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

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ABSTRACT

Background: 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.

Methods: 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: 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%).

Conclusions: This study documents prevalent and persistent abuse disproportionately experienced by lesbian and bisexual women.

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,1,3-5,7-9 smoking,1,3-5,7,10,11 and depressive symptoms.3,4,12,13 Little is known about the causes of the 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,14-16 substance abuse,17,18 and mental health problems and psychopathology.18-20 Several studies with adult21-24 and adolescent25 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.26,27 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, and 19% reported verbal abuse and 5% reported physical attack by a father; abuse perpetrated by brothers and sisters was also reported.26,27 In addition, Balsam et al.24 found lesbian, gay, and bisexual (LGB) siblings were more likely than heterosexual siblings in the same family to report being targeted for abuse.

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 put them at risk for abuse by parents, other adults, or older children.28,29

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.30,31 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,32 and some evidence suggests that gender nonconformist children may be more likely to be targeted for abuse.33,34

Recent work examining sexual orientation group disparities in childhood violence victimization in females has been based on large, population-based samples of adolescents;25 however, most previous studies raise two methodological concerns. These concerns relate to (1) samples recruited through LGB organizations or venues,22,24 yielding data that may be subject to enrollment bias related to sexual orientation, and (2) small lesbian/bisexual samples from larger population-based surveys,21,23 which may provide imprecise estimates because of 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 about 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, 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. In 1989, baseline questionnaires were sent to approximately 520,000 registered nurses from 14 populous U.S. states, and 116,608 women aged 25–42 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. 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) 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. 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).

2. **Parent/guardian physical abuse.** Physical abuse was assessed with four items adapted from the seven-item Severe Assault domain of the Revised Conflict Tactics Scale (CTS2). 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.” 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, the total score on our modi-
fied 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, we calculated physical abuse prevalence estimates for the full cohort (abuse defined as score >0) and chronicity estimates (continuous score) for the subset of NHISII participants who reported having been abused. Our modified subscale showed acceptable internal consistency in the NHISII cohort (alpha = 0.65 in childhood and 0.68 in adolescence). The CTS2 Physical Assault Subscale has good internal consistency (alpha = 0.86).

(3) Adult/older child sexual abuse. Sexual abuse was assessed with four items adapted from a national survey conducted by the Gallup Organization 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 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. 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 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. Prior research 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% confidence intervals (CI) in the full cohort. PRs are preferred to odds ratios (ORs) in these analyses because reports of abuse are common and, therefore, violate the rare-outcome assumption of logistic regression in which ORs are used to approximate risk ratios. To estimate differences in chronicity of physical abuse in the subset who scored >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 >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 or forced sexual activity was 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 victimiza-
tion in childhood before age 11 years to estimate the risk of revictimization in adolescence (ages 11–17 years). Binary dependent variables representing history of physical abuse and of sexual abuse 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% (n = 223) were bisexual, and 0.8% (n = 494) were lesbian. Participants ranged in age from 36 to 56 years at the time of data collection, and 93.3% were of white race/ethnicity (Table 1). As shown in Table 2, lesbian and bisexual women, compared with 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 with 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% of heterosexual, 73.3% of bisexual, and 69.2% 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% of heterosexual women re-

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Table 1. Basic Characteristics by Sexual Orientation among NHSII Participants (n = 63,028)*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Heterosexual (n = 62,311)</th>
<th>Bisexual (n = 223)</th>
<th>Lesbian (n = 494)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in 2001, years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36–41</td>
<td>16</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>42–46</td>
<td>31</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>47–51</td>
<td>34</td>
<td>37</td>
<td>35</td>
</tr>
<tr>
<td>52–56</td>
<td>19</td>
<td>21</td>
<td>23</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (non-Latina)</td>
<td>95</td>
<td>93</td>
<td>97</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Residence at birth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>39</td>
<td>46</td>
<td>41</td>
</tr>
<tr>
<td>Midwest</td>
<td>38</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>South</td>
<td>13</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>West</td>
<td>10</td>
<td>10</td>
<td>14</td>
</tr>
</tbody>
</table>

*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)

<table>
<thead>
<tr>
<th>Type of abuse</th>
<th>Heterosexual (n = 62,311)</th>
<th>Bisexual (n = 223)</th>
<th>Lesbian (n = 494)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotional abuse</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean score (SD)</td>
<td>3.02 (2.24)</td>
<td>0.72 (0.15)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Difference (SE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical abuse</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Prevalence in childhood</td>
<td>38</td>
<td>42</td>
<td>0.238</td>
</tr>
<tr>
<td>% Prevalence in adolescence</td>
<td>22</td>
<td>32</td>
<td>0.0003</td>
</tr>
<tr>
<td>Mean (SD) Chronicity score</td>
<td>4.15 (2.03)</td>
<td>0.81 (0.31)</td>
<td>0.009</td>
</tr>
<tr>
<td><strong>Sexual abuse</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any sexual abuse</td>
<td>21</td>
<td>35</td>
<td>1.69 (1.41, 2.01)</td>
</tr>
<tr>
<td>Forced sexual activity</td>
<td>6</td>
<td>16</td>
<td>2.66 (1.36, 3.61)</td>
</tr>
<tr>
<td>Any sexual abuse</td>
<td>21</td>
<td>36</td>
<td>1.71 (1.44, 2.04)</td>
</tr>
<tr>
<td>Forced sexual activity</td>
<td>8</td>
<td>19</td>
<td>2.43 (1.86, 3.19)</td>
</tr>
</tbody>
</table>

- aHeterosexual women served as the reference group for each comparison; difference adjusted for age, race/ethnicity (white non-Latina, other), and region of residence at birth.
- bHeterosexual women served as the reference group for each comparison. Prevalence ratios (PR) are adjusted for age, race/ethnicity (white non-Latina, other), and region of residence at birth.
- cChronicity score on Physical Abuse Subscale of CTS calculated for subset of women with scores >0.
- dIncludes reports of any sexual abuse (unwanted sexual touching and/or forced sexual activity).
ported some type of abuse in childhood or adolescence, and roughly 70% of lesbian and bisexual women reported these adverse experiences. Other recent studies with adult21–24 and adolescent25 female samples similarly report that childhood abuse disproportionately burdens lesbian and bisexual females. Our findings extend the extant research in several ways. First, 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. Second, our study included multiple measures of abuse, and sufficient detail was collected to allow us to characterize prevalence, severity, and revictimization rates. Third, 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 re-
porting patterns. Saewyc et al.\textsuperscript{25} have suggested that among women with same-sex attractions, those who have been abused in childhood, compared with 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. Corliss et al.\textsuperscript{23} 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. Also, 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 themselves\textsuperscript{47} and less likely to perceive male perpetrators as primarily responsible\textsuperscript{48} for sexual assaults. Given the evidence that sexual orientation minority women identify less strongly with feminine gender norms than do heterosexual women,\textsuperscript{32} it is possible that among women who are victimized, sexual orientation minority women may be more likely than heterosexuals to blame 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 is 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 or 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.\textsuperscript{49} 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,\textsuperscript{50} 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 re-victimization 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 healthcare providers and patients. Given the elevated rates of abuse victimization among women with minority sexual orientation, healthcare providers should be aware that for a substantial portion of these patients, the symptoms of distress may originate from or be exacerbated by a history of abuse. Healthcare 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 healthcare 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.

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