

Does Physical Abuse, Sexual Abuse, or Neglect in Childhood Increase the Likelihood of Same-sex Sexual Relationships and Cohabitation? A Prospective 30-year Follow-up

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Abstract Existing cross-sectional research suggests associations between physical and sexual abuse in childhood and same-sex sexual orientation in adulthood. This study prospectively examined whether abuse and/or neglect in childhood were associated with increased likelihood of same-sex partnerships in adulthood. The sample included physically abused ($N = 85$), sexually abused ($N = 72$), and neglected ($N = 429$) children (ages 0–11) with documented cases during 1967–1971 who were matched with non-maltreated children ($N = 415$) and followed into adulthood. At approximately age 40, participants (483 women and 461 men) were asked about romantic cohabitation and sexual partners, in the context of in-person interviews covering a range of topics. Group (abuse/neglect versus control) differences were assessed with cross-tabulations and logistic regression. A total of 8% of the overall sample reported any same-sex relationship (cohabitation or sexual partners). Childhood physical abuse and neglect were not significantly associated with same-sex cohabitation or sexual partners. Individuals with documented histories of childhood sexual abuse were significantly more likely than controls to report ever having had same-sex sexual partners (OR = 2.81, 95% CI = 1.16–6.80, $p \leq .05$); however, only men with histories of childhood sexual abuse were significantly more likely than controls to report same-sex sexual partners (OR = 6.75, 95% CI = 1.53–29.86, $p \leq .01$). These prospective findings provide tentative evidence of a link

between childhood sexual abuse and same-sex sexual partnerships among men, although further research is needed to explore this relationship and to examine potential underlying mechanisms.

Keywords Childhood sexual abuse · Childhood physical abuse · Childhood neglect · Sexual orientation

Introduction

Much has been written about a possible connection between abuse in childhood and sexual orientation in adulthood. Understanding this relationship would contribute to knowledge about the development of sexual behavior. Findings from clinical samples and case studies (Davis & Petretic-Jackson, 2000; Gartner, 1999; Romano & De Luca, 2001), surveys of men who have sex with men (Carballo-Dieiguez & Dolezal, 1995; Doll et al., 1992; Holmes & Slap, 1998; Jinich et al., 1998; Kalichman, Gore-Felton, Benotsch, Cage, & Rompa, 2004; Lenderking et al., 1997; O’Leary, Purcell, Remien, & Gomez, 2003; Paul, Catania, Pollack, & Stall, 2001), and cross-sectional studies comparing self-reports of gay, lesbian, and bisexual (GLB) individuals with those of heterosexual comparison samples (Balsam, Rothblum, & Beauchaine, 2005; Cameron & Cameron, 1995; Corliss, Cochran, & Mays, 2002; Eskin, Kaynak-Demir, & Demir, 2005; Garcia, Adams, Friedman, & East, 2002; Hughes, Haas, Razzando, Cassidy, & Matthews, 2000; Hughes, Johnson, & Wilsnack, 2001; Sae-wyc, Bearinger, Blum, & Resnick, 1999; Tjaden, Thoennes, & Allison, 1999; Tomeo, Templer, Anderson, & Kotler, 2001) have generally found that adolescents and adults with same-sex sexual orientations retrospectively report heightened rates of childhood physical, sexual, and/or emotional abuse (see Table 1 for a summary of this literature). However, not all

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Table 1 Previous studies assessing the relationship between childhood abuse and sexual orientation

Study	N	Sex	Age	Sample description	Type of abuse	Source of abuse	Definition of same-sex sexual orientation	Outcome
<i>Prevalence of abuse in individuals with same-sex sexual orientations</i>								
Bartholow et al. (1994)	1001	M	≥18	STD clinic patients in three urban areas	SA	SR	Self reported oral or anal sex with a male; self identification as Hom or B	34%
Bradford et al. (1994)	1925	F	17–80	National sample of lesbian women	PA, SA	SR	Self identified (L)	PA: 24% SA: 21%
Carballo-Diequez and Dolezal (1995)	182	M	19–59	Puerto Rican MSM living in New York City	SA	SR	Self reported sex with another man	18%
Doll et al. (1992)	1001	M	18–73	STD clinic patients	SA	SR	Self identified as Hom or reported sex with a man	37%
Jimich et al. (1998)	1941	M	≥18	Gay-identified bar patrons and random household phone contacts	SA	SR	Self reported sex with another male	28%
Kalichman et al. (2001)	595	M	17–22	Gay pride festival attendees	SA	SR	Self-identified as G, B, or Het (2%)	21.7%
Kalichman et al. (2004)	608	M	Mean = 34.8	Gay pride festival attendees	SA	SR	Self-identified as G, B, or Het (7%)	15%
Lehmann, Lehmann, and Kelly (1998)	53	F	15–44	Recruited through a campus lesbian organization	PA, SA, EM	SR	Self-identified (L)	19%
O'Leary et al. (2003)	456	M	≥18	HIV-positive men who have sex with men	SA	SR	Self reported sex with other men in the past year	14.9%
Paul et al. (2001)	2881	M	≥18	Telephone probability sample of men who have sex with men in four urban areas	SA	SR	Self reported sexual contact with other men or self identified as G or B	20.6%
Roberts and Sorensen (1999)	1633	F	≥18	National community sample of lesbian women	SA	SR	Self-identified (L)	26% before age 12 12% ages 12–18
Robohm et al. (2003)	227	F	18–23	LGB college organization members & “snowball” referrals	SA	SR	Self-identified (L, B)	36.1%
<i>Prevalence of abuse in individuals with same-sex sexual orientations and heterosexual comparison groups</i>								
Cameron and Cameron (1995)	5182	F, M	≥18	Random sample of adults from 6 US metropolitan areas	Incest	SR	Self identified as Hom or B	Female L/B: 9.1; Het: 2.5** Male G/B: 11.5; Het: 1.9***

