
Long-Term Consequences of Childhood Sexual Abuse by Gender of Victim

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Background: Childhood sexual abuse (CSA) is a worldwide problem. Although most studies on the long-term consequences of CSA have focused on women, sexual abuse of both boys and girls is common. Thus, a comparison of the long-term effects of CSA by gender of the victim will provide perspective on the need for future research, prevention activities, and treatment of survivors.

Methods: A retrospective cohort study was conducted from 1995 to 1997 among 17,337 adult HMO members in San Diego, California. Participants completed a survey about abuse or household dysfunction during childhood, and multiple other health-related issues. Multivariate logistic regression was used to examine the relationships between severity of CSA (intercourse vs no intercourse) and long-term health and social problems (substance use and abuse, mental illness, and current problems with marriage and family) by gender of victim. Models controlled for exposure to other forms of adverse childhood experiences that co-occur with CSA. Among men, the relationship between the gender of the CSA perpetrator to the outcomes was also examined.

Results: Contact CSA was reported by 16% of males and 25% of females. Men reported female perpetration of CSA nearly 40% of the time, and women reported female perpetration of CSA 6% of the time. CSA significantly increased the risk of the outcomes. The magnitude of the increase was similar for men and women. For example, compared to reporting no sexual abuse, a history of suicide attempt was more than twice as likely among both men and women who experienced CSA ($p < 0.05$). Compared with those who did not report CSA, men and women exposed to CSA were at a 40% increased risk of marrying an alcoholic, and a 40% to 50% increased risk of reporting current problems with their marriage ($p < 0.05$).

Conclusions: In this cohort of adult HMO members, experiencing CSA was common among both men and women. The long-term impact of CSA on multiple health and social problems was similar for both men and women. These findings strongly indicate that boys and girls are vulnerable to this form of childhood maltreatment; the similarity in the likelihood for multiple behavioral, mental, and social outcomes among men and women suggests the need to identify and treat all adults affected by CSA.

(Am J Prev Med 2005;28(5):430–438) © 2005 American Journal of Preventive Medicine

Introduction

During the past several decades, research on the long-term behavioral, social, and mental health consequences of childhood maltreatment has proliferated. Studies examining the long-term effects of childhood abuse and related stressors have found increased risk for outcomes such as substance use and misuse, psychiatric disorders, suicide, and numerous

other health and social problems.^{1–6} Investigations of childhood sexual abuse (CSA), in particular, have received a large amount of attention. However, most studies of CSA have focused on female survivors,^{7–11} leaving a relative scarcity of information about the characteristics and long-term impact of CSA on male survivors.

Most studies of CSA prevalence indicate that girls are more likely to be victims than young boys.¹² However, prevalence estimates range from 20% to 30% for females,¹² and 4% to 76% for males.^{12,13} For both genders, CSA risk is correlated with family-related factors such as divorce and domestic violence, and having members who abuse substances or who are emotionally unavailable.^{14,15} It has also been reported that CSA commonly involves the use of force or threats.^{11,16}

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Whereas the perpetrators of CSA among young girls are predominately male, there is increasing evidence that a notable proportion of CSA among young boys is perpetrated by females.¹⁷

Studies of CSA have demonstrated strong relationships to several negative health, behavioral, and social outcomes among male and female survivors that are currently public health priorities, which include HIV risk behaviors,¹⁸ psychiatric disorders,^{19,20} substance abuse,^{1,21,22} and suicidality.^{23,24} While some of these studies have used population-based samples, many have been limited to the examination of CSA among clinical samples, such as individuals in substance abuse recovery and psychiatric patients. Furthermore, studies that examine CSA in relationship to outcomes have tended to ignore the presence of other co-occurring forms of child maltreatment and many reports of CSA are almost exclusively among women.

Because there is relatively little information that compares the long-term effects of CSA among both male and female survivors, data were used from the Adverse Childhood Experiences (ACE) Study to examine the relationship of CSA and the severity of the CSA (intercourse vs nonintercourse) to the likelihood of self-reported alcohol problems, illicit drug use, suicide attempts, and current depression, as well as social outcomes such as marrying an alcoholic or having current problems with marriage and family in adult men and women. The relationship of the perpetrator's gender to each outcome among male CSA victims was also assessed.

Methods

The Adverse Childhood Experiences (ACE) Study is an ongoing collaboration between Kaiser Permanente's Health Appraisal Center (HAC) in San Diego CA and the Centers for Disease Control and Prevention and Emory University, both in Atlanta GA. The overall objective is to assess the impact of numerous adverse childhood experiences on a variety of health behaviors and outcomes and healthcare use.²⁵ The ACE Study was approved by the institutional review boards of Kaiser Permanente, Emory University, and the Office of Protection from Research Risks, the National Institutes of Health (Bethesda MD). Potential participants were sent letters that accompanied the ACE Study questionnaire informing them that their participation was voluntary, and that their answers would be held in strictest confidence and would never become a part of their medical record.

