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Prevalence and psychological sequelae of self-reported childhood physical and sexual abuse in a general population sample of men and women

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Abstract

Objective: This study examined the prevalence and psychological sequelae of childhood sexual and physical abuse in adults from the general population.

Method: A national sampling service generated a geographically stratified, random sample of 1,442 subjects from the United States. Subjects were mailed a questionnaire that included the Traumatic Events Survey (TES) [Traumatic Events Survey, Unpublished Psychological Test, Harbor-UCLA Medical Center, Los Angeles] and the Trauma Symptom Inventory (TSI) [Trauma Symptom Inventory Professional Manual, Psychological Assessment Resources, Odessa, FL]. Of all potential subjects, 935 (64.8%) returned substantially completed surveys.

Results: Sixty-six men and 152 women (14.2% and 32.3%, respectively) reported childhood experiences that satisfied criteria for sexual abuse, and 103 males and 92 females (22.2% and 19.5%, respectively) met criteria for physical abuse. Twenty-one percent of subjects with one type of abuse also had experienced the other type, and both types were associated with subsequent adult victimization. After controlling for demographics, adult history of interpersonal violence, and other child abuse, childhood sexual abuse was associated with all 10 scales of the TSI, and physical abuse was related to all TSI scales except those tapping sexual issues. Sexual abuse predicted more symptom variance than did physical abuse or adult interpersonal victimization. Various aspects of both physical and sexual abuse experiences were predictive of TSI scores. Abuser sex, however, both alone and in interaction with victim sex, was not associated with additional TSI symptomatology.

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Conclusions: Childhood sexual and physical abuse is relatively common in the general population, and is associated with a wide variety of psychological symptoms. These relationships remain even after controlling for relevant background variables.

Keywords: Physical abuse; Sexual abuse; Symptoms; Prevalence

Introduction

Although the incidence and long-term effects of childhood sexual and physical abuse are thought by most clinicians and researchers to be significant, some have suggested that the methodology and samples used in such studies may obscure or confound the actual relationship between child maltreatment and its potential effects. Among criticisms offered are (a) the fact that most studies examine clinical samples (Rind, Tromovitch, & Bauserman, 1998) or, alternatively, focus on university students (Wyatt & Peters, 1986), neither of which may provide a clear picture of the rates and impacts of child abuse in the general population, (b) the generic (i.e., not trauma-specific) measures used in many studies may underevaluate the actual symptomatology arising from childhood trauma (Carlson, 1997; Elliott, 1994), (c) the failure of many studies to examine both physical and sexual abuse as separate variables may overestimate the effects of sexual abuse where physical abuse is also present (Briere, 1992), and (d) background factors such as demographic and socioeconomic variables, family environment, and non-abuse-related traumas may confound what otherwise appear to be abuse-related effects (Fromuth, 1986; Rind et al., 1998).

Some controversy has arisen regarding the last of these points, that is, the possible confounding of abuse effects with the potential impacts of other variables that correlate with abuse. In this regard, there are significant statistical issues associated with controlling for abuse-correlated variables when abuse is antecedent to such variables (Davis, 1985; Pedhazur, 1982) or when the abuse variable is, itself, logically inseparable from the controlled variable (Briere & Elliott, 1993). For example, in the case of family environment, child abuse may further disrupt an already dysfunctional family, and a dysfunctional family may be an important aspect of child abuse (especially intrafamilial sexual and physical abuse). As a result, controlling for family environment when examining the relationship between abuse and later psychological symptoms may be a highly conservative, or even nonsensical procedure (e.g., examining the effects of incest after removing variance associated with living in a disturbed or dysfunctional family environment) (Briere & Elliott, 1993).

Despite these concerns, statistical control procedures can be helpful in assessing potential child abuse effects, especially when the control variables are less confounded with child maltreatment than is the case for concurrent family environment. In this regard, researchers have found it helpful to control for race or family income when examining potential risk factors for adult psychopathology, although this has been done rarely in child abuse research. Similarly, although other forms of child maltreatment and later (adult) victimization experiences may also covary with a given form of child abuse, controlling for such events can provide a clearer—albeit more conservative—view of the unique mental health sequelae of child abuse.

For this reason, the current authors have advocated for the application of multivariate research strategies in the study of potential child abuse effects, while, at the same time, warning of the potential problems associated with partialing out "family dysfunction" in such research (Briere, 1988, 1992; Briere & Elliott, 1993).

Despite these methodological concerns, over two decades of research suggest with relative unanimity that childhood physical and sexual abuse have a wide number of psychological sequelae. Among these are low self-esteem, anxiety, depression, anger and aggression, post-traumatic stress, dissociation, substance abuse, sexual difficulties, somatic preoccupation and disorder, self-injurious or self-destructive behavior, and most of the various symptoms and behaviors seen in those diagnosed with borderline personality disorder (see reviews by Berliner & Elliott, 2002; Briere & Runtz, 1993; Finkelhor, 1990; Kolko, 2002; Neumann, Houskamp, Pollock, & Briere, 1996; Polusny & Follette, 1995). Given this wide range of findings, an important goal of current research in this area is to determine the mediators and potential confounds associated with these abuse-symptom relationships. Equally important is the determination of the extent to which such symptom correlates occur in the general population, as opposed to solely in the university and clinical contexts where most studies in this area have been conducted.

Beyond the issue of possible abuse effects, also unresolved is the actual prevalence of childhood sexual and physical abuse in the general population. Reported sexual abuse rates for women, for example, have ranged from 8% to 32% in retrospective general population samples, whereas the rates for men range from 1% to 16% (Finkelhor, 1994). Among the possible reasons for such variability include differences in abuse definitions, survey methods, and representativeness of the samples collected. Controversy has occurred especially for male abuse rates, with several writers suggesting that the reported rates for males who were sexually abused as children are serious underestimates of their actual prevalence in the general population (e.g., Mendel, 1995).

In response to these continuing issues, the present paper reports on the prevalence and mental health correlates of child abuse in a random sample of the general population. In order to boost the external validity/generalizability of this study, special efforts were made to insure a relatively high response rate, so that concerns about representativeness could be addressed. In addition, in response to concerns about measurement sensitivity, the present study used the Trauma Symptom Inventory (TSI; Briere, 1995), a standardized test that may be more likely than some other measures to be responsive to the specific impacts of childhood abuse. Finally, the present study controlled for important demographic variables, and accounted for non-abuse-related traumas that otherwise might confound abuse-symptom analyses, while at the same time considering the statistical and interpretive implications of such a conservative procedure.

