

Juvenile sexual offending in Ghana: Prevalence, Risks and Correlates

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Abstract

Background: Sexual violence research in Africa is overwhelmingly focused on victims with little attention given to perpetrators. In the case of juveniles who perpetrate sexual violence the evidence is mainly from studies in Western industrialized societies. The consequence is that interventions for juveniles who commit sexual violence in Ghana and Africa lack evidential basis.

Objectives: This study investigates prevalence, correlates and risk factors for juvenile sexual offending.

Participants and setting: The study utilised a sample of 264 male juveniles aged 12-18 in schools and young offender institutions in southern Ghana.

Method: Prevalence of the juvenile sexual offending was estimated based on self-report. Odds ratio (OR) was used to calculate the risk for the juveniles engaging in sexual violence. The predictive significance of variables within various domains was estimated using logistic regression models.

Results: Results show that about a fifth (16.7%) of the juveniles have committed a sexual offense. A deviant sexual tendency such as paying for sex constitutes an important risk marker for juvenile sexual offending (OR: 6.41, 95% CI [3.28-12.54]). Risk factors for juvenile sexual offending are concentrated in the family domain with parental neglect (OR: 4.55, 95% CI [2.46-9.44]), parental conflict (OR: 4.45, 95% CI [2.35-8.44]) alcoholic parents (OR: 3.07, 95% CI [1.66-5.69]) parental abuse (OR: 2.90, 95% CI [1.63-5.19]), and deprived family economic condition (OR: 2.64, 95% CI [1.47-4.75]) emerging as statistically significant factors.

Conclusion: Prevalence estimates of juvenile sexual offending are influenced by types and number of questions with multiple questions eliciting more accurate estimates than a single item measure. Risk factors for juvenile sexual offending vary based on context. Interventions to reduce juvenile sexual violence must be informed by evidence from the social context.

Keywords: *juvenile sexual violence; sexual offending; risk factors; sexual abuse in Africa*

1. Introduction

There has been increasing global concern about the problem of sexual violence (Finkelhor, Ormrod, & Chaffin, 2009; Krug et al., 2002; Leach, 2003; Stoltenborgh et al., 2011). Studies show that one in four women have been victim of sexual violence, and up to a third of adolescent girls report that their first sexual encounter was by force (Flatley, 2016; Jewkes et al., 2006). Estimates of sexual violence in Africa vary considerably and these variations are in part due to the lack of adequate data collection system (Jewkes & Abrahams, 2002; Jewkes et al., 2006; Lahor, 2004; Stoltenborgh et al., 2011). In Ghana police official record report average incidence rate of 19.5 child rape per 100,000 girls (up to age 19) and 4.8 rape per 100,000 women in the last 5 years (2010-2014) (Domestic Violence and Victim Support Unit, [DOVSSU] 2016). Various studies provide varying prevalence estimates of sexual violence ranging from 6 to 33 per cent depending on the data source, type of sample and definition employed in the study (Boakye, 2009b; Child Research and Resource Centre, 2009; Coker-Appiah & Cusack, 1999; Tenkorang & Owusu, 2013). Overall, the evidence from both official records and results from prevalence studies indicate that the majority of the abuse occurred when the victim was young and offenders are usually classmates and male acquaintance (Appiah-Coker & Cusack, 1999; Boakye, 2009b; Flatley, 2016; Jewkes et al., 2006).

Although the problem of sexual violence in Africa is recognised, few studies focus on perpetrators (Jewkes et al., 2006; Jewkes et al., 2012) and hardly any research on risk factors for perpetration of juvenile sexual violence. Whatever sexual abuse studies in Africa are generally focused on victims' characteristics and sociocultural conditions in explaining sexual abuse victimisation (Jewkes & Abrahams, 2002; Jewkes et al., 2006; Richter et al., 2004; Stoltenborgh et al.,

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2011). This focus on victims could be a consequence of the difficulty in researching sexual offenders (Finkelhor et al., 2009) as well as the influence of feminist perspective on sexual violence research in Africa (e.g., Boakye, 2009a; Coker-Appiah & Cusack, 1999; Herman, 1990; Jewkes et al., 2006).

It is important to seek explanation for sexual abuse from victims' perspective including the sociocultural condition that may increase risk of sexual victimisation. However, there are also several compelling reasons to focus research attention on perpetrators of sexual violence and factors that may explain their offending behavior. First, as shown in both official records and community surveys, the majority of those who commit sexual offending are men, with a significant proportion engaging in their first sexual offense in the teenage years (Herman, 1990; Piquero et al., 2012). Prevalence estimates across studies generally suggest that about 25% of all sexual abuse is committed by juveniles (Finkelhor et al., 2009; Hutton & Whyte, 2006). Second, studies show that juveniles who commit sexual violence are likely to be versatile in their offending career. That is, not only do those who commit sexual violence tend to begin their offending early (Piquero et al., 2012) they also are likely to engage in other types of offenses as well as continue their offending behavior into adulthood (Becker, Cunningham-Rathner, & Kaplan, 1986; Finkelhor et al., 2009; Hagan et al., 2001; McCann & Lussier, 2008; Piquero et al. 2012). Third, studies show that juvenile sexual offending can have severe physical and psychological impact on victims (Abel, Becker, & Cunningham-Rathner, 1984; Tharp et al., 2012). In the case of Ghana, for example, the risk of sexual violence and the negative physical and psychological effects of this crime on victims is evident whether in the home (Boakye, 2009b; Coker-Appiah & Cusack, 1999) at school (Leach, 2003) or on the street (Oduro, 2012).

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And last, whilst it is important to understand victims and victim characteristics that may increase risk of victimisation, effective prevention or reduction in the incidence of sexual violence require that attention is given to those who perpetrate these acts to understand factors and conditions that may increase risk for juvenile involvement in sexual violence. Identifying and targeting these factors in prevention and advocacy programmes may be more effective and efficient way of utilising scarce resources to make meaningful impact than the current overwhelming focus on victims and macro-level conditions that increase risk of victimisation. This present study aims to investigate factors in the individual and family domain that increase risk for juvenile male perpetration of sexual violence in Ghana. The study shifts the focus away from the victim to the perpetrator and assesses the conditions that increase risk for engaging in sexual violence.

