



Disparities in Child Abuse Victimization in Lesbian, Bisexual, and Heterosexual Women in the Nurses' Health Study II

Citation

Austin, S. Bryn, Hee-Jin Jun, Benita Jackson, Donna Spiegelman, Janet Rich-Edwards, Heather L. Corliss, and Rosalind J. Wright. 2008. "Disparities in Child Abuse Victimization in Lesbian, Bisexual, and Heterosexual Women in the Nurses' Health Study II." *Journal of Women's Health* 17 (4): 597–606. <https://doi.org/10.1089/jwh.2007.0450>.

Permanent link

<http://nrs.harvard.edu/urn-3:HUL.InstRepos:41384682>

Terms of Use

This article was downloaded from Harvard University's DASH repository, and is made available under the terms and conditions applicable to Other Posted Material, as set forth at <http://nrs.harvard.edu/urn-3:HUL.InstRepos:dash.current.terms-of-use#LAA>

Share Your Story

The Harvard community has made this article openly available.
Please share how this access benefits you. [Submit a story](#).

[Accessibility](#)



Published in final edited form as:

J Womens Health (Larchmt). 2008 May ; 17(4): 597–606. doi:10.1089/jwh.2007.0450.

Disparities in Child Abuse Victimization in Lesbian, Bisexual, and Heterosexual Women in the Nurses' Health Study II

S. Bryn Austin, ScD^{1,2,3}, Hee-Jin Jun, ScD^{2,3}, Benita Jackson, PhD, MPH⁴, Donna Spiegelman, ScD^{5,6}, Janet Rich-Edwards, ScD, MPH^{3,5,7}, Heather L. Corliss, PhD, MPH¹, and Rosalind J. Wright, MD, MPH^{2,3}

¹Division of Adolescent and Young Adult Medicine, Children's Hospital, Boston

²Department of Society, Human Development, and Health and Social Behavior, Harvard School of Public Health, Boston

³Channing Laboratory, Department of Medicine, Brigham and Women's Hospital, and Harvard Medical School, Boston

⁴Department of Psychology, Smith College, Northampton, MA

⁵Department of Epidemiology, Harvard School of Public Health, Boston

⁶Department of Biostatistics, Harvard School of Public Health, Boston

⁷Division of Women's Health, Brigham and Women's Hospital, Boston

Abstract

A growing body of research documents multiple health disparities by sexual orientation among women, yet little is known about the possible causes of these disparities. One underlying factor may be heightened risk for abuse victimization in childhood in lesbian and bisexual women. Using survey data from 63,028 women participating in the Nurses' Health Study II, we investigated sexual orientation group differences in emotional, physical, and sexual abuse in childhood and adolescence. Multivariable log-binomial and linear regression models were used to examine orientation group differences in prevalence and severity of abuse, with heterosexual as the referent and controlling for sociodemographics. Results showed strong evidence of elevated frequency, severity, and persistence of abuse experienced by lesbian and bisexual women. Comparing physical abuse victimization occurring in both childhood and adolescence, lesbian (30%; prevalence ratio [PR] 1.61; 95% confidence interval [CI] 1.40, 1.84) and bisexual (24%; PR 1.26; 95% CI 1.00, 1.60) women were more likely to report victimization than were heterosexual women (19%). Similarly, comparing sexual abuse victimization occurring in both age periods, lesbian (19%; PR 2.16; 95% CI 1.80, 2.60) and bisexual (20%; PR 2.29; 95% CI 1.76, 2.98) women were more likely to report victimization than were heterosexual women (9%). This study documents prevalent and persistent abuse disproportionately experienced by lesbian and bisexual women.

Keywords

bisexual; child abuse; lesbian; sexual orientation; victimization

INTRODUCTION

A growing body of research documents multiple health disparities adversely affecting lesbian and bisexual women. Compared to heterosexual women, lesbians have been found to have higher body mass index (BMI)¹⁻⁶ and greater alcohol use,^{3-5, 7-10} smoking,^{1, 3-5, 8, 11, 12} and depressive symptoms.^{3, 4, 13, 14} Little is known about the causes of observed disparities in health risks, but one underlying factor may be heightened risk for violence victimization in childhood experienced by lesbian and bisexual women. Violence victimization in childhood and adolescence is linked to deleterious health outcomes in adulthood, including obesity and eating disorders,¹⁵⁻¹⁷ substance abuse,^{18, 19} and mental health problems and psychopathology.¹⁹⁻²¹ Several studies with adult²²⁻²⁵ and adolescent²⁶ samples have suggested that lesbian and bisexual females may be more likely than their heterosexual counterparts to report histories of childhood physical and sexual abuse.