Table 1 continued

Study	N	Sex	Age	Sample description	Type of abuse	Source of abuse	Definition of same-sex sexual orientation	Outcome
Corliss et al. (2002)	2917	F, M	25–74	Random national sample	PA, EA	SR	Self-identified as Hom, Het or B	<i>Female</i> PA L/B: 43.6%; Het: 30.9% Major PA L/B: 33.6%; Het: 10.3%* EA L/B: 45.5%; Het: 37.2% <i>Male</i> PA G/B: 46.7%; Het: 37.1% Major PA G/B: 26.9%; Het: 12.5%* EA G/B: 52.6%; Het: 36.5%
Garcia et al. (2002)	138	F, M	18–30	College students	PA, EA, SA	SR	Self-identified (G, B, Het)	<i>Female</i> PA L/B: 47%; Het: 29% SA ^a L/B: 53%; Het: 44% SA ^b L/B: 24%; Het: 21% EA L/B: 71%; Het: 62% <i>Male</i> PA G/B: 21%; Het: 17% SA ^a G/B: 36%; H: 10%* SA ^b G/B: 14%; Het: 7% EA G/B: 57%; Het: 41%
Garofalo et al. (1998)	4159	F, M	Grades 9–12	Public high school students	Forced sex	SR	Self-identified (G, L, B)	GLB: 32.5%; Het: 9.1%***
Hughes et al. (2000)	829	F	20–86	Community sample of lesbian women and demographically similar controls in 3 urban areas	SA	SR	Same sex attraction and behavior	L: 41%; Het: 24%***
Hughes et al. (2001)	120	F	18 to ≥60	Community sample of lesbian women and demographically similar controls	SA	SR	Self-identified (L)	<i>Definition based on age criteria</i> L: 68%; Het: 47%* <i>Self perception</i> L: 37%; Het: 19%*
Saewyc et al. (1999)	3816	F	12–19	Public school students	PA, SA	SR	Self-identified (L, B)	<i>Physical Abuse</i> L/B: 19.3%; Het: 11.9%** <i>Sexual Abuse</i> L/B: 22.1%; Het: 15.3%***

Table 1 continued

Study	N	Sex	Age	Sample description	Type of abuse	Source of abuse	Definition of same-sex sexual orientation	Outcome
Tjaden et al. (1999)	744	F, M	≥18	Random national sample	PA, SA	SR	Cohabitation with same-sex partner	<i>Female</i> PA Same: 59.5%; Opp.: 35.7%* SA Same: 16.5%; Opp.: 8.7%* <i>Male</i> PA Same: 70.8%; Opp.: 50.3%* SA Same: 15.4; Opp.: unreported ^c <i>Female</i> L: 42.5; Het: 24.6*** <i>Male</i> G: 49.2; Het: 24.4***
<i>Prevalence of same-sex sexual orientation in abused individuals and controls</i>								
Johnson and Shrier (1987)	50	M	14–24	Adolescent medicine clinic patients	SA	SR	Self report of same-sex sexual partners	Control: 8% SA by female: 28% SA by male: 57%***
<i>Associations between Abuse and Same-Sex Sexual Orientation</i>								
Balsam et al. (2005)	1245	F, M	18–79	LGB organizations, publications, websites and listservs; siblings of LGB	PA, SA, PsA	SR	Self identified (L, G, B)	PA: $t = -3.46^{**}$ SA: $t = -4.42^{**}$ PsA: $t = -5.42^{***}$
Eskin et al. (2005)	1262	F, M	17–43	Turkish university students	SA	SR	Self reported attraction, behavior, and orientation	Attraction: ns Behavior: $\beta = .33$; OR = 1.39* Orientation: ns
Harry (1989)	84	M	Undergrad.	Attendees at social events sponsored by campus GL organization; matched with heterosexual students	PA	SR	Self-identified as Hom, Het, or B	$r = .22^*$
Meston et al. (1999)	1032	F, M	17–48	Undergraduate students	PA, EA, N, SA	SR	5-point Likert scale (exclusively Hom to exclusively Het)	<i>Females</i> PA: $r = .04$ EA: $r = -.04$ N: $r = -.07$ SA: $r = -.10$ <i>Males</i> PA: $r = .02$ EA: $r = .10$ N: $r = -.05$ SA: $r = -.07$

