girls aged 20–24 (Adedini et al., 2021). Sexual violence experience is linked to risky sexual behaviors among adolescent girls (Benti & Teferi, 2015; Beyene et al., 2019; De Veause Brown et al., 2022; Seutlwadi et al., 2015). Hence, it is reasonable to hypothesize that the risk of sexual violence is higher for adolescent girls involved in risky sexual behaviors. Nonetheless, little is known about the extent of sexual violence experience and its correlates among unmarried adolescent girls in Nigeria.

The relationship between parental violence and sexual violence among adolescent girls has been documented (Ward et al., 2018). An aspect of parental violence is interparental violence or intraparental, which, according to Xyrakis et al. (2022), can deprive children of quality and adequate parental care. Lack of parental care can increase adolescent girls' risk of depression or experiencing mental health challenges that can lead to adopting some coping mechanisms and social vices like drug/substance abuse and binge drinking. This situation can expose adolescent girls to the risk of being drugged and sexually assaulted by their male peers (Gialopsos, 2017). Another aspect of parental violence is parent-to-child violence, which may be physical. The religious and cultural theory discusses the culture of child beating and maltreatment in Africa, often justified as an effective measure to instill discipline in children (Lancaster & Gelles, 1987). Adolescent girls being maltreated (by their parents) may suffer psychological challenges (including depression and low self-esteem), thus making them vulnerable to sexual perverts pretending to offer help as well as sexual pressures from their boyfriends, which may result in sexual abuse. However, there is a paucity of studies on the role of parental violence in the experience of sexual violence among unpartnered adolescent girls (who are vulnerable to sexual and reproductive health risks) in Nigeria.

This study assessed (a) the prevalence of self-reported sexual violence and (b) the relationship between exposure to parental violence and self-reported sexual violence among unpartnered adolescent girls in Nigeria. In line with the sustainable development goal (SDG) target 5.2 (Department of Economics and Social Affairs (DESA), 2019), this study generated additional insights to support interventions to prevent and reduce sexual violence against young women in Nigeria.

### **The opportunity framework**

This study is underpinned by the Opportunity Framework developed by Gialopsos (2017) in the context of a college environment. This framework is based on the idea that the factors associated with sexual violence are lifestyle behaviors, suitability (as a target for victimization), and capable guardianship (Cohen & Felson, 1979; Gottfredson, 1981; Miethe & Meier, 1994). Although capable guardianship can be regarded as the use of a weapon by a target against external abuse, Gialopsos (2017) posits that guardianship also encompasses the role of others, such as friends, staff, faculty, and bystanders, in ensuring the protection of college girls against sexual victimization especially in situations where young girls are intoxicated and vulnerable. Guardianship is noted to be important to protecting college girls from stalking victimization (Fisher et al., 2002).

In this study, we extended the concept of capable guardianship to include parenting. By providing instructions and advice to their adolescent daughters, parents demonstrate capable guardianship in shaping their daughters' perceptions, attitudes, confidence, behaviors, and decision-making ability. Just as friends, teachers, school authorities, and bystanders are essential in protecting adolescent girls from sexual victimization, parents can also watch their daughters and step in to protect them from events that may expose them to sexual violence. Besides, by providing adequate sex education, parents can guard their adolescent daughters on how to deal with sexual pressures from their boyfriends (Teitelman et al., 2008), which can reduce their risk of being sexually abused.

Interparental violence has implications for capable guardianship and children's well-being. Interparental

violence can strain parent-to-child relationships—especially when such violence leads to a parent withholding child support (Liversage, 2022)—and hinders quality parenting (Knickerbocker et al., 2007). Women experiencing spousal violence may experience emotional challenges that can hinder them from catering to the needs of their children (Katz, 2019). Interparental violence can prevent adolescent girls from accessing proper sex education from their parents as they engage in (non-marital) sexual relationships. Considering the importance of sexual education in helping adolescent girls resist sexual pressures (Teitelman et al., 2008), adolescent girls experiencing interparental violence (and, as a result, lack parental care) may find it challenging to discuss sexual topics with their parents, including how to resist sexual pressures and avoid sexual abuse outside their homes. In addition, interparental violence may lead to marital dissolution and broken home; adolescent girls in such broken homes may suffer from poor guardianship, be neglected, and be susceptible to sexual violence from sexual perverts pretending to offer them affection (Finkelhor, 1980; Sanyal, 2002).

On the other hand, drawing from the social learning theory (Bandura, 1971), adolescent girls may learn from the violence between their parents and the consequences. They may view such violence as normal between couples or people in sexual relationships, especially if punitive measures are not taken against the offending parent. Based on this, adolescent girls may end up in and tolerate abusive (non-marital) sexual relationships outside their homes.

In contrast, based on cultural practices in Nigeria and many African countries, parents often perpetrate child beating to discipline their children (Lancaster & Gelles, 1987). Such parent-to-child violence may harm children's physical and mental well-being, considering that child maltreatment has been linked to anxiety disorder and suicidal behavior, psychosis, and substance abuse among children (Cicchetti & Toth, 2016). Hence, maltreated adolescent girls may resort to suicidal behaviors and drug abuse or be in the company of fellow male drug users who may take advantage of them.

Concerning risky sexual behaviors—a lifestyle factor in the opportunity framework—there is a stand against sexual immorality in Nigeria. Risky

sexual behaviors range from multiple sexual partnerships, early sexual debut, inconsistent condom use, consumption of substances in sexual relationships, and transactional sex (Dingeta et al., 2012; Kassa et al., 2016; Olaoye & Agbede, 2022). Furthermore, risky sexual behaviors are associated with the risk of sexual violence among adolescent girls because studies have found that early sexual debut and multiple sex partners to be related to sexual violence (Benti & Teferi, 2015; Beyene et al., 2019; De Veauuse Brown et al., 2022; Seutlwadi et al., 2015).