Previous publications from the ACE Study have demonstrated strong relationships of various interrelated adverse childhood experiences to multiple risk factors for the leading causes of death in the United States,²⁵ and to priority health and social problems, such as smoking,²⁶ sexually transmitted diseases,²⁷ unintended pregnancies,²⁸ male involvement in teen pregnancy,²⁹ alcohol and illicit drug problems,³⁰⁻³² liver disease,³³ and suicide attempts.³⁴

Study Population

The study population was drawn from the HAC, which provides complete and standardized medical, psychosocial, and preventive health evaluations to adult members of Kaiser Health Plan in San Diego County. In any 4-year period, 81% of the adult membership obtains this service, and >50,000 members are evaluated yearly; thus, the data from the HAC represent the experiences and health of a majority of adult Kaiser members in San Diego. In addition, the HAC visit was for a complete health assessment rather than symptom- or illness-based care.

People who were evaluated at the HAC complete a standardized questionnaire, which includes detailed histories of health and health-related behaviors, a medical review of systems, and psychosocial evaluations. This information was abstracted and is included in the ACE Study database.

Adverse Childhood Experiences Study Design and Questionnaire

The baseline data collection was divided into two survey waves using the methods described by Felitti et al.²⁵ Two weeks after the HAC evaluation, each person was mailed an ACE Study questionnaire, which included detailed information about adverse childhood experiences (e.g., abuse and neglect), family and household dysfunction (e.g., domestic violence and substance abuse by parents or other household members), and questions about health-related behaviors from adolescence to adulthood. Wave I was conducted between August 1995 and March 1996^{25,26}; 9508 of 13,494 (70%) responded. Wave II was conducted between June and October 1997; 8667 of 13,330 persons (65%) responded. Wave II added detailed questions about health topics that analysis of Wave I had shown to be important.²⁵ The combined response rate for both survey waves was 68% (18,175/26,824).

Assessment of Representativeness and Response or Reporting Bias

A comparison of respondents and nonrespondents to the study showed that nonrespondents tended to be younger, less educated, or from racial/ethnic minority groups.³⁵ After controlling for demographic differences, health behaviors such as smoking, alcohol or drug abuse, and health conditions such as heart disease, hypertension, obesity, and chronic lung disease, did not differ between respondents and nonrespondents. In addition, there was no evidence that respondents to the ACE Study questionnaire were biased toward attributing their health problems to childhood experiences such as sexual abuse.³⁵

Exclusions from the Study Cohort

A total of 754 respondents were excluded who coincidentally had examinations twice during the time frames of both survey waves. After exclusion of 17 respondents with missing information about race/ethnicity, and 67 with missing information about educational attainment, the final study sample included 95% of the respondents (17,337/18,175; Wave I=8708, Wave II=8629).

Table 1. Definition and prevalence (%) of each category of adverse childhood experience by gender

	Women (n=9367) %	Men (n=7970) %	Total (n=17,337) %
CHILDHOOD ABUSE			
Emotional	13.1	7.6	10.6
(Did a parent or other adult in the household . . .)			
(1) Often or very often swear at you, insult you, or put you down?			
(2) Sometimes, often, or very often act in a way that made you afraid that you might be physically hurt?			
Physical	27.0	29.9	28.3
(Did a parent or other adult in the household . . .)			
(1) Sometimes, often or very often push, grab, slap, or throw something at you?			
(2) Ever hit you so hard that you had marks or were injured?			
HOUSEHOLD DYSFUNCTION			
Substance abuse	29.5	23.8	26.9
(1) Live with anyone who was a problem drinker or alcoholic?			
(2) Live with anyone who used street drugs?			
Mental illness	23.3	14.8	19.4
(1) Was a household member depressed or mentally ill?			
(2) Did a household member attempt suicide?			
Mother treated violently	13.7	11.5	12.7
(Was your mother [or stepmother]):			
(1) Sometimes, often, or very often pushed grabbed, slapped, or had something thrown at her?			
(2) Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard?			
(3) Ever repeatedly hit over at least a few minutes?			
(4) Ever threatened with or hurt by a knife or gun?			
Incarcerated household member	5.2	4.1	4.7
(1) Did a household member go to prison?			
Parental separation or divorce	24.5	21.8	23.3
(1) Were your parents ever separated or divorced?			

Definition of Childhood Sexual Abuse

Four questions from Wyatt³⁶ were adapted to define sexual abuse during childhood and adolescence: “Some people, while they are growing up in their first 18 years of life, had a sexual experience with an adult or someone at least 5 years older than themselves. These experiences may have involved a relative, family friend, or stranger. During the first 18 years of life, did an adult, relative, family friend, or stranger ever (1) touch or fondle your body in a sexual way, (2) have you touch their body in a sexual way, (3) attempt to have any type of sexual intercourse with you (oral, anal, or vaginal), or (4) actually have any type of sexual intercourse with you (oral, anal, or vaginal)?” A “yes” response to any of the four questions classified a respondent as having experienced CSA. In addition, the frequencies for each component were calculated.

