



Published in final edited form as:

*Violence Against Women*. 2022 October ; 28(12-13): 2992–3012. doi:10.1177/10778012211038973.

## Associations Among Age of First Experience of Violence, Type of Victimization, Polyvictimization, and Mental Distress in Nigerian Females

NaeHyung Lee<sup>1,2,3</sup>, Melissa Osborne<sup>1,2,3</sup>, Greta Massetti<sup>4</sup>, Ashley Watson<sup>1,2,3</sup>, Shannon Self-Brown<sup>1,2,3</sup>

<sup>1</sup>Department of Health Policy and Behavioral Sciences, School of Public Health, Georgia State University, Atlanta, GA, USA

<sup>2</sup>National SafeCare Training and Research Center, Georgia State University, Atlanta, GA, USA

<sup>3</sup>Center for Research of Interpersonal Violence, Georgia State University, Atlanta, GA, USA

<sup>4</sup>Division of Violence Prevention, Centers for Disease Control and Prevention, Atlanta, GA, USA

### Abstract

This study explored associations of age of first victimization, sexual violence (SV), physical violence (PV), polyvictimization, and mental distress among females in Nigeria ( $n = 1,766$ , 13–24 years old) using the nationally representative 2014 Nigeria Violence Against Children Survey. Multinomial logistic regressions were performed. Nigerian females reporting SV victimization and polyvictimization were more likely to experience higher mental distress. The older the female was at the time of PV victimization, the greater the risk for mental distress. Violence is prevalent in Nigeria and its impact on youth's health is severe. However, evidence-based and data-driven policies and programs can reduce and prevent violence.

### Keywords

mental health; Nigeria; females; violence; polyvictimization

### Introduction

Violence against women and girls represents a significant public health problem that results in substantial physical and mental health consequences for individuals (Decker et al., 2014). A 2013 meta-analysis found that the highest prevalence of violence against women and girls occurred in sub-Saharan Africa (García-Moreno et al., 2013). Population

Article reuse guidelines: [sagepub.com/journals-permissions](https://sagepub.com/journals-permissions)

**Corresponding Author:** NaeHyung Lee, School of Public Health, Georgia State University, PO Box 3995, Atlanta, GA 30302, USA. [nlee44@gsu.edu](mailto:nlee44@gsu.edu).

Authors' Note

The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of the CDC.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

data from Nigeria show that sexual violence (SV) and physical violence (PV) against women and girls are particularly common (National Population Commission of Nigeria, 2016). Furthermore, trafficking women and young children for prostitution, forced labor, and pornography are prevalent in Nigeria (Akin-Odanye, 2018; CIA, 2020). Experiencing violence is associated with poor mental and physical health, and behavioral health problems (Cecil et al., 2016; Ford et al., 2006; Hooven et al., 2012; Kennedy, 2017; Kidman et al., 2020; Miller-Graff et al., 2015; Riedl et al., 2019). However, more research is necessary to better understand what factors are associated with poor mental health outcomes among individuals who experienced violence in countries in sub-Saharan Africa such as Nigeria (du Plessis et al., 2015; Dunn et al., 2020; Kidman et al., 2020). Recent research using a U.S. sample demonstrated that experiencing violence at younger ages and experiencing polyvictimization—defined as experiencing multiple types of violence—are associated with higher risk of poor mental health later in adulthood (Mitchell et al., 2020). This study sought to assess the role of factors such as age of first experience of violence, type of victimization, and polyvictimization on mental distress among females in Nigeria aged 13–24 years.

### Age of First Experience of Violence

The current literature has mixed findings for the impact of age of first victimization on health outcomes. Mitchell et al. (2020) suggested that, across victimization types, youth who are victimized earlier in their development and life course experience greater negative health outcomes in adulthood than youth who are victimized later in life. Specifically, youth who experience SV and PV earlier in life have more severe depression, anxiety, and posttraumatic stress disorder symptoms (PTSDs) in adulthood (Adams et al., 2018; Mitchell et al., 2020), and higher internalizing and externalizing symptoms (Dunn et al., 2020). Keiley et al. (2001) also demonstrated that early physical maltreatment by significant adults was related to adjustment problems in early adolescence as well as internalizing and externalizing behaviors. In an attempt to better understand why this effect emerges, researchers have focused on attachment and developmental bonds, as well as brain development, as drivers. When perpetrators of violence are caregivers, relatives, or neighbors, rather than strangers, which is often the case in maltreatment especially in early childhood (Adams et al., 2018; Akin-Odanye, 2018; Manyike et al., 2015), children are more likely to establish insecure attachments (Adams et al., 2018). In addition, violence in vulnerable developmental periods is likely to disrupt developmental trajectories of the brain, resulting in impaired self-regulation (Dunn et al., 2020; Kliethermes et al., 2014; Mitchell et al., 2020). These interruptions can put children at greater risk for future victimization and poorer mental and physical health outcomes in adulthood (Dunn et al., 2020; Kliethermes et al., 2014; Mitchell et al., 2020), including psychological distress (Adams et al., 2018), emotion regulation difficulties, suicide behavior, depression, anxiety, anger (Hooven et al., 2012), and externalizing symptoms (Dunn et al., 2020).

On the other hand, a few studies have documented associations that counter this finding. For instance, Harpur et al. (2015) found that violence in late childhood (age 10–12 years) predicted more symptoms of depression (age 14 years) than violence in early (age 0–4 years) or mid-childhood (age 6–8 years), after accounting for family characteristics (e.g., poverty, primary caregiver substance abuse) and protective factors (e.g., living with

biological mother and father). Furthermore, another study found that youth who experienced maltreatment during adolescence, as compared to earlier childhood, had more adverse outcomes (e.g., delinquency, drug use, alcohol-related problems, depressive symptoms, teen pregnancy, school dropout, and internalizing and externalizing problems) during adolescence (Thornberry et al., 2001). Studies elucidate this effect with several explanations: cumulative maltreatment exposure being associated with negative health outcomes in the later childhood and the critical period of pubertal maturation influencing behavior and emotion in the context of social interactions (Andersen & Teicher, 2008; Forbes & Dahl, 2010; Harpur et al., 2015). In an attempt to better understand this effect, this study investigated the role of age of first experience of victimization of SV and PV on mental distress.

### Victimization Types and Polyvictimization

Individuals can experience various forms of violence exposure (Kidman et al., 2020). Different types of violence experienced in childhood and early life may differentially influence risk for mental health problems (Fan et al., 2017). Research exploring the mental health impacts of SV has found increased risk for anxiety disorders such as social phobia and PTSD, mood disorders such as depression, substance abuse, conduct disorder, antisocial personality disorder, dissociation, and suicidal ideation and attempts (Akin-Odanye, 2018; Akyazi et al., 2018; Curran et al., 2016; David et al., 2018; Dunn et al., 2020; Manyike et al., 2015; Nguyen-Feng et al., 2017). Similar to SV, victims of PV are more likely than nonvictims to suffer negative health outcomes. These include the following: higher internalizing and externalizing symptoms (Dunn et al., 2020), suicide attempts (Akyazi et al., 2018; Nguyen-Feng et al., 2017), trauma-related distress (e.g., reexperiencing, avoidance, and hyper-arousal), problematic behaviors (e.g., aggression, delinquent behavior, and substance use) (Thompson et al., 2019), antisocial behaviors (Fleckman et al., 2016), and violence perpetration (Swedo et al., 2019).

