

Sexually Intrusive Behavior Among Alleged CSA Male Victims: A Prospective Study

Sexual Abuse: A Journal of
Research and Treatment
XX(X) 1–15

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DOI: 10.1177/1079063213486937

sax.sagepub.com



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Abstract

Child Sexual Abuse (CSA) is one widely cited risk factor for Sexually Intrusive Behavior (SIB) among boys. To identify variables that moderate the early onset of SIB in a sample of boys, alleged victims of sexual abuse, the current study involved a prospective examination of all investigations of male CSA victims and those of boys aged under 14 who were suspected of committing SIBs on other children in Israel over a 10-year period. Comparing victims with and without SIB records revealed differences on personal and family factors as well as on the characteristics of abuse. A regression model controlling for age and family factors correctly classified over three quarters of the subjects based on reported experiences of abuse. The data help identify characteristics of the abuse that facilitate the early onset of SIB among male victims of CSA.

Keywords

Child sexual abuse, risk assessment, juvenile sex offender

The increasing numbers of children and adolescents reported for engagement in sexually intrusive behaviors (SIBs) towards other children has invoked public concern accompanied with research efforts to identify the origins of SIB. Although different sexual behaviors can be deemed SIB (Elkovitch, Latzman, Hansen, & Flood, 2009), the current study explores the more severe acts committed by children and early adolescents, ranging from fondling a victim's sexual organs over clothes to skin to skin touches, to attempted or actual penetration of vaginal, anal, or oral nature. When children reach the age of criminal responsibility (12 in Israel), such acts of SIB are deemed sexual offenses.

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Child Sexual Abuse (CSA) is apparently the most studied antecedent of sexual behavior problems among children and adolescents. In a review of 45 empirical studies on the effects of CSA, Kendall-Tackett, Williams, and Finkelhor (1993) reported that sexual behavior problems were addressed in 23 studies. Similarly, out of 59 studies of adolescents displaying SIBs, reviewed by Seto and Lalumiere (2010), 31 included past CSA as a variable.

Despite the large study of CSA as a central risk factor for childhood SIB and sexual offending in adolescence, the last decade has seen little new empirical evidence based on prospective methods, which are necessary for establishing causal relationship and valid risk factors. The present study follows a sample of boys, alleged CSA victims and explores variables which may have facilitated the onset of SIB before they turned 14.

Observing clinical samples of children who were victims of CSA, past research consistently reflects a mild but stable association: children with documented CSA engage more often in inappropriate sexual behaviors than children with no CSA records (Kendall-Tackett et al., 1993; Putnam, 2003). Such studies have typically reported significant levels of sexualized behavior in 30% to 40% of abused samples (e.g., Friedrich, Jaworski, Huxsahl, & Bengston, 1997; Friedrich, 2007; Friedrich, Olafson & Faller, 2007). Higher frequencies of SIB were observed when CSA victims were compared to nonvictims with no clinical records (e.g., Hibbard & Hartman, 1992; Inderbitzen-Pisaruk, Shawchuck, & Hoier, 1992; Mian, Marton, & LeBaron, 1996; Wells, McCann, Adams, Voris, & Dahl, 1997), and impressively, when compared to nonabused psychiatric control groups (Cosentino, Meyer-Bahlburg, Alpert, Weinberg, & Gaines, 1995; Friedrich et al., 1997; Friedrich et al., 2001).

However, while the abuse-SIB association was evident when victims were followed into adolescence to detect sexual offending, this association was not specific to sexual abuse: Widom and Ames (1994) followed abused or neglected children prospectively and found that while sexually abused children were later reported for sexual offenses twice as often as matched controls, physical abuse, or neglect formed similar risk factors as sexual abuse. This finding was later supported by other studies, suggesting that physical abuse, neglect, and exposure to family violence were associated with inappropriate sexual behavior in children and adolescents (Drach et al., 2001; Friedrich, 1997; Friedrich et al., 2001; Tarren-Sweeney, 2008) and their co-occurrence with sexual abuse increased the risk for SIB (Hall, Gray, et al., 1998; Hall, Mathews, & Pearce, 1998). Taken together, although sexual abuse is a significant risk factor, the research makes clear that it is just one of several possible origins of SIB in children. The CSA-SIB association was rather weak and most victims did not demonstrate SIBs, suggesting that a complexity of factors affects the strength of this association. Exploring moderators of the CSA-SIB association, some researchers have focused on developmental and family factors while others have addressed the experience of abuse. Child's younger age at onset of abuse has increased risks of developing SIB among victims (Kendall-Tackett et al., 1993; McClellan et al., 1996). Similarly, family environment seems to mediate the CSA-SIB relationship: low socioeconomic status (SES) of the family was found to be a significant predictor of sexual behavior problems for school-aged children, although not for preschoolers (Friedrich et al., 1992); similarly, high intensity of parental emotional reactions

to disclosure (Mannarino & Cohen, 1996) and low maternal support following the abuse (Everson, Hunter, Runyan, Edleson, & Coulter, 1989; Hall, Mathews, & Pearce, 2002; Leifer, Shapiro, & Kassem, 1993) were associated with the occurrence and severity of sexual behavior problems among victims (but see also Mannarino & Cohen, 1996).