On the other hand, young girls' risky sexual behaviors may indirectly determine their exposure to sexual violence through parental violence. Young girls are cautioned against sexual immorality; their sexual behaviors can attract scolding and beating, which is assumed by parents (in many Nigerian cultures) as a potent way of correcting children. Risky sexual behaviors may also lead to interparental violence because, in some cultures in Nigeria (e.g., the Yoruba culture), mothers are often accused (by fathers) of being responsible for their children's waywardness (Famulusi, 2012). Therefore, adolescent girls engaging in risky sexual behaviors may experience parental violence, which can negatively affect their psychological well-being, increase their disposition to social vices and drug abuse, and make them vulnerable to sexual perverts outside their homes.

Concerning target suitability, adolescent children's risk of experiencing sexual violence is not solely attributable to their lifestyles and behaviors but to other attributes, making them easy targets (Finkelhor & Asdigian, 1996). Poverty has been linked to social and health vulnerabilities (Njoku & Akintayo, 2021). Studies have documented that the quest to escape poverty often predisposes poor girls to transactional or paid sex (Mensah, 2020). In the conflict-affected northern region of Nigeria, girls from poor households are more likely to engage in transactional sex for survival, even with the backing of their parents (Njoku & Akintayo, 2021). The quest for survival predisposes young girls to sexual abuse (outside their homes) from security personnel and aid workers (Njoku & Akintayo, 2021).

Furthermore, household poverty promotes intimate partner violence or spousal violence (Barrington et al., 2022). Evidence shows that interparental violence reduces child support, thus forcing children into child labor (such as street hawking and/or paid sex), thus predisposing them to sexual violence outside their homes (Akpan & Oluwabamide, 2010).

Based on the Opportunity Framework, we hypothesized that exposure to parental violence was positively associated with the experience of sexual violence among unpartnered adolescent girls after controlling for risky sexual behaviors, wealth index, and other socio-demographic variables.

## Methods

### Data source

This study utilized a cross-sectional design by analyzing the 2013 and 2018 Nigeria Demographic and Health Surveys (NDHS). NDHS involved a two-stage stratified cluster sampling. It provides reliable and accurate data that enables the computation of nationally representative estimates of demographic and health indicators in Nigeria among women aged 15–49 (National Population Commission – NPC & ICF, 2019). From the two surveys—in which 41,821 women in the 2018 NDHS and 38,948 women in the 2013 NDHS—adolescent girls' (aged 15–19) data were extracted (from the Individual Recode (IR)), pooled and analyzed to increase the sample size and enhance statistical precision (Friedenreich, 1993; Smith-Warner et al., 2006). A similar approach has been used in previous studies (Babalola, 2011; Okunlola et al., 2022; Solanke et al., 2018). From the women interviewed in the two surveys, a sample of women was randomly selected to answer questions from the domestic violence module. Information about this approach is published elsewhere. From this sample of women, a weighted size of 5,145 unpartnered adolescent girls (aged 15–19 with complete data for all the variables in this study: 1,430 and 3,715 girls in 2018 and 2013, respectively) was considered in this study. In this study, unpartnered means those who had never been in

a marital union or cohabited. Only 70 (1.36%) unpartnered adolescent girls had missing data.

### Ethical considerations

Approval to analyze the data was obtained from the DHS Program ([https://dhsprogram.com/data/dataset/Nigeria\\_Standard-DHS\\_2018.cfm?flag=1](https://dhsprogram.com/data/dataset/Nigeria_Standard-DHS_2018.cfm?flag=1)). According to the DHS Program, two approvals were gotten before the commencement of the data collection in Nigeria: one from the ICF review board in the United States with the approval number (ICF IRB FWA00000845) and the second one from the National Health Research Ethics Committee in Nigeria with the approval number (NHREC/01/01/2007). Before interviewing the eligible respondents, they were provided with both verbal and written consent forms.

### Measures

The outcome variable was self-reported sexual violence. Respondents were asked if they were ever forced to perform unwanted sexual acts. Those who said they had ever been forced to perform such acts were categorized as the (1) “Ever experienced” group. Those who said they had never been forced were considered the (0) “Never experienced; others who refused to or did not respond were classified as (2) “Refused to respond.” Those who said they had never experienced sexual violence constituted the base outcome.

The primary explanatory variable was parental violence, measured by combining exposure to interparental violence and experience of violence from parents (violent parenting). Women who responded in the affirmative to the question of whether “respondent’s father ever beat her mother?” were categorized as exposed (1), otherwise, nor exposed (0). Parent-to-child violence was measured using two yes-or-no questions about (a) whether the respondent’s mother has physically hurt her, and (b) whether the respondent’s father has physically hurt the respondent. The responses to the two questions on interparental violence and parent-to-child violence were summed and categorized as (1) exposed to parental violence (if the scores were greater than 0) and (0) not exposed (if the

scores were equal to 0). The following were the variables statistically controlled for:

