Ohayi *et al.*
Egyptian Journal of Forensic Sciences (2022) 12:48
https://doi.org/10.1186/s41935-022-00305-2

Egyptian Journal of Forensic Sciences

ORIGINAL ARTICLE Open Access

An analysis of child sexual abuse seen in a teaching hospital of a developing country

Samuel Robsam Ohayi[1,2*], Sunday Gabriel Mba[1,3] and Mark Sunday Ezeme[4]

Abstract

Background: Child sexual abuse (CSA) continues to expand in scope and character and in developing countries is fuelled by poverty, poor policies, and cultural perceptions and practices. It is poorly studied or under-reported in sub-Saharan Africa. This may be due to the taboo placed on sex and ignorance of the consequences of child sexual abuse. The objective of this study was to analyze the characteristics of CSA seen in our environment. An interviewer-administered questionnaire was used to obtain information about children attending a forensic clinic with a history of sexual abuse. Information was obtained from the child and/or an accompanying adult. Descriptive statistics were performed on obtained data.

Results: In the study period, CSA cases represented 72.4% of sexual assault; 98.4% of victims were females. Victims' average age was 10.2±4.2 years (95% CI 9.47–10.93), most (61.1%) lived with both parents, and most presented for care after 72 h of the incident. Most parents/guardians were low-income earners with only secondary education. Most perpetrators (75.6%) were known to their victims and were predominantly artisans (36.6%), while most (43.5%) were aged from 21 to 30 years and 18.3% were adolescents; a greater proportion was unmarried or widowed (52%). The abuse occurred mostly in the perpetrator and victim's home (56.4%). Inducement with gifts and promises (65.1%) was the most means of procuring CSA; in 21.4% of cases, victims were exposed to pornography before the act. Penis (64.3%) and finger (26.2%) were mostly used. Most victims did not sustain injuries (68.6%) and presented without symptoms (64.3%), while 35 (27.7%) had genitourinary symptoms.

Conclusions: In our environment, sexual abuse of children is commoner than that of adults and has characteristics that make it potentially more problematic than usual including a proportionately high number of adolescent perpetrators and involvement of pornographic materials. Preventive measures should be geared towards these and other aspects of the problem.

Keywords: Child sexual abuse, Victims, Perpetrators, Characteristics, Developing country, Adolescent perpetrators, Pornographic material

Background

Child sexual assault (CSA) is a public health problem with severe damaging effects on society. Therefore, United Nations made its prevention part of the Sustainable Development Goals (UNGA 2015). The World Health Organization (WHO) defines CSA as "the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared and cannot give consent, or that violates the laws or social taboos of society" (WHO 2020). CSA acts include attempted or completed sexual intercourse; fondling or making a child touch one's sexual organs or kissing; indecent exposure to a child; exposing a child to pornographic material or deliberately having any type of sexual act in the presence of a child; or using a child for prostitution (UNICEF 2011; WHO 2003).

*Correspondence: robohayi@yahoo.com

[2] Department of Anatomic Pathology & Forensic Medicine, Enugu State University, Teaching Hospital, Parklane, Enugu, Nigeria
Full list of author information is available at the end of the article

The global prevalence of CSA is hard to determine because definition varies across countries and cultures. Reported rates include 8 to 31% for girls and 3–17% for boys (Barth et al. 2003) and 18% and 8% for girls and boys, respectively (Stoltenborgh et al. 2011). The prevalence in sub-Saharan Africa (SSA) is similar though varies between countries (Mwangi et al. 2015; Yahaya et al. 2012; Moore et al. 2007). According to localized Nigerian studies, the prevalence ranges from as low as 0.9% (Chinawa et al. 2013) to as high as 95.1% (Abdulkadir et al. 2011). However, a Nigerian national survey, Violence Against Children Survey, showed that about 6 out of every 10 (about 60%) children will suffer emotional, physical, or sexual violence before the age of 18 years; the first experience usually occurs between the age of 6 and 11 years (UNICEF 2016). According to 2017 estimates, about 47.2% of the Nigerian population is less than 18 years old (UNICEF 2017). Nigeria is diverse in ethnicity, culture, religion, and legal systems making the protection of her children problematic (GN 2021). An estimated 54% of its population lives below the international poverty line exposing her children to poverty and vulnerability to sexual exploitation (UNICEF 2017). For this study, a child is someone who is less than 18 years of age (0 – <18 years) in accordance with the United Nations Convention on the Rights of a Child (UNCRC 2008) and Nigeria's Child's Right Act (GN 2003).

CSA is mostly reported late when they are reported. The commonest reason for this is late discovery. Disclosure in most cases follows the "accidental" discovery of tell-tale signs in a victim (Vrolijk-Bosschaart et al. 2018). Unlike sexual abuse in adults, CSA rarely involves violence. Usually, the perpetrator is someone known to the victim and there may be multiple episodes (Mwangi et al. 2015; Platt et al. 2018; Bugaje et al. 2012; Ezugwu et al. 2017). Adults and older children, male and female can be perpetrators of CSA. Though a number of studies have been done on this subject in other parts of our country, to the best of our knowledge, there is a paucity of the study in our part of the country.

The objective of this study was to identify and analyze the characteristics of victims, perpetrators, and acts of CSA in Enugu, South East Nigeria, and to draw attention to any peculiar aspects of the problem in our environment.