Note: F female; M male; SA sexual abuse; PA physical abuse; EA emotional abuse; PsA psychological abuse; N neglect; L lesbian; G gay; B bisexual; U unsure; Het heterosexual; Hom homosexual; MSM men who have sex with men

* $p < .05$; ** $p < .01$; *** $p < .001$

^a Unwanted sexual touching

^b Forced sexual act

^c Reported as “insufficient number to reliably calculate”

studies have found this pattern of results (Bell, Weinberg, & Hammersmith, 1981; Meston, Heiman, & Trapnell, 1999).

Moreover, this relationship may be stronger for men than for women. Men who have sex with men report rates of childhood sexual abuse that are approximately three times higher than that of the general male population (Purcell, Malow, Dolezal, & Carballo-Diéguez, 2004). On the other hand, rates of childhood sexual abuse reported by lesbian women are often similar to those reported by women in general (Bradford, Ryan, & Rothblum, 1994; Davis & Petretic-Jackson, 2000; Roberts & Sorensen, 1999; Robohm, Litzenberger, & Pearlman, 2003), though some studies have found that lesbian women report higher rates of childhood abuse than heterosexual women (e.g., Hughes et al., 2000, 2001; Saewyc et al., 1999). Several studies that include both women and men and that assess both sexual and non-sexual forms of childhood maltreatment have reported a stronger relationship for men than for women (Balsam et al., 2005; Corliss et al., 2002; Garcia et al., 2002).

A number of theoretical mechanisms have been offered to explain the connection between childhood abuse and adult sexual orientation. Some have interpreted the relationship between childhood sexual abuse and sexual orientation as an indication that sexual abuse can cause an individual to develop a same-sex sexual orientation (e.g., Cameron & Cameron, 1995). These theories hinge largely on evidence that sexual perpetrators are typically male and suggest contrasting mechanisms for men and women. As Gartner (1999) describes, boys who are sexually abused by an older male may perceive the abuse as an indication that they are gay. On the other hand, it has been speculated that women who are sexually abused may develop an aversion toward sex with men and feel more comfortable in intimate relationships with other women (Marvasti & Dripchak, 2004). Another hypothesis is that the experience of sexual abuse may result in uncertainty regarding sexual orientation and greater experimentation with both same- and opposite-sex relationships, regardless of ultimate sexual orientation (Gartner, 1999; Gilgun & Reiser, 1990).

A quite different set of hypotheses suggests that a child's sexual orientation or attractions preceded the abuse. For example, it is possible that youths who are exploring their sexual identity are more likely to put themselves in situations where they are at risk for being sexually abused (Holmes & Slap, 1998). Another possibility is that children who later identify a same-sex sexual orientation are disproportionately targeted as victims of abuse. Studies with GLB youths have found that they are often physically and verbally abused by family members and peers as a result of their sexual orientation (Faulkner & Cranston, 1998; Garofalo, Wolf, Kessel, Palfrey, & DuRant, 1998; Hunter, 1990; Pilkington & D'Augelli, 1995). Even before sexual orientation is identified or revealed, gender non-conforming behavior in childhood

may be associated with later same-sex sexual orientation (Bailey & Zucker, 1995) and may make children more vulnerable to abuse (Balsam et al., 2005; Corliss et al., 2002). One study examining this possibility found that GLB youths who described themselves as gender-nonconforming in childhood (e.g., reported being called a "sissy" or a "tomboy") were more likely to report verbal or physical, but not sexual, abuse (D'Augelli, Grossman, & Starks, 2006).

While these speculations have received considerable theoretical attention and debate, relevant empirical evidence is sparse, and a number of characteristics of the existing research limit our ability to draw conclusions. First, the existing studies utilize cross-sectional designs and cannot provide information about the temporal order of the phenomena being studied since variables are assessed simultaneously. Thus, it is unclear whether the abuse preceded the development of sexual orientation or vice versa. Second, existing studies have relied on retrospective self reports of child abuse (see Table 1), which are vulnerable to recall error and self-report biases (Widom & Morris, 1997; Widom & Shepard, 1996). Individuals who identify GLB orientations or report same-sex sexual behaviors may be more willing in general to report or reveal potentially stigmatizing information, including childhood abuse (Corliss et al., 2002). Third, findings from clinical samples are not generalizable to non-treatment seeking samples, since individuals seeking treatment are likely to have elevated rates of child maltreatment and other difficulties.