Explorations of the nature of abuse experienced in childhood reveal that the severity of the abuse, the identity of the offender, and the reactions on the part of the victims predicted whether or not they would subsequently commit SIBs. Severe sexual abuse, including penetration, use of threats, enduring or repeated abuse, and sexual coercion were found to be associated with sexualized behaviors among children and adolescents as was abuse by parental or multiple perpetrators (Cosentino et al., 1995; Friedrich et al., 1992, 2001; Friedrich, Davies, Feher, & Wright, 2003; Kendall-Tackett, Williams, & Finkelhor, 2001). Similarly, ambivalent reactions or self-blaming by the victims were associated with later SIBs (Hall, Mathews, et al., 1998; Mannarino, Cohen, & Berman, 1994). Finally, as mentioned earlier, additional instances of physical or emotional abuse (Hall, Gray, et al., 1998, Hall, Mathews, et al. 1998) imposed further risk for developing SIBs among CSA victims.

A review of the research reveals that the association between sexual abuse history and SIB has been explored in both directions. Observing SIB among past CSA victims is different from observing CSA history among those who show SIB, involving different methods and resulting with different rates of co-occurrence. Nevertheless, the body of research on CSA histories of children referred to treatment for SIB also indicates that prior sexual abuse is overrepresented among these children, both using formal records (Bonner, Walker, & Berliner, 1999) or mother reports (Gray, Busconi, Houchens, & Pithers, 1997). Similarly, observing samples of adolescent sexual offenders in comparison to nonsexual offenders or to nonoffenders, extant research revealed that male sexual offenders report more often having experienced CSA or related experiences of sexual nature such as early exposure to sex or pornography, or exposure to sexual violence (Burton, Duty, & Leibowitz, 2011; Johnson & Knight, 2000; Knight & Sims-Knight, 2003; Salter et al., 2003; Silovsky & Niec, 2002; for a meta-analysis see Seto & Lalumiere, 2010). CSA history ranged from 10% to 90% in different samples of children and adolescents with SIB, with a meta-analysis revealing that about one third (32%) of the boys involved in SIB were formally reported for CSA in the past (Seto & Lalumiere, 2010). This association seemed to continue later in life as data about youth (Seto et al., 2010) or adults (Jespersen, Lalumière, & Seto, 2009) suggests, although coincidence between CSA and SIB was partial and limited along the life span in all studies.

Direct comparisons of sexually aggressive children and adolescents, with and without abuse history, pointed again to moderators of SIB among the victims, which are related to family dysfunction such as the absence of parents (Hummel, Thomke, Oldenburger, & Specht, 2000), maternal depression disorders (Becker, Harris, & Sales, 1993), and family violence or criminality (Burton et al., 2011). Family dysfunction and adverse childhood experiences (ACEs) such as early abuse were found in the extant research to affect various forms of maladjusted behaviors, including sexual behaviors in adolescence (see Hillis et al., 2004).

For adolescents, risk factors for SIB were also related to the nature of abuse experienced such as abuse by both men and women or by related perpetrators, repeated and

severe abuse including acts of penetration, and involving violence (Burton, Miller, & Tai Shill, 2002). Having experienced CSA seemed to have affected not only the risk for SIB but also various aspects of the SIB when it occurred, such as age of onset, victim selection, or mode of abuse (Burton et al., 2011; Clark, 1997; Hershkowitz, 2011). Past victims who engaged in SIB tended to do so at a younger age, to have a higher number of victims, to select younger children, siblings or unrelated children, to act alone and to act repeatedly, suggesting that CSA is associated with more severe SIB.

The body of research on moderators of the CSA–SIB association is limited in several aspects which can be addressed with the data set used for the current study. First, it has illuminated several discrete developmental and family factors associated with SIBs but has not explored the relative contribution of each factor. Moreover, these factors seem to function as moderators but have not been controlled for when exploring the contribution of the nature of abuse to later SIB. Finally, it is mostly based on clinical samples and nonprospective designs which are more vulnerable to bias, thus more likely to compromise the validity of the results.

The current study aimed to identify variables that moderate the early onset of SIB in a sample of boys, alleged CSA victims by the age of 14. This study followed prospectively alleged CSA male victims for up to 10 years to detect a later record of SIB. Those with and those without a record of SIB were compared with the aim of: (a) exploring the separate and combined effects of developmental and family characteristics on the occurrence of SIB; and (b) identifying CSA variables which function as moderators of the early onset of SIB, after controlling for developmental and family characteristics.

Method

The present study employed national data files of children and adolescents, aged under 14, who were referred for investigation following sexual abuse complaints made to the police or following suspicions reported to the Child Protective Services (CPS). They were investigated as alleged victims, and/or suspects of committing SIB on other children. All children were interviewed using the National Institute of Child Health and Human Development (NICHD) investigative protocol (Orbach et al., 2000) by trained child investigators. These child investigators had degrees in social work and were employed by the Israeli Ministry of Labor and Welfare as the only professionals authorized by law to conduct child forensic interviews. Because the child investigator unit performs CSA and SIB investigations of children aged up to 14, the data file analyzed in this study is limited to this age. The data were drawn from national files covering a whole decade of child investigations (January 1, 1998–December 30, 2007) performed in six regions of Israel. Permission to use the data files was provided by the head of the Child Investigation Unit in Israel.