Sexual abuse that involved attempted or completed intercourse was considered more severe than abuse that involved only touching/fondling. The gender of the perpetrator was defined by indicating whether the perpetrator was male, female, or both. Mutually exclusive groups were created, such that if a respondent reported more than one type of childhood sexual abuse, the gender of perpetrator had to be the same for all items in order to categorize it as “male only” or “female only.” Responses of “female” and “male” for different types of childhood sexual abuse items were classified as “both.”

Definition of Other Adverse Childhood Experiences

All of the questions about other ACEs pertained to the respondents’ first 18 years of life, and have been described in detail elsewhere.²⁵ The questions used to define each ACE are presented in Table 1; items adapted from the Conflict Tactics Scale (CTS)³⁷ were used to define emotional and physical abuse, as well as violence against the mother.³⁷ Cohen’s kappa values for the test–retest reliability of CSA, other categories of ACEs, and the ACE score were found to be range of 0.46 to 0.86.³⁸

Behavioral and Social Outcomes

Questions used to determine these outcomes follow:

- Self-reported alcohol problems. A “yes” response to the question, “Have you ever had problems with your drinking?” defined self-reported alcohol problems.^{39,40}
- Ever used illicit drugs. A “yes” response to the question, “Have you ever used street drugs?” defined ever using illicit drugs.
- Ever attempted suicide. A “yes” response to the question, “Have you ever attempted to commit suicide?”
- Current depression. A screening instrument for depressive disorders (major depression and dysthymia) developed for the Medical Outcomes Study was used.^{31,41,42} For brevity, a

Table 2. Prevalence (%) and characteristics of childhood sexual abuse by gender

	Men (n=7970) %	Women (n=9367) %
Type of sexual abuse		
Touched in a sexual way	13.2	22.5
Forced to touch an adult	8.1	7.9
Attempted sexual intercourse	7.3	8.6
Completed sexual intercourse	6.7	5.6
Any type of childhood sexual abuse	16.0	24.7
Severity of sexual abuse^a	(n=1276)	(n=2310)
No intercourse	58.2	77.1
Intercourse	41.8	22.9
Sex of perpetrator^a		
Male only	51.0	91.9
Female only	20.8	2.1
Both male and female	18.3	3.6
Not specified	9.9	2.4

^aFrequencies calculated only for those who met the definition of childhood sexual abuse.

positive screen for depressive disorders using this tool is referred to as “depression.” This instrument used data from primary care and mental health subsamples of the Los Angeles Epidemiologic Catchment Area Study,⁴² and the Psychiatric Screening Questionnaires for Primary Care Patients.⁴³

- Ever married an alcoholic. A “yes” response to the question: “Have you ever been married to someone (or lived with someone as if you were married) who was a problem drinker or an alcoholic?”
- Current marriage problems. Among the individuals who reported being currently married at the time of the survey (6097 men, 5925 women), a “yes” response to the question: “Are you now having serious or disturbing problems with your marriage?”
- Current family problems. A “yes” response to the question: “Are you now having serious or disturbing problems with your family?”

Statistical Analysis

All analyses were conducted in 2004 using SAS, version 8.02 (SAS Institute Inc., Cary NC, 1999–2001). Adjusted odds ratios (ORs) and 95% confidence intervals (CIs) were obtained from logistic regression models that estimated the likelihood of the seven behavioral or social outcomes by exposure to CSA, and the nature of CSA (no intercourse vs intercourse), with no CSA as the referent. The relationship between gender of perpetrator of CSA and the behavioral and social outcomes was examined for men only, because 92% of the women who met the definition for childhood sexual abuse indicated that the perpetrator was male (Table 2).

Covariates in all models were included on a priori reasoning, rather than using a stepwise selection, and included age (continuous variable), race/ethnicity, and educational level (high school diploma, some college, or college graduate vs less than high school). The total number of ACEs, excluding

sexual abuse (ACE score range, 0 to 7), was included in all models as an ordinal covariate when analyzing the relationship between sexual abuse and outcomes by gender, in order to control for exposure to other ACEs. Because it has been previously demonstrated that each of the individual ACEs is highly interrelated and tends to co-occur with others,⁴⁴ the ACE score was included in the multivariate models that assessed the relationship of CSA to various long-term outcomes. By doing this, the effect of CSA was assessed on each outcome, and ensured that comparisons of the effects by gender of the victim were not confounded by differences in exposure to other ACEs.

In the data presented herein, people with incomplete information about an adverse childhood experience were coded as not having that experience. To assess the potential effect of this assumption, the analysis was repeated after excluding any respondent who had missing information on any ACE; no substantial difference in the results was found.

Results

Characteristics of Study Population

The study population included 9367 (54%) women and 7970 (46%) men. The mean age (standard deviation) was 56 (15.2) years. Seventy-five percent of the participants were white; 39% were college graduates; 36% had some college education; and 18% were high school graduates. Only 7% had not graduated from high school (data not shown).