The processes that are hypothesized to contribute to elevated rates of violence victimization of sexual minorities may be direct or indirect. First, through a direct process of targeted violence, youth whose sexual minority orientation is known to others may be targeted for abuse by parents, other adults, or older children because of antigay bias as a means to reinforce the lower social status held by sexual minorities.^{27, 28} In a study of sexual minority youth who had disclosed their orientation to family members, youth reported targeted victimization because of their sexual orientation: 28% reported verbal abuse and 5% reported physical attack by a mother, while 19% reported verbal abuse and 5% reported physical attack by a father; abuse perpetrated by brothers and sisters was also reported.^{27, 28} In addition, Balsam et al. found lesbian, gay, and bisexual (LGB) siblings were more likely than heterosexual siblings in the same family to report being targeted for abuse.²⁵

Second, through a less direct process, sexual orientation minority youth may experience social isolation or internal conflict related to their lower social status, and as a result, may be more likely to engage in risk behaviors such as alcohol and other drug use that may then put them at risk for abuse by parents, other adults, or older children.^{29, 30}

It is important to note that both the first and second hypothesized processes leading to violence victimization presuppose some degree of awareness of sexual minority orientation by self or others and, therefore, may be expected to occur more often in adolescence rather than childhood. Attractions to the same or other sex may emerge by age 10 or 11, and opportunities for sexual encounters with the same sex and development of sexual identity are more likely to emerge in mid to late adolescence.^{31, 32} As a result, the first and second hypothesized processes may be more predictive of new onset of abuse in adolescence or revictimization in adolescence rather than to abuse experienced earlier in childhood.

A third hypothesized process of violence victimization relates to gender expression rather than sexual orientation per se and so may also be considered indirect. Sexual orientation minority women are more likely than heterosexual women to report gender nonconformist behavior in childhood,³³ and some evidence suggests that gender nonconformist children may be more likely to be targeted for abuse.^{34, 35}

Recent work examining sexual orientation group disparities in childhood violence victimization in females has been based on large, population-based samples of adolescents,²⁶ however, most previous studies raise two methodological concerns. These concerns relate to: 1) samples recruited through lesbian, gay, and bisexual (LGB) organizations or venues,^{23, 25} yielding data that may be subject to enrollment bias related to sexual orientation; and 2) small lesbian/bisexual samples from larger population-based surveys,^{22, 24} which may provide imprecise estimates due to small sample sizes and preclude separate analyses of data from lesbian and bisexual women because of insufficient statistical

power. Studies that include larger samples of lesbian and bisexual women may yield more precise estimates for each sexual orientation minority subgroup, whose experience of violence victimization may differ. Little is known as to whether there may be orientation group differences in the periods in which victimization occurs; therefore, research is needed to examine developmental patterns in abuse occurrence, which may provide important information regarding the underlying processes contributing to abuse disparities.

We hypothesized that among those with a sexual minority orientation, we would observe higher rates of having been targets of violence in childhood and adolescence. We tested this hypothesis using data from the Nurses' Health Study II (NHSII), a large, prospective cohort study of U.S. women, examining sexual orientation group differences in retrospective reports of exposure to emotional, physical, and sexual abuse and in the developmental period in which abuse occurred (childhood, adolescence, or both) in lesbian, bisexual, and heterosexual women. Given that revictimization has been associated with negative outcomes,^{36–38} we also sought to examine differences in revictimization by sexual orientation.

MATERIALS AND METHODS

Participants

We carried out our analyses with data provided by women participating in the ongoing NHSII.³⁹ In 1989, baseline questionnaires were sent to approximately 520,000 registered nurses from 14 populous U.S. states, and 116,608 women ages 25 to 42 years were enrolled in the study. Returning a completed questionnaire in response to the invitation to participate was considered an indication of consent. The cohort has been followed with biennial questionnaires assessing risk indicators and disease incidence. In 2001, a supplemental violence victimization questionnaire was mailed to 91,297 women in the cohort, and 68,505 women returned questionnaires, with a 75% response rate.⁴⁰ The Brigham and Women's Hospital and Harvard School of Public Health institutional review boards approved this study.

Measures

Abuse Victimization in Childhood and Adolescence—The 2001 NHSII supplemental questionnaire included validated self-report measures assessing abuse experienced in childhood (up to age 11 years) and adolescence (11–17 years). Abuse experiences in childhood and adolescence were assessed in three ways:

1. **Emotional Abuse:** Two items from the five-item Emotional Abuse Subscale of the Modified Childhood Trauma Questionnaire (CTQ)⁴¹ were included on the self-report questionnaire to assess abuse perpetrated by a family member. The items were preceded by the question: "When you were a child (up to age 11 years), did any of the following things happen to you?" The two items read: "Someone in my family yelled and screamed at me" and "People in my family said hurtful or insulting things to me," with the response options: "Never True," "Rarely True," "Sometimes True," "Often True," and "Very Often True." The total score was the sum of the two items and ranged from 0 to 8, where a higher score is interpreted as an indicator of more frequent abuse.⁴¹ The two-item subscale showed acceptable internal consistency in the NHSII cohort (Cronbach's alpha=0.83). Psychometric studies of the Emotional Abuse Subscale of the CTQ have found good internal consistency (alphas from 0.84 to 0.95), and the CTQ has been found to have good test-retest reliability (alphas from 0.79 to 0.81).^{41, 42}