The purpose of this study was to examine prospectively whether individuals with documented cases of childhood maltreatment were more likely than controls to have same-sex romantic or sexual relationships later in life. To our knowledge, this is the first prospective investigation of the relationship between childhood maltreatment and sexual orientation in adulthood. The present study used a prospective matched cohort design (Leventhal, 1982) to examine whether individuals with documented histories of childhood maltreatment (sexual and physical abuse and neglect) were more likely than non-maltreated controls to report same-sex cohabitation or sexual relationships when followed up and assessed in middle adulthood. Given the previous literature, we hypothesized this relationship would be stronger for men than for women.

Defining sexual orientation for the purposes of research is complicated (Savin-Williams, 2006). In this study, we assessed sexual orientation through report of behaviors—cohabitation and sexual experiences with same-sex partners—rather than self-identification of sexual orientation. It is important to note that we were not attempting to classify individuals as homosexual or heterosexual, and our outcomes did not imply a predominantly homosexual identity, but merely whether or not an individual had had relationships with same-sex partners.

Method

Participants

Data were collected as part of a large prospective cohort design study in which abused and/or neglected children were matched with non-abused, non-neglected children and followed into adulthood. Because of the matching procedure, the participants were assumed to differ only in the risk factor; that is, having experienced childhood sexual or physical abuse or neglect. Since it was not possible to assign participants randomly to groups, the assumption of equivalency for the groups is an approximation. The control group may also differ from the abused and neglected individuals on other variables associated with abuse or neglect. For complete details of the study design and subject selection criteria, see Widom (1989a).

The original sample of abused and neglected children ($N = 908$) was made up of substantiated cases of childhood physical and sexual abuse and neglect processed from 1967 to 1971 in county juvenile (family) and adult criminal courts of a midwestern metropolitan area. Cases of abuse and neglect were restricted to children 11 years of age or less at the time of the incident and, therefore, represent childhood maltreatment. A control group of children without documented histories of childhood abuse and/or neglect ($N = 667$) was matched with the abuse/neglect group on age, sex, race/ethnicity, and approximate family social class during the time that the abuse and neglect records were processed.

The control group represents a critical component of the design of the study. Children who were under school age at the time of the abuse and/or neglect were matched with children of the same sex, race, date of birth (± 1 week), and hospital of birth through the use of county birth record information. For children of school age, records of more than 100 elementary schools for the same time period were used to find matches with children of the same sex, race, date of birth (± 6 months), class in elementary school during the years 1967–1971, and home address, preferably within a five-block radius of the abused/neglected child. Overall, matches were found for 74% of the abused and neglected children. Non-matches occurred for a number of reasons. For birth records, non-matches occurred in situations when the abused and neglected child was born outside the county or state or when date of birth information was missing. For school records, non-matches occurred because of lack of adequate identifying information for the abused and neglected children or because the elementary school had closed over the last 20 years and class registers were unavailable.

The initial phase of the study compared the abused and/or neglected children to the matched comparison group (total $N = 1,575$) on juvenile and adult criminal arrest records (Widom, 1989b). A second phase involved tracking,

locating, and interviewing individuals in the abuse and/or neglect and control groups during 1989–1995, approximately 20 years after the incidents of abuse and neglect ($N = 1,196$). The research presented in this article used information collected during two subsequent follow-up interviews conducted in 2000–2002 ($N = 896$) and 2003–2004 ($N = 808$). Although there was attrition associated with death, refusals, and our inability to locate individuals over the various waves of the study, the characteristics of the sample at the four time points has remained about the same. The abuse and neglect group represented 56–58% at each time period; White, non-Hispanics were 62–66%; and males were 48–51% of the samples. There were no significant differences across the samples on these variables or in mean age across the four phases of the study.

Participants included in the analyses reported here were all of those who completed the 2000–2002 and/or 2003–2004 interview ($N = 944$). Participants had a mean age of 39.5 years ($SD = 3.53$, range = 30–47) in 2000–2002 and 41.2 years ($SD = 3.54$, range = 32–49) in 2003–2004. Approximately half of this sample (51.2%) was female. The majority were White, non-Hispanic (60.2%) or Black, non-Hispanic (33.4%), with 4.1% Hispanic and 2.3% other ethnic/racial backgrounds. Participants completed an average of 11.6 years of school (58.9% completed high school). The median occupational level (Hollingshead, 1975) was semi-skilled labor, and only 13.7% held professional or semi-professional jobs. Thus, the sample was skewed toward the lower end of the socioeconomic spectrum. The sample included 529 cases of child abuse and neglect (85 physical abuse, 72 sexual abuse, and 429 neglect) and 415 matched controls. Cases of different types of abuse and neglect sum to more than 529 since some individuals had cases of more than one type. The average age at the time of their abuse and neglect cases was 6.3 years (6.7 for physical abuse, 8.0 for sexual abuse, and 5.9 for neglect).