1.1 Juveniles who commit sexual violence

Research on risk factors for engaging in sexual violence has focused primarily on adult offenders (Carpentier & Proulx, 2011). The majority of the studies have been primarily concerned with factors related to recidivism of adult sexual violence (Carpentier & Proulx, 2011; Hanson & Morton-Bourgon, 2005). Risk factors for juvenile sexual offending has only began to receive attention in the last few decades (Tharp et al., 2012; van Wijk et al., 2006). The evidence from the research suggests that many adult risk factors do not relate to juvenile sexual offending (Tharp et al., 2012). Reviews of juvenile sexual offending studies show a more consistent relationship between individual factors and juvenile sexual offending than family and other background factors (Seto & Lalumie`re, 2010; Tharp et al., 2012; van Wijk et al., 2005). Juveniles who sexually offend are more likely to be neurotic, impulsive, and to have more social emotional problems compared to those who

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commit nonsexual offenses (van Wijk et al., 2005). Other reviews suggest the evidence is less consistent on the relationship between impulsiveness and juvenile sexual offending (Seto & Lalumie`re, 2010; Tharp et al., 2012). Ward and Beech (2015) have suggested a possible neurological basis for impulsiveness among those who engage in sexual violence although there may be other causal factors involved (Boakye 2009a; see also Howard & McMurrin, 2013). Other reviews point to atypical sexual interests (e.g., voyeurism, interest in children, interest in coercive sex) as the most important risk factor for juvenile sexual offending (Seto & Lalumie`re, 2010).

Evidence for other individual factors such as intelligence, academic achievement and empathy has shown less consistent results. For example, there is less clarity on whether juveniles who commit a sexual offense differ on cognitive abilities compared with juveniles who do not engage in sexual offense. Cantor et al. (2005) meta-analysis involving 75 studies suggest that adult who commit sexual offenses have low intelligence compared with those involved in nonsexual offenses. However, the evidence from studies focusing on juveniles involve in sexual offending was less clear. For example, Seto and Lalumie`re's (2010) review found that juveniles involved in sexual offending and those who commit nonsexual offenses score below 10 percentage points on IQ scale with those who commit sexual offenses obtaining lower score than those involved in nonsexual offenses although the difference was not statistically significant. Similar contradictory findings have been reported for other cognitive factors such as reading and academic achievement problems. Some reviews suggest that those involved in nonsexual offenses experience more academic problems than those who commit sexual violence (Seto & Lalumie`re, 2010) while other studies report contrary

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results (Tharp et al., 2012; van Wijk et al., 2005). Similarly, inconsistent results have been reported in relation to the role of empathy in juvenile sexual offending although empathy has been widely emphasised in intervention programmes for those who commit sexual offenses (McGrath et al., 2010; Varker et al., 2008). Whilst some reviews show that adult who commit sexual violence may be deficient in specific type of empathy (i.e., affective empathy, Jolliffe & Farrington, 2004), the evidence is less clear for juveniles who engage sexual offenses. Conclusion from subsequent reviews, however, point to a generally lower empathy score for juvenile perpetrators of sexual violence compared with those who engaged in nonsexual offenses and normal controls (Tharp et al., 2012; Varker et al., 2008).

Across all reviews, negative attitudes, hostility towards females and unhealthy sexual attitudes, experiences and behavior such as masturbation, early exposure to pornographic and other precocious behavior are the most consistent and strong factors distinguishing juveniles who commit a sexual offense from other groups of juveniles (Seto & Lalumie`re, 2010; Tharp et al., 2012; van Wijk et al., 2005). While some theories suggest that these hostilities and negative attitudes among those involved in sexual violence may be linked to poor social skills (Marshall & Barbaree, 1990) other reviews point to social isolation as the possible explanatory factor for juvenile sexual offending (Seto & Lalumie`re, 2010). Importantly, like alcohol, these factors are considered risk markers or associative factors; they are a continuum of the same underlying antisocial behavior and therefore do not offer much by way of explanation for juvenile sexual violence. For example, alcohol may “serve as an aid to overcoming inhibitions in those already predisposed to commit sexual assaults” (Herman, 1990, p.185). In the case

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of juveniles, the relationship between alcohol or, substance abuse generally, is at best tenuous (Seto & Lalumie`re, 2010; van Wijk et al., 2005).

Research on juvenile sexual violence is even less consistent on family risk factors (van Wijk et al., 2006). Family factors have been implicated in juvenile offending generally and considering that juvenile who sexually offend also tend to engage in nonsexual offending behavior, this could explain the difficulty in distinguishing which family factors are distinctly linked to juvenile sexual offending. One family factor that has dominated both empirical and theoretical discourse on sexual offending is the question of whether abused victims become abusers (Burton, 2003; Garland & Dougher, 1990; Kaufman & Zigler, 1987; Marshall & Barbaree, 1990; Widom, 1989). A link has often been suggested between being sexually abused as a child and involvement in sexual violence in later life leading to what is often described as the cycle of abuse hypothesis (Marshall & Barbaree, 1990). However, evidence in support of this hypothesis is at best mixed. Although several studies report a relationship between being sexually abused and involvement in sexual violence, these studies generally suffer from methodological weaknesses including reliance on clinical samples and failure to control for other variables (Garland & Dougher, 1990; Kaufman & Zigler, 1987). For example, Bentovim & Williams (1998) found in their study that the majority of children who sexually abuse came from homes where they had been abused or neglected. Carpentier and Proulx (2011) reported similar findings in their study of 351 adolescents in Montreal. They found that deviant sexual behavior (exhibitionism, compulsive masturbation) and having sexually victimised parents increased the odds of committing first sexual offense prior to age 12. Juveniles who commit sexual offense are also likely to have experienced other forms of nonsexual

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abuse and maltreatment compared with juveniles who commit a nonsexual offense given that these types of abuse either tend to co-occur (Leibowitz, Burton, & Howard, 2012; Seto & Lalumie`re, 2010) or precede the sexual victimisation as in the case of physical abuse or witnessing such violence (Bentovim, 2002; Bentovim & Williams, 1998; McCuish, Cale, & Corrado, 2017; Zakereh, Ronis, & Knight, 2008).