Unfortunately, many youth are not only at risk for one type of violence victimization, but often experience multiple types of victimization, defined as polyvictimization (Curran et al., 2016; Finkelhor et al., 2007; Johnco et al., 2019; Källström et al., 2017; Miller-Graff et al., 2015; Mitchell et al., 2020). A recent meta-analysis of 26,664 youth, which included 30 studies since 2005, found polyvictimization prevalence to be 38.1% for youth growing up in low- and middle-income countries and 10% for youth growing up in the United States (Johnco et al., 2019). Examining polyvictimization is important. Studies focused on specific types of victimization experience may fail to examine complete victimization profiles. Youth growing up in certain environmental circumstances, families, or neighborhoods that are prone to child maltreatment, violence, and neglect may be at risk of victimization clustering (Finkelhor et al., 2007). That is, exposure to one type of violence can increase the odds of other types of violence exposure. For example, one study found that a history of PV significantly increases the odds of experiencing SV (by 2.5 times) and emotional violence (by 6.3 times) (Fleckman et al., 2016).

Polyvictimization can account for large variations in mental distress (Hellström, 2019) above and beyond single-type victimization (Ford & Delker, 2018; Schwab-Reese et al., 2018). Polyvictimization is associated with a higher likelihood of a range of adverse mental health

outcomes (Curran et al., 2016; Fleckman et al., 2016; Källström et al., 2017; Kerig, 2018; Samms-Vaughan & Lambert, 2017), as well as a more negative view of oneself, less sense of control (Hooven et al., 2012), and negative intellectual functioning and achievement (Samms-Vaughan & Lambert, 2017). In addition, research found that youth who experienced more types of traumatic events endorsed higher clinical level of internalizing (40%–72%) and externalizing symptoms (58%–82%) (SAMHSA, 2011).

### **Purpose of the Current Study**

This study explores the associations between age of first experience of violence, victimization type, and polyvictimization with mental distress among females in Nigeria. This study builds on the recent work by Mitchell et al. (2020) and addresses gaps in the literature regarding how these factors are associated with the mental health of youth growing up in Nigeria. Because of the mixed findings on the age of first experience of violence victimization and mental distress, we proposed to further explore these associations in this study and did not pose a directional hypothesis. We hypothesized that victimization type (SV and PV) and polyvictimization would be associated with higher levels of mental distress among females in Nigeria.

## **Methods**

### **Setting, Sample, and Data Collection**

The study used the Violence Against Children Survey (VACS) data from Nigeria, which was a nationally representative cross-sectional household survey of 13–24-year-old females and males. The National Population Commission of the Federal Government of Nigeria executed the survey between May and July 2014 with technical support from the United States Centers for Disease Control and Prevention (CDC) as well as the United Nations International Children's Fund (UNICEF). The Nigeria VACS presented national estimates of the magnitude and nature of sexual, physical, and emotional violence experienced in childhood. The overall response rate was 93.7% for both females and males. This study focused on SV and PV among females ( $n = 1,766$ ) (National Population Commission of Nigeria, 2016).

A three-stage cluster sample survey design was used. The primary sampling units (PSUs) were the enumeration areas (EAs) from the 2006 census. In the first stage, 353 EAs were randomly selected from 662,529 EAs with proportional probability sampling according to the number of households of the EAs. In the second stage, 20 households per PSU were selected by equal probability systematic sampling. In the third stage, one eligible respondent was randomly selected from the list of all eligible respondents aged 13–24 years in each household. Prior to finalizing the questionnaire, a survey pilot was conducted to test the questionnaire and survey protocols. Informed consent/assent was obtained prior to administering the questionnaire. Interviews were conducted in a safe and private location by culturally sensitive interviewers with relevant language skills and experience in confidential data collection. A three-step weighting procedure was applied to yield nationally representative data (National Population Commission of Nigeria, 2016). The

Nigeria VACS was reviewed and approved by both the CDC Institutional Review Board as well as the Nigeria Health Ethics Research Committee.

## Measures

The Nigeria VACS used the standardized VACS questionnaire, which has been used to measure violence, risk and protective factors, and health risks in similar settings across multiple surveys (Nguyen et al., 2019). Measures in VACS were selected from a range of well-established and respected survey tools with demonstrated validity and reliability. Items measuring violence were selected from a range of well-respected survey tools with demonstrated validity and reliability (Dube et al., 2004; Holden et al., 2020). Items were drawn from measures including the ISPCAN (International Society for the Prevention of Child Abuse and Neglect) Child Abuse Screening Tool-Retrospective (ICAST-R; for parent PV, and emotional violence; Dunne et al., 2009) and the Juvenile Victimization Questionnaire (JVQ; for peer, intimate partner, and adult PV, SV, witnessing PV in the home, and witnessing PV in the community; Finkelhor et al., 2005). Published studies have demonstrated the psychometric properties, reliability, and validity of both the ICAST-R (Dunne et al., 2009; Zolotor et al., 2009) and the JVQ (Finkelhor et al., 2005; Pereda et al., 2018).

### Dependent Variable.

**Mental Distress.:** Mental distress was measured with the Kessler-6 Distress Scale (Prochaska et al., 2012). Respondents were asked, “How often have you been feeling the following ways in the past 30 days?” and six mental health items as follows: “nervous,” “hopeless,” “restless,” “so sad that nothing could cheer you up,” “that everything was an effort,” and “worthless.” Response categories ranged from 0 (none of the time) to 4 (all the time). The total possible scores ranged from 0 to 24, and a cut-off of 5 was applied to define moderate mental distress and 13 for severe mental distress. The scale and these cut-off points were tested by measure developers, supported for expanded use of examining mental distress, and demonstrated validity and reliability in extended contexts (Juan et al., 2019; Krieger et al., 2011; Prochaska et al., 2012; Vissoci et al., 2018). In the regression models, the variable included three categories: no, moderate, and severe mental distress (0 = no, 1 = moderate, and 2 = severe).

### Independent Variables.

**Age of First Victimization.:** Age of first victimization was assessed by asking, “How old were you the first time [SV/PV] happened?” to respondents who indicated that they had ever experienced SV/PV. Age of first experience of SV was the earliest age that the respondent experienced any type of SV. Age of first experience of PV was the earliest age that the respondent experienced any PV by any perpetrator. The response categories of PV/SV were in four age groups (0–5, 6–11, 12–17, and 18–24 years old).

**SV Victimization.:** SV included six total types (two types of sexual exploitation and four types of sexual abuse). The six types were (a) sexual exploitation (“Have you ever received food, favors or any gifts in exchange for sex?”), (b) noncontact SV/exploitation (“Have you ever participated in a sex photo or video, or shown your sexual body parts in

front of a webcam, whether you wanted to or not?”), (c) unwanted sexual touching (“Has anyone ever touched you in a sexual way without your permission, but did not try and force you to have sex?”), (d) unwanted attempted sex (“Has anyone ever tried to make you have sex against your will but did not succeed?”), (e) physically forced sex (“Has anyone ever physically forced you to have sex and did succeed?”), and (f) pressured sex (“Has anyone ever pressured you to have sex, through harassment, threats or tricks and did succeed?”). Response options were either yes (1) or no (0) to whether the participant ever experienced that type. The number of multiple types of SV that respondents experienced in their lifetime were summed and then categorized as none, one, two, and three or more based on the distribution of the data. Prevalence of lifetime SV, overall and by type, is included. Characteristics of SV experiences, including the specific perpetrator, age difference between perpetrator and victim, and location, were assessed for the *first* experience of SV.

**PV Perpetrators.:** Respondents were asked about PV ever experienced by four types of perpetrators: (a) intimate partners (e.g., romantic partner, boyfriend, or husband), (b) peers (e.g., siblings, schoolmates, neighbors, or strangers), (c) parents, adult caregivers, and other adult relatives, and (d) adults in the neighborhood (e.g., teachers, police, employers, religious or neighborhood leaders, neighbors, or other adults). For each perpetrator type, PV was coded if respondents answered “yes” to one or more of three questions: Has [the perpetrator] ever “punched, kicked, whipped, or beat you with an object?” “choked, suffocated, tried to drown you, or burned you intentionally?” or “used or threatened you with a knife, gun or other weapon?” Participants were asked who the specific perpetrator of the first incident was. For example, for peers, they were asked if it was a male friend, female friend, male classmate/schoolmate, female classmate/schoolmate. Victims of PV were also asked if they experienced an injury as a result of the first incident of PV by perpetrator type. The number of perpetrator types of PV was summed and categorized as none, one, two, and three or more based on whether respondents experienced PV by perpetrator type (intimate partners, peers, parents/adult caregivers, and neighborhood adult).