Procedure

Participants completed the interviews in their homes or another place appropriate for the interview, if preferred by the participant. The interviewers were masked to the purpose of the study and to the inclusion of an abused and/or neglected group. Participants were also masked to the purpose of the study and were told that they had been selected to participate as part of a large group of individuals who grew up in the late 1960s and early 1970s. Institutional Review Board approvals were obtained for the procedures involved in this study at each wave of the study across several academic institutions, and participants gave written, informed consent. For individuals with limited reading ability, the consent form was presented and explained verbally.

Measures

Child Abuse and Neglect

Childhood physical and sexual abuse and neglect were assessed through review of official records processed during the years 1967–1971 and were limited to cases of children age 11 and younger. *Physical abuse* cases included injuries such as bruises, welts, burns, abrasions, lacerations, wounds, cuts, bone and skull fractures, and other evidence of physical injury. *Sexual abuse* cases had charges ranging from relatively nonspecific charges of “assault and battery with intent to gratify sexual desires” to more specific charges of “fondling or touching in an obscene manner,” sodomy, incest, rape, etc. *Neglect* cases reflected a judgment that the parents’ deficiencies in child care were beyond those found acceptable by community and professional standards at the time and represented extreme failure to provide adequate food, clothing, shelter, or medical attention to children.

Same-sex Cohabitation

During the 2000–2002 interview, participants were asked two questions about cohabitation with a romantic partner of the same sex: (1) “Are you currently living as a couple with a [woman/man] at least part of the time? By couple, we mean romantically or sexually involved, not just roommates.” (2) “Have you ever lived as a couple with a [woman/man]?” A dichotomous variable (1 = yes, 0 = no) was created to reflect any same-sex cohabitation.

Same-sex Sexual Partners

During the 2003–2004 interview, participants were asked: (1) “How many men have you had sexual intercourse with in your lifetime?” and (2) “How many women have you had sexual intercourse with in your lifetime?” A dichotomous variable was created to reflect whether the participant had ever had any same-sex sexual partners (1 = yes, 0 = no). Additional questions asked participants how many male and female sexual partners they had had in the past year, and this information was used to create a second dichotomous variable reflecting current same-sex sexual relationships (1 = yes, 0 = no). For a more dimensional measure of sexual partners, scaled variables were also created to reflect 0, 1, or more than 1 same-sex sexual partner (ever and in the past year). Whereas the actual number of same-sex sexual partners was not normally distributed (skewness = 15.73, kurtosis = 269.26) since the majority of the sample (93%) did not report any same-sex sexual partners, this scaled variable approximated a normal distribution ($M = .11$, $SD = .43$, skewness = 3.89, kurtosis = 13.75) and provided a comparison with the binomial measure.

Analyses

Cross-tabulations and logistic regression conducted with SPSS 15.0 were used to assess differences between the abuse/neglect and control groups in terms of the prevalence of same-sex cohabitation and same-sex sexual partners. Separate regressions were conducted for each type of abuse and/or neglect with each outcome. Odds ratios (OR) and 95% confidence intervals (CI) were generated by exponentiation of the regression coefficients and indicated magnitude of effect. ORs represent the change in likelihood of the outcome based on the value of the independent variable (abuse/neglect versus control group). Ordinary least squares regression was used to assess models with the scaled variables for same-sex sexual partners as the dependent variable, separately for each type of abuse and neglect. Each regression included all participants with complete data on the variables of interest. Since some participants did not complete both interviews or had missing data (e.g., refused to answer a particular question), sample sizes differed slightly depending on the outcome ($N = 887$ for cohabitation; $N = 800$ for sexual partners).

Results

Overall Prevalence of Same-Sex Sexual Orientation

Table 2 shows the percentage of the entire sample reporting same-sex cohabitation or sexual relationships. A total of 8% of the sample reported any same-sex relationship (cohabitation or sexual partners); 2.5% reported having lived with a same-sex romantic partner; and 7% reported having had same-sex sexual partners. Most of those reporting same-sex sexual partners also reported opposite-sex partners, and very few participants (5 men and 1 woman) reported exclusively same-sex sexual partners. The percentage reporting same-sex partners did not vary significantly by sex, race/ethnicity, number of years of education, occupational status, or age of the respondent, and thus further analyses did not control for these demographic characteristics.

Does Childhood Abuse and/or Neglect Increase the Likelihood of Same-Sex Relationships?