For purposes of the current analysis, the data files of the alleged male victims of sexual abuse and suspects of SIB were electronically merged, allowing the identification of 157 duplicate cases, which represent young alleged victims who were later investigated as suspects of SIB. Suspicions of SIB included fondling a victim's sexual organs over or under clothes, and/or sexual penetration (vaginal, anal, or oral), or attempted penetration. All suspicions were based on detailed forensic statements made by the victims in the

course of child investigations. In their investigation, 96 (61.1%) suspects gave detailed accounts of the alleged SIB which corresponded to the victims' allegations. Because the boys in the research group were investigated twice, the time between the investigation as victims and the investigation as suspects was documented; it ranged 0 to 7 years ($M = .76$, $SD = 1.40$). The suspects' age ranged from 6 to 14 years ($M = 11.59$, $SD = 2.03$).

A comparison group of equal size ($n = 157$) was a random sample of alleged male victims who had no record of SIB by the end of December 2007. In order to permit the longest follow-up and to increase confidence that these children were not referred for SIB, the comparison group was selected from the alleged victims who were investigated during the first year of the study period (1998). Because the alleged victims were only followed till they turned 14, the actual follow-up period ranged 1 to 10 years ($M = 4.45$, $SD = 2.62$), depending on the time of the investigation and the child's age at this time. The follow-up duration was longer for victims with no SIB record (1-10, $M = 5.79$, $SD = 2.74$) than for victims with SIB record (1-8, $M = 3.11$, $SD = 1.62$; $t(312) = -10.536$; $p < .0001$). Victims' age at the time of abuse ranged from 3 to 14 years ($M = 9.97$, $SD = 2.77$). For the purpose of some analyses, age was collapsed into two categories: before the age of 10, and 10 or above. These cut-offs were used as a proxy for childhood and preadolescence onset of abuse. Abuse allegations made by the victims included undressing ($n = 34$), fondling over or under clothes ($n = 137$), and penetration ($n = 69$). Abuse information is missing for 74 children, 37 in each group, who did not specify the sexual acts.

The data extracted from the files include characteristics of the victims and their families, as well as characteristics of the abuse experiences. Personal characteristics of the victims include age and diagnosis of intellectual or mental disability as assessed by the educational, welfare, or health systems. Children with minor or serious disabilities were identified, while all others were deemed normally developing. In addition, family data included immigration status (whether or not the parents have immigrated from other countries in the last decade), estimated SES, family size, and birth order, as well as family structure, indicating whether the family consists of no, one, or both biological parents and whether single parents are accompanied by partners or new spouses. When the victims resided outside the parental home in a foster home or an institution, this information was noted.

Details of the abuse experiences included the identity of the perpetrator; the severity and frequency of the abuse; strategies used by the perpetrator (use of force, threats, or emotional rewards); the victim's interest in and understanding of the sexual interaction; and the victim's cooperation or resistance during the abuse. Also noted were previous experiences of physical or sexual abuse reported by the victims, the investigator's assessment of the abuse as a traumatic experience to the victims, and their decisions to refer the victims to additional investigative procedures or to therapy following the investigation.

Results

Of the 7,805 boys who were alleged sexual abuse victims during the 10-year period, 157 (2%) had a subsequent record of SIB before they turned 14. This group of alleged victims, with a SIB record was compared to the control group of male alleged victims

Table 1. Characteristics of Young Victims Associated With SIB.

	Victim-Suspects (<i>n</i> = 157)	Victims-Only (<i>n</i> = 157)	Total (<i>N</i> = 314)
Personal characteristics			
<i>Age at the onset of abuse</i>			
10 or above	116 (73.9 %)	74 (47.1%)	190 (60.5%)
Below 10	51 (26.1%)	83 (52.9%)	124 (39.5%)
Family characteristics			
<i>Family structure</i>			
Two parents	98 (62.8%)	123 (78.3%)	221 (70.4%)
Other	59 (37.2%)	34 (21.7%)	93 (29.3%)
<i>Suspect's residence</i>			
At home	119 (75.8%)	144 (91.7%)	263 (83.8%)
Out of home	38 (24.2%)	13 (8.3%)	51 (16.2%)
<i>SES</i>			
Low class	87 (55.2%)	65 (41.7%)	152 (48.3%)
Middle or high class	70 (44.8%)	92 (58.3%)	162 (51.7%)
<i>Immigration</i>			
Yes	49 (30.8%)	16 (10.5%)	65 (20.4%)
No	108 (69.2%)	141 (89.5%)	249 (78.0%)

with no such record (*n* = 157) in terms of their personal and family characteristics and in terms of the nature of the abuse they have reported. The characteristics associated with SIB are displayed in Tables 1 and 2.

In comparison to alleged victims with no later record of SIB, those who had a record of SIB were characterized as listed below:

Personal Characteristics

Age: they were older at the onset of abuse ($M = 10.92$, $SD = 2.12$ vs. $M = 8.99$, $SD = 3.02$; $t(312) = 6.548$; $p < .001$) and were more often 10 years or above when the abuse occurred (73.9% vs. 47.1%; $p < .001$).

Mental/intellectual disability: No significant group differences were evident in terms of mental or intellectual development, with about one fifth of both groups assessed as children with intellectual or mental disabilities (22.3 vs. 16.8%; $p = .139$).

Family Characteristics

Family structure: their families less often consisted of two biological parents (62.8% vs. 78.3%; $p < .002$) and instead, more often consisted of one biological parent, with or without a partner. No differences in family size or birth order were evident.

Residence: they were almost three times more likely to have been removed from their parents' home to some other residence (24.2% vs. 8.3%; $p < .001$), including institutions or foster homes.

Table 2. Characteristics of Abuse Associated With SIB.