**Polyvictimization.:** Polyvictimization was coded according to the five categories based on responses to the SV and PV victimization variables described above. Specifically, polyvictimization categories were as follows: (a) *no victimization*: no SV or PV, (b) *one victimization*: experienced either one SV type or PV by one perpetrator type, (c) *SV victimization*: experienced more than one type of SV but not PV, (d) *PV victimization*: experienced PV by more than one perpetrator but not SV, and (e) *polyvictimization*: experienced at least one type of SV and PV by at least one perpetrator. Based on polyvictimization definitions used in the literature (Annerback et al., 2012; Arata et al., 2005, 2007; Berenson et al., 2001; Chan et al., 2011; Charak et al., 2015; Hahm et al., 2010; Hultmann & Broberg, 2016; Kennedy et al., 2016), the current study operationally defined polyvictimization, accounting for the type of violence victimization.

## Data Analysis

Three multinomial logistic regressions were performed to examine the associations of age of first victimization, SV victimization, PV victimization, polyvictimization, and mental distress. Model 1 was specifically for SV: mental distress (no mental distress as comparison



group) was the dependent variable and age of first experience of SV (0–5 years old as comparison group) and SV victimization (one SV victimization as comparison group) were independent variables. Model 1 only included respondents who experienced at least one SV victimization ( $n = 604$ ). Model 2 was for PV: mental distress (no mental distress as comparison group) was the dependent variable and age of first experience of PV (0–5 years old as comparison group) and PV victimization (one PV victimization as comparison group) were independent variables. Model 2 only included respondents who experienced at least one PV victimization ( $n = 986$ ). Model 3 was for polyvictimization of both SV and PV and included the full sample: mental distress (no mental distress as comparison group) was the dependent variable and polyvictimization (no victimization as comparison group) was the independent variable. An  $\alpha = 0.05$  was used to assess statistical significance, and 95% confidence intervals were reported. To adjust for the complex survey sample design of VACS, clustering, stratification, and sample weights were used to accurately generate nationally representative estimates. Detailed information on sampling methodology and sample weights is available in the VACS Nigeria report (National Population Commission of Nigeria, 2016). Due to differences in the analytic sample used (this study used all females ages 13–24 years, whereas the report separates out the 13–17 and 18–24 years age groups), the present results may differ from those included in the country report. SAS 9.4 (Cary, NC) was used to perform secondary data analyses. Missing data were handled using listwise deletion.

## Results

### Demographic Characteristics

Demographic characteristics of Nigerian adolescent and young adult females, including age, ethnicity, education completion, marital status, and religion are summarized in Table 1. More than half of females (59.2%, 95% confidence interval [CI]: 56.0–62.3) were 18–24 years old and less than a half (40.8%, 95% CI: 37.7–44.0) were 13–17 years old. Most females (65.9%, 95% CI: 60.3–71.5) completed secondary education and more than one in five females (23.2%, 95% CI: 18.1–28.3) completed primary education as the highest level of education (Table 1).

### Prevalence of Lifetime Victimization and Mental Distress and Characteristics of First SV and PV Experiences

Table 2 includes prevalence of SV, PV, and polyvictimization by demographic characteristics. The most common age of first experience of SV was 12–17 years (63.3%, 95% CI: 58.3–68.3), followed by 18–24 (27.3%, 95% CI: 22.4–32.1). For PV, the most common age at first experience was 6–11 (52.4%, 95% CI: 47.8–57.0), followed by 12–17 years (27.7%, 95% CI: 23.9–31.6). Most females (64.5%, 95% CI: 61.2–67.8) did not experience any SV, and about one in five girls experienced one type of SV (18.7%, 95% CI: 16.4–20.9) and 11.9% (95% CI: 9.5–14.3) and 4.9% (95% CI: 3.6–6.3), respectively, experienced two and three or more types of SV. Among SV victims, unwanted sexual touching was most common (19.8%, 95% CI: 17.0–22.5) followed by unwanted attempted sex (18.7%, 95% CI: 15.9–21.5) and physically forced sex (13.4%, 95% CI: 10.9–15.8). Fewer than half of females (41.5%, 95% CI: 37.5–45.4) experienced no PV

by any perpetrator, about one in four (25.2%, 95% CI: 22.4–28.0) experienced PV by one perpetrator, more than one in five (22.8%, 95% CI: 20.0–25.6) experienced PV by two perpetrators, and 10.5% (95% CI: 8.6–12.5) experienced PV by three perpetrators or more. For PV victimization by perpetrator, parent or caregiver PV (41.0%, 95% CI: 37.2–44.8) was most common, followed by neighborhood adult PV (33.4%, 95% CI: 29.2–37.6), peer PV (20.6%, 95% CI: 17.9–23.2), and intimate partner PV (13.6%, 95% CI: 11.2–16.0). About one in four females experienced polyvictimization (26.3%, 95% CI: 23.2–29.4), and nearly one in three experienced no victimization (32.2%, 95% CI: 28.7–35.7). Most females (68.7%, 95% CI: 65.2–72.3) experienced no mental distress, approximately one in four (25.5%, 95% CI: 22.1–29.0) experienced moderate mental distress, and a small fraction (5.7%, 95% CI: 4.3–7.2) experienced severe mental distress.

### **Associations Between Age of First Experience of Violence, Polyvictimization, and Mental Distress**

**SV Types and Mental Distress.**—In the adjusted multinomial logistic regression for SV, age of first experience of SV was not statistically significantly associated with mental distress, but SV victimization was (Table 3). Females who experienced three or more types of SV had 2.25 times higher odds for moderate compared to no mental distress (95% CI: 1.10–4.63) than females who only experienced one type of SV, after controlling for age of first experience of SV. Females who had two types of SV had 0.61 times odds of severe compared to no mental distress (95% CI: 0.25–1.48) than those who experienced one type. Females who experienced three or more types of SV had 5.27 times odds of severe compared to no mental distress (95% CI: 2.39–11.60) than females who experienced only one type of SV.

**Perpetrators of PV and Mental Distress.**—In the adjusted multinomial logistic regression for PV, females who had the first experience of PV at age 18–24 years had 6.07 times higher odds of severe mental distress compared to no mental distress (95% CI: 1.66–22.21) than females whose age of first experience of PV victimization was 0–5 years, after controlling for PV victimization. No significant associations were found between PV victimization and mental distress (Table 3).

**Polyvictimization and Mental Distress.**—In the unadjusted logistic regression, polyvictimization was significantly associated with mental distress (Table 3). The odds of having moderate distress compared to no mental distress was 2.72 times higher for females who experienced both SV and PV (i.e., the fifth category, polyvictimization) than females who did not experience either SV or PV (i.e., the first category, no victimization; 95% CI: 1.79–4.13). Females who experienced polyvictimization (the fifth category) had 1.49 times the odds of having severe mental distress (95% CI: 0.85–2.62) than females who experienced no victimization (the first category).

### **Discussion**

The aim of the study was to evaluate the associations between age of first victimization, victimization type (SV and PV), polyvictimization, and mental distress among Nigerian



females. This article expands the existing literature examining these associations among youth in the United States (Mitchell et al., 2020) to a national sample of females in Nigeria. Hypotheses were partially supported.

