

Sexual Abuse in Childhood and Sexual Dysfunction in Adulthood: An Australian Population-Based Study

Jake M. Najman, Ph.D.,^{1,5} Michael P. Dunne, Ph.D.,² David M. Purdie, Ph.D.,³
Francis M. Boyle, Ph.D.,⁴ and Peter D. Coxeter, M.P.H.¹

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This study examined self-reported adult sexual functioning in individuals reporting a history of childhood sexual abuse (CSA) in a representative sample of the Australian population. A sample of 1793 persons, aged 18–59 years, were randomly selected from the electoral roll for Australian states and territories in April 2000. Respondents were interviewed about their health status and sexual experiences, including unwanted sexual experiences before the age of 16 years. More than one-third of women and approximately one-sixth of men reported a history of CSA. Women were more likely than men to report both non-penetrative and penetrative experiences of CSA. For both sexes, there was a significant association between CSA and symptoms of sexual dysfunction. In assessing the specific nature of the relationship between sexual abuse and sexual dysfunction, statistically significant associations were, in general, evident for women only. CSA was not associated with the level of physical or emotional satisfaction respondents experienced with their sexual activity. The total number of lifetime sexual partners was significantly and positively associated with CSA for females, but not for males; however, the number of sexual partners in the last year was not related to CSA. CSA in the Australian population is common and contributes to significant impairment in the sexual functioning of adults, especially women. These consequences appear not to extend to the other areas of sexual activity considered in this study.

KEY WORDS: childhood sexual abuse; prevalence; sexual dysfunction; population study.

INTRODUCTION

There is now a body of evidence to support the view that the experience of childhood sexual abuse (CSA) may impair long-term sexual functioning. Much of this evidence is derived from studies comprising clinical samples (Briere, 1984; Briere & Runtz, 1987; Herman

& Hirschman, 1981; Langmade, 1983; Mieselman, 1978; Tsai & Wagner, 1978). Similarly, a number of reviews have confirmed the association between CSA and adult sexual functioning in clinical samples of adults (Bachmann, Moeller, & Benett, 1988; Beitchman et al., 1992; Browne & Finkelhor, 1986; DiLillo, 2001; Rumstein-McKean & Hunsley, 2001; Tharinger, 1990). Of course, clinical samples may not reflect what occurs in population/community samples.

A recent review of community studies published since 1990 found that 39 out of 42 calculated total odds ratios showed statistically significant relationships between CSA and a wide range of sexual behavior outcomes (e.g., early age first sexual intercourse, sexual desire disorders, engaging in prostitution) during adolescence or adulthood (Fergusson & Mullen, 1999). Conversely, Alexander and Lupfer (1987) and Greenwald, Leitenberg, Cado, and Tarran (1990) reported no significant group

¹Schools of Population Health and Social Science, University of Queensland, Queensland, Australia.

²Centre for Public Health Research, Queensland University of Technology, Queensland, Australia.

³Population Health and Clinical Sciences Division, Queensland Institute of Medical Research, Queensland, Australia.

⁴School of Population Health, University of Queensland, Queensland, Australia.

⁵To whom correspondence should be addressed at School of Population Health, University of Queensland, Herston, Queensland 4006, Australia; e-mail: j.najman@uq.edu.au.

differences between those who had experienced CSA and controls with respect to self-reported sexual dysfunction (or satisfaction) subsequent to the occurrence, or type, of sexual abuse. Adverse sequelae are not an inevitable outcome of CSA, with some research suggesting that women subjected to CSA failed to attribute any long-term deleterious consequences to the abuse (Mullen, Martin, Anderson, Romans, & Herbison, 1994). Fleming, Mullen, Sibthorpe, and Bammer (1999) found that although over 80% of the women reported a range of adverse outcomes in their life, less than half attributed these to long-term effects of the abuse. It appears that CSA may affect a small percentage of those experiencing abuse in an intensely negative way, with a much smaller effect, if any, on most individuals who experience CSA (Rind & Tromovitch, 1997). Accompanying factors, such as temperamental vulnerability and the use of force, may be more significant contributors to harm than CSA per se.

The situation has been clarified by some recent research with Australian adult twins who had shared the same home environment as children, but where only one of the twins had been sexually abused. The results reiterated earlier findings suggesting that a dysfunctional family environment during childhood accounts for much of the variance in adult mental health; however, there appears to be a significant and possibly direct effect of CSA on adjustment, including risk of divorce, depression, alcohol dependence, and other problems (Nelson et al., 2002).

Although no specific sexual abuse syndrome has been confirmed (Paolucci, Genuis, & Violato, 2001), at least for adult women experiencing CSA, the range of difficulties consistently reported in the literature can be usefully generalized into two major patterns: "oversexualization" and "undersexualization" (DiLillo, 2001; Rumstein-McKean & Hunsley, 2001). Individuals, it is suggested, may experience both over time, with cycles of promiscuity and abstinence in those who have experienced abuse (Herman & Hirschman, 1981).