Characteristics of Childhood Sexual Abuse

The prevalence of each type of CSA, severity of abuse, and gender of perpetrator are shown in Table 2; 25% of women and 16% of men reported any type of CSA. Among those who met the definition of childhood sexual abuse, 42% of the men and 23% of the women reported intercourse sexual abuse. Among the men, females accounted for $\leq 38\%$ of the perpetration of CSA (Table 2).

Table 3 presents the associations between CSA and each of the seven behavioral and social outcomes by gender. For both men and the women, the risk of each outcome was increased at a similar magnitude. For example, compared with no sexual abuse, there was a twofold increased risk for suicide attempts for both men and women ($p < 0.05$) (Table 3). Similarly, there was a 40% increased risk of marrying an alcoholic for both men and women who reported CSA compared with those not reporting CSA ($p < 0.05$).

The risk of each outcome was slightly higher for both genders if CSA involved intercourse compared to CSA without intercourse (Table 4). For example, compared to men who did not report sexual abuse, the adjusted OR for suicide attempts was 1.8 (95% CI=1.1–2.8) for childhood sexual abuse that did not involve intercourse, and 2.4 (95% CI=1.5–3.8) for intercourse sexual abuse ($p < 0.05$) (Table 4). The adjusted OR for

Table 3. Prevalence and adjusted odds ratios for the relationship between childhood sexual abuse to substance abuse, mental health, and social outcomes, by gender

	Men			Women		
	<i>n</i>	%	Adjusted odds ratio ^a	<i>n</i>	%	Adjusted odds ratio ^a
Alcohol problems						
No sexual abuse	6694	12.6	1.0 (referent)	7057	5.3	1.0 (referent)
Sexual abuse	1276	19.2	1.3 (1.1–1.5)	2310	12.7	1.6 (1.4–1.9)
Total	7970	13.7	—	9367	7.1	—
Ever used illicit drugs						
No sexual abuse	6694	16.7	1.0 (referent)	7057	12.1	1.0 (referent)
Sexual abuse	1276	24.4	1.5 (1.3–1.8)	2310	25.0	1.7 (1.4–1.9)
Total	7970	17.9	—	9367	15.3	—
Suicide attempts						
No sexual abuse	6694	1.5	1.0 (referent)	7057	3.3	1.0 (referent)
Sexual abuse	1276	4.1	2.1 (1.4–3.0)	2310	11.9	2.2 (1.8–2.7)
Total	7970	1.9	—	9367	5.4	—
Current depression^b						
No sexual abuse	3414	7.9	1.0 (referent)	3520	13.4	1.0 (referent)
Sexual abuse	601	11.8	1.2 (0.92–1.6)	1173	24.7	1.4 (1.1–1.6)
Total	4015	8.5	—	4693	16.2	—
Married an alcoholic						
No sexual abuse	6694	7.9	1.0 (referent)	7057	23.4	1.0 (referent)
Sexual abuse	1276	12.5	1.4 (1.2–1.7)	2310	35.6	1.4 (1.2–1.5)
Total	7970	8.6	—	9367	26.4	—
Current marriage problems^c						
No sexual abuse	5179	4.6	1.0 (referent)	4553	6.6	1.0 (referent)
Sexual abuse	918	7.8	1.5 (1.2–2.0)	1372	10.6	1.4 (1.1–1.7)
Total	6097	5.0	—	5925	7.6	—
Current family problems						
No sexual abuse	6694	6.0	1.0 (referent)	7057	10.2	1.0 (referent)
Sexual abuse	1276	10.7	1.7 (1.3–2.1)	2310	16.7	1.4 (1.2–1.6)
Total	7970	6.8	—	9367	11.8	—

^aOdds ratios adjusted for age, education, race/ethnicity and other forms of adverse childhood experiences.

^bWave 1 only, *n*=4015 for men; *n*=4693 for women.

^cCurrently married.

suicide attempts among women was similar to that found for men ($p < 0.05$) (Table 4).

This study also examined the relationship between gender of the perpetrator for each of the seven outcomes among male respondents only, because 92% of women who met the definition of CSA reported that the perpetrator of CSA was male. There was an increased risk of each of the outcomes if either male or female perpetrators were involved (Table 5). For example, when compared to the referent of no CSA, the risk for illicit drug use was 1.9 (95% CI=1.3–2.7) for female perpetration of CSA and 1.4 (95% CI=1.1–1.8) for male perpetration of CSA ($p < 0.05$) (Table 5).

Discussion

Within this large cohort of adult HMO members, a history of CSA was common among both men and women. Consistent with other reports on the prevalence of CSA, women had a slightly higher prevalence than men (25% vs 16%, respectively).^{45–47} It was found that the magnitude of the increased risk of alcohol problems, illicit drug use, suicide attempts, marrying an

alcoholic, and current marital and family problems associated with CSA, was similar for both male and female respondents. Furthermore, severity of the CSA consistently showed that intercourse CSA was associated with an elevated risk for the outcomes among both genders. Thus, the data provide strong evidence that exposure to CSA among both genders is common, and acts as a strong risk factor for multiple types of mental health, behavioral, and social outcomes similarly for adult men and women.