Age of first victimization of SV was not found to be significantly associated with recent mental distress (in the past month). Given the exploratory nature of our study and mixed findings in the literature, this study can be a confirmation that it may not be the age of first SV victimization that is an important influence on mental distress, but rather that the individual experienced SV victimization. In terms of PV, older age of first experience of PV was significantly associated with higher risk for severe recent mental distress. This may be that PV in school or home setting is normalized in Nigerian context and PV such as corporal punishment is culturally and socially more acceptable when perpetrated against a younger child than against an adolescent (Herrmann, 2019; Mcleod, 2019; Stephen, 2013). It is also possible that mental distress may also be associated with recency of last victimization; thus, future studies can control for the age of last experience of victimization in examining its association to mental distress.

With regard to our research questions on types of victimization and polyvictimization, findings suggested that SV victimization and polyvictimization were significantly associated with higher mental distress commensurate with the extant literature (Akin-Odanye, 2018; Akyazi et al., 2018; Curran et al., 2016; David et al., 2018; Dunn et al., 2020; Fleckman et al., 2016; Källström et al., 2017; Kerig, 2018; Manyike et al., 2015; Nguyen-Feng et al., 2017; Samms-Vaughan & Lambert, 2017). Interestingly, results suggested that females with two types of SV had lower odds of severe mental distress compared to those who experienced a single occurrence of SV. This could be the results of a measurement issue; the types of SV are not mutually exclusive and multiple types of SV could have occurred at the same time. At the same time, this also means that the same type of SV could have occurred multiple times, which was counted as one type of SV. Furthermore, the severity of the incident characteristics was not examined, which could also directly impact mental distress (Manyike et al., 2015). Lastly, this association could be the result of psychological numbing that at times emerges for individuals who experience chronic trauma or rape/assault (Feeny et al., 2000; van Der Kolk & Saporta, 1991).

In contrast, the association between PV victimization and mental distress did not emerge as significant. PV may have been confounded with other variables, such as other life adversities (e.g., poverty and family conflicts) or other victimization types (e.g., SV, witnessing intimate partner violence, community violence, or witnessing violence) (Finkelhor et al., 2009; Hooven et al., 2012) that were not part of the analyses. It is also possible that PV does not have the same impact on mental health as SV. A study by Fan et al. (2017) conducted with Malawian children and youth supports this explanation, with results indicating that PV did not have a significant, direct effect on psychological distress while SV was directly and significantly associated with psychological distress. In the study, PV was indirectly associated with psychological distress through its intercorrelation with SV and emotional violence.

The significant association between polyvictimization and mental distress that was found in this study reinforces the importance of measuring multiple forms of violence and trauma to better understand the unique and combined contributions of these experiences on female mental health. These findings provide insight for violence prevention and treatment and mental health care intervention efforts in Nigeria where a majority of the population is under 25 years old (CIA, 2020). Furthermore, to the best of our knowledge, the current study was one of the first studies to examine these relations in sub-Saharan Africa.

### Study Strengths and Limitations

Results of the current study must be interpreted in light of strengths and limitations associated with its methodology and design. Important strengths come from the representative nature of the VACS sampling method and large sample size. However, the study has several limitations. First, the VACS data are cross-sectional; therefore, causal inference is not possible. Second, the data were retrospectively self-reported and may be impacted by recall bias. Third, the prevalence of SV and PV may have been underestimated due to fear of disclosure. Fourth, given that the VACS is a household survey, experiences of youth who live outside of family care (e.g., run-away, homeless, or institutionalized youth) were not represented. Fifth, the study did not extensively include potential confounders, such as individual factors (e.g., self-esteem) or relationship factors (family social support) that could have affected the relationship between violence and mental health. Sixth, there were some limitations to measurement of the variables of interest. That is, characteristics of the specific violence incidents that have been found to be associated with mental distress in prior research were not assessed (Manyike et al., 2015). Lastly, time constraints (past 30 days) of the mental distress measure used in this study limit our understanding of how acute distress may have been experienced immediately or in the months after a particular victimization experience.

### Conclusions and Future Directions

Violence is prevalent in Nigeria and its impact on youth's health and development is severe. However, evidence-based strategies, programs, and policies that are informed by data-driven approaches to prevent and respond to violence can reduce and prevent it (World Health Organization, 2016). Evidence-based programs, such as those highlighted in INSPIRE (Implementation and enforcement of laws; Norms and values, Safe environments; Parent and caregiver support; Income and economic strengthening; Response and support services; Education and life skills): Seven Strategies to End Violence Against Children (World Health Organization, 2016), highlight comprehensive, multisectoral efforts supported by the best-available evidence. The programs and strategies highlighted in INSPIRE have the added value of having been implemented and/or evaluated in other country settings, making them a potential fit for the Nigerian context. For example, economic strengthening interventions and those that promote healthy relationship norms among youth can reduce SV and PV and its impacts (Buller et al., 2018; Yount et al., 2017). In addition, mental health interventions that build resilience among those who experience violence and address the psychological impacts of violence have been successfully implemented in Thailand and Zambia, and may be appropriate for Nigeria (Bolton et al., 2014; Murray et al., 2015, 2020).

Though an extensive literature exists on the mental health impacts of violence (Fan et al., 2017; Mitchell et al., 2020; Swedo et al., 2019), additional research is needed on the aspects and characteristics of violence that are uniquely associated with poor mental health. More studies are warranted to inform our understanding, and it is critically important to conduct clinical trials to examine what prevention and intervention efforts may be the most impactful, disseminatable, and sustainable. Longitudinal or prospective study designs can further explicate the associations demonstrated by retrospective data collection. Additional research with more narrowly defined age groups can also better target intervention age groups (Dunn et al., 2020; Harpur et al., 2015). Future studies can also include more extensive measurement of the victimization experience, which contains numerous imperative details on victimization type/form, severity, and frequency (Manyike et al., 2015). More thorough assessment of violence would allow for further delineation for how violence incident characteristics may relate to acute and long-term mental distress. By uncovering such important sensitive periods for violence and adverse mental health outcomes, research can better inform how to ensure positive trajectories for females, living in Nigeria, who have experienced violence.

## Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

## Author Biographies

**NaeHyung Lee**, PhD, conducts violence prevention research both in the USA and international contexts. Her research interests include health impacts of violence and other life adversities experienced particularly among children and youth as well as effective strategies to prevent and mitigate adverse childhood experiences.

**Melissa Osborne**, PhD, is a Clinical Assistant Professor in the School of Nursing at Georgia State University. She conducts research in the area of pediatric violence and injury research and prevention, particularly child maltreatment and firearm access and injury in the pediatric population. The overarching goal of her research is to better inform prevention strategies that help keep children and adolescents safe and healthy at home. Most recently, her work has examined risk patterns among adolescent firearm suicides using surveillance data and assessed in-home firearm availability among children at risk for maltreatment.

**Greta Massetti**, PhD, is a Senior Scientist in the CDC's Division of Violence Prevention, where she leads global efforts to improve the availability of data on violence against children and youth and to use data to inform evidence-based strategies to prevent violence. Her research addresses the prevalence, contexts, and health consequences of violence against children and youth globally.

**Ashley Watson**, M.P.H., is a PhD student and a Graduate Research Assistant in the School of Public Health, Georgia State University. Her current research interests include the identification of risk and protective factors in victims of abuse, health disparities, gender differences, and women's health.

**Shannon Self-Brown, PhD**, is a Professor in the School of Public Health at Georgia State University. Her research focuses on child maltreatment prevention, behavioral parenting intervention, youth trauma intervention, and implementation science. Her research addresses the impact of youth violence, trauma, and disaster exposure on youth mental health, as well as the implementation of evidence-based behavioral parenting programs and mental health practices for traumatized youth.