2. **Parent/Guardian Physical Abuse:** Physical abuse was assessed with four items adapted from the seven-item Severe Assault domain of the Physical Assault Subscale of the Revised Conflict Tactics Scale (CTS2).⁴³ On the NHSII questionnaire, the items were preceded by the clause: “When you were a child (up to age 11 years), did your parent, step-parent or adult guardian ever:,” which was followed by the four items, reading: “Kick, bite, or punch you,” “Hit you with something that hurt your body,” “Choke or burn you,” and “Physically attack you in some other way.” Response options were: “Never,” “Once,” “A few times,” “More than a few times.” These same items were repeated with the alternate beginning: “When you were a teenager (ages 11–17 years). . . .” Responses were scored as follows: Never: 0; Once: 1; A few times: 3; and More than a few times: 5. Consistent with recommendations from the CTS2 authors,⁴³ the total score on our modified subscale was the sum of the four items and ranged from 0 to 20, where a higher score was interpreted as an indicator of more chronic abuse. Also consistent with recommendations,⁴³ we calculated physical abuse prevalence estimates for the full cohort (abuse defined as score>0) and chronicity estimates (continuous score) for the subset of NHSII participants who reported having been abused. Our modified subscale showed acceptable internal consistency in the NHSII cohort ($\alpha=0.65$ in childhood and 0.68 in adolescence). The CTS2 Physical Assault Subscale has good internal consistency ($\alpha=0.86$).⁴³
3. **Adult/Older Child Sexual Abuse:** Sexual abuse was assessed with four items adapted from a national survey conducted by the Gallup Organization^{44, 45} assessing prevalence of abuse. An item on unwanted touching asked, “When you were a child (up to age 11 years), were you ever touched in a sexual way by an adult or an older child or were you forced to touch an adult or an older child in a sexual way when you did not want to?” An item on forced sexual activity asked respondents, “When you were a child (up to age 11 years), did an adult or older child ever force you or attempt to force you into any sexual activity by threatening you, holding you down or hurting you in some way when you did not want to?” Both of these items were repeated with the alternate beginning “When you were a teenager (ages 11–17 years). . . .” Participants were classified as having experienced any sexual abuse in childhood if they reported unwanted touching and/or forced sexual activity up to age 11 years. They were similarly classified as having experienced any sexual abuse in adolescence if they reported either type of abuse occurring from age 11 to 17 years.

Sexual Orientation Identity—In 1995, an item on sexual orientation identity was added to the questionnaire.³ The item read: “Whether or not you are currently sexually active, what is your sexual orientation or identity? (Please choose one answer),” with responses options: “1) Heterosexual 2) Lesbian, gay or homosexual 3) Bisexual 4) None of these 5) Prefer not to answer.”

Covariates—Covariates included age, race/ethnicity, and region of residence at birth.

Statistical Analysis

For primary analyses, we evaluated sexual orientation group differences for each abuse-related dependent variable, comparing lesbian and bisexual women to heterosexual women as the reference group using the SAS statistical package.⁴⁶ Prior research^{3, 40} and preliminary analyses indicated that self-reported abuse history and sexual orientation differed by age, race/ethnicity, and region of residence at birth; therefore, to control for potential confounding, all multivariable models adjusted for these sociodemographic covariates. To estimate sexual orientation group differences in mean scores on the modified

Emotional Abuse Subscale of the CTQ, we examined multivariable linear regression models in the full cohort. To estimate sexual orientation group differences in the prevalence of physical abuse and sexual abuse, we used multivariable log binomial regression modeling to generate prevalence ratios (PR) and 95 percent confidence intervals in the full cohort. Prevalence ratios are preferred rather than odds ratios in these analyses because reports of abuse are common and therefore violate the rare-outcome assumption of logistic regression in which odds ratios are used to approximate risk ratios.⁴⁷ To estimate differences in chronicity of physical abuse in the subset who scored greater than 0 on the modified Physical Assault Subscale of the CTS2, we compared mean scores using multivariable linear regression models.

In additional analyses, we explored temporal patterns in reports of physical and sexual abuse to examine orientation group differences in the developmental period in which abuse was reported to have occurred. For these analyses, physical abuse was modeled using the binary form of the variable in which a score of greater than 0 on the modified Physical Assault Subscale of the CTS2 was considered an indication of abuse, as described above. Similarly, for these analyses, sexual abuse was modeled using a binary variable in which a report of any unwanted sexual touching and/or forced sexual activity were considered an indication of having experienced sexual abuse, as described above. Age periods of abuse occurrence were categorized into four mutually exclusive groups: abuse never experienced, abuse experienced in childhood only, in adolescence only, and in both childhood and adolescence. Log binomial modeling was used to evaluate orientation group differences in temporal patterns in physical and sexual abuse in multivariable models controlling for sociodemographic covariates.

Finally, we carried out subanalyses restricted to the subset of women who reported victimization in childhood before age 11 years to estimate the risk of revictimization in adolescence (ages 11 to 17 years). Binary dependent variables representing history of physical abuse and of sexual abuse, as described above, were used for these subanalyses. We used log binomial models to examine sexual orientation group differences in the risk of revictimization for physical and sexual abuse in adolescence, controlling for sociodemographics. All *p* values are two-sided.