Oversexualization may be characterized by an increase in the frequency and number of sexual partners, lower use of risk-reducing contraceptives, and a greater likelihood of participation in commercialized sex and prostitution. Browne and Finkelhor (1986) cited three studies that reported that 33%, 28%, and 25% of their respective samples engaged in activities that could be considered promiscuous. Fromuth (1986), however, found that having experienced CSA only predicted whether subjects described themselves as promiscuous, not their actual number of partners. Similarly, Mullen et al. (1994) reported that participants who reported CSA were no more or less likely than controls to be engaged in any particular frequency of intercourse, although they were more likely

to see this as too often or not often enough. Conversely, undersexualization relates to behavioral indications of diminished sexual satisfaction, in the form of frigidity (Mieselman, 1978), sexual arousal disorders, inhibited orgasm, and coital pain. Other sexual problems related to adults who have experienced CSA include higher levels of specific sexual dysfunctions (e.g., vaginismus, dyspareunia, and flashbacks), in addition to emotional problems related to sex, such as sexual guilt and sexual anxiety (Tharinger, 1990), confusion about sexual orientation (Mieselman, 1978), and lower sexual esteem (Finkelhor, 1979). Mullen et al. (1994) observed that women self-reporting CSA were more likely to express dissatisfaction with their sex life and to experience difficulties with their own sexuality.

Despite indications that 25% to 33% of all those experiencing CSA are men, it is only recently that the literature has begun to reflect this. A comprehensive review of 166 studies representing 149 sexual abuse samples of boys concluded that the sexual abuse of boys appears to be common and clinically underreported, underrecognized, and undertreated (Holmes & Slap, 1998). Holmes and Slap noted that sexually abused men, compared with non-abused men, were up to five times more likely to report sexually related problems (including sexual dysfunction), reported greater difficulty controlling sexual feelings, and were hypersexual. Furthermore, abused men, compared with non-abused men, were reported to engage more frequently in high-risk sexual behaviors, such as prostitution and unprotected anal intercourse. They had more lifetime sexual partners, used condoms less frequently, and had higher rates of STDs and partner pregnancy. Interestingly, Bauserman and Rind (1997) and Holmes and Slap (1998) reported that, in spite of the high prevalence of negative sequelae, many men who have experienced CSA have reported neutral or positive reactions to their abuse, with 91% of those with positive reactions recalling the events as physically pleasurable.

Few studies directly compare the impact of CSA on men with that of women in adulthood (Holmes, Offen, & Waller, 1997). The limited data available on CSA gender comparisons appear to report more similarities than differences. Some studies have found no gender differences in their respective clinical and college samples (Briere, Evans, Runtz, & Wall, 1988). Similarly, a national survey to elicit histories of CSA reported no significant gender differences (Finkelhor, Hotaling, Lewis, & Smith, 1989). Rind and Tromovitch (1997) and Rind, Tromovitch, and Bauserman (1998) argued that CSA experiences for men and women are not equivalent. Rind et al. (1998) found a stronger association between CSA and adjustment problems for women than for men across all levels of

consent that were considered, but not when unwanted sex only was contrasted. Rind et al. (1998) suggested that some types of CSA (i.e., unwanted experiences) may be equivalent between genders.

The present study examined the self-reported rates of CSA in an Australian population sample, and the extent to which it appears to lead to sexual dysfunction in adult men and women.

METHOD

Participants

The names of 4,449 adults, aged 18–59 years, who were enrolled to vote, were selected randomly from the Commonwealth Electoral Roll in October 1999. This roll is a compulsory national register of Australian citizens and includes the respondents' full name, gender, residential address, and age group (18–29, 30–39, 40–49, 50–59 years). Sample numbers were based upon the age distribution of the Australian population using 1996 census data (McKlenan, 1998). Of the 4449 selected for follow-up, 1196 were not listed on the electronic data bases, 178 could not be contacted and 125 were not available to be contacted, (total 1499 not contacted). Of those remaining ($N = 2950$), 1793 completed the study questionnaire, 324 partially completed the questionnaire, and 833 refused to do the questionnaire. Thus, the final sample constitutes 40% of those originally selected and 58% of those for whom a valid telephone number was located (see Purdie, Dunne, Boyle, Cook, & Najman, 2002). Of the participants 49% ($N = 876$) were male and 51% ($N = 908$) were female. A comparison of the sociodemographic characteristics of the sample with the population indicates a similar age and gender distribution, but higher socioeconomic levels in our sample (Purdie et al., 2002). Interviews were conducted using a Computer Assisted Telephone Interviewing laboratory.