Also linked to juvenile sexual violence are family neglect and lack of parental warmth/attachment. For example, Marshall and Marshall (2000) noted that childhood neglect and poor parental attachment increases risk of sexual violence. They contend that such deprived juveniles are likely to address these inadequacies by seeking inappropriate relationships. Others note that the collective impact of abuse and lack of parental warmth and attachment is that they reduce empathy and development of appropriate relationship skills (Katz, 1990; Smallbone, 2006; Seto & Lalumie`re, 2010). Juveniles who commit sexual offense also tend to report poor communication with their parents compared with non-offenders (Blaske, Borduin, Henggeler, & Mann, 1989). They also tend to have poor parental supervision (van Wijk et al., 2005). However, as Ward, Hudson, Marshall, and Siegert (1995) noted, this feature may not be specific to juvenile who commit a sexual offense.

Other family factors that have been associated with juveniles who commit a sexual offense are parental deviance, and substance abuse (van Wijk et al., 2005). These factors are thought to influence juveniles who commit a sexual offense through parental neglect, abuse or poor parenting (van Wijk et al., 2005; Varker et al., 2008). Similarly, juveniles who commit a sexual offense are likely to have

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experienced family separation, divorce or to have poor family background (Bentovim, 2002; Varker et al., 2008).

Although several family factors have been linked to juveniles who commit a sexual offense, it seems childhood abuse, particularly exposure to severe physical abuse (both sexual and nonsexual), neglect, and family violence have strong effect on this category of juvenile offenders (Davis & Leitenberg, 1987; Seto & Lalumie`re, 2010; Zakereh, Ronis, Knight, 2008). Importantly, it is clear from the review that several factors influence juveniles to commit a sexual offense. Studies, however, rarely focus on multiple factors and their relative influence juvenile to commit a sexual offense. To better understand juvenile perpetration of a sexual offense it is important to examine risk factors in multiple domains and their relative importance in the aetiology of juvenile sexual offending (Bentovim, 2002). Also, as can be seen from the review, the majority of studies are located mostly in western industrialized countries. It is important for research in Ghana and Africa to focus attention on perpetrators of sexual violence.

1.2. Research objectives

The objectives of the present study are to: (1) investigate the proportion of juveniles involved in sexual violence; (2) identify factors that distinguishes juvenile with history of sexual offending from those with no history of sexual offending; and (3) investigate factors that are independently related to juvenile sexual offending.

2. Method

2.1. Sample

The present study is part of a larger delinquency study in Ghana (Boakye, 2013). Interviews were conducted with a total of 264 adolescent males aged 12 to 18 in three correctional facilities and three public schools located in southern Ghana. Three criteria were used in the selection of the schools. To be eligible, the school must be a public school. Second, the school must be located in the same neighborhood as the correctional facilities. Third, the composition of the students must be ethnically diverse (i.e. class ethnic composition must be five or more). Based on these criteria, seven eligible schools were identified. Of these, three were randomly selected and approached to participate in the study. All of the schools were located in neighborhoods that can be described as low to average socioeconomic areas (Agyei-Mensah & Owusu, 2009). The inclusion of the institutional sample was to ensure adequate representation of offenders in the study (Cernkovich, Giordano, & Pugh, 1985). As noted, the prevalence estimates for juveniles who commit sexual violence generally range between 7% and 20% in official and self-report studies. Previous studies, therefore, typically rely on sample of convicted sexual offenders or those in institutions (see Hanson & Morton-Bourgon, 2005; Jolliffe & Farrington, 2004). In the present study, 18.2% of juveniles in institutions were there for sexual offenses, the second most common type of offense committed by the offenders in these institutions after theft (62.7%). The other offenses were nonsexual violence (16.4%) and drug related offenses (1.8%). Whilst official data might best capture juveniles who have committed a serious sexual offense the data could also reflect biases in the official system as this may represent a highly select group. In Ghana, as in many developing countries, the poor state of official crime data makes reliance on official sources

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for prevalence estimate and investigation of risk factors for offending especially problematic (Boakye, 2009a, 2009b). The present study therefore utilised self-reported sexual offending as the outcome measure. The items measure lifetime prevalence of self-reported sexual offending as opposed to current offense prevalence or frequency of offending. This allows for a more accurate measure of sexual violence of both the institutional juveniles and the juveniles in schools. Furthermore, it helps to capture events and experiences prior to juveniles being sent to young offender institutions. Whilst it may be argued that some of what is considered sexual offending by juveniles may be innocent sex play or experimentation by sexually maturing adolescents (Becker et al., 1986; Moore et al., 2007), the focus in this study is on serious sexual offenses which, if detected, could lead to arrest and conviction of the juveniles.

The minimum age of 12 was set to reflect the age of criminal responsibility in Ghana. The Juvenile Justice Act 2003 (Act 653) defines a juvenile delinquent as a person below the age of 18 in conflict with the law whilst the Children's Act 1998 (Act 560) set the age of criminal responsibility at 12. All the juveniles in the selected public schools were eligible to be included in the study. Interviews were successfully completed with 115 of 124 male juveniles (93%) in the three correctional facilities. The three public schools had a total of 365 male juveniles. Of this, 156 were randomly selected to participate in the study. The sample of 156 juveniles in the public schools was to ensure that the number was relatively comparable with the institutional sample. Interview were completed with 149 of the juveniles, representing 96% of students sampled from the three public schools. The researcher received ethical approval from the Institute of Criminology, University of Cambridge. Permission was obtained from heads of juveniles in the

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correctional facilities and the selected public schools prior to participation in the study. The research project was also initially explained to parents at a parent-teacher association (PTA) meeting held in the various schools. Selected students were also given participant information sheet and consent form to be delivered to their parent/guardian. Parental consent was obtained in writing or verbally when the parents/guardians had no formal education (26 of 156). Informed consent was obtained from all the juveniles prior to participation.

The two groups were comparable in terms of age, gender, religious background and neighborhood socioeconomic condition. The sample was all male juveniles with a mean age of 16.1 ($SD = 1.26$) and a median age of 16 years. The mean age for juveniles in public schools was 16.35 with SD of 1.09 and a median age of 16.5 years. The mean age for juveniles in institution was 15.97 with SD of 1.67 and median age of 16 years. The majority of juveniles associate themselves with the Christian faith (82%); 16.5% professed affiliation with the Islamic religion. The rest belong to other religions or had no religious affiliation. National figures show broadly similar pattern; the majority of Ghanaians (71.2%) describe themselves as Christians, with the remaining self-identifying as Muslims (17.6%), traditionalists (5.2%), nonreligious (5.2%) and or other (.8%) (Ghana Statistical Service, 2012).