RESULTS

Over 63,000 women provided information about their sexual orientation: 98.9% were heterosexual (*n* = 62,311), 0.4 percent (*n* = 223) bisexual, and 0.8 percent (*n* = 494) lesbian. Participants ranged in age from 36 to 56 years at the time of data collection, and 93.3 percent were of white race/ethnicity (Table 1). As shown in Table 2, lesbian and bisexual women, compared to heterosexual women, reported more frequent occurrence of abuse, and in the subset who experienced physical victimization, lesbian and bisexual women reported greater chronicity of the abuse in both childhood and adolescence.

Table 3 shows temporal patterns in physical and sexual abuse occurrence. Compared to heterosexual women, bisexual women were more likely to report that their first experience of physical abuse victimization occurred in adolescence and more likely to report sexual abuse occurring in both age periods. Lesbian women were more likely than heterosexual women to report physical abuse and sexual abuse that occurred in both childhood and adolescence but not more likely to report first onset of either physical or sexual abuse in adolescence. Combining reports from childhood and adolescence, 56.9 percent of heterosexual, 73.3 percent of bisexual, and 69.2 percent of lesbian women reported one or both types of abuse at some point up to age 17 years. (Data not shown.)

Sexual orientation group differences in revictimization in adolescence were examined in subanalyses restricted to women who had experienced abuse in childhood before age 11 (Table 4). Among women who had experienced any physical abuse in childhood, lesbian women were more likely than heterosexual women to report physical abuse again in adolescence. Among women who had experienced any childhood sexual abuse, both bisexual and lesbian women were more likely than heterosexual women to report sexual abuse occurring again in adolescence.

DISCUSSION

Results of this large cohort study of over 63,000 women show clear evidence of elevated frequency, severity, and persistence of abuse victimization reported by women of minority sexual orientation. High rates of victimization were observed across all sexual orientation groups in the cohort: Almost 57 percent of heterosexual women reported some type of abuse in childhood or adolescence, and roughly 70 percent of lesbian and bisexual women reported these adverse experiences.

Other recent studies with adult^{22–25} and adolescent²⁶ female samples similarly report that childhood abuse disproportionately burden lesbian and bisexual females. Our findings extend the extant research in several ways. One, our study reports abuse patterns in a large cohort study, with comparatively large numbers of lesbian and bisexual women, in which participants were not selected on the basis of sexual orientation. Two, our study included multiple measures of abuse, and sufficient detail was collected to allow us to characterize prevalence, severity, and revictimization rates. And three, respondents were asked to indicate the developmental period in which the abuse occurred: childhood, adolescence, or both periods. This additional level of temporal information will be informative in ongoing efforts to understand underlying processes that may drive observed disparities in victimization.

In addition to hypotheses regarding targeted victimization of sexual minorities, there may be several alternative hypotheses to explain abuse disparities that relate to possible differential reporting patterns. One, Saewyc and colleagues²⁶ have suggested that, among women with same-sex attractions, those who have been abused in childhood, compared to those who have not been abused, may be more willing to identify themselves as lesbian or bisexual — a socially stigmatized identity — because they may perceive themselves as social outsiders already by virtue of being victims of abuse.²⁶ Two, Corliss and colleagues²⁴ have suggested that lesbian/bisexual women may be more willing to report socially stigmatizing experiences, such as abuse in childhood, because reporting a sexual minority orientation in itself requires revealing stigmatizing information about oneself. Three, some research suggests that women who strongly identify with feminine gender role norms, particularly as they relate to sexual relationships with men, are more likely than other women to blame themselves⁴⁸ and less likely to perceive male perpetrators as primarily responsible⁴⁹ for sexual assaults. Given the evidence that sexual orientation minority women identify less strongly with feminine gender norms than do heterosexual women,³³ it is possible that among women who are victimized, sexual orientation minority women may be more likely than heterosexuals to perceive the perpetrator as responsible and to characterize the incident as abuse. Each of these alternative hypotheses warrants further study.

Our study has several limitations. All participants were registered nurses at the time they were enrolled in the cohort, which resulted in our sample having more homogeneity in socioeconomic position than found in the general population. Women of color make up a small part of the NHSII cohort, which limited our ability to explore racial/ethnic patterns within orientation groups. We did not have information related to timing of recognition or

disclosure of sexual orientation nor on gender nonconformist expression in childhood. As a result, we could not investigate whether or to what degree these hypothesized factors may contribute to orientation disparities in abuse victimization. Our study relied on retrospective recall in adulthood of experiences of abuse in childhood and adolescence. Retrospective recall may lead to underestimates of abuse rates.⁵⁰ The NHSII questionnaire queried participants about one important dimension of sexual orientation, sexual identity, but not other dimensions, such as attraction and sex of sexual partners,⁵¹ which may have different associations with abuse victimization.