Methods

Procedure

A national sampling service generated a geographically stratified, random sample of 1,442 subjects with deliverable addresses, based on records of registered owners of automobiles

and/or individuals with listed telephones. According to the 1990 U.S. Census, over 95% of all households have telephones, allowing this sample to tap the majority of individuals in the United States. These subjects were mailed a questionnaire that included, among other measures, the Traumatic Events Survey (TES; Elliott, 1992) and the Trauma Symptom Inventory. Informed consent and a guarantee of confidentiality was included on the coversheet of the questionnaire. Research approval for this study was obtained from Biola University when the second author was affiliated there.

Three follow-up mailings were sent to nonrespondents at approximately one month intervals. Of all potential subjects, 935 (64.8%) returned surveys with substantially complete data for the measures used in this study. Although response rates varied according to three types of solicitation approaches (some received no money, some received $5 with the questionnaire, and some received $5 if they mailed back the completed questionnaire), no demographic variable, self-reported trauma experience, or TSI scale score differed according to method. Given this equivalence, the different solicitation samples were combined into a single group.

Measures

Traumatic Events Survey (TES). The TES evaluates a wide range of childhood and adult traumas. This instrument appears to be a valid measure of exposure to potentially traumatic events, and has been used in several published studies of trauma impacts (see Briere, 1997 for a more detailed review of this measure). Of the 30 interpersonal and environmental traumas examined by the TES, 20 address adult events and 10 are devoted to childhood events.

Trauma Symptom Inventory (TSI). The TSI is a 100-item test of posttraumatic stress and other psychological sequelae of traumatic events. Each item asks about the frequency at which a given symptom has occurred in the last 6 months, rated on a 0 ("never") to 3 ("often") Likert-like scale. Typical items are "Feeling tense or 'on edge'," "Nightmares or bad dreams," "Bad thoughts or feelings during sex," "Feeling helpless," and "Trouble controlling your temper." The TSI has three validity scales and 10 clinical scales, although only the clinical scale results are reported for this study. The latter are *Anxious Arousal*, *Depression*, *Anger-Irritability*, *Intrusive Experiences*, *Defensive Avoidance*, *Dissociation*, *Sexual Concerns*, *Dysfunctional Sexual Behavior*, *Impaired Self-Reference*, and *Tension Reduction Behavior*. TSI scales are internally consistent (mean alphas of .86, .87, .84, and .84 in general population, clinical, university, and military samples, respectively; Briere, 1995), and exhibit convergent, predictive, and incremental validity in a variety of studies (e.g., Briere & Elliott, 1998; Runtz & Roche, 1999; Shapiro & Schwartz, 1997).

Abuse specification

Child physical and sexual abuse histories were determined by subjects' responses to the relevant sections of the TES. The two TES physical abuse items ask "Before the age of 18, did your parents or caretaker ever do the following:" (1) "hit you with a fist, kick you, or throw you down on the floor, into a wall, or down stairs," or (2) "do something to you on purpose that left marks, bruised, burned, or caused you to bleed, lose teeth, or have broken bones." Additional

items ask how often the events had occurred, the subject's age at the first and last times it ever happened, and how upsetting the subject found the event to be at the time it occurred.

The two sexual abuse items are: (1) "Before the age of 18, did anyone 5 or more years older than you ever kiss or touch you in a sexual way or have you touch them in a sexual way," and (2) "Before the age of 18, did anyone less than 5 years older than you use physical force to kiss or touch you in a sexual way, or force you to touch them in a sexual way?" Additional items assess how often these acts occurred, the subject's age at first and last time it occurred, whether any event included oral/anal/vaginal penetration, total number of individuals who perpetrated these acts, whether any of these individuals were family members, and how upsetting the subject found the event to be at the time it occurred.

Childhood physical abuse was considered present in this study if either of the two TES physical abuse items were endorsed. Similarly, childhood sexual abuse was defined as present if either TES sexual abuse item was endorsed. For both physical and sexual abuse, characteristics were summarized as follows: age at first abuse was considered to be the earliest endorsement of either item, age at last abuse the latest endorsement of either item, frequency of abuse was the highest number for either item, and how "upset" the subject felt was defined as the highest rating for either item. For sexual abuse, penetration and incest were considered present if endorsed on either TES sexual abuse item.

Adult trauma specification

The variable used in the present study to index adult interpersonal violence was created by determining for each subject any exposure to sexual or physical violence (within or outside of a relationship) at age 18 or older, as self-reported on the TES. If any such violence was reported, this variable was scored as positive, whereas no reports of adult interpersonal violence of any type meant that this variable was scored as negative.

This variable was created to serve as a control variable, since child abuse history has been related to subsequent adult trauma exposure in several studies (Neumann et al., 1996). In this regard, it is possible that some of what have been considered child abuse effects may be due, in fact, to adult traumas that are statistically associated with child abuse. For example, an adult rape experience might produce symptoms that would correlate with child maltreatment to the extent that rape and child maltreatment were correlated. In such an instance, were the rape not taken into account, child abuse would account for symptom variance that was potentially due to the more proximal rape experience (Briere, 1992). To address this possible confound, adult trauma—as operationalized above—was entered in regression analyses before child abuse was considered, thereby controlling for its potential impact on symptomatology. Because the focus of the present paper is child abuse, as opposed to adult victimization, adult victimization was treated solely as a summary variable. Additional papers are in progress regarding specific adult victimization effects.

Subjects

Of the 935 subjects in this sample, 464 (49.6%) were male and 471 (50.4%) were female. The mean subject age was 46 years, with a range of 18 to 90. The modal marital status was married/

cohabiting ($n = 521, 55.4\%$), followed by never married ($n = 171, 18.2\%$), separated/divorced ($n = 158, 16.8\%$), and widowed ($n = 88, 9.4\%$). Racial breakdown was Caucasian ($n = 698$, 74.7%), African American ($n = 106$, 11.3%), Hispanic ($n = 68$, 7.3%), Asian ($n = 28$, 3.0%), Native American ($n = 19$, 2.0%) and "other" ($n = 16$, 1.7%). The modal education level was some college or trade school ($n = 306$, 32.5%) and the modal family income was $10,000–$19,999 ($n = 182$, 19.3%), followed by $20,000–$29,999 ($n = 174$, 18.5%).