## References

- Adams J, Mrug S, & Knight DC (2018). Characteristics of child physical and sexual abuse as predictors of psychopathology. *Child Abuse & Neglect*, 86, 167–177. 10.1016/j.chiabu.2018.09.019 [PubMed: 30308347]
- Akin-Odanye EO (2018). Prevalence and management of child sexual abuse cases presented at Nigerian hospitals: A systematic review. *Journal of Health and Social Sciences*, 3(2), 109–124. 10.19204/2018/prv12
- Akyazi S, Tabo A, Guveli H, Inem MC, & Oflaz S (2018). Domestic violence victims in shelters: What do we know about their mental health? *Community Mental Health Journal*, 54(3), 361–369. 10.1007/s10597-018-0240-1 [PubMed: 29404833]
- Annerback E-M, Sahlqvist L, Svedin CG, Wingren G, & Gustafsson PA (2012). Child physical abuse and concurrence of other types of child abuse in Sweden-Associations with health and risk behaviors. *Child Abuse & Neglect*, 36(7–8), 585–595. 10.1016/j.chiabu.2012.05.006 [PubMed: 22854707]
- Andersen SL, & Teicher MH (2008). Stress, sensitive periods and maturational events in adolescent depression. *Trends in Neurosciences*, 31(4), 183–191. 10.1016/j.tins.2008.01.004 [PubMed: 18329735]
- Arata CM, Langhinrichsen-Rohling J, Bowers D, & O'Brien N (2007). Differential correlates of multi-type maltreatment among urban youth. *Child Abuse & Neglect*, 31(4), 393–415. 10.1016/j.chiabu.2006.09.006 [PubMed: 17412420]
- Arata CM, Langhinrichsen-Rohling J, Bowers D, & O'Farrill-Swails L (2005). Single versus Multi-Type Maltreatment: An Examination of the Long-Term Effects of Child Abuse. *Journal of Aggression, Maltreatment & Trauma*, 11(4), 29–52. 10.1300/J146v11n04\_02
- Berenson AB, Wiemann CM, & McCombs S (2001). Exposure to Violence and Associated Health-Risk Behaviors Among Adolescent Girls. *Archives of Pediatrics & Adolescent Medicine*, 155(11). 10.1001/archpedi.155.11.1238
- Bolton P, Lee C, Haroz EE, Murray L, Dorsey S, Robinson C, Ugueto AM, & Bass J (2014). A transdiagnostic community-based mental health treatment for comorbid disorders: Development and outcomes of a randomized controlled trial among Burmese refugees in Thailand. *PLoS Medicine*, 11(11), e1001757. 10.1371/journal.pmed.1001757 [PubMed: 25386945]
- Buller AM, Peterman A, Ranganathan M, Bleile A, Hidrobo M, & Heise L (2018). A mixed-method review of cash transfers and intimate partner violence in low- and middle-income countries. *World Bank Research Observer*, 33(2), 218–258. 10.1093/wbro/lky002
- Cecil CAM, Smith RG, Walton E, Mill J, McCrory EJ, & Viding E (2016). Epigenetic signatures of childhood abuse and neglect: Implications for psychiatric vulnerability. *Journal of Psychiatric Research*, 83, 184–194. 10.1016/j.jpsychires.2016.09.010 [PubMed: 27643477]
- Central Intelligence Agency (CIA). (2020). Africa: Nigeria—The world factbook. Retrieved from: [https://www.cia.gov/library/publications/the-world-factbook/geos/print\\_ni.html](https://www.cia.gov/library/publications/the-world-factbook/geos/print_ni.html)
- Chan KL, Brownridge DA, Yan E, Fong DYT, & Tiwari A (2011). Child maltreatment polyvictimization: Rates and short-term effects on adjustment in a representative Hong Kong sample. *Psychology of Violence*, 1(1), 4–15. 10.1037/a0020284
- Charak R, Koot HM, Dvorak RD, Elklit A, & Elhai JD (2015). Unique versus cumulative effects of physical and sexual assault on patterns of adolescent substance use. *Psychiatry Research*, 230(3), 763–769. 10.1016/j.psychres.2015.11.014 [PubMed: 26596366]

- Curran E, Adamson G, Stringer M, Rosato M, & Leavey G (2016). Severity of mental illness as a result of multiple childhood adversities: US national epidemiologic survey. *Social Psychiatry and Psychiatric Epidemiology*, 51(5), 647–657. 10.1007/s00127-016-1198-3 [PubMed: 26952327]
- David N, Ezechi O, Wapmuk A, Gbajabiamila T, Ohihoin A, Herbertson E, & Odeyemi K (2018). Child sexual abuse and disclosure in South Western Nigeria: A community based study. *African Health Sciences*, 18(2), 199–208. 10.4314/ahs.v18i2.2 [PubMed: 30602944]
- Decker MR, Peitzmeier S, Olumide A, Acharya R, Ojengbede O, Covarrubias L, Gao E, Cheng Y, Delany-Moretwe S, & Brahmbhatt H (2014). Prevalence and health impact of intimate partner violence and non-partner sexual violence among female adolescents aged 15–19 years in vulnerable urban environments: A multi-country study. *Journal of Adolescent Health*, 55(6 Suppl), S58–S67. 10.1016/j.jadohealth.2014.08.022
- Dube SR, Williamson DF, Thompson T, Felitti VJ, & Anda RF (2004). Assessing the reliability of retrospective reports of adverse childhood experiences among adult HMO members attending a primary care clinic. *Child Abuse & Neglect*, 28(7), 729–737. 10.1016/j.chiabu.2003.08.009 [PubMed: 15261468]
- Dunn EC, Nishimi K, Neumann A, Renaud A, Cecil CAM, Susser ES, & Tiemeier H (2020). Time-dependent effects of exposure to physical and sexual violence on psycho-pathology symptoms in late childhood: In search of sensitive periods in development. *Journal of the American Academy of Child & Adolescent Psychiatry*, 59(2), 283–295.e4. 10.1016/j.jaac.2019.02.022 [PubMed: 31078631]
- Dunne MP, Zolotor AJ, Runyan DK, Andrevia-Miller I, Choo WY, Dunne SK, Gerbaka B, Isaeva O, Jain D, Kasim MS, Macfarlane B, Mamyrova N, Ramirez C, Volkova E, & Youssef R (2009). ISPCAN Child Abuse Screening Tools retrospective version (ICAST-R): Delphi study and field testing in seven countries. *Child Abuse & Neglect*, 33(11), 815–825. 10.1016/j.chiabu.2009.09.005 [PubMed: 19853301]
- du Plessis B, Kaminer D, Hardy A, & Benjamin A (2015). The contribution of different forms of violence exposure to internalizing and externalizing symptoms among young South African adolescents. *Child Abuse & Neglect*, 45, 80–89. 10.1016/j.chiabu.2015.02.021 [PubMed: 25804436]
- Fan AZ, Liu J, Kress H, Gupta S, Shawa M, Wadonda-Kabondo N, & Mercy J (2017). Applying structural equation modeling to measure violence exposure and its impact on mental health: Malawi violence against children and young women survey, 2013. *Journal of Interpersonal Violence*, 36 (3–4), 1699–1717. 10.1177/0886260517741214 [PubMed: 29295003]
- Feeny NC, Zoellner LA, Fitzgibbons LA, & Foa EB (2000). Exploring the roles of emotional numbing, depression, and dissociation in PTSD. *Journal of Traumatic Stress*, 13(3), 489–498. 10.1023/A:1007789409330 [PubMed: 10948488]
- Finkelhor D, Hamby SL, Ormrod R, & Turner H (2005). The Juvenile Victimization Questionnaire: Reliability, validity, and national norms. *Child Abuse & Neglect*, 29(4), 383–412. 10.1016/j.chiabu.2004.11.001 [PubMed: 15917079]
- Finkelhor D, Ormrod RK, & Turner HA (2007). Poly-victimization: A neglected component in child victimization. *Child Abuse & Neglect*, 31(1), 7–26. 10.1016/j.chiabu.2006.06.008 [PubMed: 17224181]
- Finkelhor D, Ormrod RK, & Turner HA (2009). Lifetime assessment of poly-victimization in a national sample of children and youth. *Child Abuse & Neglect*, 33(7), 403–411. 10.1016/j.chiabu.2008.09.012 [PubMed: 19589596]
- Fleckman JM, Drury SS, Taylor CA, & Theall KP (2016). Role of direct and indirect violence exposure on externalizing behavior in children. *Journal of Urban Health*, 93(3), 479–492. 10.1007/s11524-016-0052-y [PubMed: 27184572]
- Forbes EE, & Dahl RE (2010). Pubertal development and behavior: Hormonal activation of social and motivational tendencies. *Brain and Cognition*, 72(1), 66–72. 10.1016/j.bandc.2009.10.007 [PubMed: 19942334]
- Ford JD, Chapman J, Mack JM, & Pearson G (2006). Pathways from traumatic child victimization to delinquency: Implications for juvenile and permanency court proceedings and decisions. *Juvenile and Family Court Journal*, 57(1), 13–26. 10.1111/j.1755-6988.2006.tb00111.x