Childhood physical abuse and neglect were not significantly associated with increased likelihood of same-sex cohabitation or sexual partnerships (see Table 3). Individuals with documented histories of childhood sexual abuse were more likely than controls to report ever having had same-sex sexual partners (OR = 2.81, 95% CI = 1.16–6.80, $p \leq .05$). Conversion of this odds ratio to an effect size equivalent to a standardized mean difference (Chinn, 2000) yielded an effect size of .57, a moderate effect (Cohen, 1988). However,

Table 2 Prevalence of same-sex relationship as a function of sex

	Females		Males		Combined	
	N	%	N	%	N	%
Any same-sex relationships	403	7.9	355	8.2	758	8.0
Same-sex cohabitation	454	2.0	433	3.0	887	2.5
Same-sex sexual partners (ever)	424	6.8	376	6.4	800	6.6
Same-sex sexual partners (past year)	423	2.1	377	2.9	800	2.5

victims of sexual abuse were not more likely than controls to report cohabitation with a same-sex partner (OR = 1.73, 95% CI = .35–8.52, $p > .10$) or to report same-sex sexual partners in the past year (OR = 1.18, 95% CI = .14–10.28, $p > .10$).

As shown in Table 3, separate regression analyses for women and men in the sample revealed that the relationship between childhood sexual abuse and same-sex sexual orientation was significant only for men. Men with documented histories of childhood sexual abuse were more likely than control men to report ever having had same-sex sexual partners (OR = 6.75, 95% CI = 1.53–29.86, $p \leq .01$). It should be noted that the sample size of the sexually abused men was small and that the confidence interval associated with this large odds ratio (6.75) should make us cautious in interpreting this result. However, this odds ratio was equivalent to an effect size of 1.05, indicating a very large effect (Cohen, 1988), and even with the small sample size, this finding was statistically significant.

To help clarify this relationship, we conducted post-hoc analyses to determine if total number of sexual partners or involvement in prostitution explained the increased likelihood of reporting male sexual partners by men with histories of sexual abuse. First, the relationship between childhood sexual abuse and same-sex sexual partners among men remained significant when participants' total lifetime number of sexual partners was controlled (OR = 6.72, 95% CI = 1.38–32.76, $p \leq .05$). Second, controlling for prostitution did not reduce the relationship between child sexual abuse and same-sex sexual partnerships among men (OR = 7.07, 95% CI = 1.51–33.08, $p \leq .01$).

As shown in Table 3, the results of regression analyses with the scaled outcomes for same-sex sexual partners were consistent with results of logistic regression. The only significant relationship was between childhood sexual abuse and lifetime same-sex sexual partners among men ($\beta = .19$, 95% CI = .09–.63, $p \leq .01$).

Discussion

The first notable finding from this study was that the rates of same-sex relationships reported by our sample were fairly

Table 3 Relationships between abuse and neglect in childhood and same-sex romantic cohabitation or sexual partners

	Con.		Any abuse or neglect		Physical abuse		Neglect		Sexual abuse	
	%	%	OR (95% CI)	β	%	OR (95% CI)	β	%	OR (95% CI)	β
Romantic cohabitation	1.8	3.0	1.74 (0.70–4.32)	–	2.6	1.48 (0.30–7.25)	–	3.0	1.73 (0.35–8.52)	–
Sexual partners (ever)	5.2	7.8	1.53 (0.85–2.75)	.06	6.4	1.25 (0.45–3.48)	.04	6.8	2.81 (1.16–6.80)*	.11*
Sexual partners (PY)	1.4	3.3	2.34 (0.84–6.51)	.05	2.6	1.80 (0.34–9.45)	.02	3.5	1.18 (0.14–10.28)	.00
<i>Women</i>										
Romantic cohabitation	2.1	1.8	0.92 (0.25–3.48)	–	2.6	1.28 (0.14–11.75)	–	2.0	0.24 (0.84–3.89)	–
Sexual partners (ever)	5.1	8.1	1.63 (0.72–3.67)	.08	7.9	1.59 (0.41–6.18)	.07	7.3	2.11 (0.67–6.61)	.09
Sexual partners (PY)	1.7	2.4	1.44 (0.35–5.82)	.03	2.6	1.56 (0.16–15.40)	.03	2.6	1.54 (0.36–6.55)	.04
<i>Men</i>										
Romantic cohabitation	1.5	4.3	3.00 (0.8–11.06)	–	2.6	1.75 (0.18–17.23)	–	4.0	2.78 (0.73–10.63)	–
Sexual partners (ever)	5.3	7.3	1.42 (0.61–3.33)	.04	5.0	0.95 (0.20–4.56)	.01	6.3	6.75 (1.53–29.86)**	.19**
Sexual partners (PY)	1.2	4.4	3.86 (0.82–18.11)	.07	2.5	2.17 (0.19–24.50)	.02	4.6	8.45 (0.71–101.28)	.10