2.2. Measures

Data were collected through structured interviews using a closed-ended questionnaire instrument administered by three research assistants (two male graduate students and one female undergraduate student). To ensure anonymity and confidentiality, participants were interviewed individually in a private space in

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the juvenile institutions and schools. Interviews were conducted in English which is the official medium of instruction in Ghana. Each student was assigned a unique identification number instead of relying upon their name or other identifying information to ensure anonymity. Participants were also reminded that participation was voluntary and that they were free to refuse to answer any questions without any consequences. The decision to conduct an in-person interview was to ensure consistency, as a small number of the institutional sample (11 of 115) could not read or write in English. It also provided opportunity to clarify specific items and thereby minimized potential problem of inaccurate response or nonresponse.

Numerous variables in various domains were measured in this study (see Boakye, 2010; 2013). For the purpose of this paper, we focus on variables in the individual and family domain. Some of the items were adapted from previous instruments (e.g., Jolliffe & Farrington, 2006; Loeber et al., 1998), whereas others were developed from the context (see Boakye 2010). Particular attention was given to the local context in developing the questionnaire instrument. The instrument was piloted and revised prior to conducting the main study (see Boakye, 2010; 2013). The individual variables measured include negative attitude to school, truancy, and precocious sexual behavior such as watching pornography, visiting brothels and paying for sex. Such early sexual acts have been noted as common among high-risk groups including street children and other vulnerable groups (Oduro, 2012; Tenkorang & Owusu, 2013). The juveniles were also asked to report their use of alcohol, tobacco, and/or other illegal substances, such as cannabis. These factors are considered risk markers or correlates (Hawkins et al., 1992).

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The focus is on dynamic risk factors; that is factors that are considered amenable to change through appropriate intervention techniques (Beech & Craig, 2012). Examples include impulsiveness, academic difficulties, empathy, and low religiosity. Items comprising these scales range from two to ten with a generally good internal consistency. For academic performance, the juveniles were asked to indicate the level of difficulty they have/had in understanding English and Mathematics, which are core subjects in school. They were also asked to indicate the extent of academic difficulties they have/had experienced in school as well as their best subjects or the subject they like/liked best in school. The officially delinquent juveniles were asked about their school experiences prior to arrest or detention, given that their education was often than not interrupted during the period of arrest and detention. Responses to three items were summed up to form the academic problem/difficulty construct (Cronbach's alpha ($\alpha = .62$)). Impulsiveness was assessed based on 10 items. Examples of items were "You have trouble sitting still and doing the same thing for a long time"; "You often say or do things that you later feel you shouldn't have said or done"; and "You are quick to hit anyone who tries to argue with you" ($\alpha = .60$). Response to items were: 2 = *very true*; 1 = *sometimes true*; and 0 = *not true*. Items used to measure lack of guilt were revised from eight to five following pilot study. These include "You believe it is a waste of time to sit down and feel bad about what you have done wrong"; "You are always happy whenever you are able to teach someone a 'lesson'"; and "You don't feel bad about what others think you have done wrong" ($\alpha = .61$).

Some of the constructs proved especially difficult to measure based on items adapted from previous instruments. This was the case with the 10 items

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adapted from the Basic Empathy Scale (Jolliffe & Farrington, 2006) to measure empathy and its two subdimensions -cognitive and affective empathy. Finally, two of the items measuring affective empathy showed better reliability ($\alpha = .56$) compared with the six items intended to measure cognitive empathy ($\alpha = .27$). The two items were: “You often get upset whenever you see someone in trouble or being treated unfairly” and “You often feel bad whenever you fail or are unable to help someone in trouble”. The affective empathy construct was retained in the present study. The juveniles were asked about their religious affiliation, frequency of participation in religious activities, and the importance of their religious beliefs in their daily lives. Importance of religious belief was assessed on a 5-point scale, ranging from not at all important (1) to extremely important (5).

Variables measured at the family level were categorized into childrearing and parental/family background factors. Childrearing variables assessed include lack of parental warmth, poor parental supervision, physical punishment, inconsistent discipline, poor communication, parental neglect and abuse. For example, the five items used to assess parental warmth include “You always feel/felt your parents love you” and “You are always happy when you are with your parents” ($\alpha=.82$). Ten items used to measure poor parental supervision ($\alpha =.71$). The juveniles were asked whether their parents always knew where they were, when they were expected home after school, call to find out where they were, or always monitor who they were with or who their friends were. Poor parental communication was measured based on four items. These include “You often feel your mother/father/guardian doesn't like talking to you” and “Your mother/father/guardian always talks very harshly to you” ($\alpha =.57$).

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Both prevalence and frequency of physical punishment were measured by asking the juveniles whether their parents or guardian spanked or hit them when they did something bad. The answer format was *no never, yes sometimes, yes always*. A second and third question followed asking them to rate the severity of parental physical punishment and discipline in general on a 4-point scale from 1 = not at all harsh to 4= extremely harsh. Inconsistent punishment was measured with the question “Can you *always* tell when and with what bad thing that if you did, you should definitely expect harsh punishment from your parents/guardian?” Response was *yes* or *no*. Abuse items included constantly swearing and throwing objects at the child, flogging the child with a wire, a dog chain or any metal object, or locking the boy up for several hours without food or water ($\alpha = .80$). A high threshold was set in developing the abuse items to distinguish it from physical punishment, which is a normative parental disciplinary method in Ghana (e.g., Jaffee et al., 2004; Lansford et al., 2004, p. 809). Four items describing parental failure to provide for the child’s basic needs such as food, clothing, and shelter were used to construct the parental neglect scale ($\alpha = .77$).