It was found that nearly 40% of CSA among men and 6% of CSA among women was perpetrated by a female; this has been reported by others.⁴⁷ Among male victims of CSA, the risk of negative outcomes was similar when the gender of the perpetrator was compared. Thus, perpetration of CSA by a female appears to exert negative effects that are similar in magnitude to CSA perpetrated by males. Prior reports have suggested that female perpetration of childhood sexual abuse is under-reported, which makes it appear as if female perpetration of CSA does not occur as frequently as male perpetration.¹⁷ However, the findings indicate that female perpetration is common and also associated

Table 4. Prevalence and adjusted odds ratios for the relationship of intercourse and non-intercourse childhood sexual abuse to substance abuse, mental health, and social outcomes, by gender

	Men			Women		
	<i>n</i>	%	Adjusted odds ratio ^a	<i>n</i>	%	Adjusted odds ratio ^a
Alcohol problems						
No sexual abuse	6694	12.6	1.0 (referent)	7057	5.3	1.0 (referent)
Sexual abuse, no intercourse	742	17.2	1.1 (.93–1.4)	1781	11.5	1.5 (1.3–1.9)
Intercourse	534	21.9	1.5 (1.2–1.8)	529	16.6	1.9 (1.4–2.5)
Ever used illicit drugs						
No sexual abuse	6694	16.7	1.0 (referent)	7057	12.1	1.0 (referent)
Sexual abuse, no intercourse	742	21.8	1.3 (1.1–1.6)	1781	22.7	1.6 (1.4–1.9)
Intercourse	534	28.1	1.8 (1.4–2.3)	529	32.7	1.9 (1.5–2.4)
Suicide attempts						
No sexual abuse	6694	1.5	1.0 (referent)	7057	3.3	1.0 (referent)
Sexual abuse, no intercourse	742	3.4	1.8 (1.1–2.8)	1781	9.4	1.8 (1.5–2.3)
Intercourse	534	5.2	2.4 (1.5–3.8)	529	20.2	3.6 (2.7–4.7)
Current depression^b						
No sexual abuse	3414	7.9	1.0 (referent)	3520	13.4	1.0 (referent)
Sexual abuse, no intercourse	333	12.3	1.3 (0.92–1.9)	892	22.6	1.3 (1.1–1.6)
Intercourse	268	11.2	1.1 (.73–1.7)	281	31.3	1.6 (1.2–2.2)
Married an alcoholic						
No sexual abuse	6694	7.9	1.0 (referent)	7057	23.4	1.0 (referent)
Sexual abuse, no intercourse	742	11.9	1.3 (1.1–1.7)	1781	35.1	1.4 (1.2–1.5)
Intercourse	534	13.3	1.5 (1.2–2.0)	529	37.0	1.3 (1.1–1.6)
Current marriage problems^c						
No sexual abuse	5179	4.6	1.0 (referent)	4553	6.6	1.0 (referent)
Sexual abuse, no intercourse	548	8.8	1.7 (1.2–2.4)	1087	10.0	1.3 (1.1–1.7)
Intercourse	370	6.8	1.3 (0.82–1.9)	285	13.0	1.6 (1.1–2.3)
Current family problems						
No sexual abuse	6694	6.0	1.0 (referent)	7057	10.2	1.0 (referent)
Sexual abuse, no intercourse	742	10.5	1.7 (1.3–2.3)	1781	16.1	1.3 (1.1–1.6)
Intercourse	534	10.9	1.6 (1.2–2.2)	529	18.9	1.4 (1.1–1.8)

^aOdds ratios adjusted for age, education, race/ethnicity, and other forms of adverse childhood experiences.

^bWave 1 only, *n*=4015 for men; *n*=4693 for women.

^cCurrently married.

with a substantial risk for negative long-term consequences. Thus, the vulnerability of boys to perpetration of CSA by **both males and females** deserves increased national attention.

Recent findings from a prospective study by Banyard et al.⁴⁶ found that men and women survivors of CSA had similar risks for mental health outcomes.⁴⁶ They suggest that experiencing sexual abuse leaves the child with little control over what happens, and creates a situation of “powerlessness.”⁴⁶ In fact, the sense of lack of control likely acts as a stressor that has effects on neurodevelopment that are not gender-specific. Studies showing gender differences with respect to impact of CSA have suggested that they are the result of differences in coping between males and females.^{47,50} One study that examined gender differences among adolescents with a history of sexual abuse suggested that females were more likely to engage in internalizing behaviors (suicide ideation, disordered eating), and males were more likely to exhibit externalizing behaviors (delinquency, heavy drinking).⁴⁹ However, examination of substance use, mental illness, and family problems in association with CSA suggests that both

genders manifest similar types of behaviors and problems during adulthood.