	Victim-Suspects (n = 157)	Victims-Only (n = 157)	Total (N = 314)
Frequency of abuse			
Single incident	52 (33.1%)	96 (61.3%)	148 (46.8%)
Multiple incidents	105 (66.9%)	61 (38.7%)	166 (53.1%)
Perpetrator's identity			
Parents	25 (15.6%)	14 (9.1%)	39 (9.6%)
Relatives or friends	93 (59.8%)	50 (32.2%)	143 (35.7%)
Known or unknown	38 (24.6%)	92 (58.7%)	130 (32.2%)
Severity of abuse			
Penetration	42 (26.8%)	27 (17.2%)	69 (22.0%)
Other acts	115 (73.2%)	130 (82.8%)	245 (78.0%)
Reactions to abuse			
Curiosity or interest			
Yes	14 (8.9%)	4 (2.5%)	18 (5.7%)
No	143 (91.1%)	153 (97.5%)	296 (94.3%)
Cooperation active			
Passive	49 (31.1%)	33 (21.2%)	82 (19.7%)
Resistant	26 (16.8%)	47 (29.7%)	73 (17.5%)
	82 (52.1%)	77 (49.2%)	159 (32.2%)
Previous abuse			
Sexual			
Yes	46 (29.3%)	6 (3.8%)	52 (16.6%)
No	111 (70.7%)	151 (96.2%)	262 (83.4%)
Physical			
Yes	19 (12.1%)	7 (4.5%)	26 (8.3%)
No	138 (87.9%)	150 (95.5%)	288 (91.7%)

SES: their family socioeconomic class was more often low (55.2% vs. 41.7%; $p < .014$) rather than middle or high classes.

Immigration status: their family was also more likely to have immigrated from other countries (30.8% vs. 10.5%; $p < .001$).

Characteristics of Abuse

Frequency of abuse: alleged victim with SIB records were remarkably more likely than victims with no SIB to have been offended repeatedly in multiple instances, as opposed to only once (66.9% vs. 38.7%; $p < .001$).

Relationship to perpetrator: They were more often victimized by parents (15.6% vs. 9.1%) and relatives or friends (59.8% vs. 32.2%) and less often abused by other suspects, known or unknown to the victim (24.6% vs. 58.7%; $p < .001$).

Severity of abuse: They were more likely to have experienced severe acts of sexual abuse, and reported more often sexual penetration (26.8% vs. 17.2%; $p < .028$), but no more use of threats, force, or emotional rewards by the perpetrator, in comparison to victims only.

Table 3. Predicting SIB by Abuse Variables After Controlling for Other Predictors.

Predictors	B	S.E.	Wald	Sig.	Exp(B)
<i>Block 1</i>					
Victim's age	1.277	.304	17.640	.000	3.586
Single parent	1.033	.326	10.038	.002	2.810
Immigration	1.018	.394	6.678	.010	2.768
Constant	2.063	.452	20.812	.000	0.127
<i>Block 2</i>					
Victim's age	1.192	.345	11.906	.001	3.293
Single parent	0.758	.366	4.293	.038	2.134
Immigration	1.299	.457	8.080	.004	3.667
Frequency of abuse	0.834	.327	6.510	.011	2.301
relationship to suspect	1.331	.350	14.474	.000	3.784
Prior sexual abuse	1.993	.518	14.799	.000	7.340
Constant	4.677	.745	39.356	.000	0.009

Note: all $df = 1$

Reactions to abuse: They showed more often curiosity or interest in the sexual interaction (8.9% vs. 2.5%; $p < .013$) and were more often active (31.1% vs. 21.2%) rather than passive (16.8% vs. 29.7%) or resistant (52.1% vs. 49.2%; $p < .037$).

Previous abuse: They have more often reported previous instances of sexual touch (29.3% vs. 3.8%; $p < .001$) or physical abuse (12.1% vs. 4.5%; $p < .011$), in addition to those under current investigation.

Assessment and referral: They were more frequently assessed by the child investigator as having undergone a traumatic experience, resulting in humiliation, emotional harm, and/or physical injury (74.8% vs. 64.4%; $p < .05$). They were more often referred to therapy (82.2% vs. 69.5%; $p < .002$) following the investigation, but no more often referred to medical examinations or allowed to testify in court.

Prediction of SIB

Logistic regression analyses were employed in order to identify moderators of SIB among alleged victims, including (a) age at onset of abuse and family characteristics and (b) characteristics of the sexual abuse experience after controlling for age and family characteristics (see table 3). Only variables that were found to be significantly associated with SIB were included in the analysis. Victim's age at the onset of abuse and family variables were entered in a first block ($p < .001$), while abuse variables were entered in a second block ($p < .001$).

The final model was significant ($p < .001$), correctly classifying 77.4% of the children: 74.8% of the victims with SIB and 80.2% of the victims with no SIB. The variables included in the final model were checked for multicollinearity and showed satisfying independence ($VIF > .88$; Tolerance < 1.13 , for all variables). Victim's age was a significant moderator, with children aged 10 or above at the onset of abuse being

over three times more likely to display SIB than children who were younger at the time of abuse ($p < .001$; $Exp(B) = 3.293$). Of the family characteristics, significant moderators were single-parent families ($p < .05$; $Exp(B) = 2.134$) and immigration status ($p < .01$; $Exp(B) = 3.667$). After controlling for these variables, the following moderators relating to the abuse characteristics were found significant: relationship to perpetrator, with alleged victims of parents, relatives, or friends being over three times more likely to have a record of SIB than alleged victims of other known or unknown suspects ($p < .001$; $Exp(B) = 3.784$); frequency of alleged abuse, with children reporting multiple events being twice as likely to have a record of SIB as children reporting a single event ($p < .01$; $Exp(B) = 2.301$); Previous instances of sexual abuse, with children reporting such instances being over seven times more likely to be referred for SIB record than children with who did not report previous sexual abuse ($p < .001$; $Exp(B) = 7.340$).