Statistical issues

Because of the relatively large number of statistical tests performed in this study, and thus the likelihood of experiment-wise error rate inflation, the minimal alpha for statistical significance was set at $p < .01$. In addition, post hoc univariate tests were only performed when their associated multivariate tests were significant, per Cohen and Cohen's approach to experiment-wise error rate protection (Cohen & Cohen, 1983). Finally, all 2×2 χ^2 were corrected for continuity.

Results

Prevalence and characteristics of abuse histories

Sexual abuse. A total of 66 men and 152 women (14.2% and 32.3%, respectively) reported childhood experiences that satisfied the current criteria for sexual abuse. This sex difference was statistically significant, $\chi^2(1) = 41.6$, $p < .001$. Of these cases, a number of abuse characteristics did not differ according to sex of subject. These were incest (abuse within the immediate or extended family: 46.8%), oral, anal, or vaginal penetration by a penis or other object (52.8%), number of incidents (mode = 2–5, 32.2%), number of perpetrators ($M = 1.7$, $SD = 1.2$), age at first abuse ($M = 9.7$, $SD = 3.8$), and age at last abuse ($M = 12.1$, $SD = 4.0$). However, males were more likely than females to report at least one female sexual abuse perpetrator (39.4% vs. 8.5%, $\chi^2(1) = 13.5$, $p < .001$), and females were more likely than males to report at least one male perpetrator (92.7% vs. 69.7%, $\chi^2(1) = 8.6$, $p < .003$). There also were sex differences in reports of how upsetting the sexual abuse was at the time it happened. On a scale of 0 ("not at all") to 3 ("very"), males had a mean score of 1.5 ($SD = 1.4$), whereas females have a mean score of 2.3 ($SD = 1.4$), $t(215) = 5.4$, $p < .001$.

Physical abuse. Childhood experiences satisfying criteria for physical abuse were reported by 103 males and 92 females (22.2% and 19.5%, respectively), without a significant sex difference. Mean ages at first and last physical abuse incidents were 9.0 ($SD = 4.1$) and 14.1 ($SD = 3.5$) years, respectively, with no sex difference for age at first abuse, but with females reporting abuse that ended at a later age than was the case for males ($M = 14.8$, $SD = 3.6$ vs. $M = 13.4$, $SD = 13.4$, respectively), $t(173) = -2.2$, $p = .007$. The modal number of physical abuse incidents for this group was 2–5, and was equivalent for males and females. As was true for sexual abuse, males rated their physical abuse as less upsetting at the time than did females ($M = 2.4$, $SD = .8$, vs. $M = 2.8$, $SD = .5$, respectively), $t(189) = -3.8$, $p < .001$.

Overlapping abuse histories. Cross-tabulation of subjects' physical and sexual abuse histories indicated that individuals with one form of abuse were statistically more likely to have experienced the other as well ($\chi^2(1) = 23.2$, $p < .001$). In this regard, of all subjects with some form of child abuse history ($n = 345$), 72 (20.9%) had experienced both physical and sexual abuse.

Prevalence of adult interpersonal violence

Based on their self-reports on the TES, a total of 337 subjects (36.0%) reported at least one instance of sexual or physical interpersonal victimization at age 18 or later. This prevalence varied by sex: 149 males (32.0%) reported victimization, as opposed to 188 females (39.9%), $\chi^2(1) = 5.96$, $p < .015$. Adult victimization histories were more common among both those who reported childhood physical abuse ($\chi^2(1) = 45.2$, $p < .001$) and childhood sexual abuse ($\chi^2(1) = 39.8$, $p < .001$).

Prediction of symptomatology

Of the current sample, 921 (all but 14) subjects had complete data on background variables, abuse status, and TSI raw scale scores. Hierarchical multiple regression analyses were performed first, regressing (in order of entry) sociodemographic variables, adult victimization history, and childhood abuse history (sexual and physical) on each of the 10 TSI scale scores.

At Step 1, demographic variables were significantly associated with psychological symptomatology (see Table 1). Step 1 β weights (evaluating the unique effects of each demographic variable, controlling for all other demographic variables) indicated that raw TSI scores were (a) negatively related to age (younger subjects scored higher on all TSI scales), (b) positively related to female sex (women scored higher than men on Anxious Arousal, Depression, Dissociation, and Impaired Self-Reference), (c) positively or negatively related to racial minority status, according to TSI scale (Caucasians [coded as "0"] scored higher on Anxious Arousal, whereas non-Caucasians [coded as "1"] scored higher on Tension Reduction Behavior), and (d) negatively related to income (those with less family income scored higher on all TSI scales except Anger-Irritability, Dissociation, Sexual Concerns, and Tension Reduction Behavior).

At Step 2, multiple regression analysis revealed significant R^2 changes for all 10 TSI scores, indicating that the adult interpersonal trauma variable predicted additional TSI score variance beyond that predicted by Step 1 demographic variables.

At Step 3, physical and sexual abuse were entered simultaneously and were found to produce significant R^2 changes for all 10 TSI scores, indicating that childhood abuse was associated with additional TSI variance after controlling for demographic variables, adult trauma, and each other. As indicated in Table 1, Step 3 β weights revealed that sexual abuse was uniquely related to all 10 TSI scales, and physical abuse was associated with all scales except Sexual Concerns and Dysfunctional Sexual Behavior.

Finally, at Step 4, all 2-way interactions between sex, sexual abuse, and physical abuse were entered. Only in one instance was the R^2 change associated with this step statistically significant: subjects with a sexual abuse history but no physical abuse scored higher than other subjects on Dysfunctional Sexual Behavior ($\beta = -.17$, $p < .001$).