CONCLUSIONS

Our findings have clear relevance to research efforts to understand sexual orientation group disparities in health. In addition, they add to the accumulating knowledge characterizing patterns in type and timing of abuse and vulnerability to revictimization from one developmental period to the next, which can provide insights into underlying processes that place children at risk for abuse. New research is needed to examine the direct and indirect processes leading to disparities in emotional, physical, and sexual abuse victimization and the implications of these disparities for the health of women of minority sexual orientation. Our findings combined with other similar studies point to the need for greater allocation of resources by policymakers and funders and by society in general to understand and eliminate sexual orientation group disparities in abuse victimization. In doing so, the associated psychological, physical, economic, and societal costs of child abuse may be reduced.

Our study findings are also important for health care providers and patients. Given the elevated rates of abuse victimization among women with minority sexual orientation, health care providers should be aware that for a substantial portion of these patients, their symptoms of distress may originate from or be exacerbated by a history of abuse. Health care providers should bear in mind, however, that, depending on the measure of abuse, a large portion of women with minority sexual orientation report experiencing no abuse. For health care providers serving sexual orientation minority women patients, inquiring about whether they may have an abuse history may help to tailor a more effective treatment plan.

Acknowledgments

The authors would like to thank Katherine Croom, BS, Ellen Hertzmark, MA, Eileen N. Hibert, MA, Renee M. Johnson, PhD, Susan Malspeis, SM, Lisa A. Prokop, BA, and Christina Souza for their contributions to this paper and the tens of thousands of women across the country participating in the NHSII. The work reported in this manuscript was supported by the Harvard Medical School Center of Excellence in Women's Health, NIH grants HL64108 and CA50385, the main NHSII grant. NHSII is supported for other specific projects by the following NIH grants: CA67262, AG/CA14742, CA67883, CA65725, DK52866, HL64108, HL03804, DK59583, and HD40882. In addition, the Channing Laboratory has received modest additional resources at various times and for varying periods since January, 1, 1993, from the Alcoholic Beverage Medical Research Foundation, American Cancer Society, Amgen, California Prune Board, Centers for Disease Control and Prevention, Ellison Medical Foundation, Florida Citrus Growers, Glaucoma Medical Research Foundation, Hoffmann-LaRoche, Kellogg's, Lederle, Massachusetts Department of Public Health, Mission Pharmacal, National Dairy Council, Rhone Poulenc Rorer, Robert Wood Johnson Foundation, Roche, Sandoz, U.S. Department of Defense, U.S. Department of Agriculture, Wallace Genetics Fund, Wyeth-Ayerst, and private contributions. S.B.A. and H.L.C. are supported by the Leadership Education in Adolescent Health project, Maternal and Child Health Bureau, HRSA grant T71 MC00009-16.

REFERENCES

1. Aaron DJ, Markovic N, Danielson ME, Honnold JA, Janosky JE, Schmidt NJ. Behavioral risk factors for disease and preventive health practices among lesbians. *Am J Public Health.* 2001; 91(6): 972–975. [PubMed: 11392943]