Methods

Structured interviewer-administered questionnaire was used by the Forensic physician to obtain information from children (directly or via the person accompanying them or both) attending the Forensic clinic of a university teaching hospital from February 2019 to January 2020 with complaints of sexual assault. A questionnaire was developed following a review of relevant literature and a discussion of identified themes with relevant experts. Afterwards, a face validity test was conducted on it. The collected data include demographic information of the victim, her parent/guardian, and the assailant(s) where available and relevant information about the index sexual assault. When two parents/guardians accompanied a victim, the information of one of them (volunteered by them) was collected. Ethical clearance was obtained from the teaching hospital's Ethics committee. The procedure and purpose of the data collection were explained to older children and/or parents or guardians accompanying a victim of sexual assault. Assent (from older children) and/or consent (from parent/guardian) were obtained before each interview. Victims and their parents/guardians were assured that refusal to give consent or withdrawal from the interview would not affect their receiving available care. A typical interview was conducted at the first clinic visit.

This research was carried out at a teaching hospital in the city of Enugu, the capital of the Enugu State, in the southeastern part of Nigeria. The city is a cosmopolitan with a population of 772,872 according to 2020 estimates (UNWPR 2020) and has similar demographic characteristics with most other cities in Nigeria with an estimated 50.1% of its population being children while 35.6% and 64.4% of the children are males and females, respectively (UNDESA, Population Division 2022). The population is largely engaged in small-scale commerce, civil service or are artisan (skilled craftsmen) (NNPC 2014).

Data obtained were analyzed for descriptive statistics using IBM SPSS statistics version 20.

Results

There were 126 cases of CSA in the study period representing 12.8% of all interpersonal violence and 72.4% of all sexual abuse seen in the Forensic unit in the period. As shown in Table 1, an overwhelming 98.4% (n=124) of survivors were females. Victims' age range was 2 years to 17 years; the average age was 10.2±4.2 years (95% CI 9.47–10.93) while most were aged 10 years to 14 years (n=64; 50.8%). Most victims (n=77; 61.1%) lived with both parents at the time of the incident. Four (4; 3.2%) victims had not enrolled in any school at the time of the incident while 59 (46.8%) were in a primary. Most victims (n=67; 53.2%) presented to the clinic more than 72 h after the incident. Twenty-eight survivors (22.2%) reported the CSA incident spontaneously (without being prompted or being "caught in the act") while 6 (4.8%) were "caught in the act" and 92 (73.0%) were discovered incidentally (following the questioning after "signs" were observed in a victim).

Table 1 Victims' characteristics

Characteristic/parameter	Number	Percentage
Age in years		
0–5	24	19.0
6–11	47	37.3
12–17	55	43.7
Total	126	100
Sex		
Male	2	1.6
Female	124	98.4
Total	126	100
Custodian		
Both parents	77	61.11
Single parents	13	10.32
Alone/with friends	9	7.14
Foster care	12	9.52
Others[a]	15	11.91
Total	126	100
Highest education		
Primary	59	46.8
Secondary	46	36.5
Tertiary	1	0.8
Pre-primary	16	12.7
Yet to enrol	4	3.2
Total	126	100
Time interval to clinic visit		
≤24 h	36	28.5
25–72 h	20	15.9
>72 h	67	53.2
Don't know/remember	3	2.4
Total	126	100

[a] Older sibling and extended family namely aunt, grandparent, and uncle

Table 2 Characteristics of victims' custodian (parent/guardian)[a]

Characteristic/parameter	Number	%
Education		
Primary	28	22.2
Secondary	62	49.2
Tertiary	36	28.6
Total	126	100
Occupation		
Civil servant	22	17.5
Artisan/trader	72	57.1
Corporate/private sector	14	11.1
Housewife/unemployed	18	14.3
Total	126	100
Place of abode		
High-density area	66	52.4
Medium-density area	31	24.6
Low-density area	15	11.9
Nearby communities/villages	14	11.1
Total	126	100

[a] Where both parents accompanied the child, they volunteered the demographic information of one of them

As shown in Table 2, most parents/guardians were of low socioeconomic class with 80 (63.5%) living in high-density areas of the city where they shared conveniences or in the surrounding rural villages and 67 (53.2%) having average annual household income below $354 reported to be the average annual household income in our country in 2020 (Statista 2020a, b). Secondary education was the highest education attained by most parents/guardians (n=62; 49.2%), most were artisans or petty traders (n=72; 57.1%) while 18 (14.3%) were unemployed housewives. In 61.9% (n=78) and 17.5% (n=22) of cases, parents/guardians felt that the assailant and the survivor respectively should be blamed for the incident.