Parental/family background characteristics measured include alcoholic parents, parental arrest, parental conflict, broken family/divorce, large family size, low parental socioeconomic status (SES) and severe family economic deprivation. Assessment of alcoholic parents was based on the statement, “Your father/mother/guardian drinks a lot of alcohol”. Response was *not true, sometimes true, often true, not applicable, and don’t know*. Parental conflict was assessed based on four items, which included “Your father hit/use to hit you mother when he is angry” and “Your father and mother/guardian shout/use to shout at each other almost every day” ($\alpha = .84$). Family configuration of the juveniles was assessed

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based on whether parents were married, divorced or separated. Juveniles were also asked whether either or both parents were alive or dead, or travelled. The juveniles in institutions were less likely to have parents who were married (27.1% vs 62.2%) and more likely to have parents who are divorced/separated (43.9% vs 20.9%), or dead (23.4% vs 14.2%). Parental divorce/separation was the most salient of all the family configurations. This was therefore retained in the present study. Parental divorce or broken family referred to juveniles whose parents have been separated for at least three months. Large family size was defined as families with six or more children. The average family size in Ghana is 4.4 children (Ghana Statistical Service, 2012).

Parental SES was assessed based on parental education and occupation. Information about parental education and occupation was obtained from the juveniles and from school and institutional records. A simple weighting procedure was developed to categorize parents into low and high SES groups based on the information obtained (Boakye, 2010; 2013). For example, all parents with college education, in formal employment (e.g., teacher, banker) and/or running large businesses in the private informal sector (e.g., spare parts dealer, commercial farmer) were classified as high SES parents. Those juveniles whose parents had less than a college-level education and/or had jobs such as office clerks, petty traders, and subsistence farming were classified into the low SES category. Parents in the low-SES category, however, may not necessarily be economically deprived because of the presence of various network support systems, including the extended family support system in Ghana (Boakye, 2010; Nukunya, 2003). A different measure was, therefore, developed based on the juveniles' response to five items to assess poverty or severe family economic deprivation ($\alpha = .70$). Items

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include “The roof of the house, where you live/lived with your parents, leaks whenever it rains” and “You share/shared the same bed/mattress with at least 3 people in your room”. The response format for scale items was: *very/often true, sometimes true, or not true*. Data were dichotomized using a 75/25 percent split to capture the most severely affected juveniles based on their responses to the scale items (Farrington & Loeber, 2000). Variables based on single item measures and requiring a yes/no response include repeating a grade level, divorce, inconsistent discipline, parental deviance and delinquent siblings. The juveniles’ responses were checked against their records for accuracy. Also, a five-item social desirability scale administered to all participants showed no evidence that they were deliberately providing invalid responses.

2.3. Sexual violence

A total of 40 items comprising six categories of moderate and serious offenses as described in the Juvenile Justice Act 2003 of Ghana formed the self-reported delinquency scale: murder, robbery, rape, aggravated assault, possession or use of hard drugs and firearm offenses. Three items on the questionnaire were intended to measure sexual violence. Table 1 shows these three items and the proportion of juveniles who admitted engaging in these acts. As can be seen, 14.1% of the juveniles admitted “ever forcing a girl to have sex”. There was no significant difference between juveniles known to authorities (6.3%) and those who did not come to official notice (7.8%). However, the percentage admitting sexual offense decreased significantly when the juveniles were asked more specific and direct questions about whether they have ever hurt or used threats to procure sex from a girl (7.8%), or whether they have ever surreptitiously tempered with a girls drink

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with the intention of having sex (9.4%). The difference was noticeable for juveniles known to the authorities (2.0%; 2.4%) than those in school (5.9%; 7.1%).

Insert table 1 about here

Items two and three (“ever hurt/threatened a girl to have sex”, and “ever spiked a girls drink in order to have sex”) were combined to form the sexual offense scale in this study. The scale shows about one-sixth of the juveniles (16.7%) admit committing some form of sexual violence. A higher proportion of the juveniles in school admitted involvement in sexual violence compared with the institutionalized juveniles, suggesting a possible underreporting of sexual violence by the juveniles in institutions. Juveniles who admitted engaging in sexual offenses were also significantly more likely compared with remaining group to admit involvement in nonsexual offense (36% vs. 12%), fraud (36% vs. 16%), serious property crime (38% vs. 16%), and drug offenses (40% vs. 18%).

2.4. Data Analysis

The analysis was carried out in three stages using the odds ratio (OR) and logistic regression model. First, the relationship between eight risk markers and sexual violence was calculated using OR. The OR shows the strength of relationship between the predictor variables and sexual violence (Cohen, 1996; Farrington & Loeber, 2000). OR of 2 or greater, which is a doubling of risk, is generally considered a strong relationship (Cohen, 1996).

Second, the odds ratios for individual and family factors were calculated for sexual violence. The third stage involved logistic regression analyses used to investigate which of the variables that were significant in the bivariate analyses,

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were independent predictors of sexual violence. Individual variables were entered first, followed by childrearing factors and parental/family background factors.

3. Results

3.1. Correlates and risk factors for juvenile sexual offending

Table 2 shows the results for eight risk markers for sexual violence. The number of juveniles at the high-risk end who engaged in sexual violence is compared with the remainder of the sample. In all cases, except peer delinquency, the high-risk juveniles admitted greater involvement in sexual violence compared with the remainder of sample; that is juveniles who hold negative attitudes towards school, are truant from school, and view pornographic materials, and abuse alcohol were more likely to report involvement in sexual violence compared with those who did not show these risk markers. Smoking cigarette or cannabis and paying for sex and truancy from school were significant risk markers for sexual violence. Juveniles who visit the brothel or paid for sex were more than six times likely to engage in sexual violence compared with the other juveniles who had not engaged in these behaviors.

Insert table 2 & 3 about here

Table 3 shows the results for individual and family risk factors for juvenile sexual violence. The family risks factors are further divided into childrearing and parental/family background characteristics. At the individual level, juveniles with academic problems, those who repeated a grade and those who expressed lack of emotional empathy were disproportionately likely to admit involvement in sexual violence. Juveniles with academic problems and those who lack emotional empathy were nearly twice likely compared with the rest of the juveniles to engage

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in sexual offense. Interestingly, juveniles who were impulsive were no more likely compared with those who not impulsive to commit a sexual offense. Similarly, low religiosity and low guilt were not significant risk factors for juvenile sexual violence. Among childrearing variables, parental neglect, abuse and parental conflict more than doubled the risk for juvenile sexual violence; that is juveniles who commit sexual violence were significantly more likely compared with those with no history of sexual violence to have experienced parental neglect and abuse and to have grown up in a high-conflict home. Parental neglect, which includes failure to provide for the child's emotional and physical needs, has a particularly damaging impact on adolescent sexual behavior. Juveniles who experienced such parental neglect and those who lived in a high-conflict home (usually father abusing the mother) were more than four times likely to engage in sexual violence compared with those who did not experience this family condition.