2. Boehmer U, Bowen DJ, Bauer GR. Overweight and obesity in sexual-minority women: evidence from population-based data. *Am J Public Health.* 2007; 97(6):1134–1140. [PubMed: 17463369]
3. Case P, Austin SB, Hunter DJ, et al. Sexual orientation, health risk factors, and physical functioning in the Nurses' Health Study II. *Journal of Women's Health.* 2004; 13:1033–1047.
4. Cochran SD, Mays VM, Bowen D, et al. Cancer-related risk indicators and preventive screening behaviors among lesbians and bisexual women. *Am J Public Health.* 2001; 91(4):591–597. [PubMed: 11291371]
5. Valanis BG, Bowen DJ, Bassford T, Whitlock E, Charney P, Carter RA. Sexual orientation and health: comparisons in the Women's Health Initiative sample. *Archives of Family Medicine.* 2000; 9(9):843–853. [PubMed: 11031391]
6. Yancey AK, Cochran SD, Corliss HL, Mays VM. Correlates of overweight and obesity among lesbian and bisexual women. *Prev Med.* 2003; 36:676–683. [PubMed: 12744910]
7. Aaron DJ, Markovic N, Danielson ME, Honnold JA, Janosky JE, Schmidt NJ. Behavioral risk factors for disease and preventive health practices among lesbians. *Am J Public Health.* 2001; 91(6): 972–975. [PubMed: 11392943]
8. Gruskin E, Hart S, Gordon N, Ackerson L. Patterns of cigarette smoking and alcohol use among lesbians and bisexual women enrolled in a large health maintenance organization. *Am J Public Health.* 2001; 91(6):976–979. [PubMed: 11392944]
9. Roberts SA, Dibble SL, Scanlon JL, Paul SM, Davids H. Differences in risk factors for breast cancer: lesbian and heterosexual women. *J Gay and Lesbian Medical Association.* 1998; 2(3):93–101.
10. Drabble L, Trocki K. Alcohol consumption, alcohol-related problems, and other substance use among lesbian and bisexual women. *J Lesbian Stud.* 2005; 9(3):19–30. [PubMed: 17548282]
11. Gruskin EP, Gordon N. Gay/lesbian sexual orientation increases risk for cigarette smoking and heavy drinking among members of a large Northern California health plan. *BMC Public Health.* 2006; 3(6):241. [PubMed: 17018152]
12. Gruskin EP, Greenwood GL, Matevia M, Pollack LM, Bye LL. Disparities in smoking between the lesbian, gay, and bisexual population and the general population in California. *Am J Public Health.* 2007; 97(8):1496–1502. [PubMed: 17600265]
13. Gilman SE, Cochran SD, Mays VM, Hughes M, Ostrow D, Kessler RC. Risk of psychiatric disorders among individual reporting same-sex sexual partners in the National Comorbidity Survey. *Am J Public Health.* 2001; 91(6):933–939. [PubMed: 11392937]
14. Koh AS, Ross LK. Mental health issues: a comparison of lesbian, bisexual and heterosexual women. *J Homosex.* 2006; 51(1):33–57. [PubMed: 16893825]
15. Gustafson TB, Sarwer DB. Childhood sexual abuse and obesity. *Obesity Reviews.* 2004; 5:129–135. [PubMed: 15245381]
16. Johnson JG, Cohen P, Kasen S, Brook JS. Childhood adversities associated with risk for eating disorders or weight problems during adolescence or early adulthood. *Am J Psychiatry.* 2002; 159(3):394–400. [PubMed: 11870002]
17. Aaron DJ, Hughes TL. Association of childhood sexual abuse with obesity in a community sample of lesbians. *Obesity.* 2007; 15(4):1023–1028. [PubMed: 17426338]
18. 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 Experiences Study. *Pediatrics.* 2003; 111(3):564–572. [PubMed: 12612237]
19. Molnar BE, Buka SL, Kessler RC. Child sexual abuse and subsequent psychopathology: results from the National Comorbidity Survey. *Am J Public Health.* 2001; 91(5):753–760. [PubMed: 11344883]
20. Edwards VJ, Holdon GW, Felitti VJ, Anda RF. Relationship between multiple forms of childhood maltreatment and adult mental health in community respondents: results from the Adverse Childhood Experiences Study. *Am J Psychiatry.* 2003; 160(8):1453–1460. [PubMed: 12900308]
21. Chapman DP, Whitfield CL, Felitti VJ, Dube SR, Edwards VJ, Anda RF. Adverse childhood experiences and the risk of depressive disorders in adulthood. *J Affective Disorders.* 2004; 82:217–225.

22. Tjaden P, Thoennes N, Allison CJ. Comparing violence over the life span in samples of same-sex and opposite-sex cohabitants. *Violence and Victims*. 1999; 14(4):413–426. [PubMed: 10751048]
23. Matthews AK, Hughes TL, Johnson T, Razzano LA, Cassidy R. Prediction of depressive distress in a community sample of women: the role of sexual orientation. *Amer J Pub Health*. 2002; 92(7): 1131–1139. [PubMed: 12084697]
24. Corliss HL, Cochran SD, Mays VM. Reports of parental maltreatment during childhood in a United States population-based survey of homosexual, bisexual, and heterosexual adults. *Child Abuse and Neglect*. 2002; 26:1165–1178. [PubMed: 12398854]
25. Balsam KF, Rothblum ED, Beauchaine TP. Victimization over the life span: a comparison of lesbian, gay, bisexual, and heterosexual siblings. *J Consult and Clinical Psych*. 2005; 73(3):477–487.
26. Saewyc EM, Reis EA, Murphy A. Hazards of stigma: the sexual and physical abuse of gay, lesbian, and bisexual adolescents in the U.S. and Canada. *Child Welfare*. 2006; 85(2):195–213. [PubMed: 16846112]
27. D'Augelli AR, Hershberger SL, Pilkington NW. Lesbian, gay, and bisexual youth and their families: disclosure of sexual orientation and its consequences. *Amer J Orthopsychiatry*. 1998; 68:361–371. [PubMed: 9686289]
28. Pilkington NW, D'Augelli AR. Victimization of lesbian, gay, and bisexual youth in community settings. *J Community Psychology*. 1995; 23:34–56.
29. Garofalo R, Wolf RC, Kessel S, Palfrey SJ, DuRant RH. The association between health risk behaviors and sexual orientation among a school-based sample of adolescents. *Pediatrics*. 1998; 101(5):895–902. [PubMed: 9565422]
30. Russell ST, Driscoll AK, Truong N. Adolescent same-sex romantic attractions and relationships: implications for substance use and abuse. *Am J Public Health*. 2002; 92(2):198–202. [PubMed: 11818291]
31. Anhalt K, Morris TL. Developmental and adjustment issues of gay, lesbian, and bisexual adolescents: a review of the empirical literature. *Clin Child Fam Psychol Rev*. 1998; 1(4):215–230. [PubMed: 11324092]
32. Rosario M, Meyer-Bahlburg HFL, Hunter J, Exner TM, Gwadz M, Keller AM. The psychosexual development of urban lesbian, gay, and bisexual youths. *J Sex Research*. 1996; 33(2):113–126.
33. Bailey JM, Zucker JJ. Childhood sex-typed behavior and sexual orientation: a conceptual analysis and quantitative review. *Dev Psychol*. 1995; 31:43–55.
34. D'Augelli AR, Grossman AH, Starks MT. Childhood gender atypicality, victimization, and PTSD among lesbian, gay, and bisexual youth. *J Interpers Violence*. 2006; 21(11):1462–1482. [PubMed: 17057162]
35. McConaghy N, Silove D. Do sex-linked behaviors in children influence relationships with their parents? *Arch Sexual Behavior*. 1992; 21:469–479.
36. Arias I. The legacy of child maltreatment: long-term health consequences for women. *Journal of Women's Health*. 2004; 13(5):468–473.
37. Messman TL, Long PJ. Child sexual abuse and its relationship to revictimization in adult women: a review. *Clinical Psychology*. 1996; 16(5):397–420.
38. Wyatt GE, Guthrie D, Notgrass CM. Differential effects of women's child sexual abuse and subsequent sexual revictimization. *Journal of Consulting and Clinical Psychology*. 1992; 60(2): 167–173. [PubMed: 1592945]
39. Brigham and Women's Hospital/Harvard Medical School. Nurses' Health Study. Brigham and Women's Hospital/Harvard Medical School. Available at: <http://www.channing.harvard.edu/nhs/>.
40. Jun H-J, Rich-Edwards J, Boynton-Jarret R, Wright RW. Women's experience with battering and cigarette smoking: added risk related to co-occurrence with other forms of intimate partner violence. *American Journal of Public Health*. In press.
41. Bernstein DP, Fink L, Handelsman L, Foote J. Initial reliability and validity of a new retrospective measure of child abuse and neglect. *American Journal of Psychiatry*. 1994; 151(8):1132–1136. [PubMed: 8037246]