Table 3 is a display of the characteristics of CSA perpetrators. A total of 131 persons perpetrated the 126 acts of CSA in this study; 121 acts were perpetrated by a single assailant while the rest were perpetrated by 2 or more assailants. Most perpetrators (n=99; 75.6%) were known to their victims before the incident while 11 (8.4%) were shop owners to whom the survivors had gone to buy. Perpetrators were predominantly artisans, a demographic characteristic in our country for craftsmen and handymen (n=48; 36.6%); 20 (15.3%) were secondary and tertiary level students. A greater proportion of perpetrators (57; 43.5%) was estimated to be aged from 21 to 30 years. Also, a greater proportion was unmarried (n=53; 40.5%) while 13 (11.5%) were widowed. Characteristics of the rape incidents are shown in Table 4. The most common place where CSA occurred is perpetrator's place, i.e., home or business facility (n=38; 30.2%), followed by victim's home (n=33; 26.2%) and bush (n=21; 16.7%). The method mostly used to procure the act is inducement with gifts of money, goods, and various promises including marriage (n=82; 65.1%). In 27 (21.4%) cases, victims reported that they were exposed to pornographic materials while 8 (6.4%) of the victims could not tell whether or not such exposure occurred. Object mostly used for the act was penis (n=81; 64.3%) followed by finger (n=33; 26.2%). Other objects used include a stick, tongue, candle, and pen was also used (n=14; 11.1%). Most survivors were assaulted once (n=111; 88.0%) and by one assailant (n=123; 97.6%); mostly, 99 (68.6%) did not sustain any form of injuries (Fig. 1). Concerning complications of the sexual assault (Fig. 2), 81 (64.3%) had no symptoms at presentation while 35 (27.7%) had symptoms of urogenital infections.

Table 3 Perpetrators' characteristics

Characteristic	Number	%
Sex		
Male	128	97.7
Female	3	2.3
Total	131	100
Estimated age		
≤20	24	18.3
21–30	57	43.5
31–40	26	19.9
>40	11	8.4
Don't know	13	9.9
Total	131	100
Relationship to victim		
Robber/stranger	21	16.0
Family	9	6.9
Sundry acquaintance[a]	100	76.3
Ex-boyfriend	1	0.8
Total	131	100
Occupation		
Employed (government/corporate)	23	17.6
Artisan/shop owner	62	47.3
Student	20	15.3
Unemployed	10	7.6
Not known	16	12.2
Total	131	100
Marital status		
Married	38	29.0
Never married/widowed/divorced/separated	66	50.4
Not known	27	20.6
Total	131	100

[a] Gateman, school teacher, school bus driver, house help, church member, neighbor, parent's friend, and shop owner

Table 4 Characteristics of the index rape event

Characteristic/parameter	Number	%
Place rape occurred		
Perpetrator's place—home or business facility	38	30.2
Victim's home	33	26.2
Bush	21	16.7
Uncompleted building	9	7.1
Hotel	1	0.8
School	12	9.5
Bathroom (in a public yard)	12	9.5
Total	126	100
Method of procurement of rape		
Inducement[a]	82	65.1
Force & threat of force	36	28.6
Incapacitation	7	5.6
Mixed methods (inducement & force/threat of force)	6	4.8
Don't know	9	7.1
Total	126	111.2
Object used		
Penis	81	64.3
Finger	33	26.2
Others[b]	14	11.1
Don't know/recall	4	3.2
Total		104.8
Exposure to pornographic material as part of the CSA act		
Yes	27	21.4
No	91	72.2
Don't know/remember	8	6.4
Total	126	100

[a] With gifts (monetary and other tangibles), promises

[b] Stick, tongue, candle, pen

Discussion

CSA continues to expand in scope and character being fuelled in developing countries like ours by poverty and poor policies or poor policy execution. According to the United Nations Children's Fund, UNICEF, the prevalence rate of child labor in Nigeria is 25% (UNICEF 2017). Additionally, Audu et al. reported that 40% of female child laborers in Nigeria are sexually abused (2009). Nigeria has no national action plan targeted at CSA specifically though there is a legislation against it (ECPAT/WOCON 2018) while ancillary agencies like the Department of Child Development saddled with the protection of child rights and the National Agency for the Prohibition of Trafficking in Persons (NAPTIP) perennially report lack of funds and human resources to function optimally (2017). In another hand, only a few hotels and tour operators have signed the *Code of Conduct for the Protection of Children from Sexual Exploitation in Travel and Tourism* which aims to protect children from sexual abuse in the context of travel and tourism (The Code 2021). Though this work is hospital-based research and may not be extrapolated to the community at large, the prevalence of 12.8% obtained is similar to results from community-based research (UNICEF 2011; Stoltenborgh et al. 2011; Mwangi et al. 2015; Ward et al. 2018) but differs from other works with lower rates of 0.9% (Chinawa et al. 2013) and 0.84% (Hassan et al. 2016) or higher rates of 95.1% (Abdulkadir et al. 2011), 60% (UNICEF 2016), and 25.7% (David et al. 2018). Wide variations in prevalence rates and possible explanations are well documented (Ward et al. 2018; Ajduković et al. 2013). CSA constituted about three quarters of sexual violence encountered in our center during the study period. Whether this underscores a preference for sexual predators for children or the vulnerability of children to sexual violence or both could be the subject of another study. A preponderance of CSA victims (98.4%) in this study are