A potential weakness of studies with retrospective reporting of childhood experiences is that respondents may have difficulty recalling certain events. For example, longitudinal follow-up of adults whose childhood abuse was documented has shown that their retrospective reports of such abuse are likely to underestimate actual occurrence.^{50,51} Difficulty recalling childhood events likely results in misclassification (classifying persons truly exposed to ACEs as unexposed) that would bias the results toward the null. Because this cohort has a mean age of 57 years, memory issues with recalling childhood events may also be a factor. However, in the present study, the prevalence of childhood sexual abuse reported is nearly identical to those reported in surveys of the general population; 16% of the men and 25% of the women met the case definition for contact sexual abuse, similar to findings by Finkelhor et al.⁵² that 16% of men and 27% of women had been sexually abused. The similarity of the estimates from the ACE Study to those of population-based studies suggests that

Table 5. Prevalence and adjusted odds ratios of the relationship of gender of perpetrator^a to substance abuse, mental illness, and social outcomes among men

	<i>n</i>	%	Adjusted odds ratio ^b
Alcohol problems			
No sexual abuse	6694	12.6	1.0 (referent)
Male perpetrator	651	19.5	1.2 (1.0–1.5)
Female perpetrator	265	19.2	1.3 (1.0–1.9)
Ever used illicit drugs			
No sexual abuse	6694	16.7	1.0 (referent)
Male perpetrator	651	24.7	1.4 (1.1–1.8)
Female perpetrator	265	25.3	1.9 (1.3–2.7)
Suicide attempts			
No sexual abuse	6694	1.5	1.0 (referent)
Male perpetrator	651	5.4	2.6 (1.7–3.9)
Female perpetrator	265	2.6	1.3 (.56–2.8)
Current depression^c			
No sexual abuse	3414	7.9	1.0 (referent)
Male perpetrator	323	11.8	1.2 (.84–1.8)
Female perpetrator	89	11.2	1.2 (.61–2.5)
Married an alcoholic			
No sexual abuse	6694	7.9	1.0 (referent)
Male perpetrator	651	13.7	1.4 (1.1–1.8)
Female perpetrator	265	10.9	1.3 (1.0–1.9)
Current problems in marriage^d			
No sexual abuse	5179	4.6	1.0 (referent)
Male perpetrator	451	7.8	1.4 (1.0–2.1)
Female perpetrator	196	6.6	1.2 (0.66–2.1)
Current family problems			
No sexual abuse	6694	6.0	1.0 (referent)
Male perpetrator	651	10.3	1.5 (1.1–2.0)
Female perpetrator	265	11.7	1.8 (1.2–2.6)

^aExcludes those observations where both male and female perpetrators were reported.

^bOdds ratios adjusted for age, education, race/ethnicity, and other forms of adverse childhood experiences.

^cWave 1 only *n*=4015 for men.

^dCurrently married.

these findings are likely to be applicable in other settings.

There are several strengths worth noting. First, there is control for exposure to other forms of child maltreatment and related childhood stressors, and it is shown that the likelihood for each of the outcomes examined is similar for both genders. It has been noted that studies examining the consequences of CSA have not necessarily taken into account the other exposures known to co-occur with CSA, such as other forms of abuse and family dysfunction.⁵³ Controlling for a broad range of adverse childhood experiences was a distinct advantage. Moreover, it was possible to examine social outcomes, such as current problems with marriage and family in relationship to CSA; it was found that both genders had a similar likelihood in reporting these outcomes. This is especially important to consider since there is a need to understand the antecedents of these types of social outcomes, as well as recognize that these types of adult problems have the potential to impact the next generation.⁵⁴

In conclusion, the data presented provide important implications for public health and preventive medicine. First, childhood sexual abuse is a common

form of childhood maltreatment in **both** men and women. Second, childhood sexual abuse and severity of the abuse have a similar relative impact on behavioral, mental health, and social outcomes for both men and women survivors, as reported during adulthood. Moreover, it was demonstrated that female perpetration of CSA upon boys was common (40%), and increased the risk of behavioral and social outcomes among male CSA victims. Emphasis on a clearer understanding that children and adolescents of both genders are vulnerable to CSA is needed so that healthcare practitioners can meticulously screen for their occurrence in the pediatric setting.⁵⁵ From a social dynamic perspective, the recognition that both females and males perpetrate CSA is also needed; this type of information helps to clarify characteristics related to this form of childhood maltreatment, especially in the development of prevention programs and interventions.

The Adverse Childhood Experiences Study was supported under a cooperative agreement (TS-44-10/11) from the Centers for Disease Control and Prevention through the Association of Teachers of Preventive Medicine, and is currently funded by a grant from the Garfield Memorial

What This Study Adds . . .

The majority of research on the effects of childhood sexual abuse (CSA) has focused on girls who were victims; less is known about its long-term effects on the lives of boys.

By presenting the effects of CSA side-by-side for men and women, this study demonstrated that the effects on the risks of multiple behavioral, mental, and social outcomes were nearly identical.

These similarities among men and women suggest the need to identify and treat all adults affected by CSA.

Fund at Kaiser Permanente. Maxia Dong is supported by aforementioned cooperative agreement.