Note: Con. control group; OR odds ratio; CI confidence interval; PY past year; NT not tested because one group had 0 cases. "Any abuse or neglect" refers to childhood physical abuse, sexual abuse, and/or neglect. ORs are from logistic regression with binomial dependent variables, and β s are from linear regression with scaled dependent variables for sexual partners (0, 1, 2 or more)

* $p \leq .05$; ** $p \leq .01$

similar to rates of same-sex cohabitation and sexual partners reported in nationally representative studies (Laumann, Gagnon, Michael, & Michaels, 1994; Mosher, Anjani, & Jones, 2005; Smith, 1991; Tjaden et al., 1999). These results are noteworthy because the sample studied here (both abused and neglected individuals and matched controls) was not representative of the kinds of samples studied in nationally representative surveys. Rather, the participants in this study tended to have lower levels of education and occupational statuses. In this sample, reports of same-sex partnerships were not associated with demographic factors, including age, sex, race/ethnicity, education, or occupational status. These findings, therefore, support the generalizability of rates of same-sex relationships described in the broader literature, specifically that rates of same-sex relationships among individuals from lower socioeconomic backgrounds appear to be similar to those in the general population.

Findings from this investigation provide tentative support for a relationship between childhood sexual abuse and same-sex sexual relationships, but this relationship appeared only for men. That is, men with histories of childhood sexual abuse were more likely than men in a control group to report same-sex sexual partnerships. While this finding applied to a small group of men, the magnitude of the effect was quite large. This finding was consistent with results from cross-sectional studies utilizing retrospective reports of childhood sexual abuse (see Table 1), but our findings were not affected by a number of potential problems associated with such designs. However, the data available in this study did not provide information about when same-sex sexual attractions first emerged and whether this predated or followed the sexual abuse. We also do not know what characteristics associated with the abuse (e.g., frequency, intensity, duration) might account for the relationship with adult sexual partnerships. It is also important to note that very few participants reported exclusively same-sex sexual relationships. Thus, it is possible that childhood sexual abuse increased the likelihood that men would experiment with both same- and opposite-sex partners. That childhood sexual abuse was not associated with having same-sex partners during the past year lends some support to this hypothesis. Further research is needed to tease apart these factors. Nonetheless, this evidence of a link between court-substantiated cases of childhood sexual abuse and same-sex partnerships reported by adult men 30 years later is a notable finding that adds to the literature on this topic.

In this prospective study, we found no significant relationships between childhood physical abuse or neglect and same-sex sexual orientation in adulthood. We also found no connections between childhood physical abuse, sexual abuse, or neglect and romantic cohabitation with a same-sex partner. These results were consistent for men and women and support the conclusions of Bell et al. (1981) that early

parenting experiences, positive or negative, play little direct role in the development of sexual orientation. Among women, we also found no associations between childhood sexual abuse and same-sex relationships. Our findings contrast with the results of much of the previous research, which has generally found relationships between childhood abuse and sexual orientation (see Table 1). An important distinction between our study and other research is that previous findings are all from cross-sectional studies that assessed childhood abuse through retrospective reports, whereas the current study followed children with documented cases of maltreatment into adulthood. Thus, adults or adolescents with same-sex sexual orientations may be more likely than others to report childhood abuse, but our findings suggest that victims of child abuse and neglect are no more likely than their peers to have same-sex relationships when they grow up. Also of note, the only other study that has included childhood neglect found no significant associations between sexual orientation and reports of neglect (or physical, sexual, or emotional abuse) in childhood (Meston et al., 1999). However, that study was conducted with college students, and our findings likely relate to more severe cases of abuse and neglect.

In addition, most previous studies of the relationships we examined here have asked individuals to self-label their sexual orientation (see Table 1). However, many individuals who have same-sex romantic or sexual relationships do not define themselves as gay, lesbian, or bisexual, and therefore defining sexual orientation based on an identity label excludes those who engage in same-sex behavior but do not identify as gay, lesbian, or bisexual (Savin-Williams, 2006). On the other hand, the strategy we used, based on reports of sexual relationships and cohabitation with same-sex partners, may have omitted individuals with same-sex attractions who have not cohabitated with or had sexual relations with same-sex partners. In the current research, we do not know how individuals would define their sexual orientation if they were asked, only whether or not they have had relationships with same-sex partners. Thus, our findings do not suggest that sexually abused boys are more likely to identify as gay when they grow up, only that they are more likely to have male sexual partners at some point in their lives. For women on the other hand, use of the term “sexual intercourse” to assess sexual partnerships may have obscured a relationship between sexual abuse and same-sex partnerships since women who have romantic relationships with other women may not necessarily consider these relationships to involve sexual intercourse. In other studies, rates of same-sex sexual relationships among women vary depending on whether a more strict (Laumann et al., 1994) or more liberal (Mosher et al., 2005) definition was used.