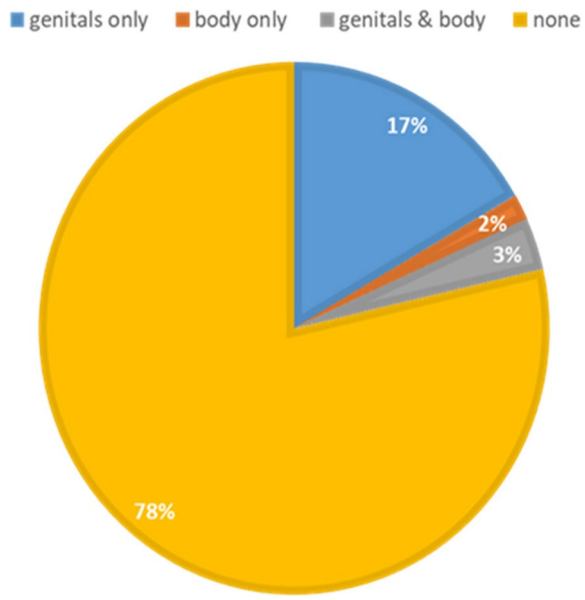

Fig. 1 Physical injuries sustained by victims

females similar to findings of 93.9%, 75.5%, 85.0%, 81.7%, and 99.1% from studies in Abakaliki, Southeast Nigeria (Chinawa et al. 2013); Brazil (Platt et al. 2018); Zaria, Northwest Nigeria (Bugaje et al. 2012); Lagos, Southwest Nigeria (David et al. 2018); and Malawi (Mulambia et al. 2018), respectively, and of only 1 male victim in 3 years reported from Botswana (Ramabu 2020). However, it differs from the report of 100% of female victims from Ibadan, Nigeria (Ige and Fawole 2012). The reported low proportion of male victims may be due to poor reporting possibly due to male ego (David et al. 2018; Mulambia et al. 2018; Easton 2014; Donnelly and Kenyon 1996; Alaggia 2010) and the patriarchal nature of our society. However, the finding nevertheless shows that in our society, contrary to the popular belief, males can also be victims of CSA. The peak age range of victims in this study is comparable to findings from other studies (Chinawa et al. 2013; Platt et al. 2018; Bugaje et al. 2012; David et al. 2018). However, a WHO review study showed that there is a wide variation in the age at which a CSA event occurs though the first event usually occurred at age 5–14 years (Andrews et al. 2004). The average age of victims in this study compares to those from other studies (David et al. 2018; Balogun and Adenowuro 2020). Predators' choice of early and mid-teenagers may be because of the attraction of nascent sexual maturity, easiness to be tricked into sexual intercourse, and low capacity for physical resistance. Also, the perceived virgin status may be an added attraction since in our culture men take pride in taking virginity from girls while girls also take pride in their virginity status. The proportion of victims not enrolled in school is comparable to the finding in another study (Mulambia et al. 2018). Though the relationship between school enrolment and risk for CSA was not determined in this study, some studies have suggested that being enrolled in school constitutes a risk for CSA (Mwangi et al. 2015; Yahaya et al. 2015; Ward et al. 2018) while another study inferred a two-way relationship between enrolment in school and CSA where dropping out of school increases the risk for CSA but on another hand results from sexual harassment at school (Ramabu 2020). This is an area for further study in our environment. Similar to reports from other studies (Bugaje et al. 2012; Ige and Fawole 2012; Ohayi and Ezugwu 2019), most victims in this study reported the CSA incident after 72 h of the

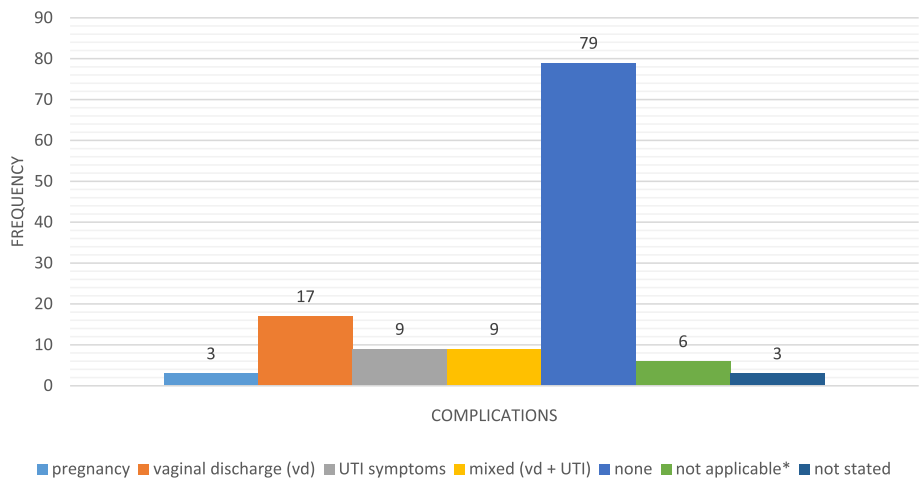

Fig. 2 Complications of CSA at presentation

event; also the proportion that reported the event spontaneously was similar to that published by WHO (2003) but lower than that reported by other authors (David et al. 2018; Priebe and Svedin 2008). Though this study did not explore the reasons for late reporting or unwillingness to report CSA, reasons already documented include the feeling of shame; fear of stigma; fear that the survivor would not be believed, that they will be scolded, of the abuser and that they may not get justice and in the case involving a family member, the desire to not sully the family name (Yahaya et al. 2012; Ezugwu et al. 2017; David et al. 2018; Balogun and Adenowuro 2020; Priebe and Svedin 2008). Because children show great difficulty with disclosing CSA, scholars propose that a child of with certain signs and symptoms should be evaluated for sexual abuse (Vrolijk-Bosschaart et al. 2018; RCPaed 2013). While clinicians watch out for CSA, there should be dedicated and concerted efforts towards addressing the reasons for the reluctance to report child sexual abuse.