1. Risky sexual behaviors: This variable was derived by summing the responses to questions on (a) age at first sex ((1) less than 15 years and (0) 15 years and above), (b) total lifetime sex partners ((0) one sex partner and (1) multiple sex partners) and (c) contraception history (based on the question on the pattern of contraceptive use: (0) ever used and (1) never used). While restricting the sample to girls who stated that they had ever had sex, the three binary variables were summed, thus resulting in scores ranging from 0 (not in any risks but had had sex) to 3 risky sexual behaviors. This coding was modified so that adolescent girls who said that they had never had sex constituted the (0) “abstained or no-risk” group, girls who were not in any risky groups (but stated that they had had sex) constituted (1) low-risk group, and those in one or more risky groups were categorized as the (2) high-risk group. Unlike previous studies that measured risky sexual behaviors in dichotomous terms or studied each of them separately (Odimegwu & Somefun, 2017; Okafor & Obi, 2005; Okeke & Odelola, 2018; Okunlola et al., 2020), our approach to operationalizing risky sexual behaviors was based on the fact that sexual behavior is a continuum with the risky sexual behaviors on the higher end and those that are sexually inexperienced on the lower end (Cort & Tu, 2018; Ajayi & Okeke, 2019).
2. Socio-economic factor: Wealth index (poorest (1), poorer (2), middle (3), richer (4), and richest (5)) was used to measure household wealth/poverty. The DHS Program computed the wealth index (National Population Commission – NPC & ICF, 2019).

Studies have shown that socio-demographic variables—which include religious affiliation, ethnicity, previous attendance of school, and level of education—can predict violence against girls, including sexual violence (Iliyasu et al., 2011; Kunnuji & Esiet, 2015; Santelli et al., 2018). Therefore, we controlled for socio-demographic variables such as age (in single years: 15 to 19 years), highest level of

education ((1) no education, (2) primary, (3) secondary, and (4) higher education).

Culture and religion play essential roles that encourage child beating among parents on the pretext of disciplining children (Lancaster & Gelles, 1987). Most adolescent children in Nigeria practise their parents’ religions. The dominant religions are Christianity and Islam, which have values that frown on risky sexual behaviors. Recent studies in Nigeria suggest that adolescent girls affiliated with Christianity are less involved in risky sexual acts (Odii et al., 2020; Olorunsola et al., 2021). Hence, we assumed that affiliation with Christianity might predict a low risk of sexual violence among adolescent girls by discouraging risky sexual behaviors. Therefore, we controlled for religion with a focus on adolescent girls affiliated with Christianity versus other religions ((1) Christianity and (0) Islam and traditional/others). We also controlled for ethnicity (the three major groups: (1) Hausa/Fulani/Kanuri, (2) Igbo, (3) Yoruba, and (4) others (4)).

We controlled for the potential influences of residence ((0) urban (0) and (1) rural) and region ((1) North-Central, (2) North-East, (3) North-West, (4) South-East, (5) South-South, and (6) South-West) while also controlling for survey year ((0) 2013 and (1) 2018) to control for the potential impact of year.

### Statistical analyses

A descriptive analysis of all variables was done using frequency and percentage distributions. This was followed by multivariable analyses using the multinomial logistic regression—considering the polytomous nature of the outcome variable—to examine the relationship between exposure to parental violence and experience of sexual violence. The fitted multinomial logistic regression is expressed mathematically as:

$$\frac{P(y = 1)}{P(y = 0)} = e^{X\beta(1)} \quad (1)$$

$$\frac{P(y = 2)}{P(y = 0)} = e^{X\beta(3)} \quad (2)$$

$p(y = 1)$  = The probability of ever experiencing sexual violence relative to the base outcome never experienced ( $p(y = 0)$ ).

$p$  ( $y = 2$ ) = The probability of not responding relative to the base outcome.

$e$  = Approximately 2.7183

$X$  = Vector of main explanatory variables, e.g., exposure to parental violence.

$\beta$  = Vector of coefficients of main explanatory variables.

The ratios of the probabilities in Equations (1) and (2) are the relative risk ratios (RRR) (StataCorp, 2015). All the relative risk ratios (RRR) were tested against 5% level significance; their 95% confidence intervals were also computed. The “svy, subpop” command in the Stata software was used to weight, restrict all analyses to the target sample, and compute valid regression standard errors (StataCorp, 2015).

## Results

### Descriptive analysis

Table 1 shows that 5.65% of unpartnered adolescent girls had ever experienced sexual violence. Slightly above one-fifth (25.47%) of girls were exposed to parental violence. Less than one-fifth of girls engaged in risky sexual behaviors (i.e., low risk (4.41%) or high risk (14.04%)). Close to one-quarter of girls resided in poor households (24.55%).

### Univariate regression analysis

According to Table 2, adolescent girls exposed to parental violence were at least twice as likely to have experienced forced sexual acts (uRRR = 2.90; 95% CI = 2.02–4.15;  $p = 0.001$ ) than their unexposed counterparts.

### Multivariable regression analysis

After controlling for the covariates in Table 3, exposure to parental violence remained positively associated with experience of sexual violence despite the slight reduction in the effect size. Girls exposed to parental violence were 90% more likely to have ever experienced sexual violence (instead of saying otherwise or refusing to answer) than their unexposed counterparts (aRRR = 1.90; 95% CI = 1.29–2.79;  $p = 0.001$ ) (Please see Table A1 in the Appendix).