Procedure

Each participant was initially contacted by telephone to inform them of their selection in the sample and to correctly determine address details. A letter was sent to describe the study and to invite participation. Following consent, individuals were specified a time frame during which they would be contacted by phone to conduct the interview. A response booklet, including numerical responses to questions, was sent to each potential participant to allow semi-anonymous answering of sensitive questions. Where an individual refused to participate, they

were invited to answer some basic demographic questions, such as employment status and income, as well as their general health status.

Measures

A questionnaire was constructed using a number of instruments to measure general health, sexual-related satisfaction and, relevant to this study, sexual dysfunction (Laumann, Paik, & Rosen, 1999), as well as sexual abuse and standard demographic items.

Child Sexual Abuse

Questions relating to CSA experiences were modified from an Australian study by Fleming (1997) and have been reported elsewhere (Dunne, Purdie, Cook, Boyle, & Najman, 2003).

Sexual Dysfunction

The conceptualization and measurement of sexual dysfunction has generated some interesting debate (Bancroft, 2002; Bancroft, Graham, & McCord, 2001). This debate, in part, concerns whether a failure to engage in sex, or enjoy sex, constitutes a sexual dysfunction. There is also a need to accept somewhat different criteria for male and female sexual dysfunction. Eight questions relating to sexual dysfunction were derived from a major U.S. survey (Laumann et al., 1999). These questions asked respondents to report whether they have had any of the listed experiences for a period of several months or more over the last twelve months. Six questions (lack of interest in sex, unable to orgasm, orgasm too quickly, painful intercourse, not finding sex pleasurable, anxiety about sexual performance) are common to males and females. Additionally, males responded to two questions concerning achieving and maintaining an erection while females had two questions about difficulties becoming lubricated and trouble reaching orgasm (Najman, Dunne, Boyle, Cook, & Purdie, 2003 for details). Respondents were asked to answer yes or no to the above questions. A comparison of U.S. and Australian findings suggests that, on these questions, U.S. and Australian data were very similar, with a majority of females and almost 50% of males reporting having experienced one or more symptoms of sexual dysfunction in the past 12 months (Najman et al., 2003). Bancroft, Loftus, and Long (2003) were critical of some of these criteria used to determine sexual dysfunction and, using U.S. data, suggested that "24.4% of women report marked distress about their

Table I. Child Sexual Abuse History by Gender

	Men (<i>n</i> = 860)	Women (<i>n</i> = 898)
No CSA	84%	65%
Non-penetrative	12%	23%
Penetrative	4%	12%

$$\chi^2 = 84.5, df = 2, p < .001.$$

sexual relationship and/or their own sexuality” (p. 193), a percentage similar to those females reporting three or more symptoms of sexual dysfunction using Laumann’s criteria in U.S. and Australian studies (Najman et al., 2003).

RESULTS

Table I considers gender differences in experiences of CSA. About one in six adult men and one in three adult women reported experiences of CSA. While non-penetrative abuse was more common than penetrative abuse, about one in eight women and about one in 25 men reported having experienced penetrative sexual abuse.

In Table II, we consider the specific forms of sexual abuse. Four types of non-penetrative experience

are listed and, in each instance, the percentage of women experiencing such abuse was substantially greater than the percentage of men experiencing this abuse. When we focus on the five types of penetrative abuse and exclude those relating to attempted vaginal or vaginal intercourse, the rates of penetrative experience were similar for men and women, with the exception that attempted anal intercourse was significantly more common for men. Nevertheless, it is clear that, overall, women experienced more penetrative CSA than did men.

Table III compares rates of sexual dysfunction, separately for men and women, for each category of CSA. In interpreting the data, we focus on those men and women who reported the highest levels of sexual dysfunction, i.e., three or more symptoms. Using this criterion, the rate of sexual dysfunction for men who had not experienced CSA was about half that for men who had experienced non-penetrative and penetrative abuse. For women, similar differences were apparent, with women who had experienced penetrative abuse substantially more likely to report three or more symptoms of sexual dysfunction.

Table IV shows the rates of sexual dysfunction by specific type of sexual abuse experience. One of the difficulties here is that relatively few men experienced penetrative sexual abuse; consequently, there may be

Table II. Specific Child Sexual Abuse Experiences by Gender (in %)^a

		Men (<i>n</i> = 859 ^b)	Women (<i>n</i> = 898 ^b)	<i>p</i>
Non-penetrative experiences				
Witness masturbation	N ^c	95	90	$\chi^2 = 15.4, df = 1, <.001$
	Y ^c	5	10	
Try to sexually arouse you	N	90	80	$\chi^2 = 36.2, df = 1, <.001$
	Y	10	20	
Touch/Fondle body ^a	N	88	75	$\chi^2 = 50.1, df = 1, <.001$
	Y	12	25	
Rub their genitals against your body	N	95	85	$\chi^2 = 47.5, df = 1, <.001$
	Y	5	15	
Penetrative experiences				
Oral sex (mouth/genital contact, you/other)	N	98	97	$\chi^2 = 3.1, df = 1, .08$
	Y	2	3	
Attempted vaginal Intercourse	N	n/a	91	—
	Y	n/a	9	
Vaginal intercourse	N	n/a	96	—
	Y	n/a	4	
Attempted anal intercourse	N	97	99	$\chi^2 = 6.2, df = 1, .01$
	Y	3	1	
Anal intercourse	N	99	99	<i>ns</i>
	Y	1	1	<i>ns</i>

^aQuestion differed slightly for women to accommodate touching or fondling of breast.