Most victims (69.8%) in this study live with either both their parents or in homes where both parents are also available. This is similar to reports from other studies (Ward et al. 2018; David et al. 2018; Ige and Fawole 2012; Balogun and Adenowuro 2020) but differs from a study in Malawi which reported that most victims live with a single parent (Mulambia et al. 2018). Our finding mirrors the practice in our society where people live with parents up to early adulthood; also, it may strengthen the notion that divorce rate is still low in our society. Similar to findings from other studies (David et al. 2018; Odeyemi et al. 2009), most parents/guardians in this study had only secondary education; most also were artisans. Also, most belong to the lower socioeconomic spectrum similar to findings from other studies (David et al. 2018; Ajduković et al. 2013; Ige and Fawole 2012).

Most perpetrators (97.7%) in this study were males similar to findings from other studies (Yahaya et al. 2012; Platt et al. 2018; Ezugwu et al. 2017; Ajduković et al. 2013) but in contrast with 46% of female perpetrators of adolescent CSA reported by Balogun and Adenowuro (2020). Our finding may be because our culture fosters male superiority over females and makes females volunteer control over males. Ajduković et al. (2013) also found that females are the predominant perpetrators against male victims. In contrast, however, none of the male CSA in our study was perpetrated by a female. However, this study shows that females should not be overlooked as potential perpetrators of CSA in our environment especially as the "house-help" system is common practice and involves females mostly. The involvement of adolescents as perpetrators in our study is comparable to findings from studies in Kenya (Mwangi et al. 2015), Abakaliki Southeast Nigeria (Chinawa et al. 2013), and Ibadan Southwest Nigeria (Balogun and Adenowuro 2020). This trend can breed future pedophiles; also adolescents as potential perpetrators can be overlooked since CSA is largely believed to be perpetrated by adults. Thirdly, successful prosecution of the offense can lead to irredeemable disruption of the adolescent perpetrator's life. Programs to discourage adolescents from engaging in CSA are therefore needed.

Most perpetrators in this study were known to their victims a finding similar to other reports (Mwangi et al. 2015; Platt et al. 2018; Bugaje et al. 2012; David et al. 2018; Ajduković et al. 2013; Balogun and Adenowuro 2020) but contrary to that by Terry and Tallon (2004). Children are very trusting and easily take to people especially those known to them. Parents and guardians should be watchful to identify when people around try to nourish this trust unduly. The proportion of CSA perpetrated by a family member/relative in our study is similar to that reported by David et al. (2018) but lower than rates reported from Kenyan (Mwangi et al. 2015) and higher than that reported from Botswana (Ramabu 2020). This finding has a social significance to our society where the family relationship is considered inviolable and incest deeply abhorred. It could also reflect collapsing family structure and values with the resulting revolt against the norm. The sociocultural impact of relative-perpetrated CSA on the family in an African context has been documented (Mulambia et al. 2018). In Brazil, the law grants guardianship change when the perpetrator of CSA is a family member (Platt et al. 2018). Most perpetrators in this study belong to the poor socioeconomic spectrum similar to the finding by Chinawa et al. (2013). The reason for this is not clear, but it may be that not being adequately engaged makes such persons reach for children for sexual gratification and self-assurance since children are easier targets. Most perpetrators were not living with a spouse when the incident occurred a finding comparable to the report by Bugaje et al. (2012). The proportion of unmarried perpetrators in our study may have been affected by adolescent perpetrators. However, the relationship between not living with a wife and engaging in rape could be an area for research especially against scripture's admonition that "It is better to marry than to burn with passion" (The Bible, New International Version 1992).

With respect to CSA characteristics, the most common place perpetrators in our study carry out their act is similar to reports from other studies (Platt et al. 2018; David et al. 2018; Ige and Fawole 2012; Balogun and Adenowuro 2020). This finding highlights the need for parents and guardians to realize that homes may no longer be the sanctuary they used to be. Bush and uncompleted buildings were used in 23.8% of cases. This may buttress