Of the eight parental/family background factors examined, three emerged as significant risk factors for juvenile sexual violence. These are parental conflict, alcoholic parents and severe family economic deprivation. These three family factors more than doubled the risk for sexual violence. Also, juveniles with delinquent siblings were nearly twice likely to engage in sexual violence compared with juveniles with no delinquent siblings (OR = 1.9) although the difference was not statistically significant. Parental SES was not a risk factor for sexual violence. Similarly, large family size, parental deviance and family breakup were not significant risk factors for juvenile perpetration of sexual violence. Thus, of the three risk domains considered (i.e., individual, childrearing and parental/family background characteristics), childrearing factors and family background characteristics were significantly more likely to increase risk for juvenile sexual

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violence. Particularly important are parental neglect, parental abuse, parental conflict, alcoholic parents and severe economic deprivation.

3.2 Predictors of juvenile sexual offending

Table 4 shows results from the logistic regression analysis. The aim was to investigate which factors independently predict juvenile sexual offending. Eight variables emerging as significant or near significant in the previous odds ratio analysis were included in the logistic regression model. These were academic problems, repeating a grade, lack of affective empathy, parental neglect, abuse, and parental conflict as well as alcoholic parents and severe family economic deprivation. A three-step model was constructed using variables in the individual, childrearing, and parental/family domains.

Insert table 4 about here

As can be seen, three of the eight variables emerged as independent predictors of juvenile sexual offending in the regression model. These are lack of affective empathy, parental neglect and parental conflict. Of the three independent predictors, parental neglect emerged as the most important risk factor for juvenile sexual offending. Juveniles who experienced parental neglect were more than six times likely to engage in sexual violence compared with those with no such family condition. This was the case after taken into account other variables. The risk was twice as likely in the case of parental neglect compared with juveniles from high-conflict homes who were three times more likely to engage in sexual violence after controlling for other variables. Lack of affective empathy was a rather weak independent predictor of juvenile sexual violence.

4. Discussion

Studies in Africa have generally focused on victims of sexual violence with the consequence that perpetrators of sexual offending have received relatively less research attention in this context. This is especially the case with juveniles who commit sexual violence. Yet recent cases in Ghana (Ibrahim, 2017) and elsewhere in Africa (Shange, 2018) show that juveniles who perpetrate sexual violence deserve research attention.

4.1 Juveniles who sexually offend

The present study shows that about a fifth (16.7%) of the juveniles admit engaging in sexual violence. This proportion is broadly within the range usually reported in sexual violence studies in Ghana (Coker-Appiah & Cusack, 1999; Tenkorang & Owusu, 2013) and in other societies (Finkelhor et al., 2009; Hutton & Whyte, 2006). Importantly, the results show that prevalence estimate of juvenile sexual violence is influenced by multiple factors including the number of scale items used and the seriousness of the act. For example, consistent with previous studies (Wyatt & Peters, 1986a), the results show that multiple measures provide better and more accurate estimate of prevalence of juvenile sexual offending than a single-item measure. More revealing is the evidence that the juveniles are more likely to admit involvement in minor forms of sexual violence than more serious sexual offending behavior. This is especially the case for juveniles already known to official authorities. A possible reason for the low admission of sexual violence among this group may be because of their fear of further negative repercussions if they should disclose further offenses. Their incarceration has given them a direct experience of the seriousness with which the law perceives their conduct compared with the juveniles in school.

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Importantly, the results show that the type of question could influence prevalence estimates of juvenile sexual offense as reported in previous studies (Wyatt & Peters, 1986a). As seen, prevalence estimates of the juveniles' sexual violence varied depending on whether the word "force" or "threatened" was used. The percentage of juveniles who admitted using force in a sexual context was about twice (14.1%) compared with those who admitted hurting or threatening to hurt the girl for refusing sex (7.8%). Force may be considered a broad and all-encompassing word as to induce multiple interpretations and therefore risk being vague (Boakye, 2009a). Thus, lack of clarity in the definition of sexual violence may have implications beyond prevalence estimates. For example, section 101 (1) of the Ghanaian Criminal Code 1960 (Act 554 as amended) defines defilement (child rape) as "natural or unnatural carnal knowledge of any child under sixteen years of age". This definition is not only colloquial but also it leaves considerable room for ambiguity, which in turn could lead to the misclassification of "consensual" sexual relation between two minors as sexual violence (Boakye, 2009a). For example, of the 18.2% of juveniles who were charged or convicted for sexual offenses, some were in "open" relationships with their girlfriends for some time until the girls became pregnant when parents of the girls reported them to the police for sexual offense (see also Mildred & Plummer, 2008:603; Wyatt & Peters, 1986b). In some cases, the girls were older than the male juveniles.

Consistent with previous studies, the results show that juveniles involved in sexual violence also tend to engage in other nonsexual offenses (Caldwell, 2002; Piquero et al., 2012). The evidence suggesting that juvenile who commit sexual violence are typically versatile in their offending behaviour, which complicates effort to identify distinctive risk factors for juvenile sexual offending. Given this

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complexity it is perhaps not surprising that many studies have reported similarity in risk factors for juvenile sexual violence and nonsexual offending.

4.2 Risk markers for juvenile sexual offending

The findings show that smoking, or the use of substances such as cannabis, is associated with juvenile sexual offending. Similarly, juveniles who admit paying for sex or visiting a brothel were six times more likely to engage in sexual violence than those who do not exhibit such behavior. However, alcohol use was not related to juvenile sexual violence perhaps because of the wide social acceptance of alcohol use in Ghana (Akyeampong, 1996; Ministry of Health, 2016). Although the minimum age for drinking or purchasing alcohol is 18 years, these restrictions are hardly enforced. Importantly, studies show at best a tenuous relation between substance abuse and juvenile sexual violence, suggesting that alcohol use may serve as a disinhibitor, thus providing a convenient alibi for those already at risk of engaging in sexual offending (Herman, 1990; Prentky et al., 2000). However, there is a strong social disapproval and strict enforcement of laws regarding the use of substances such as cannabis. Similarly, prostitution is illegal in Ghana and the use of these services, especially for juveniles, could attract a custodial sentence of up to three years on conviction. As argued, these acts may be considered part of the broader spectrum of antisocial behavior.