This predictive model was tested again for the subsample of alleged victims with SIB records who gave detailed descriptions of the SIB interaction in their investigation ($n = 96$). Because the same trends emerged, the results are not repeated.

Discussion

This study aimed to test variables that moderate the early onset of SIB (by the age of 14) in a sample of boys, alleged CSA victims. Several strengths of this study may increase the validity of the variables identified as moderators of the CSA–SIB association over previously reported studies: basing on a large and nonclinical nationwide sample of children; following prospectively victims for up to 10 years to confirm/disconfirm later SIB; and using documented records of CSA and SIB, supported with detailed statements made by the children.

Interestingly, among the alleged victims who displayed SIBs, the time lag between the investigation as a victims and the investigation as a suspect was less than 1 year on average (although the range was much larger as indicated by the standard deviation). This finding suggests the alarming conclusion that the risk for SIB is highest in the months following abuse disclosure. However, it is possible that recently abused boys, especially the older ones, were more closely followed in the educational or welfare systems in the first year following their abuse and therefore selectively more often represented in SIB investigations.

Differences between victims who did and did not display SIB revealed in the current study suggest a complexity of factors of developmental and familial nature as well as factors related to the experience of CSA. However, only some of them significantly predict involvement in early SIB, suggesting that others are interrelated and share variance with the predictors. Moreover, the results stress that attempts to elucidate risk factors for SIB associated with the experience of sexual abuse, which dominate much of this research, should control for developmental and family predictors.

In comparison to victims who had no record of SIB, the data reveal distinct personal and family characteristics of alleged victims who later developed SIB, as well as specific features of their abuse. Interestingly, the victims who later displayed SIB were older at the onset of abuse. It is hard to compare this finding with figures from others

studies (Kendall-Tackett et al., 1993; McClellan et al., 1996), as they differ with respect to the sample age range. It is likely, however, that the children who displayed SIB in this sample have been abused at a younger age, yet not necessarily investigated during the study period. This explanation is supported by self reported past experiences of sexual abuse which were found to be more frequent in the research than in the comparison group and highly predictive of SIB. Higher frequency of previous abuse by children exhibiting SIB suggests that these children had possibly been abused on additional occasions and at an earlier age.

Consistent with previous findings (Vizard, Hickey, French, & McCrory, 2007), intellectual or mental impairment was quite frequent among alleged victims who had a record of SIB, with almost one quarter of them diagnosed with some disability. However, this feature does not distinguish between those who did or did not develop SIB in the present study, as in a previous one (Salter et al., 2003), and seems instead to characterize male victims of sexual abuse in general. Looking from the other direction, a recent study showed that children with SIB were more likely to suffer intellectual disabilities when they have experienced abuse than when they have not (Hershkowitz, 2011), further supporting the possibility that intellectual disability is associated with abuse but not with SIB.

Family risk factors have been pointed to in the current study as in other ones (Becker et al., 1993; Everson et al., 1989; Friedrich et al., 1992; Hall et al., 2002; Hummel et al., 2000; Leifer et al., 1993; Mannarino & Cohen, 1996) as moderators of SIB following sexual abuse. Consistent with the ACE (adverse childhood experiences; Hillis et al., 2004) research, the current data show that on all measures, children with SIB seemed to suffer from lower family resources, that is, low SES and single-parent families as well as lower stability in terms the family going through immigration and the child being removed from home to another residence. After controlling for age, family structure, and immigration status best represented these risk factors. These factors combined may suggest that higher family load, possibly due to parents having to work during longer or unusual hours, perhaps limits effective supervision of the children, rendering them more vulnerable to both CSA and SIB.

In an attempt to elucidate the role of the abuse experience, personal and familial variables which increased significantly the odds of developing SIB among CSA victims were controlled for in the predictive model. Consistent with previous research (Cosentino et al., 1995; Friedrich et al., 1992, 2001, 2003; Kendall-Tackett et al., 2001), this model confirms that children who alleged sexual abuse by closely related perpetrators such as parents, relatives, or friends are at a much higher risk for developing SIB than children who were abused by more distant perpetrators, known or unknown to the child. Second, the frequency of alleged abuse formed another significant risk factor, with repeated abuse over time doubling the odds of involving in SIB. Interestingly, the identity of the perpetrators is related to the duration and severity of the abuse, as abuse by parental figures tends to be repeated and to gradually evolve into more severe sexual acts (Mennen & Meadow, 1995; Trickett, Reiffman, Horowitz, & Putnam, 1997). In this study, however, the frequency of abuse remained a strong risk factor even after controlling for the perpetrator's identity, although both factors

included in the final model seem to have obscured the role of abuse severity (i.e. penetration), which was not a significant predictor in the current study but reported as a moderator in other studies (Friedrich et al., 2001, 2003). Third, consistent with previous research (Hall, Gray, et al., 1998, Hall, Mathews, et al., 1998), self-reports of past sexual abuse instances formed another strong predictor of SIB, suggesting that abuse on multiple occasions and/or by multiple perpetrators, and apparently earlier abuse are central risk factors for SIB. Early sexual abuse may also explain higher rates of home removal reflected in the current study among those who later had a record of SIB; in line with previous research (Silovsky & Niec, 2002; Elkovitch et al., 2009), the current data show that a quarter of the children with SIB stayed in an alternative residence at the time of investigation, and rates of home removal were three times higher than this found in alleged victims who did not have a record of SIB.