the notion that CSA is an act fuelled by opportunism. In our study, CSA was mostly procured using inducement with different gifts and promises (65.1%) far higher than the 8.3% use of inducement with money reported by Ige and Fawole (2012) though information about the method of procuring CSA was missing in 47.2% of cases they studied. Our finding is comparable to the report by David et al. (2018). Poverty and innate vulnerability of children may be the combined factors that make inducement a useful tool for the perpetrators in this study. An important finding is the fact that the adolescent perpetrators in this study were responsible for 4 (57.1%) of the 7 cases in which incapacitation was used to procure sex. This further highlights the well-documented drug problem in our society (Jatau et al. 2021; NNBS 2019). Most victims in this study suffered 1 episode of sexual abuse similar to other reports (Bugaje et al. 2012; Hassan et al. 2016) but contrary to the report by Platt et al. (2018) which showed that the proportions of single-episode and multiple-episode victims were approximately equal. The reason for a one-off rape event is not clear, but it could be that the perpetrator does that to avoid being caught. The exploration of this aspect of CSA can enrich our understanding of CSA and might be a subject to further research. Most cases in this study involved only one perpetrator similar to findings from other studies (Mwangi et al. 2015; Platt et al. 2018; Ige and Fawole 2012). The reason for this is not clear. It is possible that assailants choose to act alone to better preserve their secret. Added to the penis which was the most common object used in our study perpetrators also used other objects like the use of the finger, tongue, and piece of stick similar to a report from other studies (Chinawa et al. 2013; Balogun and Adenowuro 2020). It may be that perpetrators prefer these other objects so as to avoid getting their victims pregnant or that some adopt the methods for some form of adventure. Some victims in our study were exposed to pornographic material similar to reports from other works (Ward et al. 2018; David et al. 2018). For several years, telecommunication was an ill-afforded luxury in our country. That changed in 2001 when mobile phone technology was introduced into our country which subsequently astronomically expanded Internet access that by December 2020, an estimated 93.62 million people had access (Statista 2020a, b). With this, enhanced access came the inadvertent increase in the risk for CSA since the Internet enables access to child sexual assault material (CSAM) and online child sexual exploitation (OCSE) (ECPAT/WOCON 2018). Our finding seems to support this finding especially as previous Nigeria studies (Chinawa et al. 2013; Abdulkadir et al. 2011; Bugaje et al. 2012; Ezugwu et al. 2017; Ige and Fawole 2012; Balogun and Adenowuro 2020; Ohayi and Ezugwu 2019; Odeyemi et al. 2009) rarely reported the association between CSA and pornographic material; however, a link has not been statistically established by the study. In response to this development, the Nigerian Government enacted the Cybercrime Prohibition and Preventions Act making an offense to produce, procure, offer, distribute, disseminate, or possession of CSAM (GN 2015). Monitoring and enforcement of this law are still met with significant difficulty making the need for its strict enforcement paramount (ECPAT/WOCON 2018). The proportion of victims with injuries in this study is similar to that reported in earlier works (Bugaje et al. 2012; Ward et al. 2018; Ige and Fawole 2012) though lower than that reported by Chinawa et al. (2013). Injury is not a usual outcome of CSA as children usually do not resist or are easily subdued by the threat of force at most. We found genitourinary infection to be the most common outcome of CSA similar to findings from Zaria (Bugaje et al., 2012). This makes routine antibiotics imperative for victims. Pregnancy was an outcome in 2.4% of cases in this study comparable to 4.5% reported from Brazil (Platt et al. 2018). Pregnancy is a major life-disrupting outcome making emergency contraception imperative. For similar reasons, a study in Botswana recommended that pregnancy should be routinely investigated in adolescent victims of sexual abuse (Ramabu 2020). Victims in our study who had attained menarche and whose menstrual history suggested that they could not be pregnant at the time of presentation were given emergency contraceptive pills if they presented within 5 days of the CSA event.

Limitations of this study derive mainly from the nature of the study population which comprised only those with an alleged history of CSA. In addition, this study was conducted in only one center. The findings therefore may not be extrapolated to the general population. Also, there may be information recall bias because having already alleged sexual violence against them they may tailor their story to support that claim.

Conclusions

Child sexual abuse in our society has characteristics that make it potentially more problematic than usual. This includes the relatively high number of adolescent perpetrators and relatively novel associations with pornographic materials. Preventive measures geared towards these and other aspects of the problem should be developed and judiciously deployed.

Abbreviations

CSA: Child sexual abuse; CSAM: Child sexual abuse material; GN: Government of Nigeria; NAPTIP: National Agency for the Prohibition of Trafficking in Persons; NNBS: Nigerian National Bureau of Statistics; NNPC: Nigerian National Population Commission; OCSE: Online Child Sexual Exploitation; RCPaed: Royal College of Paediatrics; SSA: Sub-Saharan Africa; UNCRC: United Nations

Convention on the Rights of a Child; UNICEF: United Nations Children's Fund; UNDESA: United Nations Department Economic and Social Affairs; UNGA: United Nations General Assembly; UNWPR: United Nations World Population Review; WOCON: Women Consortium of Nigeria; WHO: World Health Organization.

Acknowledgements
Not applicable.

Authors' contributions
SRO conceived the research and made substantial contribution to its design, acquisition, analysis and interpretation of the data, and drafting and revision of the article. SGM contributed to the data analysis and interpretation and revision of the article. MSE contributed to the data analysis, drafting, and revision of the article. The authors approved the version submitted to this journal.

Funding
The authors did not receive any funding for this research.

Availability of data and materials
All data generated and analyzed during this study are included in this published is article.

Declarations

Ethics approval and consent to participate
Ethical approval for the study was obtained from the hospital's Ethics Committee while consent was obtained from the patient/accompanying persons.

Consent for publication
All authors have given their consent for the publication of the article and also undertake to be personally accountable for their contributions.

Competing interests
The authors declare that they have no competing interests.