**Table 1.** Descriptive statistics of unpartnered adolescent girls.

Variables	Frequency (5,145)	Percentage
Experience of sexual violence		
Ever experienced	291	5.65
Never experienced	4,841	94.09
Refused/no response	13	0.26
Parental violence		
Exposed	1,310	25.47
Unexposed	3,835	74.53
Risky sexual behaviors		
Abstained or no risk	4,196	81.55
Low risk	227	4.41
High risk	722	14.04
Wealth index		
Poorest	446	8.67
Poorer	817	15.88
Middle	1,140	22.16
Richer	1,268	24.65
Richest	1,472	28.63
Age		
15 years	1,617	31.44
16 years	1,117	21.71
17 years	836	16.26
18 years	893	17.35
19 years	682	13.25
Highest educational level		
No education	558	10.85
Primary	559	10.86
Secondary	3,910	76.00
Higher	118	2.29
Religion		
Christianity	2,944	57.22
Islam/Traditional/others	2,201	42.78
Ethnicity		
Hausa/Fulani/Kanuri	1,291	25.10
Igbo	952	18.50
Yoruba	909	17.66
Others ethnic groups	1,993	38.74
Type of place of residence		
Urban	2,770	53.83
Rural	2,375	46.17
Region of residence		
North-Central	818	15.90
North-East	640	12.44
North-West	1,067	20.73
South-East	781	15.18
South-South	898	17.45
South-West	941	18.29
Survey year		
2013	3,715	72.19
2018	1,430	27.81

**Table 2.** Unadjusted regression of self-reported sexual violence on exposure to parental violence.

Variable	uRRR	$p$ -Value	95%CI	
(1) Experienced versus (0) never experienced				
Parental violence				
Exposed	2.899	0.001	2.024	4.152
Unexposed (RC)				
(2) Refused/no response versus (0) never experienced				
Parental violence				
Exposed	0.433	0.444	0.051	3.696
Unexposed (RC)				

CI: confidence interval; aRRR: adjusted relative risk ratio; RC: reference category. Sample size = 5,145.

## Discussion

In this study, less than one-tenth of unpartnered adolescent girls had ever experienced sexual

**Table 3.** Adjusted regression of self-reported sexual violence on exposure to parental violence.

Variable	aRRR <sup>#</sup>	p-Value	95%CI	
(1) Experienced versus (0) no experience				
Parental violence				
Exposed	1.897	0.001	1.291	2.789
Unexposed (RC)				
(2) Refused/no response versus (0) no experience				
Parental violence				
Exposed	0.358	0.274	0.057	2.256
Unexposed (RC)				

CI: confidence interval; aRRR: adjusted relative risk ratio; RC: reference category. Sample size = 5,145. #Model adjusted for risky sexual behaviors, wealth index, age, highest level of education, religion, ethnicity, type of place of residence, region of residence, and survey year.

violence. At the same time, the majority said they had never experienced sexual violence. The proportion of adolescent girls who had ever experienced sexual violence in this study is higher than another study's findings in Nigeria, where 1.9% of adolescent girls experienced either physically forced sex or 2.2% experienced pressured sex (Evans et al., 2023). However, the fear of shame and stigma might have discouraged some girls from disclosing their experiences of sexual violence (Nguyen et al., 2021), thus leading to the possibility of an underestimated prevalence of self-reported sexual violence. Due to the threat of shame and stigma, it is also possible that some girls hesitated in reporting their violent experiences and said that they had never experienced sexual violence.

Besides, slightly above one-quarter of adolescent girls were exposed to parental violence in this study. Our combined measure of parental violence—which comprises interparental violence and parent-to-child violence—shows that exposure to parental violence among adolescent girls is high and deserves intervention from policymakers and non-government organizations in Nigeria.

This study revealed that exposure to parental violence was positively associated with experience of sexual violence. This is consistent with a study in South Africa that family violence, including violence between parents, was associated with sexual violence among adolescent girls (Ward et al., 2018). Women experiencing spousal violence may experience emotional challenges that can hinder them from properly taking good care of their children (Katz, 2019). Interparental violence and violent parenting create toxic

environments that can negatively affect children's psychology and mental health (Xyrakis et al., 2022). Adolescent girls in such violent homes are vulnerable to mental challenges such as depression and anxiety (Peltonen et al., 2010; Vilariño et al., 2022). Consequently, they are susceptible to advances from sexual perverts pretending to offer them help and affection. Besides, the risk of substance use disorders increases for maltreated children (Cicchetti & Toth, 2016). Adolescent girls who are victims of parental maltreatment may resort to substance abuse and alcohol consumption, putting them at risk of being drugged and sexually assaulted by anti-social elements and sexual perverts (Kisner, 2014).

In addition, parental violence can predict susceptibility to abusive sexual relationships among adolescent girls. The reason for this can be explained through the lens of the social learning theory (Bandura, 1971). Children learn from the consequences of violence between their parents. Without the involvement of law enforcement authorities and punitive measures against a violent parent (which is often the case in Nigeria due to sociocultural reasons), they can view marital violence as being normal among couples (Solanke, 2018). Young girls exposed to such violence may end up in power-laden sexual relationships with abusive boyfriends.

This study has some limitations. We did not establish a causal relationship between exposure to parental violence and experience of sexual violence due to the cross-sectional data analyzed. This study did not include other adolescent girls in the age group 10–14 years because they were not considered in the NDHS. Thus suggesting that the prevalence of self-reported sexual violence might be underestimated. Aside from the need for future studies to include adolescent girls aged 10–14 years in their samples, they should employ effective data collection techniques to make it convenient for adolescent girls to disclose their experiences of sexual violence. Such an approach can improve the quality and reliability of data on self-reported sexual violence among adolescent girls in Nigeria.

Our operationalization of risky sexual behaviors was not longitudinal. It did not capture other indicators of risky sexual behaviors, one of which

is the consistency of condom use across sex partners, which can reduce their exposure to sexual and reproductive health risks. Future studies should adopt a longitudinal design and incorporate other indicators of risky sexual behaviors. Further, our measure of parental violence did not capture other forms of violence such as verbal, emotional, etc. These forms of violence were not examined in the analyzed survey data, leaving room for future studies to explore.