Table 1
Multiple regression of demographic variables, adult victimization, and child abuse history on Trauma Symptom Inventory (TSI) scales

TSI scale	Step 1				R^2	F (4, 917)	p		
	Age (β)	Sex[a] (β)	Race[b] (β)	Income (β)					
Anxious Arousal	−.17*	.11*	−.14*	−.09*	.06	14.9	<.001		
Depression	−.16*	.16*	−.06	−.14*	.08	19.2	<.001		
Anger-Irritability	−.27*	.03	−.08	−.04	.07	17.8	<.001		
Intrusive Experiences	−.15*	.12	.05	−.11*	.06	14.9	<.001		
Defensive Avoidance	−.17*	.07	.02	−.18*	.07	17.6	<.001		
Dissociation	−.16*	.09*	−.08	−.08	.04	10.2	<.001		
Sexual Concerns	−.20*	−.07	−.03	−.04	.04	10.2	<.001		
Dysfunctional Sexual Behavior	−.22*	−.06	.06	−.09*	.06	14.9	<.001		
Impaired Self-Reference	−.26*	.10*	.06	−.12*	.09	23.5	<.001		
Tension Reduction Behavior	−.17*	.05	.09*	.00	.07	18.4	<.001		

	Step 2				Step 3		R^2 change	F (2, 914)	p
	Adult IV[c] (β)	R^2 change	F (1, 916)	p	Physical abuse (β)	Sexual abuse (β)			
Anxious Arousal	.21*	.04	43.7	<.001	.12*	.23*	.08	36.8	<.001
Depression	.21*	.04	43.3	<.001	.13*	.25*	.08	44.5	<.001
Anger-Irritability	.20*	.04	40.1	<.001	.19*	.23*	.09	53.7	<.001
Intrusive Experiences	.26*	.07	72.1	<.001	.15*	.21*	.07	41.2	<.001
Defensive Avoidance	.26*	.07	73.4	<.001	.10*	.25*	.09	43.8	<.001
Dissociation	.21*	.05	45.0	<.001	.13*	.27*	.09	48.0	<.001
Sexual Concerns	.16*	.03	25.2	<.001	.08	.32*	.10	56.9	<.001
Dysfunctional Sexual Behavior	.12*	.01	13.0	<.001	.04	.25*	.06	32.7	<.001
Impaired Self-Reference	.19*	.04	37.9	<.001	.12*	.24*	.07	40.8	<.001
Tension Reduction Behavior	.14*	.02	19.6	<.001	.12*	.30*	.10	56.3	<.001

	Step 4 (interactions)			Final statistics		
	R^2 change	F (4, 911)	p	R^2	F (10, 911)	p
Anxious Arousal	.01	2.9	*ns*	.18	19.8	.001
Depression	.00	.4	*ns*	.20	22.5	.001
Anger-Irritability	.00	1.3	*ns*	.21	23.9	.001
Intrusive Experiences	.00	.6	*ns*	.20	23.1	.001
Defensive Avoidance	.00	.4	*ns*	.22	25.3	.001
Dissociation	.00	.5	*ns*	.18	18.5	.001
Sexual Concerns	.01	2.6	*ns*	.18	19.6	.001
Dysfunctional Sexual Behavior	.01	5.0	<.002	.15	16.1	.001
Impaired Self-Reference	.01	3.3	*ns*	.21	24.1	.001
Tension Reduction Behavior	.00	1.4	*ns*	.20	22.3	.001

[a] Male (0) versus female (1).
[b] Caucasian (0) versus non-Caucasian (1).
[c] Adult interpersonal violence.
* $p \leq .01$.

Table 2
Sexual abuse and physical abuse effect sizes for males and females

TSI scale	Males				Females			
	Sexual abuse		Physical abuse		Sexual abuse		Physical abuse	
	F (1, 461)	η^2	F (1, 461)	η^2	F (1, 458)	η^2	F (1, 458)	η^2
AA	36.2[a]	.07	4.4[b]	.01	12.2[c]	.03	119[d]	.03
D	37.0	.07	11.6	.02	24.1	.05	10.2	.02
AI	34.4	.07	29.1	.06	20.8	.04	17.7	.04
IE	20.4	.04	13.0	.03	24.4	.05	26.1	.05
DA	24.5	.05	3.3	.01	38.5	.08	13.8	.03
DIS	36.8	.07	12.7	.03	23.2	.05	10.0	.02
SC	37.2	.08	5.4	.01	39.5	.08	1.2	.00
DSB	19.8	.04	0	.00	20.6	.04	1.1	.00
TSR	31.4	.06	7.5	.02	15.0	.03	8.7	.02
TRB	42.9	.09	9.3	.02	31.5	.06	7.0	.02

Note. AA: Anxious Arousal, D: Depression, AI: Anger/irritability, IE: Intrusive Experiences, DA: Defensive Avoidance, DIS: Dissociation, SC: Sexual Concerns, DSB: Dysfiinctional Sexual Behavior, TSR: Impaired Self-Reference, TRB: Tension Reduction Behavior.

[a] All male sexual abuse effects significant at $p \leq .01$.

[b] All male physical abuse effects significant at $p \leq .01$ except AA ($p = .037$), DA (*ns*), SC ($p = .020$), and DSB (*ns*).

[c] All female sexual abuse effects significant at $p \leq .01$.

[d] All female physical abuse effects significant at $p \leq .01$ except SC (*ns*), and DSB (*ns*).

Although no sex × abuse interactions were significant, some meta-analytic studies of child abuse effects calculate effect sizes separately for males and females (e.g., Rind et al., 1998). For this reason, univariate child abuse effect sizes (η^2, representing the amount of TSI scale variance associated with a given type of abuse) are presented for each sex in Table 2. However, given the absence of significant sex × abuse interactions in this study, apparent sex differences in these effects should not be considered statistically meaningful.

In order to determine the clinical significance of the sexual and physical abuse effects found in this study, a 2(sex) × 2(sexual abuse) × 2(physical abuse) ANOVA was conducted, where the dependent variable consisted of the number of TSI scales (ranging from 0 to 10) each subject had that were in the clinical range (i.e., a *T*-score of 65 or higher, per Briere, 1995). As shown in Table 3, the number of clinically elevated scales varied as a function of sex, childhood sexual abuse, and childhood physical abuse, although inspection of the associated η^2 suggests that the sexual abuse effect was the most meaningful finding. In that instance, those with a positive history had a mean of two clinically elevated TSI scales, whereas those without a sexual abuse history had a mean of less than one elevation.