- Ford JD, & Delker BC (2018). Polyvictimization in childhood and its adverse impacts across the lifespan: Introduction to the special issue. *Journal of Trauma & Dissociation*, 19(3), 275–288. 10.1080/15299732.2018.1440479 [PubMed: 29547074]
- García-Moreno C, Pallitto C, Devries K, Stöckl H, Watts C, & Abrahams N (2013). Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence. World Health Organization.
- Hahm HC, Lee Y, Ozonoff A, & Van Wert MJ (2010). The Impact of Multiple Types of Child Maltreatment on Subsequent Risk Behaviors Among Women During the Transition from Adolescence to Young Adulthood. *Journal of Youth and Adolescence*, 39(5), 528–540. 10.1007/s10964-009-9490-0 [PubMed: 20020190]
- Harpur LJ, Polek E, & van Harmelen A-L (2015). The role of timing of maltreatment and child intelligence in pathways to low symptoms of depression and anxiety in adolescence. *Child Abuse & Neglect*, 47, 24–37. 10.1016/j.chiabu.2015.05.019 [PubMed: 26146160]
- Hellström L (2019). A systematic review of polyvictimization among children with attention deficit hyperactivity or autism spectrum disorder. *International Journal of Environmental Research and Public Health*, 16(13), 2280. 10.3390/ijerph16132280
- Herrmann C (2019). The reluctant farewell to corporal punishment. Deutsche Welle. <https://www.dw.com/en/the-reluctant-farewell-to-corporal-punishment/a-51319149>
- Holden GW, Gower T, & Chmielewski M (2020). Methodological considerations in ACEs research. In Asmundson GJG & Afifi TO (Eds.), *Adverse childhood experiences: Using evidence to advance research, practice, policy, and prevention* (pp. 161–182). Elsevier Academic Press. 10.1016/B978-0-12-816065-7.00009-4
- Hooven C, Nurius PS, Logan-Greene P, & Thompson EA (2012). Childhood violence exposure: Cumulative and specific effects on adult mental health. *Journal of Family Violence*, 27(6), 511–522. 10.1007/s10896-012-9438-0 [PubMed: 23637471]
- Hultmann O, & Broberg AG (2016). Family Violence and Other Potentially Traumatic Interpersonal Events Among 9-to 17-Year-Old Children Attending an Outpatient Psychiatric Clinic. *Journal of Interpersonal Violence*, 31(18), 2958–2986. 10.1177/0886260515584335 [PubMed: 25917005]
- Johnco C, Salloum A, McBride NM, Cepeda S, Gutfreund D, Novoa JC, & Storch EA (2019). Child trauma exposure and subsequent emotional functioning in El Salvador. *Traumatology*, 26(1), 19–28. 10.1037/trm0000193
- Juan C, Edmeades J, Petroni S, Kapungu C, Gordon R, & Ligiero D (2019). Associations between mental distress, poly-victimisation, and gender attitudes among adolescent girls in Cambodia and Haiti: An analysis of violence against children surveys. *Journal of Child & Adolescent Mental Health*, 31(3), 201–213. 10.2989/17280583.2019.1678476 [PubMed: 31805842]
- Källström Å, Hellfeldt K, Howell KH, Miller-Graff LE, & Graham-Bermann SA (2017). Young adults victimized as children or adolescents: Relationships between perpetrator patterns, poly-victimization, and mental health problems. *Journal of Interpersonal Violence*, 35(11–12), 2335–2357. 10.1177/0886260517701452 [PubMed: 29294710]
- Keiley MK, Howe TR, Dodge KA, Bates JE, & Pettit GS (2001). The timing of child physical maltreatment: A cross-domain growth analysis of impact on adolescent externalizing and internalizing problems. *Development and Psychopathology*, 13(4), 891–912. 10.1017/S0954579401004084 [PubMed: 11771913]
- Kennedy SC (2017). The relationship between childhood polyvictimization and subsequent mental health and substance misuse outcomes for incarcerated women (2016–58391–156; Issues 11-A(E)) [ProQuest Information & Learning]. psych. <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=psyh&AN=2016-58391-156&site=ehost-live&scope=site&custid=gsul>
- Kennedy SC, Tripodi SJ, Pettus-Davis C, & Ayers J (2016). Examining Dose–Response Relationships Between Childhood Victimization, Depression, Symptoms of Psychosis, and Substance Misuse for Incarcerated Women. *Women & Criminal Justice*, 26(2), 77–98. 10.1080/08974454.2015.1023486
- Kerig PK (2018). Polyvictimization and girls' involvement in the juvenile justice system: Investigating gender-differentiated patterns of risk, recidivism, and resilience. *Journal of Interpersonal Violence*, 33(5), 789–809. 10.1177/0886260517744843 [PubMed: 29411692]