The reason for the connection between childhood sexual abuse and same-sex partnerships among men is not clear from

our findings. Post-hoc analyses ruled out the possibility that this relationship was explained by a greater number of total sexual partners or involvement in prostitution among men with histories of sexual abuse. A third possibility is that boys who have sexual relationships with men later in life may be more likely to be targets of sexual victimization as children. For example, gay men tend, on average, to be more gender non-conforming as boys (Bailey & Zucker, 1995). This tendency could increase their appeal or conspicuousness to sexual predators, which might make them more likely to be victims of abuse (B. Mustanski, personal communication, February 11, 2008). Similarly, it is possible that boys who are developing and exploring a same-sex sexual orientation are more likely to enter situations where they are at risk for being sexually abused (Holmes & Slap, 1998). Finally, of course, it is possible that men's reports of male sexual partners reflect incidences of sexual abuse (perhaps even the sexual abuse that was documented in our court cases), since perpetrators of sexual abuse are most often men (Holmes & Slap, 1998). The data used in this study do not indicate the age of the reported experiences of same-sex partners, and we do not know whether these experiences were perceived as voluntary or coerced. It is important to note, however, that in this study sexual abuse occurred before the age of 12 and therefore did not reflect "age-discrepant sexual relations" between adolescent boys and adult men that have been assessed in some other studies (Rind, 2001). Our findings, though, suggest the need for further research to disentangle potential explanatory mechanisms.

Nonetheless, the connection between childhood sexual abuse and male sexual partnerships in adult men may have important clinical implications. A history of childhood sexual abuse among individuals with same-sex sexual orientations may further complicate the process of coming to terms with a sexual orientation that can be marginalizing and even evoke verbal and physical attack. Men who believe that their sexual orientation is related to childhood sexual abuse may be at particular risk for difficulties with sexual orientation and intimate relationships, as well as more generalized problems such as low self-esteem (Dorais, 2004). This may not be the case for men who do not perceive a connection between the childhood abuse and their sexual orientation. In addition, childhood sexual abuse has been linked to riskier sexual behavior among men who have sex with men (Paul et al., 2001). On the other hand, it must be emphasized that while our findings indicated an increased likelihood of same-sex sexual relationships among male victims of childhood sexual abuse, the vast majority of sexual abuse victims did not report same-sex sexual relationships. Our findings do not imply that sexual abuse "causes" boys to grow up with a homosexual preference.

This study had several strengths: (1) its prospective longitudinal design; (2) follow-up of individuals into middle

adulthood; (3) use of documented cases of childhood maltreatment, which minimized potential problems with reliance on retrospective self-reports; (4) a large, heterogeneous sample that included both men and women and Whites and non-Whites; and (5) unambiguous definitions of childhood sexual and physical abuse and neglect.

Despite its strengths, several important limitations of this study should be noted. First, although use of official records of abuse and neglect minimized potential problems with reliance on retrospective self-reports, this strategy means that cases of childhood abuse and neglect that did not come to the attention of authorities were not included. These cases likely reflect particularly severe cases of abuse and neglect, and therefore our findings may not generalize to all cases. Second, socioeconomic status of our sample was skewed toward the lower end of the socioeconomic spectrum, and therefore results cannot be generalized to cases of child abuse and neglect in middle class samples. Third, our assessment of sexual orientation had the advantage of not requiring participants to self-label their sexual orientation; however, this is also a limitation in that we do not know which individuals would actually identify a same-sex sexual orientation or who have same-sex attractions but have never had same-sex relationships. Fourth, the sample included only a small number of men with documented histories of sexual abuse. Fifth, this study used the term "sexual intercourse," and, therefore, may have resulted in underreporting of same-sex sexual relationships, which would not necessarily have involved intercourse. In particular, the association between childhood sexual abuse and same-sex sexual relationships among women might have been masked if some women did not consider their sexual relationships with other women to involve "sexual intercourse." Men may also vary in how they define sex or what they consider intercourse. Sixth, we do not know from existing data when same-sex sexual attraction emerged. Finally, it should be noted once more that with the available data, we cannot rule out the possibility that men's reports of male sexual partners reflected incidences of sexual abuse, thereby explaining the association between sexual abuse and same-sex sexual partnerships.

Findings from this prospective study revealed that men with documented histories of childhood sexual abuse were more likely to report having had same-sex sexual partners in their lifetimes. We did not find evidence for this relationship in women or for non-sexual forms of childhood maltreatment—physical abuse and neglect. While this prospective evidence linking childhood sexual abuse to same-sex sexual partnerships in men suggests an increased likelihood, these findings do not suggest that same-sex sexual orientation is caused by child abuse. Further research utilizing prospective designs is needed to replicate this finding and to determine mechanisms explaining this relationship.

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