4.3 Risk factors for juvenile sexual offending

A major finding from the present study is that factors in the family domain are more important for juvenile sexual violence than individual factors. This was evident both in the odds ratio results and the regression model estimates. Particularly important were parental neglect, parental abuse, and high-conflict homes. These findings are contrary to the general conclusions from reviews of

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evidence from previous research, which tend to suggest that individual factors such as impulsiveness are generally more robust and consistent risk factors for juvenile sexual offending than family and other factors (Seto & Lalumie`re, 2010; Tharp et al., 2012; van Wijk et al., 2005). The contrary finding may be explained by the different social context. Unlike many western societies, the collective culture in Ghana may mask the importance of individual characteristics as one's identity is intricately linked with the collective identity so that disentangling these individual and personality characteristics becomes a complex task (Boakye, 2009a; 2013). For example, personality factors such as impulsiveness may be suppressed in a context where social control is ubiquitous; that is strong informal social control mechanism may serve as a check on impulsive behavior (Boakye, 2013; Kobayashi et al., 2010). Also, in such context of high social control, the influence of religion in value inculcation would be, arguably, less important. It would also not matter much, it seems, the juveniles feeling of guilt about the behavior; rather the strong social control is likely to act as a deterrence regardless of one's moral compass.

It is for this reason that the breakdown of social control mechanisms and support systems especially at the family level becomes particularly salient in Ghanaian context. Unlike western societies, where the breakdown in these informal social control and support systems have been replaced to some extent by state support structures in the form of effective policing and welfare services, in Ghana such structures are either absent or ineffective. The impact of severe family economic deprivation therefore can be particularly damaging in the Ghanaian context. Previously, it has been the case that the extended family network ensures that any lapses in parenting are absorbed by the collective effort of the large family network (Assimeng, 1981; Nukunya, 2003). However, the strain on the extended

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family support network is most evident in the urban societies because of the severe economic pressures on families in these areas. Also, families in the urban societies are usually removed from the extended family network because of migration (Anarfi et al., 2003; Otiso & Owusu, 2008). The consequence is that parenting becomes more challenging in the urban areas especially for the economically deprived families. Children are often left not properly supervised or cared for. The risks of parental conflict and abuse are pronounced in such stressful environment with no formal or adequate informal social support systems. Also, in this context, parental alcohol abuse is likely as are the possibility of delinquent siblings. The relation between family factors and juvenile sexual offending under such social context may therefore be considered less surprising.

5. Limitations

There are a number of limitations that require that the findings from the present study be interpreted with caution. First, it is possible that the prevalence of juvenile sexual abuse reported in this study may be underestimated. Although social desirability scale was utilized to identify invalid responses and biases, it is possible that the juveniles would be less likely to admit involvement especially in serious sexual offenses that they know could lead to arrest or conviction. As seen from the results, there was a decrease in admission of a serious sexual offense for the juveniles interviewed, especially for the juveniles in institutions. The use of multiple sources such as parents, teachers and official arrest records would have enhanced the accurate estimate of juvenile sexual violence. Similarly, the reliance on single source reporting for both the predictor and outcome variables could inflate the results. In this study, the source of information for the predictor and outcome variables were the juveniles themselves. It is therefore possible that

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especially juveniles who admit involvement in sexual violence may exaggerate their lack of parental support and bad family relations. The small sample size and the design employed in this study limit the generalizability of the findings to the larger juvenile population in Ghana. The study design presents particular challenge in ruling out the possibility of overlap between the school sample and the institutionalized juveniles. Poor data recording practice in Ghana means that the juveniles' responses about their involvement in sexual offending could not be independently verified. Third, it is possible that risk factors for intra-family and extra-family juvenile sexual abuse may vary. The juvenile offenders were not asked about their relationship with the victims, or whether the victims know them (see Black et al., 2001). Fourth, although the present study measured multiple risk factors in the individual and family domains, there is a need for future studies to also examine biological, school, community and cultural factors that may contribute to juvenile sexual violence. For example, studies in Africa have shown high level of teacher violence in schools including sexual abuse (Dunne, 2007; Leach, 2003; Parkes & Heslop, 2011). It is, therefore, possible that juvenile violence, including sexual violence may be influenced by not only factors in the family, but also school level factors. Finally, risk factors imply factors that increase the likelihood of an event occurring; they do not explain the processes or situational mechanisms leading to the actual offense. Situational factors such as availability of a vulnerable victim, location and time may provide the appropriate context for sexual offense to occur. Whilst the focus of this study has been mainly on risk factors, it is also important to understand the processes or mechanisms that lead to sexual offenses in Ghana.

6. Conclusion

The lack of research on juvenile sexual offending in Africa means that the needs of those who engage in this type of violence are poorly understood. The prevalence results confirm that juvenile sexual offending is a problem in Ghana and, therefore, demand urgent research attention. Consistent with previous research the results show that juveniles involve in sexual offending also tend to engage in nonsexual offenses (Piquero et al., 2012). These juveniles also tend to exhibit deviant sexual preferences (Seto & Lalumière, 2010; Tharp et al., 2012). The versatility in the offending behavior of juveniles who commit sexual offenses needs to be taken into consideration in developing intervention programmes for this category of offenders. Another important finding from the present study is that the social context influence risk factors for juvenile sexual violence. Whereas the reviews of evidence from western studies largely point to individual factors as more robust in explaining sexual offending, the results in Ghana show family factors are more important. The influence of different social context on risk factors for juvenile sexual offending must be considered in the design of intervention programmes for this group of offenders. Interventions not informed by research evidence from the social context may be ineffective or counterproductive. For example, there is a recent emphasis on cognitive-behavioral treatments (CBTs) as a more robust psychological intervention for sexual offenders (Hunter & Santos, 1996; Lösel & Schmucker, 2005; Schmucker & Lösel, 2015; Moster, Wnuk, & Jeglic, 2009). However, it is possible that such individual risk-focused prevention approaches may not be effective in all contexts. As shown in the present study, in some context risk factors in the individual domain may be less important compared with risk factors in the family or other domains. Multisystemic therapy (MST) is a family-

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based intervention that takes into account the specific context and needs of the offender (Borduin et al., 2009; Schmucker & Lösel, 2015). MST is a multimodal intervention that targets risk factors in multiple domains and could be deployed as individual, family, peer, school, and community interventions (Borduin et al., 2009). Although MST is widely used in North America and Europe and considered effective intervention for juveniles who sexually offend in these societies, this intervention program is yet to be implemented in Ghana. Moreover, recent reviews (e.g., Schmucker & Lösel, 2015) have noted some methodological challenges in assessing effectiveness of MST interventions (e.g., only two programs for juveniles who sexually offend identified used randomized control trial, and none of the MST program effectiveness were assessed independently of the program developers). Nevertheless, the multilevel approach and adaptability of MST to different settings elevates its unique attraction as a potential intervention program to be adapted in Ghana given the evidence from the present study.