- Kidman R, Piccolo LR, & Kohler H-P (2020). Adverse childhood experiences: Prevalence and association with adolescent health in Malawi. *American Journal of Preventive Medicine*, 58(2), 285–293. 10.1016/j.amepre.2019.08.028 [PubMed: 31810632]
- Kliethermes M, Schacht M, & Drewry K (2014). Complex trauma. *Child and Adolescent Psychiatric Clinics of North America*, 23(2), 339–361. 10.1016/j.chc.2013.12.009 [PubMed: 24656584]
- Krieger N, Kosheleva A, Waterman PD, Chen JT, & Koenen K (2011). Racial discrimination, psychological distress, and self-rated health among US-born and foreign-born black Americans. *American Journal of Public Health*, 101(9), 1704–1713. 10.2105/AJPH.2011.300168 [PubMed: 21778504]
- Manyike P, Chinawa J, Aniwada E, Odetunde O, & Chinawa A (2015). Child sexual abuse among adolescents in southeast Nigeria: A concealed public health behavioral issue. *Pakistan Journal of Medical Sciences*, 31(4), 827–832. 10.12669/pjms.314.7115 [PubMed: 26430412]
- McLeod I (2019). Ban corporal punishment in schools in Nigeria. *Change.Org*. <https://www.change.org/p/nigerian-ministry-of-education-ban-corporal-punishment-in-schools-in-nigeria>
- Miller-Graff L, Cater ÅK, Howell KH, & Graham-Bermann SA (2015). Victimization in childhood: General and specific associations with physical health problems in young adulthood. *Journal of Psychosomatic Research*, 79(4), 265–271. 10.1016/j.jpsychores.2015.07.001 [PubMed: 26208402]
- Miller-Graff L, Howell KH, Scheid CR, & Schaefer L (2019). “Violence is everywhere”: Childhood polyvictimization, perceptions of the prevalence of victimization, and posttraumatic stress symptoms. *Violence and Victims*, 34(2), 376–393. 10.1891/0886-6708.VV-D-17-00144 [PubMed: 31019018]
- Mitchell KJ, Moschella EA, Hamby S, & Banyard V (2020). Developmental stage of onset, poly-victimization, and persistence of childhood victimization: Impact on adult well-being in a rural community-based study. *Child Maltreatment*, 25(1), 20–31. 10.1177/1077559519859080 [PubMed: 31284731]
- Murray LK, Kane JC, Glass N, van Wyk SS, Melendez F, Paul R, Danielson CK, Murray SM, Mayeya J, Simenda F, & Bolton P (2020). Effectiveness of the common elements treatment approach (CETA) in reducing intimate partner violence and hazardous alcohol use in Zambia (VATU): A randomized controlled trial. *PLOS Medicine*, 17(4), e1003056. 10.1371/journal.pmed.1003056 [PubMed: 32302308]
- Murray LK, Skavenski S, Kane JC, Mayeya J, Dorsey S, Cohen JA, Michalopoulos LTM, Imasiku M, & Bolton PA (2015). Effectiveness of trauma-focused cognitive behavioral therapy among trauma-affected children in Lusaka, Zambia: A randomized clinical trial. *JAMA Pediatrics*, 169(8), 761–769. 10.1001/jamapediatrics.2015.0580 [PubMed: 26111066]
- National Population Commission of Nigeria. (2016). *Violence against children in Nigeria: Findings from a National Survey, 2014*. UNICEF.
- Nguyen KH, Kress H, Villaveces A, & Massetti GM (2019). Sampling design and methodology of the violence against children and youth surveys. *Injury Prevention*, 25(4), 321–327. 10.1136/injuryprev-2018-042916 [PubMed: 30472679]
- Nguyen-Feng VN, Baker MR, Merians AN, & Frazier PA (2017). Sexual victimization, childhood emotional abuse, and distress: Daily coping and perceived control as mediators. *Journal of Counseling Psychology*, 64(6), 672–683. 10.1037/cou0000244 [PubMed: 29154578]
- Pereda N, Gallardo-Pujol D, & Guilera G (2018). Good practices in the assessment of victimization: The Spanish adaptation of the Juvenile Victimization Questionnaire. *Psychology of Violence*, 8(1), 76–86. 10.1037/vio0000075
- Prochaska JJ, Sung H-Y, Max W, Shi Y, & Ong M (2012). Validity study of the K6 scale as a measure of moderate mental distress based on mental health treatment need and utilization: The K6 as a measure of moderate mental distress. *International Journal of Methods in Psychiatric Research*, 21(2), 88–97. 10.1002/mp.1349 [PubMed: 22351472]
- Riedl D, Beck T, Exenberger S, Daniels J, Dejaco D, Unterberger I, & Lampe A (2019). Violence from childhood to adulthood: The influence of child victimization and domestic violence on physical health in later life. *Journal of Psychosomatic Research*, 116, 68–74. 10.1016/j.jpsychores.2018.11.019 [PubMed: 30654997]

- SAMHSA. (2011). Helping children and youth who have experienced traumatic events (No. SMA11-4642). SAMHSA. <https://store.samhsa.gov/product/Helping-Children-and-Youth-Who-Have-Experienced-Traumatic-Events/SMA11-4642>
- Samms-Vaughan M, & Lambert M (2017). The impact of polyvictimisation on children in LMICs: The case of Jamaica. *Health & Medicine*, 22(suppl. 1), 67–80. 10.1080/13548506.2016.1274411
- Schwab-Reese LM, Currie D, Mishra AA, & Peek-Asa C (2018). A comparison of violence victimization and polyvictimization experiences among sexual minority and heterosexual adolescents and young adults. *Journal of Interpersonal Violence*, 36(11–12), NP5874–NP5891. 10.1177/0886260518808853 [PubMed: 30406715]
- Stephen T (2013). Corporal punishment and the rights of the child in Nigeria. *SSRN Electronic Journal*. 10.2139/ssrn.2267108
- Swedo EA, Sumner SA, Hillis SD, Aluzimbi G, Apondi R, Atuchukwu VO, Auld AF, Chipimo PJ, Conkling M, Egbe OE, Kalanda MSH, Mapoma CC, Phiri E, Wasula LN, & Masetti GM (2019). Prevalence of violence victimization and perpetration among persons aged 13–24 years—Four sub-Saharan African countries, 2013–2015. *Morbidity and Mortality Weekly Report*, 68(15), 350–355. 10.15585/mmwr.mm6815a3 [PubMed: 30998666]
- Thompson EL, Coleman JN, O'Connor KE, Farrell AD, & Sullivan TN (2019). Exposure to violence and nonviolent life stressors and their relations to trauma-related distress and problem behaviors among urban early adolescents. *Psychology of Violence*, 10(5), 509–519. 10.1037/vio0000264
- Thornberry TP, Ireland TO, & Smith CA (2001). The importance of timing: The varying impact of childhood and adolescent maltreatment on multiple problem outcomes. *Development and Psychopathology*, 13(4), 957–979. 10.1017/S0954579401004114 [PubMed: 11771916]
- van Der Kolk BA, & Saporta J (1991). The biological response to psychic trauma: Mechanisms and treatment of intrusion and numbing. *Anxiety Research*, 4(3), 199–212. 10.1080/08917779108248774
- Vissoci JRN, Vaca SD, El-Gabri D, de Oliveira LP, Mvungi M, Mmbaga BT, Haglund M, & Staton C (2018). Cross-cultural adaptation and psychometric properties of the Kessler scale of psychological distress to a traumatic brain injury population in Swahili and the Tanzanian setting. *Health and Quality of Life Outcomes*, 16(1), 147. 10.1186/s12955-018-0973-0 [PubMed: 30053816]
- World Health Organization. (2016). INSPIRE: Seven strategies for ending violence against children. World Health Organization. <https://www.who.int/publications-detail-redirect/inspire-seven-strategies-for-ending-violence-against-children>
- Yount KM, Krause KH, & Miedema SS (2017). Preventing gender-based violence victimization in adolescent girls in lower-income countries: Systematic review of reviews. *Social Science & Medicine* (1982), 192, 1–13. 10.1016/j.socscimed.2017.08.038 [PubMed: 28941786]
- Zolotor A, Runyan D, Dunne M, Jain D, Péturs H, Ramirez C, Volkova E, Deb S, Lidchi V, Muhammad T, & Isaeva O (2009). ISPCAN Child Abuse Screening Tool Children's Version (ICAST-C): Instrument development and multi-national pilot testing. *Child Abuse & Neglect*, 33(11), 833–841. 10.1016/j.chiabu.2009.09.004 [PubMed: 19857897]

**Table 1.**Demographic Characteristics of 13–24-Year-Old Females, Nigeria, 2014 ( $n = 1,766$ ).

Characteristic	<i>n</i>	Weighted %	95% CI
Age group (years)			
13–17	797	40.8	37.7, 44.0
18–24	969	59.2	56.0, 62.3
Ethnicity			
Hausa-Fulani	559	32.8	28.3, 37.4
Yoruba	304	16.8	12.4, 21.1
Ibo	328	15.1	12.8, 17.3
Other	575	35.3	30.3, 40.3
Highest level of education completed			
Less than primary	20	3.4 <sup>a</sup>	1.0, 5.8
Primary	150	23.2	18.1, 28.3
Secondary	412	65.9	60.3, 71.5
More than secondary	43	6.5	4.3, 8.7
Do not know/declined	3	1.0 <sup>a</sup>	0.0, 2.2
Marital status			
Never married	1206	68.1	64.2, 72.1
Married or cohabitating	514	29.3	25.4, 33.2
Divorced/separated/widowed	43	2.6	1.7, 3.4
Religion			
Islam	825	48.0	42.9, 53.0
Catholic	213	11.7	8.5, 14.8
Other Christian	718	39.7	34.8, 44.5
Other	10	0.6 <sup>a</sup>	0.13, 1.17

Note. CI = confidence interval. Some categories may not add to the total number of 1,766 due to missing data.