Alleged victims who had a record of early SIB reported different reactions to the perpetrators during the abuse they have experienced. Although half of all victims showed resistance to their abusers, and most of them did not show sexual interest or curiosity, those who developed SIB were more often active in the abusive acts and slightly more curious, perhaps explaining later ambivalent reactions or self-blaming identified in previous research (Hall, Mathews, et al., 1998; Mannarino et al., 1994). Although alarming, victims' reactions during the abuse were not significant predictors of SIB.

Overall, this study reflects a clear and coherent picture. Just a small proportion of the allegedly abused children in this sample were later reported for SIB, and most alleged victims appeared rather resilient in this sense. SIB was reported for the average child within the 1st year following the alleged abuse. The combination of factors associated with SIB for abused boys seem to reflect high degrees of family dysfunction. However, even after controlling for these factors, some characteristics of the abuse remained important predictors in this study: relationship to the suspect, frequency of sexual abuse incidents, and previous incidents of sexual nature. Thus, the nature of the abuse experience, rather than the abuse itself, is central in the explanation of early SIB. Repeated abuse, by closely related perpetrators, in addition to past sexual experiences posed a remarkably higher risk for SIB. For older victims with higher family dysfunction, the risks accumulated such as to reliably predict their early involvement in SIB in three quarters of the cases.

The findings from this study should be considered in the context of its limitations. First, the current data base is limited to cases referred to child investigation and fails to consider SIB that are not reported to the police or CPS, explaining the low occurrence of SIB among CSA male victims evidenced in this study. Second, children were only followed by the age of 14, which obviously limits the manifestation of SIB. Including older adolescents in the sample would have increased the rates of SIB displayed in the sample. Thus, the CSA–SIB moderators revealed in this study actually help explain the early onset of SIB rather than the occurrence of SIB in general. Third, although the follow-up period in this study was 10 years, because children were only followed till they turned 14, individual duration of follow up was 1 to 10 years depending on victim's age and time of investigation, further limiting the

possibility to detect SIB among those for whom the follow-up period was shorter. While all victims were followed in the 1st year which is the year of alleged victimization, the time window for detecting SIB gradually decreased as the age of the children increased and/or as the timing of the investigation was closer to the last year of the study. This may also explain why SIB was more likely to be found within the 1st year of the investigation.

Although likely to suffer from underreport of CSA and SIB, the data presented reestablish that these two serious social problems reliably but modestly overlap (e.g., Freidrich et al., 2007). Common explanations based on learning mechanisms such as modeling, conditioning abuse with sexual stimulation, and/or normalizing sexual relationships with children are suggested in the literature (for a review see Burton, 2003).

The predictive model suggested in this study has implications for guiding risk assessment for SIB among male victims. Male SIB is not a common consequence of CSA and shouldn't be necessarily expected among the victims. Basing assessment on the nature of abuse experienced and on family resources for responding to the abuse is more informative and useful for identifying at-risk victims than just considering a history of CSA. The predictive model helps identifying the variables that facilitate early SIB among past victims, balancing the odds of false positive, and false negative, that is the model is equally effective for the identification of those who did and did not involve in SIB.

The at-risk victims identified in the current study are likely to suffer severe emotional, social, academic, and health problems, both in the short and long run (Putnam, 2003), therefore it is important to identify them and address their needs. In addition, their higher likelihood of performing SIB on other children makes assessment and intervention even more crucial for the protection of other children and for the prevention of trauma perpetuation. Furthermore, the data suggest that it might be important to intervene immediately with these victims in terms of protection and treatment procedures, as some are likely to display SIB within 1 year of their own victimization. For older children who are at higher risk according to the data, and for whom SIB may be defined as a crime, intervention is especially crucial for preventing their involvement in the legal system as suspected juvenile sexual offenders.

Declaration of Conflicting Interests

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

Funding

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

References

- Becker, J. V., Harris, C. D., & Sales, B. D. (1993). Juveniles who commit sexual offenses: A critical review of research. In J. R. Graham, M. S. Zaragoza, G. C. N. Hall & R. Hirschman (Eds.), *Sexual aggression: Issues in etiology, assessment, and treatment* (pp. 215-228). Philadelphia, PA: Taylor & Francis.