Despite the above study limitations, we leverage the advantage of pooling survey data to boost our statistical inferences. Above all, this study contributed to limited studies on the prevalence of sexual violence and the role of parental violence among adolescent girls in Nigeria. Insights from this study can assist policymakers in tackling violence against girls in line with the sustainable development goal (SDG) target 5.2 (Department of Economics and Social Affairs (DESA), 2019).

## Conclusion

This study concluded that less than one-tenth of adolescent girls had ever experienced sexual violence. Most girls said they had never had such an experience. About one-quarter of girls were exposed to parental violence. Exposure to parental violence was positively associated with self-reported sexual violence among unpartnered adolescent girls in Nigeria. Interventions to prevent sexual violence among adolescent girls should sensitize parents on the potential negative implications of parental violence for their daughters' wellbeing. Such interventions should encourage parents in violent relationships (with their partners) to seek counseling from licensed marriage counselors. There is a need for government agencies and non-governmental organizations to promote social and behavioral change information that challenges cultural and religious tenets promoting child beating and maltreatment as a disciplinary measure. Doing so can improve parent-child relationships and child welfare.

## Declaration of interest

The authors report no conflict of interests. The authors alone are responsible for the content and writing of the paper

## Funding

The author(s) reported there is no funding associated with the work featured in this article.

## References

- Adedini, S. A., Mobolaji, J. W., Alabi, M., & Fatusi, A. O. (2021). Changes in contraceptive and sexual behaviours among unmarried young people in Nigeria: Evidence from nationally representative surveys. *PLOS One*, *16*(2), e0246309. <https://doi.org/10.1371/journal.pone.0246309>
- Ajayi, A. I., & Okeke, S. R. (2019). Protective sexual behaviours among young adults in Nigeria: influence of family support and living with both parents. *BMC Public Health*, *19*(1), 983. <https://doi.org/10.1186/s12889-019-7310-3>
- Akpan, N., & Oluwabamide, A. J. (2010). The menace of child abuse in Nigeria: A case study of street hawking in Uyo, Akwa Ibom State. *Journal of Social Sciences*, *24*(3), 189–192. <https://doi.org/10.1080/09718923.2010.11892855>
- Babalola, S. (2011). Factors associated with HIV infection among sexually experienced adolescents in Africa: A pooled data analysis. *African Journal of AIDS Research*, *10*(4), 403–414. <https://doi.org/10.2989/16085906.2011.646655>
- Bandura, A. (1971). *Social learning theory*. Stanford University, General Learning Press.
- Barrington, C., Peterman, A., Akaligaung, A. J., Palermo, T., de Milliano, M., & Aborigo, R. A. (2022). Poverty can break a home': Exploring mechanisms linking cash plus programming and intimate partner violence in Ghana. *Social Science & Medicine*, *292*, 114521. <https://doi.org/10.1016/j.socscimed.2021.114521>
- Benti, T., & Teferi, E. (2015). Sexual coercion and associated factors among college female students. *Journal of Women's Health Care*, *4*(245), 2167–0420.
- Beyene, A. S., Chojenta, C., Roba, H. S., Melka, A. S., & Loxton, D. (2019). Gender-based violence among female youths in educational institutions of Sub-Saharan Africa: A systematic review and meta-analysis. *Systematic Reviews*, *8*(1), 59. <https://doi.org/10.1186/s13643-019-0969-9>
- Cicchetti, D., & Toth, S. L. (2016). Child maltreatment and developmental psychopathology: A multilevel perspective. *Developmental Psychopathology*, *3*, 457–512.
- Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, *44*(4), 588–608. <https://doi.org/10.2307/2094589>
- Cort, D. A., & Tu, H. F. (2018). Safety in stigmatizing? Instrumental stigma beliefs and protective sexual behavior in Sub-Saharan Africa. *Social Science & Medicine*, *197*, 144–152. <https://doi.org/10.1016/j.socscimed.2017.12.007>
- De Veause Brown, N. F., Annor, F. B., Swahn, M. H., & Self-Brown, S. R. (2022). Sexual violence experience among Nigerian girls and young women: What are the roles of early sexual debut, multiple sex partnerships, and