Because the distribution of scores on the "elevated TSI scales" measure was not normally distributed (skew = 2.5), nonparametric analyses were also performed on the relationship between sexual abuse history and TSI elevations. The TSI elevation variable was reformed into a five-point scale: 0 (no clinical elevations), 1 (one clinical elevation), 2 (two to four elevations), 3 (five to seven elevations), and 4 (eight to ten elevations). As presented in Table 4,

Table 3
ANOVAs of sex and abuse history on number of Trauma Symptom Inventory (TSI) scale elevations above T65

Independent variable	Number of elevated TSI scores				
	M	*SD*	*F* (1, 933)	*p*	η^2
Sex			5.6	<.018	.006
Male ($n = 469$)	1.0	2.2			
Female ($n = 472$)	.9	2.0			
Childhood sexual abuse			60.36	<.001	.061
No ($n = 721$)	.7	1.7			
Yes ($n = 220$)	2.1	3.0			
Childhood physical abuse			11.2	<.001	.012
No ($n = 744$)	.8	1.9			
Yes ($n = 197$)	1.7	2.8			

the greater the number of elevated TSI scores, the greater the likelihood of the subject having a sexual abuse history [$\chi^2(4) = 75.5$, $p < .001$]; Somer's $d = .28$, $p < .001$). In the most extreme case, of the 34 subjects with 8–10 elevated TSI scales, 22 (64.7%) had a self-reported history of childhood sexual abuse. A total of 46.4% of sexual abuse survivors had at least one elevated TSI score, as opposed to only 20.1% of those who did not report a sexual abuse history.

Abuse characteristics effects

As presented in Table 5, canonical correlation analysis indicated that five sexual abuse characteristics were associated with all TSI scores [$R_c = .50$, $F(70, 1073) = 1.50$, $p < .006$]. Examination of the canonical structure coefficients (c), which represent the redundant contribution of each abuse characteristic to the overall multivariate relationship between abuse characteristics and TSI scale scores, revealed that older age at last abuse, a greater number of abuse incidents, a greater number of abuse perpetrators, the presence of oral, anal, or vaginal penetration, and how upset subjects reported being at the time of the abuse were associated with a general increase in TSI scores. Not associated with TSI scores were age at first sexual abuse incident or whether any abuse involved incest.

Table 4
Cross-tabulation of number of elevated Trauma Symptom Inventory (TSI) scales and history of childhood sexual abuse

Number of elevated TSI scales	Negative sexual abuse history ($n = 721$)	Positive sexual abuse history ($n = 220$)
0	569 (78.9%)	118 (53.6%)
1	56 (7.8%)	22 (10.0%)
2–4	61 (8.5%)	35 (15.9%)
5–7	23 (3.2%)	23 (10.5%)
8–10	12 (1.7%)	22 (10.0%)

Table 5
Canonical correlation of sexual abuse characteristics with Trauma Symptom Inventory (TSI) scales

	c[a]
Abuse characteristic	
Age at first abuse	−.26
Age at last abuse	−.78
Number of incidents	−.53
How upset at time of abuse	−.41
Number of perpetrators	−.70
Penetration	−.50
Incest	−.14
TSI scale	
Anxious Arousal	−.50
Depression	−.42
Anger-Irritability	−.62
Intrusive Experiences	−.53
Defensive Avoidance	−.71
Dissociation	−.73
Sexual Concerns	−.82
Dysfunctional Sexual Behavior	−.75
Impaired Self-Reference	−.57
Tension Reduction Behavior	−.74

[a] Canonical structure coefficient, considered meaningful at $|c| > .35$.

Table 6
Canonical correlation of physical abuse characteristics with Trauma Symptom Inventory (TSI) scales

	c[a]
Abuse characteristic	
Age at first abuse	−.16
Age at last abuse	.84
Number of incidents	.50
How upset at time of abuse	.62
TSI scale	
Anxious Arousal	.61
Depression	.74
Anger-Irritability	.35
Intrusive Experiences	.71
Defensive Avoidance	.67
Dissociation	.64
Sexual Concerns	.18
Dysfunctional Sexual Behavior	.10
Impaired Self-Reference	.66
Tension Reduction Behavior	.17

[a] Canonical structure coefficient, considered meaningful at $|c| > .35$.

Effects of sexual abuse offender and victim sex. Because the TES also assesses the gender of the abuser in instances of self-reported sexual abuse, a final abuse characteristic analysis was performed to determine if the presence of at least one male or at least one female abuser determined symptomatic outcome, both as a main effect and as it interacted with victim sex. Multivariate analyses of covariance (controlling for total number of perpetrators) indicated that—beyond being sexually abused, per se—being abused by a male had no specific impact on TSI scores [$F(10, 97) = .6$, *ns*] for either victim sex [$F(10, 97) = 1.5$, *ns*], nor did abuse by a female [$F(10, 97) = 1.0$, *ns*] for either victim sex [$F(10, 97) = 1.2$, *ns*].

Characteristics of physical abuse were also related to TSI scales by canonical analysis [$R_c = .49$, $F(40, 597.2) = 2.02$, $p < .001$]. All TSI scales but Sexual Concerns, Dysfunctional Sexual Behavior, and Tension Reduction Behavior were associated with older age at last abuse, a greater number of physical abuse incidents, and how upset the victim was at the time of the abuse (see Table 6). Age at first physical abuse incident was not related to TSI scores.

Discussion

The results of this study are discussed below in terms of prevalence, associations with current symptomatology, and methodological issues.

Prevalence

As per other general population studies, the current results indicates that a self-reported history of sexual or physical abuse is relatively common. Approximately 32% of general population females and 14% of males reported childhood sexual abuse, and 22% and 20% of males and females, respectively, reported childhood physical abuse. Overall, a total of 345 subjects (37% of all those studied) described either sexual or physical maltreatment as a child. Of those subjects with child abuse histories, approximately 21% reported having been exposed to both physical and sexual maltreatment.

The sexual abuse prevalence figures described above are somewhat higher than some general population studies (e.g., Bagley & Ramsay, 1986; Finkelhor, 1984) but in the same range as others (e.g., Bagley, 1991; Finkelhor, Hotaling, Lewis, & Smith, 1990; Wyatt, 1985). Such numbers reinforce the notion that child maltreatment is a significant phenomenon in North American culture. It should be recalled, however, that these data reflect the state of victimization incidence approximately 30 years ago, as opposed to whatever its current rate may be. At minimum, however, these data suggest that a significant proportion of the current cohort of American men and women in America have been exposed to childhood sexual or physical abuse, as indexed by their self-report.