- Bonner, B. L., Walker, C. E., & Berliner, L. (1999). *Children with sexual behavior problems: Assessment and treatment*. (Final Report, Grant No. 90-CA-1469). Washington, DC: Administration of Children, Youth, and Families, Department of Health and Human Services. Retrieved from <http://www.calib.com/nccanch/pubs/otherpubs/childassessment/index.cfm>
- Burton, D. L. (2003). Male adolescents: Sexual victimization and subsequent sexual abuse. *Child and Adolescent Social Work Journal*, 20, 277-296. doi:10.1023/A:1024556909087
- Burton, D. L., Duty, K. J., & Leibowitz, G. S. (2011). Differences between sexually victimized and non-sexually victimized male adolescent sexual abusers: Developmental antecedents and behavioral comparisons. *Journal of Child Sexual Abuse*, 20, 1-17.
- Burton, D. L., Miller, D. L., & Tai Shill, C. (2002). A social learning theory comparison of the sexual victimization of adolescent sexual offenders and nonsexual offending male delinquents. *Child Abuse & Neglect: The International Journal*, 26, 893-907. doi:10.1016/S0145-2134(02)00360-5
- Clark, M. W. (1997). Characteristics of juvenile sex offenders who admit versus those who deny their offenses. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 57(12-B), 7718.
- Cosentino, C. E., Meyer-Bahlburg, H. F. L., Alpert, J. D., Weinberg, S. L., & Gaines, R. (1995). Sexual behavior problems and psychopathology symptoms in sexually abused girls. *Journal of the American Academy of Child and Adolescent Psychiatry*, 34, 1033-1042.
- Drach, K., Wientzen, J., & Ricci, L. (2001). The diagnostic utility of sexual behavior problems in diagnosing sexual abuse is a forensic child abuse evaluation clinic. *Child Abuse & Neglect*, 25, 489-503.
- Elkovitch, N., Latzman, R. D., Hansen, D. J., & Flood, M. F. (2009). Understanding child sexual behavior problems: A developmental psychopathology framework. *Clinical Psychology Review*, 29, 586-598. doi:10.1016/j.cpr.2009.06.006
- Everson, M. D., Hunter, W. M., Runyan, D. K., Edleson, G. A., & Coulter, M. L. (1989). Maternal support following disclosure of incest. *American Journal of Orthopsychiatry*, 59, 197-207.
- Friedrich, W. N. (2007). *Children with sexual behavior problems: Family based, attachment-focused therapy*. New York, NY: W. W. Norton.
- Friedrich, W. N., Davies, W. H., Feher, E., & Wright, J. (2003). Sexual behavior problems in preteen children: Developmental, ecological, and behavioral correlates. *Annals of the N. Y. Academy of Sciences*, 989, 95-104. doi:10.1111/j.1749-6632.2003.tb07296.x
- Friedrich, W. N., Fisher, J., Dittner, C., Acton, R., Berliner, L., Butler, J., & Wright, J. (2001). Child Sexual Behavior Inventory: Normative, psychiatric, and sexual abuse comparisons. *Child Maltreatment*, 6, 37-49. doi:10.1177/1077559501006001004
- Friedrich, W. N., Grambsch, P., Damon, L., Hewitt, S. K., Koverola, C., Lang, R. A., & Broughton, D. (1992). Child Sexual Behavior Inventory: Normative and clinical comparisons. *Psychological Assessment*, 4, 303-311.
- Friedrich, W. N., Jaworski, T. M., Huxsahl, J. E., & Bengtson, B. S. (1997). Dissociative and sexual behaviors in children and adolescents with sexual abuse and psychiatric histories. *Journal of Interpersonal Violence*, 12, 155-171.
- Friedrich, W. N., Olafson, E., & Faller, K. C. (2007). Standardized tests and measures. In K. Faller (Ed.), *Interviewing children about sexual abuse: Controversies and best practice* (pp. 207-225). New York, NY: Oxford University Press.
- Gray, A., Busconi, A., Houchens, P., & Pithers, W. D. (1997). Children with sexual behavior problems and their caregivers: Demographics, functioning, and clinical patterns. *Sexual Abuse: A Journal of Research and Treatment*, 9, 267-290.