^bNumbers vary slightly due to missing values.

^cN = Not experienced; Y = Abuse was experienced.

Table III. Child Sexual Abuse and Adult Sexual Dysfunction by Gender (in %)

	Number of sexual dysfunction symptoms							
	Men				Women			
	Nil ^a	Some ^a	Many ^a	N ^b	Nil ^a	Some ^a	Many ^a	N ^b
No CSA	46	43	12	647	44	40	15	493
Non-penetrative	46	34	20	96	31	45	25	179
Penetrative	27	50	23	30	32	35	32	99

For men: $\chi^2 = 10.7, df = 4, p = .03$.

For women: $\chi^2 = 23.7, df = 4, p < .001$.

^aNil = 0; Some = 1–2 symptoms; Many = 3+ symptoms.

insufficient numbers to detect an association even if one appears to exist.

Table IV suggests that, for men, non-penetrative CSA experiences did not lead to higher rates of sexual dysfunction. The only significant association for men was the one involving oral sex. Here, men who experienced oral CSA were substantially more likely to report that they had many symptoms of sexual dysfunction in later life.

Women reporting non-penetrative sexual abuse experiences, for every category of sexual abuse, were substantially more likely to report many symptoms of sexual

dysfunction. The differences were even more apparent when we considered the penetrative sexual experiences reported by women. In almost all of the penetrative abuse experience categories, there were strong and consistent differences, such that women who had experienced penetrative sexual abuse were substantially more likely to report many symptoms of sexual dysfunction. While the numbers in some abuse categories were low, these differences were, nevertheless, striking, particularly for attempted anal intercourse and anal intercourse. Women who had experienced these types of abuse were much

Table IV. Percentage of Sexual Dysfunction Symptoms by Child Sexual Abuse Experience and Gender

	Number of sexual dysfunction symptoms								
	Men				Women				
	Nil ^b	Some ^b	Many ^b	p	Nil ^b	Some ^b	Many ^b	p	
Non-penetrative experiences									
Witness masturbation	N ^c	45	42	13	ns	41	40	18	$\chi^2 = 14.0, df = 2, <.001$
	Y ^c	39	36	25		23	44	33	
Try to sexually arouse you	N	46	41	13	$\chi^2 = 5.0,$	42	41	17	$\chi^2 = 19.0, df = 2, <.001$
	Y	35	45	20	$df = 2.08$	29	39	32	
Touch/Fondle body ^a	N	46	42	12	ns	43	40	17	$\chi^2 = 19.6, df = 2, <.001$
	Y	38	43	19		28	43	29	
Rub their genitals against your body	N	45	41	13	ns	41	42	18	$\chi^2 = 8.2, df = 2, .02$
	Y	38	49	13		34	37	29	
Penetrative experiences									
Oral sex (mouth/genital contact, you/other)	N	46	42	13	$\chi^2 = 8.6,$	40	40	19	ns
	Y	13	53	33	$df = 2, .01$	27	47	27	
Attempted vaginal intercourse	N	—	—	—	—	40	41	18	$\chi^2 = 9.5, df = 2, <.01$
	Y	—	—	—	—	31	36	33	
Vaginal intercourse	N	—	—	—	—	40	41	19	$\chi^2 = 9.3, df = 2, <.01$
	Y	—	—	—	—	31	28	41	
Attempted anal intercourse	N	45	41	13	ns	40	41	19	$\chi^2 = 16.4, df = 2, <.001$
	Y	29	57	14		20	10	70	
Anal intercourse	N	45	42	13	ns	40	41	19	$\chi^2 = 8.4, df = 2, .01$
	Y	14	71	14		17	17	67	

^aQuestion differed slightly for women to accommodate touching or fondling of breast.

^bNil = 0; Some = 1–2 symptoms; Many = 3+ symptoms.

^cN = Not experienced; Y = Abuse was experienced.