- traditional gender role beliefs? *Journal of Interpersonal Violence*, 37(5-6), NP2747–NP2767. <https://doi.org/10.1177/0886260520945676>
- Department of Economics and Social Affairs (DESA). (2017). *World population prospects: The 2017 revision, key findings and advance tables*. United Nations.
- Department of Economics and Social Affairs (DESA). (2019). *World population prospects United Nations*. Department of Economic and Social Affairs.
- Dingeta, T., Oljira, L., & Assefa, N. (2012). Patterns of sexual risk behavior among undergraduate university students in Ethiopia: A cross-sectional study. *Pan African Medical Journal*, 12(1), 1–9.
- Evans, D. K., Hares, S., A. Holland, P., & Mendez Acosta, A. (2023). Adolescent girls' safety in and out of school: Evidence on physical and sexual violence from across Sub-Saharan Africa. *The Journal of Development Studies*, 59(5), 739–757. <https://doi.org/10.1080/00220388.2023.2172333>
- Familusi, O. O. (2012). African culture and the status of women: The Yoruba example. *The Journal of Pan African Studies*, 5(1), 299–313.
- Finkelhor, D. (1980). Risk factors in the sexual victimization of children. *Child Abuse & Neglect*, 4(4), 265–273. [https://doi.org/10.1016/0145-2134\(80\)90045-9](https://doi.org/10.1016/0145-2134(80)90045-9)
- Finkelhor, D., & Asdigian, N. L. (1996). Risk factors for youth victimization: Beyond a lifestyles/routine activities theory approach. *Violence and Victims*, 11(1), 3–19.
- Fisher, B. S., Cullen, F. T., & Turner, M. G. (2002). Being pursued: Stalking victimization in a national study of college women. *Criminology & Public Policy*, 1(2), 257–308. <https://doi.org/10.1111/j.1745-9133.2002.tb00091.x>
- Friedenreich, C. M. (1993). Methods for pooled analyses of epidemiologic studies. *Epidemiology*, 4(4), 295–302. <https://doi.org/10.1097/00001648-199307000-00004>
- Gialopsos, B. M. (2017). *Sexual violence in academia: Policy, theory, and prevention considerations*. Taylor & Francis.
- Gottfredson, M. R. (1981). On the etiology of criminal victimization. *The Journal of Criminal Law and Criminology*, 72(2), 714. <https://doi.org/10.2307/1143011>
- Hoft, M., & Haddad, L. (2017). Screening children for abuse and neglect: A review of the literature. *Journal of Forensic Nursing*, 13(1), 26–34. <https://doi.org/10.1097/jfn.000000000000136>
- Iliyasu, Z., Abubakar, I. S., Aliyu, M. H., Galadanci, H. S., & Salihu, H. M. (2011). Prevalence and correlates of gender-based violence among female university students in Northern Nigeria. *African Journal of Reproductive Health*, 15(3), 123–133.
- Iyanda, A., Boakye, K., Olowofeso, H. O., Lu, Y., & Giles, J. (2021). Determinants of gender-based violence and its physiological effects among women in 12 African countries. *Journal of Interpersonal Violence*, 36(21–22), NP11800–NP11823. <https://doi.org/10.1177/0886260519888536>
- Kassa, G. M., Degu, G., Yitayew, M., Misganaw, W., Muche, M., Demelash, T., Mesele, M., & Ayehu, M. (2016). Risky sexual behaviors and associated factors among Jiga high school and preparatory school students, Amhara Region, Ethiopia. *International Scholarly Research Notices*, 2016, 4315729–7. <https://doi.org/10.1155/2016/4315729>
- Katz, E. (2019). Coercive control, domestic violence, and a five-factor framework: Five factors that influence closeness, distance, and strain in mother–child relationships. *Violence against Women*, 25(15), 1829–1853. <https://doi.org/10.1177/1077801218824998>
- Kisner, J. (2014). What You Might Not Know About 'Getting Roofied.' <https://www.thecut.com/2014/10/what-you-might-not-know-about-getting-roofied.html>
- Knickerbocker, L., Heyman, R. E., Smith Slep, A. M., Jouriles, E. N., & McDonald, R. (2007). Co-occurrence of child and partner maltreatment. *European Psychologist*, 12(1), 36–44. <https://doi.org/10.1027/1016-9040.12.1.36>
- Kunnuji, M. O., & Esiet, A. (2015). Prevalence and correlates of sexual abuse among female out-of-school adolescents in Iwaya community, Lagos state, Nigeria. *African Journal of Reproductive Health*, 19(1), 82–90.
- Lancaster, J. B., & Gelles, R. J. (Eds.). (1987). *Child Abuse and Neglect: Biosocial Dimensions - Foundations of Human Behavior* (1st ed.). Routledge. <https://doi.org/10.4324/9781315081441>
- Lang, D. L., Sales, J. M., Salazar, L. F., Hardin, J. W., DiClemente, R. J., Wingood, G. M., & Rose, E. (2011). Rape victimization and high risk sexual behaviors: Longitudinal study of African-American adolescent females. *Western Journal of Emergency Medicine*, 12(3), 333.
- Li, M., D'Arcy, C., & Meng, X. (2016). Maltreatment in childhood substantially increases the risk of adult depression and anxiety in prospective cohort studies: Systematic review, meta-analysis, and proportional attributable fractions. *Psychological Medicine*, 46(4), 717–730. <https://doi.org/10.1017/S0033291715002743>
- Liversage, A. (2022). Abducting children abroad: Gender, power, and transnational mobility in immigrant family conflicts. *Violence against Women*, 28(5), 1139–1157. <https://doi.org/10.1177/1077801221999431>
- Marcos, V., Gancedo, Y., Castro, B., & Selaya, A. (2020). Dating violence victimization, perceived gravity in dating violence behaviors, sexism, romantic love myths and emotional dependence between female and male adolescents. *Revista Iberoamericana de Psicología y Salud*, 11(2), 132–145.
- Mensah, E. O. (2020). When you open your legs, you eat: The discourse of transactional sex among female youth in Nigeria. *Sexuality & Culture*, 24(3), 543–560. <https://doi.org/10.1007/s12119-019-09648-w>
- Miethe, T. D., & Meier, R. F. (1994). *Crime and its social context: Toward an integrated theory of offenders, victims, and situations*. Suny Press.
- National Population Commission - NPC, & ICF. (2019). *Nigeria demographic and health survey 2018—final report*. NPC and ICF. <http://dhsprogram.com/pubs/pdf/FR359/FR359.pdf>.