- Hall, D. K., Gray, A., Busconi, A., Houchens, P. K., Mathews, F., & Pearce, J. (1998). Factors associated with sexual behavior problems: Identification of five distinct child types and related treatment considerations. *Child Maltreatment, 3*, 384-406.
- Hall, D. K., Mathews, F., & Pearce, J. (1998). Factors associated with sexual behavior problems in young sexually abused children. *Child Abuse & Neglect, 22*, 1045-1063.
- Hall, D. K., Mathews, F., & Pearce, J. (2002). Sexual behavior problem in sexually abused children: A preliminary typology. *Child Abuse & Neglect, 26*, 289-312. doi:10.1016/S0145-2134(01)00326-x
- Hershkowitz, I. (2011). The effects of abuse history on sexually intrusive behavior by children: An analysis of child justice records. *Child Abuse & Neglect, 35*, 40-49. doi:10.1016/j.chiabu.2010.09.002
- Hibbard, M. R., & Hartman, G. L. (1992). Behavioral problems in alleged sexual abuse victims. *Child Abuse and Neglect, 16*, 755-762.
- Hillis, S. D., Anda, R. F., Dube, S. R., Felitti, V. J., Marchbanks, P. A., & Marks, J. S. (2004). The association between adverse childhood experiences and adolescent pregnancy, long-term psychosocial consequences, and fetal death. *Pediatrics, 113*, 320-327. doi:10.1542/peds.113.2.320
- Hummel, P., Thomke, V., Oldenburger, H. A., & Specht, F. (2000). Male adolescent sex offenders against children: Similarities and differences between those offenders with and those without a history of sexual abuse. *Journal of Adolescence, 23*, 305-317. doi:10.1006/jado.2000.0316
- Inderbitzen-Pisaruk, H., Shawchuck, C. R., & Hoier, T. S. (1992). Behavioral characteristics of child victims of sexual abuse: A comparison study. *Journal of Clinical Child Psychology, 21*, 14-19.
- Jespersen, A. F., Lalumière, M. L., & Seto, M. C. (2009). Sexual abuse history among adult sex offenders and non-sex offenders: A meta-analysis. *Child Abuse & Neglect, 33*, 179-192. doi:10.1016/j.chiabu.2008.07.004
- Johnson, G. M., & Knight, R. A. (2000). Developmental antecedents of sexual coercion in juvenile sexual offenders. *Sexual Abuse: Journal of Research and Treatment, 12*, 165-178. doi:10.1023/A:1009546308248
- Kendall-Tackett, K. A., Williams, L. M., & Finkelhor, D. (1993). Impact of sexual abuse on children: A review and synthesis of recent empirical studies. *Psychological Bulletin, 113*, 164-180.
- Kendall-Tackett, K. A., Williams, L. M., & Finkelhor, D. (2001). Impact of sexual abuse on children: A review and synthesis of recent empirical studies. In R. Bull (Ed.), *Children and the law: The essential readings* (pp. 31-76). Malden, MA: Blackwell Publishing. doi:10.1037/0033-2909.113.1.164
- Knight, R. A., & Sims-Knight, J. E. (2003). The developmental antecedents of sexual coercion against women: Testing alternative hypotheses with structural equation modeling. *Annals of the New York Academy of Sciences, 989*, 72-75. doi:10.1111/j.1749-6632.2003.tb07294.x
- Leifer, M., Shapiro, J. P., & Kassem, L. (1993). The impact of maternal history and behavior upon foster placement and adjustment in sexually abused girls. *Child Abuse and Neglect, 17*, 755-766.
- Mannarino, A. P., & Cohen, J. A. (1996). A follow up study of factors which mediate the development of psychological symptomatology in sexually abused girls. *Child Maltreatment, 1*, 246-260.
- Mannarino, A. P., Cohen, J. A., & Berman, S. (1994). The relationship between preabuse factors and psychological symptomatology in sexually abused girls. *Child Abuse & Neglect, 18*, 63-71.

- McClellan, J., McCurry, C., Ronnei, M., Adams, J., Eisner, A., & Storck, M. (1996). Age of onset of sexual abuse: Relationship to sexually inappropriate behaviors. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 1375-1383.
- Mennen, F. E., & Meadow, D. (1995). The relationship of abuse characteristics to symptoms in sexually abused girls. *Journal of Interpersonal Violence, 10*, 259-274.
- Mian, M., Marton, P., & LeBaron, D. (1996). The effects of sexual abuse on 3- to 5-year-old girls. *Child Abuse and Neglect, 20*(8), 731-745.
- Orbach, Y., Hershkowitz, I., Lamb, M. E., Srebnberg, K. J., Esplin, P. W., & Horowitz, D. (2000). Assessing the value of structured protocols for forensic interviews of alleged child abuse victims. *Child Abuse & Neglect, 24*, 733-752. doi:10.1016/S0145-2134(00)00137-x
- Putnam, F. W. (2003). Ten-year research update review: Child sexual abuse. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*, 269-278. doi:10.1097/00004583-200303000-00006
- Salter, D., McMillan, D., Richards, M., Talbot, T., Hodges, J., Bentovim, A., & Skuse, D. (2003). Development of sexually abusive behavior in sexually victimized males: A longitudinal study. *Lancet, 361*, 471-476. doi:10.1016/S0140-6736(03)12466-x
- Seto, M. C., Kjellgren, C., Priebe, G., Mossige, S., Svedin, C. G., & Langstrom, N. (2010). Sexual coercion experience and sexually coercive behavior: A population study of Swedish and Norwegian male youth. *Child Maltreatment, 15*(3), 219-288. doi:10.1177/1077559510367937
- Seto, M. C., & Lalumiere, M. L. (2010). What is so special about male adolescent sexual offending? A review and test of explanations through meta-analysis. *Psychology Bulletin, 136*, 526-575. doi:10.1037/a0019700
- Silovsky, J., & Niec, L. (2002). Characteristics of young children with sexual behavior problems: A pilot study. *Child Maltreatment, 7*, 187-197. doi:10.1177/1077559502007003002
- Tarren-Sweeney, M. (2008). Predictors of problematic sexual behavior among children with complex child maltreatment histories. *Child Maltreatment, 13*, 182-198.
- Trickett, P. K., Reiffman, A., Horowitz, L. A., & Putnam, F. W. (1997). Characteristics of sexual abuse trauma and the prediction of developmental outcomes. In D. Cicchetti & S. L. Toth (Eds.), *Developmental perspectives on trauma: Theory, research, and intervention*, (pp. 289-314). Rochester, NY: University of Rochester Press.
- Vizard, E., Hickey, N., French, L., & McCrory, E. (2007). Children and adolescents who present with sexually abusive behaviour: A UK descriptive study. *Journal of Forensic Psychiatry and Psychology, 18*, 59-73. doi:10.1080/14789940601056745
- Wells, R. D., McCann, J., Adams, J., Voris, J., & Dahl, B. (1997). A validation study of the Structured Interview of Symptoms Associated with Sexual Abuse (SASA) using three samples of sexually abused, allegedly abused, and non-abused boys. *Child Abuse & Neglect, 2*, 1159-1168.
- Widom, C. S., & Ames, M. A. (1994). Criminal consequences of childhood sexual victimization. *Child Abuse & Neglect, 18*, 303-318.

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