Table V. Level of Physical and Emotional Satisfaction Derived from Sex by Child Sexual Abuse History

	Extremely satisfying	Very satisfying	Moderately satisfying	Less than moderately satisfying	<i>N</i>
Physical satisfaction men ^a					
No CSA (%)	38	47	12	3	560
Non-penetrative (%)	30	52	12	5	82
Penetrative (%)	38	38	21	4	24
Physical satisfaction women ^b					
No CSA (%)	39	44	14	4	441
Non-penetrative (%)	34	47	16	4	160
Penetrative (%)	32	48	16	4	90
Emotional satisfaction men ^c					
No CSA (%)	37	47	12	4	559
Non-penetrative (%)	30	54	10	6	82
Penetrative (%)	42	38	21	0	24
Emotional satisfaction women ^d					
No CSA (%)	37	44	17	4	441
Non-penetrative (%)	32	45	17	6	160
Penetrative (%)	33	40	22	5	91

^a $\chi^2 = 4.2, df = 6, ns.$

^b $\chi^2 = 2.2, df = 6, ns.$

^c $\chi^2 = 5.9, df = 6, ns.$

^d $\chi^2 = 3.8, df = 6, ns.$

more likely to report that they experienced sexual dysfunction in later life.

Table V shows reported physical satisfaction with sex by category of abuse experience. The data were consistent, indicating that, for both men and women, there was no significant association between the physical satisfaction respondents derived from sex and their experiences of CSA. When we considered emotional satisfaction derived from sex, a similar result was apparent, in that men and women who experienced different levels of CSA did not differ significantly in their emotional satisfaction associated with their sexual behavior.

Table VI shows respondents number of heterosexual partners ever and in the last year. Considering first the number of partners ever for men, there was no significant association between prior experiences of CSA and the number of partners ever. By contrast, those women who had experienced penetrative sexual abuse were substantially less likely to have ever had only one partner and substantially more likely to have had six or more partners. A component of this association is possibly attributable to counting the perpetrator as a partner,⁶ but given that women who had experienced penetrative abuse reported substantially more often having had six or more partners, the findings suggest that abuse may lead to a wider range of partners over the woman's lifetime. Interestingly, this difference did not extend to partners in the last year where we note that, for men, there was no significant relationship

between the experiences of sexual abuse and the number of partners that they have had in the last year and, for women, there was similarly no significant relationship between CSA experiences and the number of partners in the last year.

DISCUSSION

The prevalence of CSA among the men and women in our sample was comparable to other recent Australian studies (Fleming, 1997; Mazza, Dennerstein, Garamszegi, & Dudley, 2001; Mazza, Dennerstein, & Ryan, 1996). Moreover, the 1:2 prevalence ratio between men and women equates with other research (Fergusson & Mullen, 1999). In comparing men and women across a range of non-penetrative and penetrative CSA experiences, our results confirmed that, in general, one in three women have experienced CSA. Women were more likely to experience a wide range of non-consensual sexual acts than were men. An exception was attempted anal intercourse, with men more likely to report this experience.

CSA was significantly associated with the frequency of sexual dysfunction symptoms. This substantiates the work of others investigating this association (DiLillo, 2001; Rumstein-McKean & Hunsley, 2001). For women (but generally not for men), this was also confirmed for each of the non-penetrative and penetrative acts for which information was sought.

Table VI. Number of Heterosexual Partners Ever and in the Last Year by Child Sexual Abuse History

	Number of Partners Ever									
	Men ^a					Women ^b				
	1	2-5	6+	<i>N</i>	1	2-5	6+	<i>N</i>		
No CSA (%)	13	34	52	679	30	44	27	535		
Non-penetrative (%)	14	28	58	101	23	38	39	198		
Penetrative (%)	6	25	69	32	10	46	45	105		

	Number of Partners in the Last Year									
	Men ^a					Women ^b				
	0	1	2-5	6+	<i>N</i>	0	1	2-5	6+	<i>N</i>
No CSA (%)	6	79	13	3	680	8	83	8	7	541
Non-penetrative (%)	7	75	15	3	101	9	77	12	2	198
Penetrative (%)	12	76	9	3	33	6	79	12	3	106

^aMen: $\chi^2 = 5.0$, $df = 4$, *ns*

^bWomen: $\chi^2 = 29.3$, $df = 4$, $p < .001$.

^cMen: $\chi^2 = 2.9$, $df = 6$, *ns*.

^dWomen: $\chi^2 = 6.8$, $df = 6$, *ns*.

Further analysis of our data also suggested that the experience of CSA had a greater impact on the self-reported sexual functioning of women than of men. These results are consistent with the findings of both Bauserman and Rind (1997) and Holmes and Slap (1998), who concluded that, for many men, the association between CSA and sexual dysfunction was weak or even absent. Our results were also consistent with other studies reporting gender differences in sexual dysfunction symptoms (Briere et al., 1988; Roesler & McKenzie, 1994). In considering gender differences in response to a history of CSA, Rind et al. (1998) explored a number of explanatory factors. For instance, men often regarded the experience as an adventure satisfying their curiosity whereas most women viewed CSA as an invasion of their body and/or morally wrong. Also, women's reactions at the time were predominantly of fear, confusion or embarrassment, while men's reactions were indifference, slight anxiety or positive pleasure (particularly where contact was with the opposite sex). Men and women may react differently to CSA experiences because they tend to experience different kinds of CSA. Because women tended to be exposed to more intrafamilial CSA and tended to experience CSA at younger ages, they may find CSA to be more damaging than do men. Men also experienced coercion less frequently than women.