42. Bernstein DP, Ahluvalia T, Pogge D, Handelsman L. Validity of the Childhood Trauma Questionnaire in an adolescent psychiatric population. *Journal of the American Academy of Child and Adolescent Psychiatry*. 1997; 36(3):340–348. [PubMed: 9055514]
43. Straus M, Hamby S, Boney-McCoy S, Sugarman D. The Revised Conflict Tactics Scales (CTS2). *J Family Issues*. 1996; 17(3):283–316.
44. Finkelhor D, Moore D, Hamby S, Straus M. Sexually abused children in a national survey of parents: methodological issues. *Child Abuse and Neglect*. 1997; 21(1):1–9. [PubMed: 9023018]
45. Moore, D.; Gallup, G.; Schussel, R. *Disciplining children in America: a Gallup poll report*. Princeton, NJ: The Gallup Organization; 1995.
46. SAS [computer program]. Version 8.2. Cary, NC: SAS Institute Inc.; 1999.
47. Spiegelman D, Hertzmark E. Easy SAS calculations for risk or prevalence ratios and differences. *Am J Epidemiol*. 2005; 162(3):199–200. [PubMed: 15987728]
48. Murnen SK, Perot A, Byrne D. Coping with unwated sexual activity: normative responses, situational determinants, and individual differences. *Journal of Sex Research*. 1989; 26(1):85–106.
49. Murnen SK, Byrne D. Hyperfemininity: measurement and initial validation of the construct. *Journal of Sex Research*. 1991; 28(3):479–489.
50. Hardt J, Rutter M. Validity of adult retrospective reports of adverse childhood experiences: review of the evidence. *Journal of Child Psychology and Psychiatry*. 2004; 45(2):260–273. [PubMed: 14982240]
51. Institute of Medicine. *Lesbian health: current assessment and directions for the future*. Washington DC: National Academy Press; 1999.

TABLE 1

Basic characteristics, by sexual orientation among NHSII participants (N = 63,028)*

Characteristic	Heterosexual (n = 62,311)		Bisexual (n = 223)		Lesbian (n = 494)	
	%	p	%	p	%	p
Age in 2001, years		0.17				<0.01
36 – 41	16		11		11	
42 – 46	31		30		30	
47 – 51	34		37		35	
52 – 56	19		21		23	
Race/Ethnicity		0.35				0.04
White (non-Latina)	95		93		97	
Other	5		7		3	
Residence at Birth		0.12				<0.001
Northeast	39		46		41	
Midwest	38		31		30	
South	13		13		15	
West	10		10		14	

* Heterosexual women served as the reference group for each comparison.