No financial conflict of interest was reported by the authors of this paper.

References

1. Heffernan K, Cloitre M, Tardiff K, Marzuk PM, Portera L, Leon AC. Childhood trauma as a correlate of lifetime opiate use in psychiatric patients. *Addict Behav* 2000;25:797-803.
2. Kendall-Tackett KA, Williams LM, Finkelhor D. Impact of sexual abuse on children: a review and synthesis of recent empirical studies. *Psychol Bull* 1993;113:164-80.
3. Kingree JB, Thompson MP, Kaslow NJ. Risk factors for suicide attempts among low-income women with a history of alcohol problems. *Addict Behav* 1991;24:583-7.
4. Mullen PE, Martin JL, Anderson JC, Romans SE, Herbison GP. Childhood sexual abuse and mental health in adult life. *Br J Psychiatry* 1993;163:721-32.
5. Osofsky JD. The impact of violence on children. *Future Child* 1999;9:33-49.
6. van der Kolk BA, Perry JC, Herman JL. Childhood origins of self-destructive behavior. *Am J Psychiatry* 1991;148:1665-71.
7. Fromuth ME. The relationship of childhood sexual abuse with later psychological and sexual adjustment in a sample of college women. *Child Abuse Neglect* 1986;10:5-15.
8. Briere J, Runtz M. Symptomatology associated with childhood sexual victimization in a nonclinical adult sample. *Child Abuse Neglect* 1988;12:51-99.
9. Harter S, Alexander PC, Neimeyer RA. Long-term effects of incestuous child abuse in college women: social adjustment, social cognition, and family characteristics. *J Consult Clin Psychol* 1988;56:5-8.
10. Briere J, Runtz M. Post sexual abuse trauma: data and implications for clinical practice. *J Interpersonal Violence* 1987;2:367-379.
11. Saunders BE, Kilpatrick DG, Hanson RF, Resnick HS, Walker ME. Prevalence, case characteristics, and long-term psychological correlates of child rape among women: a national survey. *Child Maltreatment* 1999;4:187-200.
12. Finkelhor D. Current information on the scope and nature of child sexual abuse. *Future Child* 1994;4:31-53.
13. Holmes WC, Slap GB. Sexual abuse of boys. *JAMA* 1998;280:1855-62.
14. Finkelhor D, Baron L. Risk factors for child sexual abuse. *J Interpersonal Violence* 1986;1:43-71.
15. Beitchman JH, Zucker KJ, Hood JE, DaCosta GA, Akman D, Cassavia E. A review of the long-term effects of child sexual abuse. *Child Abuse Neglect* 1992;16:101-18.
16. Elliott DM, Briere J. Forensic sexual abuse evaluations of older children: disclosures and symptomatology. *Behav Sci Law* 1994;12:261-77.
17. Grayston AD, De Luca RV. Female perpetration of child sexual abuse: a review of the clinical and empirical literature. *Aggressive Violent Behav* 1999;4:93-106.
18. Bensley LS, Eenwyk JV, Simmons KW. Self-reported childhood sexual and physical abuse and adult HIV-risk behaviors and heavy drinking. *Am J Prev Med* 2000;18:151-8.
19. Metcalfe M, Oppenheimer R, Dignon A, Palmer RL. Childhood sexual experiences reported by male psychiatric patients. *Psychol Med* 1990;20:925-9.
20. Brown GR, Anderson B. Psychiatric morbidity in adult inpatients with childhood histories of sexual and physical abuse. *Am J Psychiatry* 1991;148:55-61.
21. Kendler KS, Bulik CM, Silberg J, Hetttema JM, Myers J, Prescott CA. Childhood sexual abuse and adult psychiatric and substance use disorders in women: an epidemiological and cotwin control analysis. *Arch Gen Psychiatry* 2000;57:953-9.
22. Rohsenow DJ, Corbett R, Devine D. Molested as children: a hidden contribution to substance abuse? *J Substance Abuse Treatment* 1988;5:13-8.
23. Kingree JB, Thompson MP, Kaslow NJ. Risk factors for suicide attempts among low-income women with a history of alcohol problems. *Addict Behav* 1999;24:583-7.
24. Rossow I, Lauritzen G. Shattered childhood: a key issue in suicidal behavior among drug addicts? *Addiction* 2001;96:227-40.
25. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the Adverse Childhood Experiences (ACE) Study. *Am J Prev Med* 1998;14:245-58.
26. Anda RF, Croft JB, Felitti VJ, et al. Adverse childhood experiences and smoking during adolescence and adulthood. *JAMA* 1999;282:1652-58.
27. Hillis SD, Anda RF, Felitti VJ, Nordenberg D, Marchbanks P. Adverse childhood experiences and sexually transmitted diseases in men and women: a retrospective study. *Pediatrics* 2000;106:1-6.
28. Dietz PM, Spitz AM, Anda RF, et al. Unintended pregnancy among adult women exposed to abuse or household dysfunction during their childhood. *JAMA* 1999;282:1359-64.
29. Anda RF, Felitti VJ, Chapman DP, et al. Abused boys, battered mothers, and male involvement in teen pregnancy. *Pediatrics* 2001;107:1-8.
30. Dube SR, Anda RF, Felitti VJ, Edwards VJ, Croft JB. Adverse childhood experiences and personal alcohol abuse as an adult. *Addict Behav* 2002;27:713-25.
31. Anda RF, Whitfield CL, Felitti VJ, et al. Adverse childhood experiences, alcoholic parents, and later risk of alcoholism and depression. *Psychiatric Services* 2002;53:1001-9.
32. Dube SR, Felitti VJ, Dong M, Chapman DP, Giles WH, Anda RF. Childhood abuse, neglect and household dysfunction and the risk of illicit drug use: the Adverse Childhood Experience Study. *Pediatrics* 2003;111:564-72.
33. Dong M, Dube SR, Felitti VJ, Giles WH, Anda, RF. Adverse childhood experiences and self-reported liver disease: new insights into the causal pathway. *Arch Intern Med* 2003;163:1949-56.
34. Dube SR, Anda RF, Felitti VJ, Chapman D, Williamson DF, Giles WH. Childhood abuse, household dysfunction and the risk of attempted suicide throughout the life span: findings from Adverse Childhood Experiences Study. *JAMA* 200;286:3089-96.
35. Edwards VJ, Anda RF, Nordenberg DF, Felitti VJ, Williamson DF, Wright JA. Bias assessment for child abuse survey; factors affecting probability of response to a survey about childhood abuse. *Child Abuse Neglect* 2001;25:307-12.
36. Wyatt GE. The sexual abuse of Afro-American and white American women in childhood. *Child Abuse Neglect* 1985;9:507-19.
37. Straus M, Gelles RJ. Physical violence in American families: risk factors and adaptations to violence in 8,145 families. New Brunswick NJ: Transaction Press, 1990.
38. Dube SR, Williamson DF, Thompson T, Felitti VJ, Anda RF. Assessing the reliability of retrospective reports of adverse childhood experiences among adult HMO members attending a primary care clinic. *Child Abuse Neglect* 2004;28:729-37.
39. Schoenborn CA. Exposure to alcoholism in the family: United States, 1998. *Vital Health Stat* 1998;16.
40. U.S. Department of Health and Human Services. Ninth special report to the US Congress on alcohol and health. Rockville MD: U.S. Department of Health and Human Services, 1997.
41. Wells KB. Depression as a tracer condition for the national study of medical care outcomes. Santa Monica CA: Rand Corporation, 1985.
42. Burnam MA, Wells KB, Leake B, Landsverk J. Development of a brief screening instrument for detecting depressive disorders. *Med Care* 1988;26:775-89.
43. Burnam MA, Hough RL, Escobar JL, et al. Six-month prevalence of specific psychiatric disorders among Mexican-Americans and non-Hispanic whites in Los Angeles. *Arch Gen Psychiatry* 1987;44:687-94.