Interestingly, there was no association between CSA and the physical or emotional pleasure respondents reported deriving from participating in sexual activity as adults during the preceding year. CSA appears to lead to impaired sexual functioning and impaired sexual functioning has been associated with reduced physical

and emotional pleasure obtained from sex. However, this latter association was not strong and CSA did not appear to lead to other outcomes we have examined. In contrast to the findings of an association between CSA and sexual dysfunction, we found no evidence that other aspects of sexual functioning were impaired by prior CSA.

An increase in sexualized behaviors has been previously observed in those who have experienced CSA (DiLillo, 2001; Rumstein-McKean & Hunsley, 2001). Browne and Finkelhor (1986) have also found that promiscuity, identified by the frequency of sexual behavior and number of sexual relationships, was evident in samples reporting a history of CSA. We observed that women, but not men, who had experienced CSA reported more sexual partners over their lifetime, but neither men nor women who had experiences CSA reported more partners in the last year. Perhaps CSA is associated with obtaining more partners early in a woman's sexual career, but not when she is older.

There are a number of caveats to be considered when interpreting the findings of the current study. Firstly, generalizability of data from sexuality surveys is potentially threatened by selection bias (Dunne et al., 1997). We can generalize only with respect to adults aged 18-59 years who are enrolled to vote and who have a listed telephone number. A detailed analysis of the characteristics of respondents completing the interview, those refusing, and those selected though unable to be contacted has been presented elsewhere (Purdie et al., 2002). These groups have been compared with each other and with the national population (1996 census data and a 1995 national health survey) and were considered to be broadly

representative on most demographic characteristics and self-reported health status. However, we were unable to determine whether the sexual experiences of participants differed from the general population or those refusing to be interviewed. Self-selection is also a noteworthy consideration. Although volunteers in sex surveys differ from refusers in their sexual experiences and may be more likely to have a history of sexual abuse in general, the size of the effect does not introduce a major bias (Dunne, 2001; Dunne et al., 1997).

Secondly, questions in the current survey specified sexual acts as “unwanted.” This may exclude “wanted” events with an adult perpetrator that should still be classified as sexual abuse (Dunne et al., 2003). Our results, therefore, may underestimate the true prevalence of CSA.

Thirdly, sexual dysfunction in this sample was measured by a broad range of forms that impact on both men and women. Although no clinical assessments or other measures to determine severity or chronicity of sexual dysfunction were used, we argue that data obtained from our measure (adapted from McKean, Muller, & Lang, 1992) represent more than trivial or transient sexual problems.

Fourthly, it is difficult to know how valid the respondent’s answers were regarding their experiences of CSA. The questions asked were about specific events and we have accepted the respondent’s perceptions that they experienced CSA, but have not investigated whether the CSA occurred or was intended.

Fifthly, we need to consider the possibility that problems in sexual functioning influence recall of CSA. It could be suggested that person whose sexual functioning is impaired may seek explanations of why this might be the case and recall CSA experiences in a way which is not the case for those whose sexual functioning is non-impaired. This “rumination bias” explanation cannot be eliminated, but appears unlikely given the specific associations we have observed.

Finally, we cannot rule out the role of an unmeasured “third variable.” We were not able to adjust for other factors, such as the child’s family environment (e.g., high conflict, substance abuse, or other forms of maltreatment), but these factors have repeatedly been cited as factors contributing to later symptomology (DiLillo, 2001). The interpretations of our findings would have been strengthened were we able to statistically control for such factors.

The current study examined the level of adult sexual dysfunction in people who report a history of CSA from a representative Australian population-based sample, aged between 18 and 59 years. High rates of CSA and sexual dysfunction were observed. Women report the greater burden of both. Comparing people who experience CSA

with people who have never been abused revealed a significant association, particularly for women, between an unwanted childhood sexual experience and impairment of adult sexual functioning. However, the majority of men and about half the women in our sample who reported sexual dysfunction had not experienced CSA. Furthermore, we could not find evidence that “physical and emotional satisfaction” from recent sexual activity (a somewhat different dimension of the quality of sexual life) was compromised for the majority of people who were sexually abused as children. Overall, CSA is only likely to affect a modest proportion of those persons in the population who experience sexual dysfunction.