Author details
[1]Forensic Unit, Department of Histopathology, Enugu State University Teaching Hospital, Parklane, Enugu, Nigeria. [2]Department of Anatomic Pathology & Forensic Medicine, Enugu State University, Teaching Hospital, Parklane, Enugu, Nigeria. [3]Department of Obstetrics & Gynaecology, Enugu State University Teaching Hospital, Parklane, Enugu, Nigeria. [4]Department of Psychiatry, Enugu State University Teaching Hospital, Parklane, Enugu, Nigeria.

Received: 9 August 2022 Accepted: 21 October 2022
Published online: 01 November 2022

References

Abdulkadir I, Umar LW, Musa HH, Musa S, Oyeniyi OA, Ayoola-William OM et al (2011) Child sexual abuse in Minna, Niger state. Niger Med J 52(2):79–82
Ajduković M, Sušac N, Rajter M (2013) Gender and age differences in prevalence and incidence of child sexual abuse in Croatia. Croat Med J 54:469–479
Alaggia R (2010) An ecological analysis of child sexual abuse disclosure: considerations for child and adolescent mental health. J Can Acad Child Adolesc Psychiatry 19:32–39
Andrews G, Corry J, Slade T, Issakidis C, Swanston H (2004) Child sexual abuse. In: Ezzati M, Lopez AD, Rodgers A, Murray CJL (eds) Comparative quantification of health risks: global and regional burden of disease attributable to selected major risk factors. WHO, Geneve, pp 1851–1940
Audu B, Geidman A, Jarna H (2009) Child labour and sexual assault among girls in Maiduguri, Nigeria. Int J Gynecol Obstet 104:64–67
Balogun FM, Adenowuro OE (2020) Prevalence and pattern of child sexual abuse: a cross-sectional study among male secondary school adolescents in Ibadan, Nigeria. J Child Adolesc Health 4(1):1–8
Barth J, Bermetz L, Heim E, Trelle S, Tonia T (2003) The current prevalence of child sexual abuse worldwide: a systematic review and meta-analysis. Int J Public Health 58:469–483
Bugaje MA, Ogunride GO, Farouk JA (2012) Child sexual abuse in Zaria, Northwestern Nigeria. Niger J Paediatr 39(3):110–114
Chinawa JM, Ibekwe RC, Ibekwe MU, Obi E, Muoneke VU, Obu DC et al (2013) Prevalence and pattern of sexual abuse among children attending Ebonyi State University Teaching Hospital, Abakaliki, Ebonyi state. Niger J Paediatr 40(3):227–231
David N, Ezechi O, Wapmuk A, Gbajabiamila T, Ohihoin A, Herbertson E et al (2018) Child sexual abuse and disclosure in South Western Nigeria: a community based study. Afr Health Sci 18(2):199–208
Donnelly DA, Kenyon S (1996) "Honey, we don't do men": gender stereotypes and the provision of services to sexually assaulted males. J Interp Viol 11(3):441–448. https://doi.org/10.1177/088626096011003009
Easton SD (2014) Masculine norms, disclosure, and childhood adversities predict long-term mental distress among men with histories of child sexual abuse. Child Abuse Negl 38(2):243–251
ECPAT International/Women Consortium of Nigeria (WOCON) (2018) Sexual exploitation of children in Nigeria: submission for the Universal Periodic Review of the human rights situation in Nigeria to the Human Rights Council, 31st Session (October – November 2018), UPR third cycle 2017 – 2021. Available at: https://uprdoc.ohchr/org/uprweb/downloadfile.aspx?filename=5926&file=EnglishTranslation
Ezugwu EC, Ohayi SR, Iyoke AC, Nnaji HC (2017) Characteristics of perpetrators of rape of the girl child in a low resource setting in Enugu South East Nigeria, Nigeria. Ann Med Health Sci Res 7:180–184
Government of Nigeria (2003) Child's Right Act. Available at: http://www.placng.org/new/laws/C50.pdf
Government of Nigeria (2015) Cybercrime (Prohibition, Prevention, Etc.) Act 2015. Available at: https://cert.gov.ng/ngcert/resources/CyberCrime_Prohibition,Prevention,etc_Act_2015.pdf
Government of Nigeria (2021) Constitution of the Federal Republic of Nigeria, 1999. http://www.nigerialaw.org/ConstitutionOfTheFederalRepublicOfNigeria.htm. Accessed 16 June 2021
Hassan M, Awosan KJ, Panti AA, Nasir S, Tunau K, Umar AG et al (2016) Prevalence and pattern of sexual assault in Usmanu Danfodiyo University Teaching Hospital, Sokoto, Nigeria. Pan Afr Med J 24:332. https://doi.org/10.11604/pamj.2016.24.332.9462
Ige OK, Fawole OI (2012) Evaluating the medical care of child sexual abuse victims in a general hospital in Ibadan, Nigeria. Ghana Med J 46(1):22–26
Jatau AI, Sha'ban A, Gulma KA, Shitu Z, Khalid GM, Isa A et al (2021) The burden of drug abuse in Nigeria: a scoping review of epidemiological studies and drug laws. Public Health Rev 42:1603960. https://doi.org/10.3389/phrs.2021.1603960
Moore AM, Awusabo-Asare K, Madise N, John-Langba J, Kumi-Kyereme A (2007) Coerced first sex among adolescent girls in sub-Saharan Africa: prevalence and context. Afr J Reprod Health 11(3):62–82
Mulambia Y, Miller AJ, MacDonald G, Kennedy N (2018) Are one-stop centres an appropriate model to deliver services to sexually abused children in urban Malawi? BMC Pediatr 18:145
Mwangi MW, Kellogg TA, Brookmeyer K, Buluma R, Chiang L, Otieno-Nyunya B et al (2015) Perpetrators and context of child sexual abuse in Kenya. Child Abuse Negl 44:46–55
National Agency for the Prohibition of Trafficking in Persons (NAPTIP), Research and Programme Development Department (2017) Data analysis (April-September). https://www.naptip.gov.ng/wp-content/uploads/2017/05/2017-April-September-data-analysis.pdf. Accessed 24 Jan 2022
Nigerian National Bureau of Statistics (2019) National Survey on Drug Use and Health 2016-2017, First round. Available at: https://nigerianstat.gov.ng/nada/index.php/catalog/64
Nigerian National Population Commission (2014) https://www.citypopulation.de/php/nigeria-admin.php?adm1id=NGA014. Accessed 13 Mar 2022
Odeyemi KA, Onajole AT, Ogunnowo BE (2009) Sexual behavior and the influencing factors among out of school female adolescents in Mushin market, Lagos, Nigeria. Int J Adolesc Med Health 21(1):101–109
Ohayi SR, Ezugwu EC (2019) Prevalence and pattern of genital injuries among adolescent rape victims attending Enugu State University Teaching Hospital, South East Nigeria. J Obstet Gynaecol 39(2):190–194