Perhaps the most important finding in this study is that a constellation of factors, particularly in the family domain, may be involved in explaining juvenile sexual offending (Kaufman & Zigler, 1987). This is an important revelation given that the majority of research on juvenile sexual offending and therapeutic intervention tend to focus on one or a few risk factors. The evidence in this study suggests that such narrow focus fail to identify robust explanatory factors for juvenile sexual violence. For effective intervention future research should measure a broad range of risk factors in multiple domains to help identify robust explanatory factors for juvenile sexual offending in specific social contexts. Similarly, it is important not only to examine multilevel factors but also situational factors as well as factors that interact to increase risk for juvenile sexual violence.

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Tables

Table 1: measures of sexual violence

Self-reported offense	% of total sample (N)	% juveniles in institution (n)	% juveniles in school (n)	OR	[95% CI]
Ever forced a girl to have sex	14.1 (255)	6.3 (115)	7.8 (140)	.970	[.477-1.971]
Ever hurt/threatened a girl to have sex	7.8 (255)	2.0 (115)	5.9 (140)	.378	[.133-1.076]
Ever spiked a girls drink in order to have sex	9.4 (255)	2.4 (115)	7.1 (140)	.373	[.143-.974]
Sexual violence*	16.7 (264)	4.2 (115)	12.5 (149)	.372	[.179-.773]

Note: *item 2 and 3 combined to form sexual offense scale; OR = odds ratio.

Table 2: Risk markers for juvenile sexual violence

Variables	% engaged in sexual violence		OR	[95% CI]
	% sexual offenders (n)	% nonoffenders (n)		
Negative attitude to school	29.4 (17)	16.3 (233)	2.14	[.85-5.38]
Peer delinquency	9.6 (73)	15.2 (125)	0.60	[.27-1.28]
Truancy (7 or more)	23.3 (43)	12.9 (209)	2.01*	[1.03-4.04]
Pornography	16.5 (158)	12.0 (100)	1.44	[.69-3.01]
Alcohol use	16.2 (105)	12.8 (149)	1.32	[.65-2.68]
Cigarette smoking	34.7 (49)	9.7 (207)	4.97***	[2.35-10.48]
Smoking cannabis	28.3 (53)	10.0 (201)	3.57**	[1.67-7.60]
Ever paid for sex	38.5(39)	8.9 (214)	6.41* **	[3.28-12.54]

Note: OR = odds ratio; * $p < .05$. ** $p < .01$. *** $p < .05$, one-tailed.

Table 3: Risk factors for juvenile sexual violence

Variables	% engaged in sexual violence		OR	[95% CI]
	% sexual offenders (n)	% nonoffenders (n)		
Individual				
Academic problems	24.6 (57)	16.0 (188)	1.72	[.94-3.13]
Repeat grade	22.3 (94)	14.7 (150)	1.67	[.96-2.92]
Impulsiveness	13.7 (51)	17.5 (200)	0.75	[.36-1.57]
Lack empathy	24.4 (41)	15.0 (220)	1.83	[.93-3.59]
Lacks guilt	15.9 (63)	15.2 (191)	1.05	[.55-2.22]
Low religiosity	16.7 (36)	16.4 (219)	1.02	[.54-2.28]
Childrearing				
Poor supervision	16.0 (50)	14.6 (178)	1.11	[.54-2.31]
Physical punishment	24.0 (25)	16.0 (238)	1.66	[.73-3.79]
Inconsistent punishment	20.0 (100)	15.2 (158)	1.40	[.81-2.42]
Lacks parental warmth	20.8 (53)	14.8 (209)	1.50	[.79-2.85]
Poor parental communication	19.3 (57)	12.1 (190)	1.74	[1.01-3.37]
Parental neglect	34.6 (52)	10.4 (192)	4.55**	[2.46-9.44]
Parental abuse	28.6 (63)	12.1 (198)	2.90*	[1.63-5.19]

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Parental/family background				
Parental conflict	34.6 (52)	10.6 (160)	4.45**	[2.35-8.44]
Alcoholic parents	30.6 (49)	12.6 (207)	3.07*	[1.66-5.69]
Parental arrest	18.2 (22)	15.8 (234)	1.18	[.46-3.08]
Broken family (divorce)	17.9 (78)	16.5 (121)	1.11	[.59-2.08]
Large family size (6+)	13.0 (77)	14.5 (152)	0.88	[.45-1.73]
Delinquent siblings	25.0 (20)	15.1 (238)	1.87	[.76-4.60]
Low SES	14.3 (35)	15.5 (213)	0.91	[-.39-2.13]
Severe economic deprivation	27.9 (61)	12.8 (196)	2.64*	[1.47-4.75]

Note: OR = Odds ratio; * $p < .05$. ** $p < .01$. *** $p < .05$, one-tailed

Table 4: Logistic regression results for juvenile self-reported sexual violence

Variables	B	SE	Exp (B) [95% CI]	F Change	p
Sexual offense					
Model 1					
Lack of empathy	.336	.170	1.399* (1.058-1.850)	3.870	.049
Model $\chi^2 = 3.870$					
R ² = .037					
Model 2					
Parental neglect	1.904	.448	6.712*** (3.214-14.016)	18.367	.0001
Model $\chi^2 = 22.237$					
R ² = .202					
Model 3					
Parental conflict	1.146	.467	3.144* (1.458-6.783)	5.895	.015
Model $\chi^2 = 252$					
R ² = .252					

* $p < .05$. *** $p < .05$, (one-tailed, based on confidence interval); $N = 178$