TABLE 2

Self-reported history of abuse in childhood and adolescence, by sexual orientation among NHSII participants (N = 63,028)

Type of Abuse	Heterosexual (n = 62,311)		Bisexual (n = 223)		Lesbian (n = 494)		
	%	PR (95% CI) [§]	%	PR (95% CI) [§]	%	PR (95% CI) [§]	
Emotional Abuse							
	Mean Score (SD)	Difference (SE) [*]	Difference (SE) [*]	Difference (SE) [*]	Difference (SE) [*]	Difference (SE) [*]	
Childhood	3.02 (2.24)	0.72 (0.15)	<0.0001	<0.0001	0.73 (0.10)	<0.0001	
Physical Abuse							
	%	PR (95% CI) [§]	%	PR (95% CI) [§]	%	PR (95% CI) [§]	
Prevalence in Childhood	38	1.10 (0.94, 1.28)	42	1.25 (1.14, 1.37)	47	1.48 (1.30, 1.68)	
Prevalence in Adolescence	22	1.42 (1.17, 1.72)	32	1.48 (1.30, 1.68)	33	1.48 (1.30, 1.68)	
	Mean (SD)	Difference (SE) [*]	Difference (SE) [*]	Difference (SE) [*]	Difference (SE) [*]	Difference (SE) [*]	
Chronicity Score [‡] in Childhood	4.15 (2.03)	0.81 (0.31)	0.009	1.23 (0.20)	<0.0001	<0.0001	
Chronicity Score [‡] in Adolescence	4.00 (3.41)	1.02 (0.41)	0.013	1.14 (0.27)	<0.0001	<0.0001	
Sexual Abuse							
Childhood							
	Any Sexual Abuse [‡]	21	35	1.69 (1.41, 2.01)	<0.0001	34	1.64 (1.45, 1.85)
	Forced Sexual Activity	6	16	2.66 (1.96, 3.61)	<0.0001	15	2.56 (2.08, 3.16)
Adolescence							
	Any Sexual Abuse [‡]	21	36	1.71 (1.44, 2.04)	<0.0001	33	1.56 (1.37, 1.76)
	Forced Sexual Activity	8	19	2.43 (1.86, 3.19)	<0.0001	15	1.95 (1.59, 2.41)

* Heterosexual women served as the reference group for each comparison; difference adjusted for age, race/ethnicity (White non-Hispanic, Other), and region of residence at birth.

[‡] Chronicity score on Physical Abuse Subscale of CTS calculated for subset of women with scores greater than 0.

[‡] Includes reports of any sexual abuse (unwanted sexual touching and/or forced sexual activity).

[§] Heterosexual women served as the reference group for each comparison. Prevalence ratios (PR) are adjusted for age, race/ethnicity (White non-Hispanic, Other), and region of residence at birth.

TABLE 3

Temporal patterns in self-reported history of physical and sexual abuse in childhood and adolescence by sexual orientation, adjusted for sociodemographics, among NHS II participants (N=63,028)

Type of Abuse	Heterosexual		Bisexual		Lesbian	
	%	PR (95% CI)*	%	PR (95% CI)*	%	PR (95% CI)*
Physical Abuse[†]						
Occurred in childhood only [‡]	19	0.94 (0.71, 1.24)	18	0.94 (0.71, 1.24)	17	0.91 (0.74, 1.10)
Occurred in adolescence only [§]	3	2.25 (1.42, 3.56)	8	2.25 (1.42, 3.56)	2	0.72 (0.41, 1.25)
Occurred in both childhood and adolescence	19	1.26 (1.00, 1.60)	24	1.26 (1.00, 1.60)	30	1.61 (1.40, 1.84)
Sexual Abuse[#]						
Occurred in childhood only [‡]	12	1.25 (0.92, 1.71)	15	1.25 (0.92, 1.71)	15	1.24 (1.01, 1.53)
Occurred in adolescence only [§]	13	1.29 (0.96, 1.74)	16	1.29 (0.96, 1.74)	14	1.15 (0.92, 1.43)
Occurred in both childhood and adolescence	9	2.29 (1.76, 2.98)	20	2.29 (1.76, 2.98)	19	2.16 (1.80, 2.60)

* Prevalence ratios (PR) are adjusted for age, race/ethnicity (White non-Hispanic, Other), and region of residence at birth.

[†] Defined as score greater than 0 on Severe Physical Abuse Subscale of Conflict Tactics Scale.

[‡] Childhood defined as younger than age 11 years.

[§] Adolescence defined as age 11 through 17 years.

[#] Includes reports of any sexual abuse (unwanted sexual touching and/or forced sexual activity).

Self-report of revictimization in adolescence among the subset of NHS II participants reporting abuse in childhood, by sexual orientation and adjusted for sociodemographics

TABLE 4

Type of Revictimization	Heterosexual (n = 23,374)		Bisexual (n=93)		Lesbian (n=234)	
	%	PR (95% CI)*	%	PR (95% CI)*	%	PR (95% CI)*
Physical Abuse [†] by Parent/Guardian Revictimization in Adolescence Among Subset of Women Physically Abused in Childhood	49	1.15 (0.96, 1.37)	57	1.15 (0.96, 1.37)	64	1.28 (1.16, 1.41)
Sexual Abuse [‡] by Adult or Older Child Revictimization in Adolescence Among Subset of Women Sexually Abused in Childhood	42	1.36 (1.12, 1.64)	56	1.36 (1.12, 1.64)	55	1.32 (1.15, 1.52)

* Prevalence ratios (PR) are adjusted for age, race/ethnicity (White non-Hispanic, Other), and region of residence at birth.

[†] Defined as score greater than 0 on Severe Physical Abuse Subscale of Conflict Tactics Scale.

[‡] Includes reports of any sexual abuse (unwanted sexual touching and/or forced sexual activity).