- Nduonofit, L. L. E., & Nwala-Cadger, G. (2015). Unemployment and late marriage: A study of post graduate students of University of Port Harcourt. *International Journal of Innovative Social Sciences & Humanities Research*, 3(1), 1–9.
- Nguyen, K. H., Kress, H., Atuchukwu, V., Onotu, D., Swaminathan, M., Ogbanufe, O., Msungama, W., & Sumner, S. A. (2021). Disclosure of sexual violence among girls and young women aged 13–24 years: Results from the violence against children surveys in Nigeria and Malawi. *Journal of Interpersonal Violence*, 36(3–4), NP2188–2204NP. <https://doi.org/10.1177/0886260518757225>
- Njoku, E. T., & Akintayo, J. (2021). Sex for survival: Terrorism, poverty and sexual violence in north-eastern Nigeria. *South African Journal of International Affairs*, 28(2), 285–303. <https://doi.org/10.1080/10220461.2021.1927166>
- Odi, A., Atama, C. S., Igwe, I., Idemili-Aronu, N. J., & Onyeneho, N. G. (2020). Risky sexual behaviours among adolescent undergraduate students in Nigeria: Does social context of early adolescence matter? *Pan African Medical Journal*, 37(1), 1–11. <https://doi.org/10.11604/pamj.2020.37.188.22968>
- Odimegwu, C., & Somefun, O. D. (2017). Ethnicity, gender and risky sexual behaviour among Nigerian youth: An alternative explanation. *Reproductive Health*, 14(1), 16. <https://doi.org/10.1186/s12978-017-0284-7>
- Okafor, I. I., & Obi, S. N. (2005). Sexual risk behaviour among undergraduate students in Enugu, Nigeria. *Journal of Obstetrics and Gynaecology*, 25(6), 592–595. <https://doi.org/10.1080/01443610500239511>
- Okeke, S. R., & Odelola, J. O. (2018). Spatial and social settings as predictors of risky sexual behaviour among undergraduates in a Nigerian university. *Journal of Interprofessional Education & Practice*, 11, 32–36. <https://doi.org/10.1016/j.xjep.2018.02.007>
- Oksanen, A., Miller, B. L., Savolainen, I., Sirola, A., Demant, J., Kaakinen, M., & Zych, I. (2021). Social media and access to drugs online: A nationwide study in the United States and Spain among adolescents and young adults. *European Journal of Psychology Applied to Legal Context*, 13(1), 29–36. <https://doi.org/10.5093/ejpalc2021a5>
- Okunlola, D. A., Alawode, O. A., Awoloye, A. F., & Adegboye, O. (2022). Exploring the hierarchies: Multilevel correlates of child mortality in Nigeria and implications for interventions. *Global Social Welfare*, 9(3), 131–139. <https://doi.org/10.1007/s40609-022-00225-y>
- Okunlola, D. A., Alawode, O. A., Bolarinwa, O. A., Agbeja, I. O., & Awoloye, A. F. (2020). Socio-demographic, economic and psychological correlates of risky sexual behaviour among sexually active young people in Nigeria. *Global Journal of Health Science*, 12(8), 9. <https://doi.org/10.5539/gjhs.v12n8p9>
- Olaoye, T., & Agbede, C. (2022). Prevalence and personal predictors of risky sexual behaviour among in-school adolescents in the Ikenne Local Government Area, Ogun State, Nigeria. *International Journal of Adolescent Medicine and Health*, 34(3) <https://doi.org/10.1515/ijamh-2019-0135>
- Olorunsola, A. M., Muyibi, S. A., Irabor, A. E., Adetunji, A. A., Ismail, W. O., & Ogunniyan, T. (2021). Pattern and predictors of sexual behaviour among adolescents in Ibadan, South West, Nigeria. *Archives of Community Medicine and Public Health*, 7(2), 175–181. <https://doi.org/10.17352/2455-5479.000158>
- Peltonen, K., Ellonen, N., Larsen, H. B., & Helweg-Larsen, K. (2010). Parental violence and adolescent mental health. *European Child & Adolescent Psychiatry*, 19(11), 813–822. <https://doi.org/10.1007/s00787-010-0130-8>
- Santelli, J. S., Grilo, S. A., Choo, T.-H., Diaz, G., Walsh, K., Wall, M., Hirsch, J. S., Wilson, P. A., Gilbert, L., Khan, S., & Mellins, C. A. (2018). Does sex education before college protect students from sexual assault in college? *PLOS One*, 13(11), e0205951. <https://doi.org/10.1371/journal.pone.0205951>
- Sanyal, S. (2002). Traumas of a child victim of rape in India: A diagnostic study. *International Journal of Comparative and Applied Criminal Justice*, 26(1), 115–132. <https://doi.org/10.1080/01924036.2002.9678682>
- Seutlwadi, L., Matseke, G., & Peltzer, K. (2015). Sexual violence and associated factors among female youths in South Africa. *Gender and Behaviour*, 13(1), 6465–6470.
- Smith, D. J. (2010). Promiscuous girls, good wives, and cheating husbands: Gender inequality, transitions to marriage, and infidelity in southeastern Nigeria. *Anthropological Quarterly*, 83(1), 123–152.
- Smith-Warner, S. A., Spiegelman, D., Ritz, J., Albanes, D., Beeson, W. L., Bernstein, L., Berrino, F., van den Brandt, P. A., Buring, J. E., Cho, E., Colditz, G. A., Folsom, A. R., Freudenheim, J. L., Giovannucci, E., Goldbohm, R. A., Graham, S., Harnack, L., Horn-Ross, P. L., Krogh, V., ... Hunter, D. J. (2006). Methods for pooling results of epidemiologic studies: The pooling project of prospective studies of diet and cancer. *American Journal of Epidemiology*, 163(11), 1053–1064. <https://doi.org/10.1093/aje/kwj127>
- Solanke, B. L. (2018). Does exposure to interparental violence increase women's risk of intimate partner violence? Evidence from Nigeria demographic and health survey. *BMC International Health and Human Rights*, 18(1), 1–13. <https://doi.org/10.1186/s12914-018-0143-9>
- Solanke, B. L., Banjo, O. O., Oyinloye, B. O., & Asa, S. S. (2018). Maternal grand multiparity and intention to use modern contraceptives in Nigeria. *BMC Public Health*, 18(1), 1207. <https://doi.org/10.1186/s12889-018-6130-1>
- StataCorp. (2015). *Stata 14 base reference manual*. Stata Press.
- StataCorp. (2015). *Stata statistical software: Release 14*. StataCorp LP.
- Teitelman, A. M., Ratcliffe, S. J., & Cederbaum, J. A. (2008). Parent–adolescent communication about sexual pressure, maternal norms about relationship power, and STI/HIV protective behaviors of minority urban girls. *Journal of*