Platt VB, Back IC, Hauschild DB, Guedert JM (2018) Sexual violence against children: authors, victims and consequences. Ciên Saúde Colet 23(4):1019–1031
Priebe G, Svedin CG (2008) Child sexual abuse is largely hidden from adult society. An epidemiological study of adolescent disclosures. Child Abuse Negl 32(12):1095–1098
Ramabu NM (2020) The extent of child sexual abuse in Botswana: hidden in plain sight. Heliyon 6:e03815
Royal College of Paediatrics and Child Health (2013) Child protection companion, 2nd edn. Royal College of Paediatrics and Child Health, London
Statista (2020a) Internet users in Nigeria from 2017 to 2026 (in millions). Available at: https://statista.com/statistics/183849/internet-users-nigeria/
Statista (2020b) Monthly living wage in Nigeria. Available at: https://www.statista.com/statistics/1119087/monthly-living-wage-in-nigeria/#statisticContainer
Stoltenborgh M, van IJzendoorn MH, Euser EM, Bakermans-Kranenburg MJ (2011) A global perspective on child sexual abuse: meta-analysis of prevalence around the world. Child Maltreat 16:79–101
Terry KJ, Tallon J (2004) Child sexual abuse: a review of the literature. Available at: https://www.ncjrs.gov/App/publications/Abstract.aspx?id=207964
The Bible, New International Version (1992) Zondervan Publishing House (Original work published 1973), Grand Rapids.
The Code (2021) Members of The Code. http://www.thecode.org/who-havesigned/members/
United Nations Children's Fund (UNICEF) (2017) The state of the world's children 2017; a fair chance for every child, 175, https://www.unicef.org/publications/files/SOWC_2017_ENG_WEB.pdf. Accessed 14 Mar 2022
United Nations Convention on the Rights of the Child (2008) http://www2.ohchr.org/english/bodies/crc/docs/AdvanceVersions/CRC.C.GBR.CO.4.pdf. Accessed 15 June 2021
United Nations Department of Economic and Social Affairs, Population Division. World population prospects 2022, online edition. https://population.un.org/wpp/Download/Standard/Population/. Accessed 13 Sept 2022
United Nations General Assembly (2015) Transforming our world: the 2030 agenda for sustainable development. Available at: https://sustainabledevelopment.un.og/post2015/transformingourworld
United Nations World Population Review (2020) https://worldpopulationreview.com/world-cities/enugu-population. Accessed 13 Sept 2022
United Nations' Children's Fund (UNICEF) (2016) Ending violence against children in Nigeria, a Year of Action Progress Report on the Implementation of Priority Actions to End Violence Against Children 2015-2016. Available at: https://www.unicef.org/nigeria/resources_11016.html
United Nations' Children's Fund (UNICEF)1 (2011) Child protection from violence, exploitation and abuse. Available at: www.unicef.org>protection
Vrolijk-Bosschaart TF, Brilleslijper-Kater SN, Benninga MA, Lindauer RJL, Teeuw AH (2018) Clinical practice: recognizing child sexual abuse - what makes it so difficult? Eur J Pediatr 177:1343–1350
Ward CL, Artz L, Leoschut L, Kassanjee R, Burton P (2018) Sexual violence against children in South Africa: a nationally representative cross-sectional study of prevalence and correlates. Lancet Glob Health 6:e460–e468
World Health Organisation (2003) Guidelines for medico-legal care for victims of sexual violence. Available at: www.who.int/violence_injury_prevention/…/en/guidelines_chap7.pdf
World Health Organisation (2020) Child sexual abuse global estimates. Available at: https://www.who.int/
Yahaya I, Soares J, Ponce De Leon A, Macassa G (2012) A comparative study of the socio-economic factors associated with childhood sexual abuse in sub-Saharan Africa. Pan Afr Med J 11:51

Publisher's Note