APPENDIX

Each participant was asked: “Before the age of 16, did someone [X] when you did not want them to?” for each of the following statements indicative of non-penetrative (1–4), and penetrative (5–9), sexual experiences:

1. Before age 16 did someone masturbate in front of you when you didn’t want them to?
2. Before age 16 did someone try to sexually arouse you when you didn’t want them to?
3. Before age 16 did someone touch or fondle your body, including your breast and genitals, or make you touch or fondle their body when you didn’t want to them to? (varied slightly according to gender)
4. Before age 16 did someone rub their genitals against your body in a sexual way when you didn’t want them to?
5. Before age 16 did someone touch your genitals with their mouth or make you touch their genitals with your mouth when you didn’t want them to?
6. Before age 16 did someone try to have vaginal intercourse with you when you didn’t want them to but intercourse did not occur? (women only)
7. Before age 16 did someone have vaginal intercourse with you when you didn’t want them to? (women only)
8. Before age 16 did someone try to have anal intercourse with you when you didn’t want them to but intercourse did not occur?
9. Before age 16 did some have oral intercourse with you when you didn’t want them to?

For all of the above questions the response categories were never, once, or more than once. Supplementary questions asked about the age of the perpetrator and respondent at the time.

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REFERENCES

- Alexander, P. C., & Lupfer, S. L. (1987). Family characteristics and long-term consequences associated with sexual abuse. *Archives of Sexual Behavior, 16*, 235–245.
- Bachmann, G. A., Moeller, T. P., & Bennett, J. (1988). Childhood sexual abuse and the consequences in adult women. *Obstetrics and Gynaecology, 71*, 631–642.
- Bancroft, J. (2002). The medicalization of female sexual dysfunction: The need for caution. *Archives of Sexual Behavior, 31*, 451–455.
- Bancroft, J., Graham, C. A., & McCord, C. (2001). Conceptualizing women's sexual problems. *Journal of Sex & Marital Therapy, 27*, 95–103.
- Bancroft, J., Loftus, J., & Long, J. S. (2003). Distress about sex: A national survey of women in heterosexual relationships. *Archives of Sexual Behavior, 32*, 193–208.
- Bauserman, R., & Rind, B. (1997). Psychological correlates of male child and adolescent sexual experiences with adults: A review of the nonclinical literature. *Archives of Sexual Behavior, 26*, 105–141.
- Beitchman, J. H., Zucker, K. J., Hood, J. E., daCosta, G. A., Akman, D., & Cassavia, E. (1992). A review of the long-term effects of child sexual abuse. *Child Abuse and Neglect, 16*, 101–118.
- Briere, J. (1984). *The long-term effects of childhood sexual abuse on later psychological functioning: Defining a post-sexual abuse syndrome*. Paper presented at the Third National Conference on Sexual Victimization of Children, Washington, DC.
- Briere, J., Evans, D., Runtz, M., & Wall, T. (1988). Symptomology in men who were molested as children: A comparison study. *American Journal of Orthopsychiatry, 58*, 457–461.
- Briere, J., & Runtz, M. (1987). Post sexual abuse trauma: Data and implications for clinical practice. *Journal of Interpersonal Violence, 2*, 367–379.
- Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin, 99*, 66–77.
- DiLillo, D. (2001). Interpersonal functioning among women reporting a history of childhood sexual abuse: Empirical findings and methodological issues. *Clinical Psychology Review, 21*, 553–576.
- Dunne, M. P. (2001). Sampling considerations. In M. Wiederman, & B. Whitley (Eds.), *Handbook for conducting research on human sexuality* (pp. 85–112). Hillsdale, NJ: Erlbaum.
- Dunne, M. P., Martin, N. G., Bailey, J. M., Heath, A. C., Bucholz, K. K., Madden, P. A. F., et al. (1997). Participation bias in a sexuality survey: Psychological and behavioural characteristics of responders and non-responders. *International Journal of Epidemiology, 26*, 844–854.
- Dunne, M. P., Purdie, D. M., Cook, M. D., Boyle, F. M., & Najman, J. M. (2003). Is child sexual abuse declining? Evidence from a population-based survey of men and women in Australia. *Child Abuse and Neglect, 27*, 141–152.
- Fergusson, D. M., & Mullen, P. E. (1999). *Childhood sexual abuse: An evidence based perspective*. Thousand Oaks, CA: Sage.
- Finkelhor, D. (1979). What's wrong with sex between adults and children? Ethics and the problem of sexual abuse. *American Journal of Orthopsychiatry, 49*, 692–697.
- Finkelhor, D., Hotaling, G. T., Lewis, I. A., & Smith, C. (1989). Sexual abuse and its relationship to later sexual satisfaction, marital status, religion, and attitudes. *Journal of Interpersonal Violence, 4*, 379–399.