<sup>a</sup>Estimate is unreliable (relative standard error is  $\geq 30\%$ ) and should be interpreted with caution.

**Table 2.**

Lifetime Prevalence of SV, PV, Polyvictimization, and Mental Distress by Characteristics, Nigeria, 2014 ( $n = 1,766$ ).

Lifetime SV		Lifetime PV	
Variable	<i>n</i> (weighted % [95% CI])	Variable	<i>n</i> (weighted % [95% CI])
Overall prevalence	616 (36.3 [32.9, 39.6])	Overall prevalence	1058 (67.9 [63.9, 71.9])
Age of first SV experience (years old), among SV victims		Age of first PV experience (years old), among PV victims	
0–5	11 (1.8 [0.3, 3.3]) <sup>a</sup>	0–5	135 (13.9 [10.9, 16.9])
6–11	50 (7.6 [4.9, 10.3])	6–11	530 (52.4 [47.8, 57.0])
12–17	394 (63.3 [58.3, 68.3])	12–17	271 (27.7 [23.9, 31.6])
18–24	149 (27.3 [22.4, 32.1])	18–24	53 (6.0 [4.1, 7.8])
Lifetime SV prevalence by type		Lifetime PV prevalence by perpetrator	
Sexual exploitation	41 (2.2 [1.3, 3.2])	Intimate partner	156 (13.6 [11.2, 16.0])
Noncontact SV/exploitation	4 (0.2 [0.01, 0.4]) <sup>a</sup>	Peer	396 (20.6 [17.9, 23.2])
Unwanted sexual touching	344 (19.8 [17.0, 22.5])	Parent/adult caregiver	778 (41.0 [37.2, 44.8])
Unwanted attempted sex	336 (18.7 [15.9, 21.5])	Neighborhood adult	610 (33.4 [29.2, 37.6])
Physically forced sex	214 (13.4 [10.9, 15.8])		
Pressured sex	78 (5.3 [3.5, 7.0])		
Number of SV types experienced, lifetime		Number of PV perpetrator types, lifetime	
None	1149 (64.5 [61.2, 67.8])	None	702 (41.5 [37.5, 45.4])
One	329 (18.7 [16.4, 20.9])	One	421 (25.2 [22.4, 28.0])
Two	204 (11.9 [9.5, 14.3])	Two	412 (22.8 [20.0, 25.6])
Three or more	83 (4.9 [3.6, 6.3])	Three or four	225 (10.5 [8.6, 12.5])
<b>Lifetime polyvictimization (SV and PV)</b>		<b>Mental distress in the past 30 days<sup>b</sup></b>	
Category	<i>n</i> (weighted % [95% CI])	Category	<i>n</i> (weighted % [95% CI])
No victimization	556 (32.2 [28.7, 35.7])	None	1194 (68.7 [65.2, 72.3])
One victimization	366 (21.6 [19.0, 24.1])	Moderate	464 (25.5 [22.1, 29.0])
SV victimization	59 (4.1 [2.5, 5.7])	Severe	98 (5.7 [4.3, 7.2])
PV victimization	308 (15.8 [13.5, 18.2])		
Polyvictimization	470 (26.3 [23.2, 29.4])		

*Note.* SV=sexual violence; PV=physical violence; CI=confidence interval. Polyvictimization was defined as follows: (1) no victimization: no SV or PV; (2) one victimization: experienced either one SV type or PV by one perpetrator type; (3) SV victimization: experienced more than one type of SV but not PV; (4) PV victimization: experienced PV by more than one perpetrator but not SV; (5) polyvictimization: experienced at least one type of SV and PV by at least one perpetrator. Some categories may not add to the total number of 1,766 due to missing data.

<sup>a</sup>Estimate is unreliable (relative standard error is  $\geq 30\%$ ) and should be interpreted with caution.

<sup>b</sup>Total scored for mental distress ranged from 0 to 24 (0–4 no mental distress, 5–12 moderate mental distress, 13–24 severe mental distress). Estimate is unreliable (Relative Standard Error is  $\geq 30\%$ ), should be interpreted with caution.

**Table 3.**

Associations Among Age of First Experience of Violence, Victimization, Polyvictimization, and Mental Distress.

<b>Model 1: SV (n = 604)</b>				
	<b>Moderate versus no mental distress</b>		<b>Severe versus no mental distress</b>	
	<b>AOR (95% CI)</b>	<b>p-value</b>	<b>AOR (95% CI)</b>	<b>p-value</b>
Age of first experience of violence (years old)				
0–5	1		1	
6–11	0.75 (0.12, 4.59) <sup>a</sup>	.68	1.61 (0.07, 36.11) <sup>a</sup>	.86
12–17	0.79 (0.15, 4.23) <sup>a</sup>	.70	1.47 (0.11, 19.00) <sup>a</sup>	.91
18–24	1.00 (0.19, 5.28) <sup>a</sup>	.63	1.65 (0.12, 22.05) <sup>a</sup>	.72
SV types				
One	1		1	
Two	1.05 (0.64, 1.72)	.14	0.61 (0.25, 1.48) <sup>a</sup>	.001*
Three or more	2.25 (1.10, 4.63)	.02*	5.27 (2.39, 11.60)	<.001*
<b>Model 2: PV (n = 986)</b>				
	<b>Moderate versus no mental distress</b>		<b>Severe versus no mental distress</b>	
	<b>AOR (95% CI)</b>	<b>p-value</b>	<b>AOR (95% CI)</b>	<b>p-value</b>
Age of first experience of violence (years old)				
0–5	1		1	
6–11	0.99 (0.60, 1.64)	.67	1.80 (0.61, 5.34)	.61
12–17	0.78 (0.45, 1.38)	.36	1.85 (0.60, 5.73)	.66
18–24	0.95 (0.38, 2.37)	.93	6.07 (1.66, 22.21) <sup>a</sup>	.005*
PV perpetrators				
One	1		1	
Two	1.05 (0.69, 1.62)	.50	1.03 (0.43, 2.46)	.98
Three or four	1.41 (0.81, 2.45)	.18	1.09 (0.39, 3.37)	.87
<b>Model 3: polyvictimization (n = 1750)</b>				
	<b>Moderate versus no mental distress</b>		<b>Severe versus no mental distress</b>	
	<b>OR (95% CI)</b>	<b>p-value</b>	<b>OR (95% CI)</b>	<b>p-value</b>
No victimization				
No victimization	1		1	
One victimization	1.31 (0.85, 2.03)	.66	1.17 (0.62, 2.22)	.39
SV victimization	1.36 (0.56, 3.29)	.93	0.57 (0.17, 1.92) <sup>a</sup>	.30
PV victimization	1.12 (0.72, 1.75)	.20	0.69 (0.30, 1.57) <sup>a</sup>	.36
Polyvictimization	2.72 (1.79, 4.13)	<.001*	1.49 (0.85, 2.62)	.03*

*Note.* AOR = adjusted odds ratio; OR = odds ratio; CI = confidence interval. Polyvictimization was defined as follows: (1) no victimization: no SV or PV; (2) one victimization: experienced either one SV type or PV by one perpetrator type; (3) SV victimization: experienced more than one type of SV but not PV; (4) PV victimization: experienced PV by more than one perpetrator but not SV; (5) polyvictimization: experienced at least one type of SV and PV by at least one perpetrator.

<sup>a</sup>Estimate is unreliable (relative standard error is 30%) and should be interpreted with caution. Respondents' age at the time of the interview (in years) may have been a potential confounder in assessing mental distress in each model; we examined each model, accounting for age at assessment (results not displayed) and found that the results did not substantially differ.

\* $p < .05$ .

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript