

# Suicidality Among Veterans: Implications of Sexual Minority Status

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Using the California Quality of Life surveys, we examined suicidal ideation and attempts in 129 lesbian, gay, and bisexual (LGB) veterans and in 315 heterosexual veterans in 2008–2009 and 2012–2013. Although there were no significant differences in the past 12-month suicidal ideation and lifetime attempts, LGB veterans had higher odds of lifetime suicidal ideation than heterosexual veterans (adjusted odds ratio = 3.00; 95% confidence interval = 1.38, 6.53). Suicide assessment and prevention efforts in LGB veterans could benefit from a life-course perspective regarding suicide risk. (*Am J Public Health*. 2014;104:S535–S537. doi:10.2105/AJPH.2014.302100)

Suicide prevention is a public health imperative for military veterans,<sup>1</sup> who are estimated to constitute more than 20% of US suicide deaths annually.<sup>2</sup> Lesbian, gay, and bisexual (LGB or sexual minority) populations also have elevated risks of suicidal ideation and attempt compared with heterosexuals.<sup>3</sup> It is unclear, however, if LGB status is significantly associated with suicidal ideation or attempt among veterans, a population particularly vulnerable to suicide risk.<sup>4</sup> Although 1 previous study found that LGB veterans had a higher prevalence of past-year suicidal ideation than heterosexual veterans did,<sup>5</sup> little else is known about possible differences in lifetime suicidal ideation or suicide attempts in this subpopulation.

By using a population-based sample, we sought to examine the association between sexual orientation and past-year suicidal ideation, lifetime suicidal ideation, and lifetime suicide attempt among veterans.

## METHODS

Data were from the 2008–2009 and 2012–2013 California Quality of Life (Cal-QOL) surveys, which are computer-assisted telephone interviews of probability-based samples of adults aged 18 to 70 years from parent waves of the California Health Interview Surveys (see Cochran et al. for study methodology and sample characteristics of the 2008–2009 wave<sup>6</sup>). Our study focused on respondents who indicated “ever serving on active duty in the Armed Forces of the United States” (n = 444).

Demographic characteristics included gender, age, race/ethnicity, education, and employment status. Because of the restricted

sample size, we dichotomized sexual orientation as LGB or heterosexual. Marital status was categorized as partnered (married or cohabiting) versus single (widowed, divorced, separated, never married). Because California has a higher cost of living than the rest of the United States,<sup>7</sup> we followed previous Cal-QOL analyses<sup>8</sup> and dichotomized income using 300% of the year-adjusted federal poverty level as defined by the US Department of Health and Human Services. All veterans were asked if they had ever served in a war zone or area of active conflict, which was operationalized as service in a combat zone.<sup>9</sup>

Suicidality was assessed using the World Health Organization Composite International

**TABLE 1—Demographic Characteristics and Suicidality Among Veterans, by Sexual Minority Status: California Quality of Life Surveys, 2008–2009 and 2012–2013**

| Variable                        | Sexual Minority Veterans (n = 129) |     | Heterosexual Veterans (n = 315) |     | P    |
|---------------------------------|------------------------------------|-----|---------------------------------|-----|------|
|                                 | No. (%) or Mean                    | SE  | No. (%) or Mean                 | SE  |      |
| <b>Demographics<sup>a</sup></b> |                                    |     |                                 |     |      |
| Age, y                          | 53.1                               | 2.7 | 52.0                            | 1.0 | .881 |
| Gender                          |                                    |     |                                 |     |      |
| Male                            | 108 (78.4)                         | 7.6 | 282 (89.6)                      | 2.2 | .307 |
| Female (Ref)                    | 21 (21.5)                          |     | 33 (10.4)                       |     |      |
| Race/ethnicity                  |                                    |     |                                 |     |      |
| Non-Hispanic White              | 104 (71.4)                         | 7.9 | 188 (65.9)                      | 3.3 | .43  |
| Racial/ethnic minority (Ref)    | 25 (28.6)                          |     | 127 (34.1)                      |     |      |
| Relationship status             |                                    |     |                                 |     |      |
| Partnered                       | 39 (52.2)*                         | 7.7 | 235 (76.8)                      | 2.9 | .003 |
| Single (Ref)                    | 90 (47.8)                          |     | 80 (23.2)                       |     |      |
| Education                       |                                    |     |                                 |     |      |
| < college                       | 51 (44.8)                          | 7.9 | 191 (59.3)                      | 3.4 | .162 |
| ≥ college degree (Ref)          | 78 (55.2)                          |     | 124 (40.7)                      |     |      |
| Employment status               |                                    |     |                                 |     |      |
| Unemployed                      | 6 (1.8)                            | 0.8 | 15 (5.6)                        | 1.8 | .07  |
| Out of workforce                | 63 (37.9)                          | 7.2 | 106 (28.7)                      | 2.9 | .326 |
| Employed (Ref)                  | 60 (60.3)                          | 7.3 | 194 (65.7)                      | 3.2 |      |
| Below 300% FPL                  | 37 (26.5)                          | 3.3 | 93 (30.8)                       | 6.6 | .338 |
| Service in combat zone          | 25 (18.6)*                         | 7.2 | 120 (37.6)                      | 3.3 | .041 |
| <b>Suicidality<sup>b</sup></b>  |                                    |     |                                 |     |      |
| Lifetime suicidal ideation      | 52 (47.0)*                         | 7.9 | 72 (22.1)                       | 2.8 | .007 |
| Lifetime suicide attempt        | 21 (22.6)                          | 7.7 | 26 (7.6)                        | 1.7 | .082 |
| Past 12 mo suicidal ideation    | 8 (4.2)                            | 1.8 | 22 (7.4)                        | 1.8 | .224 |

Note. FPL = federal poverty level (according to The US Department of Health and Human Services). All analyses are weighted; frequencies are unweighted and percentages and SEs are weighted.

<sup>a</sup>Single logistic regression adjusted for survey year and testing association of demographic characteristics with sexual minority status.

<sup>b</sup> $\chi^2$  test (sexual minority vs heterosexual).

\*P < .05.

**TABLE 2—Association of Sexual Minority Status and Other Demographic Characteristics With Suicidality Among Veterans: California Quality of Life Surveys, 2008–2009 and 2012–2013**

| Variable               | Lifetime Suicidal Ideation AOR (95% CI) | Lifetime Suicide Attempt AOR (95% CI) | Past 12 Mo Suicidal Ideation AOR (95% CI) |
|------------------------|---|---------------------------------------|---|
| Age                    | 0.98 (0.95, 1.01)                       | 0.97 (0.92, 1.02)                     | 0.92* (0.87, 0.97)                        |
| Female                 | 1.68 (0.68, 4.16)                       | 1.05 (0.21, 5.39)                     | 2.53 (0.42, 15.26)                        |
| Non-Hispanic White     | 1.31 (0.65, 2.65)                       | 2.50 (0.69, 9.03)                     | 3.02 (0.81, 11.24)                        |
| Partnered              | 0.64 (0.32, 1.27)                       | 0.37 (0.13, 1.04)                     | 0.33* (0.12, 0.90)                        |
| ≤ college degree       | 1.13 (0.58, 2.22)                       | 1.86 (0.66, 5.25)                     | 1.10 (0.30, 4.05)                         |
| Unemployed             | 1.16 (0.22, 6.23)                       | 1.30 (0.12, 13.87)                    | 2.09 (0.26, 16.99)                        |
| Out of workforce       | 1.61 (0.66, 3.92)                       | 1.28 (0.25, 6.56)                     | 7.18 (1.34, 38.42)                        |
| < 300% FPL             | 2.51* (1.24, 5.09)                      | 3.65* (1.27, 10.48)                   | 6.48* (1.97, 21.28)                       |
| Service in combat zone | 0.94 (0.48, 1.84)                       | 1.28 (0.46, 3.55)                     | 2.16 (0.70, 6.63)                         |
| Sexual minority        | 3.00* (1.38, 6.53)                      | 3.21 (0.89, 11.59)                    | 0.46 (0.11, 1.90)                         |

Note. AOR = adjusted odds ratio; CI = confidence interval; FPL = federal poverty level (according to The US Department of Health and Human Services). All analyses are weighted and adjusted for survey year. Sample size for all models is 444 respondents.

\* $P < .05$ .

Diagnostic Interview for Suicidality.<sup>10</sup> Analyses focused on dichotomous items of the past 12-month suicidal ideation, lifetime suicidal ideation, and lifetime suicide attempt.

We used a logistic regression model to parsimoniously evaluate demographic characteristic predictors of LGB status.<sup>11</sup> We used 3 separate logistic regression models for each suicide-related symptom to investigate the association of LGB status. We adjusted all models for survey cycle, service in a combat zone, and sociodemographic factors related to suicidality (e.g., gender, age, education, income, employment, and relationship status).<sup>12</sup> We weighted all analyses using SAS version 9.2 (SAS Institute, Cary, NC) and SUDAAN version 11.0.1 (RTI International, Research Triangle Park, NC) to account for oversampling of LGB individuals.<sup>11</sup>

## RESULTS

Among veterans, the weighted prevalence of LGB status was 2.46% (95% confidence interval [CI] = 1.77%, 3.42%). Fewer LGB veterans were partnered, and fewer indicated combat exposure than heterosexual veterans (Table 1). In bivariate analyses, LGB veterans had lower prevalence of past 12-month suicidal ideation than heterosexual veterans (4.2% vs 7.4%), although this was not statistically significant. Conversely, 47.0% of LGB veterans indicated lifetime suicidal ideation,

which was significantly higher than that among heterosexual veterans (22.1%). Lifetime suicide attempt was elevated among LGB veterans compared with heterosexual veterans, but did not achieve statistical significance (22.6% vs 7.6%;  $P = .082$ ). In adjusted models, LGB veterans experienced 3 times the odds of lifetime suicidal ideation than heterosexual veterans (95% CI = 1.38, 6.53; Table 2).

## DISCUSSION

Unlike a previous study,<sup>5</sup> we did not observe significant crude differences in past 12-month suicidal ideation by sexual orientation among veterans. However, LGB veterans in our study had higher odds of lifetime suicidal ideation and evidenced a trend for an elevated prevalence of lifetime attempts compared with heterosexuals. In this veteran sample, it was unclear when sexual orientation differences in lifetime suicidality occurred. In general, the literature suggests that adolescence and young adulthood might be specific periods of heightened risk for sexual minority individuals.<sup>13</sup> These developmental periods might overlap with or be proximal to the typical age of military enlistment. Further research is needed to ascertain when suicidal symptoms occur among LGB veterans with respect to their military service.

In addition to lifetime suicidality, LGB individuals were more likely than heterosexuals

to experience anxiety and mood disorders,<sup>14</sup> but it was unclear how characteristics of veteran status might influence mental health and suicidality among LGB individuals. For example, sexual minority veterans had more than twice the odds of keeping firearms in the home than sexual minority nonveterans,<sup>15</sup> and firearm ownership, itself, is linked to risk of suicide.<sup>16</sup> Future research is needed on whether characteristics of veteran status (e.g., firearm ownership,<sup>15</sup> traumatic brain injury,<sup>17</sup> military sexual trauma<sup>18</sup>) might play roles in the suicidality of LGB individuals. Furthermore, suicide prevention for veterans should identify the needs of LGB veterans with histories of suicidal symptoms.

We noted several study limitations. First, as a state-based sample, the results might not generalize to the United States. Second, we aggregated sexual minority groups to increase statistical power, obscuring possible heterogeneity among sexual minority identities.<sup>19</sup> Despite aggregation, the sample size was relatively small, which affected the statistical power of our study. Specifically, although we observed elevation in lifetime suicide attempts among LGB veterans, the small sample size might have reduced our ability to detect statistical significance. The Cal-QOL also did not include a measure of lifetime depression, which would have been an important covariate for the lifetime suicidal ideation and attempt outcomes. Finally, self-reported

veteran status could introduce misclassification bias. ■

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This article was accepted May 14, 2014.

### Contributors

J. R. Blosnich conceptualized the study and drafted the article. V. M. Mays wrote sections of the introduction and discussion. S. D. Cochran conducted analyses. All authors reviewed drafts of the article.

### Acknowledgments

This work was supported by a postdoctoral fellowship to J. R. B. from the Office of Academic Affiliations in the Department of Veterans Affairs and the Center for Health Equity Research and Promotion in the VA Pittsburgh Healthcare System. This work was supported by a grant from the National Center for Minority Health and Health Disparities (MD006923) to V. M. M. and a grant from the National Institute on Drug Abuse (DA20826) to S. D. C.

**Note.** The opinions expressed in this article are those of the authors and do not necessarily represent the opinions of the funders, institutions, the Department of Veterans Affairs, or the US Government.

### Human Participant Protection

This study was approved by the institutional review boards of University of California, Los Angeles and Westat.

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