- Fleming, J. (1997). Prevalence of childhood sexual abuse in a community sample of Australian women. *Medical Journal of Australia, 166*, 65–68.
- Fleming, J., Mullen, P. E., Sibthorpe, B., & Bammer, G. (1999). The long-term impact of childhood sexual abuse in Australian women. *Child Abuse and Neglect, 23*, 145–159.
- Fromuth, M. (1986). The relationship of childhood sexual abuse with later psychological and sexual adjustment in a sample of college women. *Child Abuse and Neglect, 10*, 5–15.
- Greenwald, E., Leitenberg, H., Cado, S., & Tarran, M. J. (1990). Childhood sexual abuse: Long-term effects on psychological and sexual functioning in a nonclinical and nonstudent sample of adult women. *Child Abuse and Neglect, 14*, 503–513.
- Herman, J., & Hirschman, L. (1981). *Father-daughter incest*. Cambridge, MA: Harvard University Press.
- Holmes, G. R., Offen, L., & Waller, G. (1997). See no evil, hear no evil, speak no evil: Why do relatively few male victims of childhood sexual abuse receive help for abuse-related issues in adulthood? *Clinical Psychology Review, 17*, 69–88.
- Holmes, W. C., & Slap, G. B. (1998). Sexual abuse of boys: Definition, prevalence, correlates, sequelae, and management. *Journal of the American Medical Association, 280*, 1855–1862.
- Langmade, C. (1983). The impact of pre- and postpubertal onset of incest experiences in adult women as measured by sex anxiety, sex guilt, sexual satisfaction and sexual behavior. *Dissertation Abstracts International, 44*, 917B.
- Laumann, E., Paik, A., & Rosen, R. C. (1999). Sexual dysfunction in the United States: Prevalence and predictors. *Journal of the American Medical Association, 281*, 537–544.
- Mazza, D., Dennerstein, L., Garamszegi, C. V., & Dudley, E. C. (2001). The physical, sexual and emotional violence history of middle-aged women: A community-based prevalence study. *Medical Journal of Australia, 175*, 199–201.
- Mazza, D., Dennerstein, L., & Ryan, V. (1996). Physical, sexual and emotional violence against women: A general practice-based prevalence study. *Medical Journal of Australia, 164*, 14–17.
- McKean, E. A., Muller, K. L., & Lang, E. L. (1992). *The 1992 National Health and Social Life Survey (NHSLS) Users' Manual for the CD-ROM*. Los Altos, CA: Sociometrics.
- McKlenan, W. (1998). *Census of population and housing: Socio-economic indexes for areas (Catalogue No. 2039.0)*. Canberra: Australian Bureau of Statistics.
- Mieselman, K. (1978). *Incest: A psychological study of causes and effects with treatment recommendation*. San Francisco, CA: Jossey-Bass.
- Mullen, P. E., Martin, J. L., Anderson, J. C., Romans, S. E., & Herbison, G. P. (1994). The effect of child sexual abuse on social, interpersonal and sexual function in adult life. *British Journal of Psychiatry, 165*, 35–47.
- Najman, J. M., Dunne, M. P., Boyle, F. M., Cook, M. D., & Purdie, D. M. (2003). Sexual dysfunction in the Australian population. *Australian Family Physician, 32*, 951–954.
- Nelson, E. C., Heath, A. C., Madden, P. A. F., Cooper, M. L., Dinwiddie, S. H., Bucholz, K. K., et al. (2002). Association between self-reported childhood sexual abuse and adverse psychosocial outcomes: Results from a twin study. *Archives of General Psychiatry, 59*, 139–145.
- Paolucci, E. O., Genius, M. L., & Violato, C. (2001). A meta-analysis of the published research on the effects of child sexual abuse. *Journal of Psychology, 135*, 17–36.
- Purdie, D. M., Dunne, M. P., Boyle, F. M., Cook, M. D., & Najman, J. M. (2002). Health and demographic characteristics of respondents in an Australian national sexuality survey: Comparison with population norms. *Journal of Epidemiology and Community Health, 56*, 748–753.

- Rind, B., & Tromovitch, P. (1997). A meta-analytic review of findings from national samples on psychological correlates of child sexual abuse. *Journal of Sex Research, 34*, 237–255.
- Rind, B., Tromovitch, P., & Bauserman, R. (1998). A meta-analytic examination of the assumed properties of child sexual abuse using college samples. *Psychological Bulletin, 124*, 22–53.
- Roesler, T., & McKenzie, N. (1994). Effects of childhood trauma on psychological functioning in adults sexually abused as children. *Journal of Nervous and Mental Disease, 182*, 145–150.
- Rumstein-McKean, O., & Hunsley, J. (2001). Interpersonal and family functioning of female survivors of childhood sexual abuse. *Clinical Psychology Review, 21*, 471–490.
- Tharinger, D. (1990). Impact of child sexual abuse on developing sexuality. *Professional Psychology: Research and Practice, 21*, 331–337.
- Tsai, M., & Wagner, N. (1978). Therapy groups for women sexually molested as children. *Archives of Sexual Behavior, 7*, 417–427.