- the American Psychiatric Nurses Association*, 14(1), 50–60. <https://doi.org/10.1177/1078390307311770>
- Vilarino, M., Amado, B. G., Seijo, D., Selaya, A., & Arce, R. (2022). Consequences of child maltreatment victimization in internalizing and externalizing mental health problems. *Legal and Criminological Psychology*, 27(2), 182–193. <https://doi.org/10.1111/lcrp.12212>
- Wagman, J., Baumgartner, J. N., Waszak Geary, C., Nakyanjo, N., Ddaaki, W. G., Serwadda, D., Gray, R., Nalugoda, F. K., & Wawer, M. J. (2009). Experiences of sexual coercion among adolescent women: Qualitative findings from Rakai District, Uganda. *Journal of Interpersonal Violence*, 24(12), 2073–2095. <https://doi.org/10.1177/0886260508327707>
- Ward, C. L., Artz, L., Leoschut, L., Kassanje, R., & Burton, P. (2018). Sexual violence against children in South Africa: A nationally representative cross-sectional study of prevalence and correlates. *The Lancet. Global Health*, 6(4), e460–e468. [https://doi.org/10.1016/S2214-109X\(18\)30060-3](https://doi.org/10.1016/S2214-109X(18)30060-3)
- WHO. (2019). Violence against women: Intimate partner and sexual violence against women. <https://www.who.int/reproductivehealth/publications/violence/en/>.
- Xyrakis, N., Aquilina, B., McNiece, E., Tran, T., Waddell, C., Suomi, A., & Pasalich, D. (2022). Interparental coercive control and child and family outcomes: A systematic review. *Trauma, Violence & Abuse*, 15248380221139243. <https://doi.org/10.1177/15248380221139243>

## Appendix

**Table A1.** Adjusted regression of experience of sexual violence on exposure to parental violence (full Table).

Variables	aRRR	p-Value	95% CI	
(1) Experienced versus (0) never experienced				
Exposure to parental violence (Ref = not exposed)				
Exposed	1.897	0.001	1.291	2.789
Risky sexual behaviors (Ref = abstained or no risk)				
Low risk	2.104	0.101	0.864	5.121
High-risk	4.956	0.000	3.115	7.883
Wealth index (Ref = poorest)				
Poorer	1.300	0.445	0.663	2.549
Middle	0.978	0.957	0.432	2.213
Richer	1.087	0.849	0.462	2.556
Richest	1.045	0.924	0.419	2.606
Age	1.018	0.788	0.892	1.163
Highest level of education (Ref = no education)				
Primary	1.017	0.972	0.391	2.646
Secondary	1.136	0.778	0.468	2.758
Higher	0.228	0.076	0.044	1.170
Religion (Ref = Islam and others)				
Christianity	1.680	0.092	0.918	3.074
Ethnicity (Ref = Hausa/Fulani/ Kanuri or Beri beri)				
Igbo	3.131	0.138	0.692	14.163
Yoruba	1.021	0.976	0.268	3.881
Others	2.313	0.146	0.748	7.156
Type of place of residence (Ref = urban)				
Rural	0.814	0.377	0.515	1.286
Region (Ref = North-Central)				
North-East	2.515	0.002	1.406	4.499
North-West	0.625	0.517	0.150	2.596
South-East	1.009	0.986	0.363	2.807
South-South	0.810	0.492	0.444	1.479
South-West	1.169	0.699	0.530	2.580
Survey year (Ref = 2013)				
2018	1.365	0.112	0.930	2.003
(2) Refused/no response versus (0) never experienced				
Exposure to parental violence (Ref = not exposed)				
Exposed	0.358	0.274	0.057	2.256
Risky sexual behaviors (Ref = abstained or no risk)				
Low risk	6.424	0.231	0.305	135.177
High-risk	0.000	0.000	0.000	0.000
Wealth index (Ref = poorest)				
Poorer	0.212	0.178	0.022	2.021
Middle	0.089	0.036	0.009	0.853
Richer	0.059	0.124	0.002	2.174
Richest	0.068	0.079	0.003	1.360
Age	0.910	0.721	0.542	1.527
Highest level of education (Ref = no education)				
Primary	4.136	0.297	0.286	59.740
Secondary	0.957	0.974	0.069	13.363
Higher	0.000	0.000	0.000	0.000
Religion (Ref = Islam and others)				
Christianity	0.399	0.416	0.043	3.664
Ethnicity (Ref = Hausa/Fulani/ Kanuri or Beri beri)				
Igbo	193.113	0.014	2.949	12646.200
Yoruba	11.989	0.070	0.817	175.889
Others	2.999	0.392	0.243	37.046
Type of place of residence (Ref = Urban)				
Rural	5.046	0.047	1.020	24.966
Region of residence (Ref = North-Central)				
North-East	0.499	0.668	0.021	11.963
North-West	1.311	0.777	0.202	8.516
South-East	0.000	0.000	0.000	0.000
South-South	0.700	0.508	0.244	2.012
South-West	0.496	0.340	0.118	2.090
Survey year (Ref = 2013)				
2018	0.823	0.828	0.141	4.801

CI: confidence interval; aRRR: adjusted relative risk ratio; Ref: reference category. Sample size = 5,145.