In addition to the prevalence of sexual and physical abuse, the present study reports on the sex of sexual abuse offenders for male and female victims. The gender breakdown for female victims is generally in line with the sexual abuse literature (93% had been abused by at least one male, and 9% had been abused by at least one female), whereas the data on perpetrator sex for male victims represents a newer finding. In this regard, 39% of males reported having been sexually abused by at least one female, and 70% described sexual abuse by at least

one male. Although there are few community studies with which to compare these latter numbers, Finkelhor (1994) estimates that, extrapolating from available retrospective report studies, approximately 20% of prepubescent boys have been sexually victimized by a female. At the other end of the report continuum, Mendel (1995) found that 60% of his clinical sample of males reported childhood sexual contact with an older female. Given that boys are probably at least as likely be abused by females during puberty as they would be prepubertally, it is not surprising that the current sample, which considered sexual abuse experiences up through age 17, would report a 39% female abuse rate. Such relatively high rates of female offending are noteworthy, since the common assumption is that the vast majority of sexual child abusers are male. Although nothing in the present study contradicts the notion that most sexual abusers are men, the current data suggest that the child abuse field may have underestimated the rate of women's sexual offending, primarily against boys.

Association with psychological symptoms

Sexual abuse. The current data suggest that, as has been found in clinical and university student studies, childhood sexual abuse is a significant risk factor for a range of psychological symptoms in the general population. Specifically, reports of sexual abuse were associated with elevations on all 10 scales of the TSI, even after controlling for a variety of sociodemographic variables, including sex, age, race, and family income, as well as subsequent interpersonal victimization as an adult and physical abuse in childhood. These data support not only the majority of the literature on mental health sequelae of childhood sexual abuse, but also the findings of one of the only general population studies in this area (Saunders, Villeponteaux, Lipovsky, Kilpatrick, & Veronen, 1992). Saunders et al. found that in a 391-person random sample of Charleston County, South Carolina, self-reported childhood sexual abuse was associated with a wide range of psychiatric disorders and problems, including depression, phobias, obsessive-compulsive disorder, panic disorder, posttraumatic stress disorder, sexual disorders, and both suicidal ideation and suicide attempts.

In the current study, certain characteristics of the sexual abuse experience were specifically associated with psychological symptomatology. Predictive of TSI scores were sexual abuse at a later age, a greater number of abuse incidents, multiple abusers, victimization that involved oral, anal, or vaginal penetration, and a greater level of emotional upset at the time of the abuse. As has been shown in some other studies (see reviews by Briere, 2000; Berliner & Elliott, 2002), whether the abuse was intrafamilial or extrafamilial did not seem to affect psychological outcome, at least as measured by TSI scores. Finally, contrary to expectation, sex of the abuser was not a significant predictor of symptomatology among those who reported having been abused, even under those conditions sometimes thought to be most detrimental (e.g., male abuser-male victim or female abuser-female victim).

Physical abuse. Also associated with most TSI scores was self-reported childhood physical abuse, although to a lesser extent than sexual abuse. Physical abuse was associated with all TSI scales except for those tapping sexual symptoms (Sexual Concerns and Dysfunctional Sexual Behavior) and Tension Reduction Behavior. The tendency for sexual, but not physical abuse to predict sexual symptoms has been found in other studies (e.g., Briere & Runtz, 1990),

reinforcing the notion that sexual distress or dysfunction may be a specific impact of sexual trauma for some individuals. Similar to sexual abuse, physical abuse characteristics associated with more severe symptomatology were abuse at a later age, a greater number of abuse incidents and abuse perpetrators, and greater distress at the time of the abuse.

Effects of controlling for related variables. It should be noted that the multiple regression approach used in this study is intrinsically conservative with respect to uncovering abuse-symptom relationships. By entering interpersonal violence in adulthood in the step prior to simultaneously entering sexual and physical abuse, each type of child abuse was considered only after all variance associated with adult victimization and the other form of childhood abuse was removed. Because childhood physical and sexual abuse were found in the present study to be risk factors for later adult victimization, and sexual abuse was significantly associated with physical abuse, controlling for adult victimization and the other form of child abuse (i.e., controlling for sexual abuse while examining physical abuse effects, and the reverse) is likely to have removed significant abuse-related variance that otherwise might have correlated with symptomatology. For this reason, the continuing relationship between self-reported childhood maltreatment and adult symptomatology is all the more noteworthy.

Effect size and clinical significance issues. Although the relationship between child abuse history and both (a) the likelihood of adult victimization, and (b) a variety of types of psychological symptomatology proved to be statistically robust in this study, it should be noted that the size of the abuse-symptom relationships are relatively small. Once demographics and adult interpersonal violence exposure were taken into account (admittedly a conservative procedure), the additional variance in any given TSI scale accounted for by physical and sexual abuse ranged from 6% (for Dysfunctional Sexual Behavior) to 10% (for Sexual Concerns and Tension Reduction Behavior). Effect sizes of this magnitude suggest that the impact of child abuse may vary from individual to individual, probably as a function of a range of other variables, abuse-specific and otherwise. For example, the canonical correlation results of the current study join findings from other studies (see Berliner & Elliott, 2002 for a review) in suggesting that more severe outcomes are likely to arise when sexual abuse occurs later in childhood (perhaps as a function of closer proximity to the point of [adult] symptom evaluation), involves a greater number of separate abuse incidents and multiple abuse perpetrators, includes oral/anal/vaginal penetration, and is perceived as especially upsetting at the time.

As a result, it is important to qualify the results of this or other studies by emphasizing that abuse need not always produce long-term effects, nor need all such effects necessarily be major. It is likely that any given child's short- and long-term response to maltreatment will be a function of a variety of variables, including his or her temperament, general pre-abuse developmental history and psychological functioning, the characteristics of the abuse experience(s), and how others responded to any subsequent disclosure. On the other hand, effect sizes of the magnitude found in the present study can have substantial clinical implications. Ondersman, Chaffin, and Berliner (1999), for example, performed a meta-analysis and estimate that the relationship between smoking and lung cancer is approximately $r = .12$; a considerably smaller effect size (1% of variance accounted for) than what is demonstrated here (6–10% of symptom

variance)—especially given that the latter refers to variance still available after partialing-out related socioeconomic and victimization variables.

Another way to consider the meaningfulness of the effects found here is to examine their psychometric significance. In the present study, sexual abuse victims were more than twice as likely to have at least one TSI scale elevated into the clinical range, and those with a greater number of clinical TSI elevations were considerably more likely to be sexual abuse survivors. Such data suggest that, at minimum, sexual abuse survivors are at increased risk for the subsequent development of clinically significant psychological disturbance, as measured by psychological tests.