44. Dong M, Anda RF, Felitti VJ, et al. The interrelatedness of multiple forms of childhood abuse, neglect, and household dysfunction. *Child Abuse Neglect* 28:771–84.
45. Elliott M. *Female sexual abuse of children*. New York: Guilford Press, 1994.
46. Banyard VL, Williams LM, Siegel JA. Childhood sexual abuse: a gender perspective on context and consequences. *Child Maltreatment* 2004;9:223–38.
47. Berliner L, Elliott DM. Sexual abuse of children. In Meyers JEB, Berliner L, Briere J, Hendrix CT, Jenny C, Reid TA, eds. *The APSAC handbook on child maltreatment*. Thousand Oaks CA: Sage Publications, 2002:55–78.
48. Putnam FW. Ten-year research update review: child sexual abuse. *J Am Acad Child Adolesc Psychol* 2003;42:269–78.
49. Chandy JM, Blum RW, Resnick MD. Gender-specific outcomes for sexually abused adolescents. *Child Abuse Neglect* 1996;20:1219–31.
50. Femina DD, Yeager CA, Lewis DO. Child abuse: adolescent records vs adult recall. *Child Abuse Neglect* 1990;14:227–31.
51. Williams LM. Recovered memories of abuse in women with documented child sexual victimization histories. *J Trauma Stress* 1995;8:649–73.
52. Finkelhor D, Hotaling G, Lewis IA, Smith C. Sexual abuse in a national survey of adult men and women: prevalence, characteristics, and risk factors. *Child Abuse Neglect* 1990;14:19–28.
53. Collings SJ. The long-term effects of contact and noncontact forms of child sexual abuse in a sample of university men. *Child Abuse Neglect* 1995;19:1–6.
54. Roberts R, O'Connor T, Dunn J, Golding J. The effects of child sexual abuse in later family life; mental health, parenting and adjustment of offspring. *Child Abuse Neglect* 2004;28:525–45.
55. Johnson CF. Child sexual abuse. *Lancet* 2004;364:462–70.