Limitations of this study. Like most other studies on adult abuse sequelae, the cross-sectional self-report methodology of the current research limits the interpretations that can be made from its results. Participants' descriptions of their maltreatment history may have been affected by memory distortion, and their symptom endorsements may have been biased by under- or over-reporting of their actual level of distress. Further, although a 65% return rate is considered well within the range of acceptability for mail-out research (Dillman, 1978), it is possible that those who did not return questionnaires would have responded in ways that could have changed the findings of this study. For example, the methodology of the current research precluded participation by those unable to read English, as well as those who were not surveyed by the mailing list, such as the homeless, incarcerated, or psychiatrically hospitalized.

In addition, the cross-sectional nature of this study precludes definitive causal interpretations regarding the long-term impacts of child abuse (Briere, 1992). The relationship between self-reported childhood maltreatment and adult symptomatology may have been due to other intervening variables. Although we took care to control for demographics, other child abuse, and adult trauma exposure, we did not examine childhood neglect, nor did we assess for intervening life stressors (other than adult interpersonal violence) that might have covaried with childhood maltreatment and adult symptomatology. It should be noted, however, that the current data generally agree with the findings of most other studies in the area (Berliner & Elliott, 2002; Kolko, 2002; Neumann et al., 1996; Polusny & Follette, 1995) and are in concordance with longitudinal studies that directly implicate childhood abuse in the development of lasting psychological symptoms (Egeland, 1997; Starr & Wolfe, 1991).

Conclusion

The current report on the prevalence and symptomatic correlates of self-reported child abuse in the general population suggests that not only is child maltreatment relatively common, it also is associated with a variety of types of psychological dysfunction years later. Because this study was based on self-report, retrospective data, the relationship between childhood abuse and adult symptoms cannot be assumed to be causal. Nevertheless, in combination with a variety of other studies, the current findings suggest that a reliable relationship exists, even after controlling for background variables such as socioeconomic status and other forms of trauma.

Together, these various studies and the current data reinforce the proposition that childhood sexual and physical abuse is endemic in our culture, and suggest that, in contrast to the conclusions of Rind et al. (1998), sexual abuse is likely to have significant long-term effects. These findings not only support of child abuse prevention activities as a way to potentially decrease the rate of psychological disorder in American society, but also serve as a continuing reminder to clinicians that at least some of the basis for their clients' psychological disturbance may involve childhood maltreatment experiences.

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References

Bagley, C. (1991). The prevalence and mental health sequels of child sexual abuse in a community sample of women aged 18 to 27. *Canadian Journal of Community Mental Health*, *10*, 103–116.

Bagley, C., & Ramsay, R. (1986). Sexual abuse in childhood: Psychosocial outcomes and implications for social work practice. *Journal of Social Work and Human Sexuality*, *4*, 33–47.

Berliner, L., & Elliott, D. M. (2002). Sexual abuse of children. In J. E. B. Myers, L. Berliner, J. Briere, C. T. Hendrix, T. Reid, & C. Jenny (Eds.), *The APSAC handbook on child maltreatment* (2nd ed., pp. 55–78). Newbury Park, CA: Sage Publications.

Briere, J. (1988). Controlling for family variables in abuse effects research: A critique of the "partialing" approach. *Journal of Interpersonal Violence*, *3*, 80–89.

Briere, J. (1992). Methodological issues in the study of sexual abuse effects. *Journal of Consulting and Clinical Psychology*, *60*, 196–203.

Briere, J. (1995). *Trauma Symptom Inventory professional manual*. Odessa, FL: Psychological Assessment Resources.

Briere, J. (1997). *Psychological assessment of adult posttraumatic states*. Washington, DC: American Psychological Association.

Briere, J. (2000). Incest. In A. E. Kazdin (Ed.), *Encyclopedia of psychology*. Washington, DC: American Psychological Association and Oxford Press.

Briere, J., & Elliott, D. M. (1993). Sexual abuse, family environment, and psychological symptoms: On the validity of statistical control. *Journal of Consulting and Clinical Psychology*, *61*, 284–288.

Briere, J., & Elliott, D. M. (1998). Clinical utility of the Impact of Event Scale: Psychometrics in the general population. *Assessment*, *5*, 135–144.

Briere, J., & Runtz, M. (1990). Differential adult symptomatology associated with three types of child abuse histories. *Child Abuse & Neglect*, *14*, 357–364.

Briere, J., & Runtz, M. (1993). Child sexual abuse: Long-term sequelae and implications for psychological assessment. *Journal of Interpersonal Violence*, *8*, 312–330.

Carlson, E. B. (1997). *Trauma assessments: A clinician's guide*. New York: Guilford.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Davis, J. A. (1985). *The logic of causal order*. Sage University Paper Series on Quantitative Applications in the Social Sciences, number 07-055. Beverly Hills, CA: Sage.

Dillman, D. A. (1978). *Mail and telephone surveys: The Total Design method*. New York: Wiley.

Egeland, B. (1997). Mediators of the effects of child maltreatment on developmental adaptation in adolescence. In D. Cicchetti & S. L. Toth (Eds.), *Developmental perspectives on trauma: Theory, research, and intervention* (pp. 403–434). Rochester, NY: University of Rochester Press.

Elliott, D. M. (1992). *Traumatic Events Survey*. Unpublished psychological test. Los Angeles: Harbor-UCLA Medical Center.

Elliott, D. M. (1994). Assessing adult victims of interpersonal violence. In J. Briere (Ed.), *Assessing and treating victims of violence* (pp. 4–16). San Francisco: Jossey-Bass.

Finkelhor, D. (1984). *Child sexual abuse: New theory and research*. New York: Free Press.

Finkelhor, D. (1990). Early and long-term effects of child sexual abuse: An update. *Professional Psychology: Research and Practice, 21*, 325–330.

Finkelhor, D. (1994). Current information on the scope and nature of child sexual abuse. *The Future of Children, 4*, 31–53.

Finkelhor, D., Hotaling, G., Lewis, I. A., & Smith, C. (1990). Sexual abuse in a national survey of adult men and women: Prevalence, characteristics, and risk factors. *Child Abuse & Neglect, 14*, 19–28.

Fromuth, M. E. (1986). The relationship of childhood sexual abuse with later psychological and sexual adjustment in a sample of college women. *Child Abuse & Neglect, 10*, 5–16.

Kolko, D. J. (2002). Child physical abuse. In J. E. B. Myers, L. Berliner, J. Briere, C. T. Hendrix, T. Reid, & C. Jenny (Eds.), *The APSAC handbook on child maltreatment* (2nd ed., pp. 21–54). Newbury Park, CA: Sage Publications.

Mendel, M. P. (1995). *The male survivor: The impact of sexual abuse*. Thousand Oaks, CA: Sage.

Neumann, D. A., Houskamp, B. M., Pollock, V. E., & Briere, J. (1996). The long-term sequelae of childhood sexual abuse in women: A meta-analytic review. *Child Maltreatment, 1*, 6–16.

Ondersman, S. J., Chaffin, M., & Berliner, L. (1999). Commentary on the Rind et al. meta-analysis. *APSAC Advisor, 12*, 1–5.

Pedhazur, E. J. (1982). *Multiple regression in behavioral research: Explanation and prediction* (2nd ed.). New York: Holt, Rinehart and Winston.

Polusny, M. A., & Follette, V. M. (1995). Long term correlates of child sexual abuse: Theory and review of the empirical literature. *Applied & Preventive Psychology, 4*, 143–166.

Rind, B., Tromovitch, P., & Bauserman, R. (1998). A meta-analytic examination of assumed properties of child sexual abuse using college samples. *Psychological Bulletin, 124*, 22–53.

Runtz, M. G., & Roche, D. N. (1999). Validation of the Trauma Symptom Inventory (TSI) in a Canadian university sample. *Child Maltreatment, 4*, 69–80.

Saunders, B. E., Villeponteaux, L. A., Lipovsky, J. A., Kilpatrick, D. G., & Veronen, L. J. (1992). Child sexual assault as a risk factor for mental disorders among women: A community survey. *Journal of Interpersonal Violence, 7*, 189–204.

Shapiro, B. L., & Schwartz, J. C. (1997). Date rape: Its relationship to trauma symptoms and sexual self-esteem. *Journal of Interpersonal Violence, 12*, 407–419.

Starr, R. H., & Wolfe, D. A. (Eds.). (1991). *The effects of child abuse and neglect: Issues and research*. New York: Guilford.

Wyatt, G. E. (1985). The sexual abuse of Afro-American and White American women in childhood. *Child Abuse & Neglect, 9*, 507–519.

Wyatt, G. E., & Peters, S. D. (1986). Methodological considerations in research on the prevalence of child sexual abuse. *Child Abuse & Neglect, 10*, 241–251.

Résumé

Objectif: Cette étude a voulu examiner la prévalence et les séquelles psychologiques des agressions sexuelles et des mauvais traitements physiques dans la population en général.

Méthode: Un échantillon aléatoire et géographiquement stratifié comprenait 1.442 sujets vivant aux États Unis. Ils ont reçu un questionnaire par la poste contenant le Traumatic Events Survey (TES; Elliott,

1992) et le Trauma Symptom Inventory (TSI; Briere, 1995); 935 individus (64.8%) l'ont retourné, généralement bien rempli.
Résultats: Soixante-six hommes et 152 femmes (14.2% et 32.3% respectivement) ont relaté des expériences qui rencontraient les critères pour agressions sexuelles; et 103 hommes et 92 femmes (22.2% et 19.5% respectivement) ont satisfait les critères pour les mauvais traitements physiques. Vingt-et-un pour cent des individus qui avaient connu au moins un type de mauvais traitements avaient aussi connu l'autre type, et pour les deux catégories de mauvais traitements, on note que les individus deviennent victimes d'agressions en âge adulte. Ayant contrôlé les facteurs démographiques ainsi que la présence de violence durant la vie adulte et autres types de mauvais traitements en enfance, les auteurs ont noté que les abus sexuels s'associent aux dix échelles du TSI tandis que les mauvais traitements physiques s'associent à toutes les échelles du TSI sauf celles qui mesurent les agressions sexuelles. La présence d'expériences d'agressions sexuelles prédit une plus grande variance de symptômes que la présence de mauvais traitements physiques ou d'agressions subies durant la vie adulte. Divers aspects des expériences sexuelles et physiques prédisent des scores du TSI. Cependant, on n'a remarqué aucun lien entre des symptômes additionnels du TSI et la présence d'actes sexuels des agresseurs, en soi, ou combiné avec la présence d'expériences sexuelles de la victime.
Conclusions: On retrouve communément la présence d'agressions sexuelles et physiques en enfance dans la population en général, et celles-ci s'accompagnent d'une gamme de symptômes psychologiques. Ces liens persistent même après avoir contrôlé diverses variables.

Resumen

Objetivo: Este estudio examina la prevalencia y las secuelas psicológicas del maltrato y el abuso sexual en la infancia en adultos de la población general.
Método: Un servicio estadístico nacional generó una muestrea aleatoria geográficamente estratificada de 1.442 sujetos de USA. A todos los sujetos de les envió por correo un cuestionario que incluyó la Encuesta de Acontecimientos Traumáticos (TES; Elliot, 1992) y el Inventario de Síntomas Traumáticos (TSI; Briere, 1995). De todos los potenciales sujetos, un total de 935 (64.8%) devolvieron las entrevistas cumplimentadas.
Resultados: Sesenta y seis varones y 152 mujeres (14.2% y 32.3%, respectivamente) notificaron experiencias infantiles que satisfacen los criterios para abuso sexual. Además, 103 varones y 92 mujeres (22.2% y 19.5%, respectivamente) notificaron experiencias infantiles que cumplieron los criterios de maltrato físico. Un 21% de los sujetos con un tipo de maltrato también había experimentado el otro tipo y ambos tipos de maltrato estaban asociados con posterior victimización como adultos. Después de controlar el efecto de las variables demográficas, la historia adulta de violencia interpersonal y otros tipos de maltrato, se observó una asociación del abuso sexual infantil con el total de las 10 escalas del TSI y una asociación del maltrato físico con todas las escalas del TSI, excepto con aquellas relacionadas con cuestiones sexuales. El abuso sexual tiene un mayor valor predictivo de la varianza de los síntomas que el maltrato físico o la victimización adulta interpersonal. Varios aspectos de las experiencias de maltrato físico y abuso sexual fueron predictivos de las puntuaciones en el TSI. El género del abusador sexual, ni de manera aislada ni en interacción con el género de la víctima, estuvo asociada con sintomatología adicional en el TSI.
Conclusiones: El maltrato físico y el abuso sexual infantil es relativamente frecuente en la población general y están asociados con una amplia variedad de síntomas psicológicos. Estas relaciones permanecen incluso después de haber controlado variables históricas relevantes.