ARCHIVES OF SUICIDE RESEARCH
2022, VOL. 26, NO. 2, 961–967
https://doi.org/10.1080/13811118.2020.1806159

Routledge
Taylor & Francis Group

BRIEF REPORT

Comparison of Lifetime Suicide Attempts and Recent Suicidal/Self-Harming Thoughts Among Sexual Minority and Heterosexual Utahns: Results from a Population-Based Survey

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ABSTRACT

Objective: We sought to be the first published article to report differences in population-representative prevalence of suicidal thoughts and attempts by sexual orientation.

Method: Data from Utah's Behavioral Risk Factor Surveillance System (BRFSS) collected for 2016 ($N = 10,988$) and 2017 ($N = 10,251$) were examined to determine differences in the prevalence of suicidal thoughts in the past 2 weeks and the lifetime prevalence of suicide attempts (i.e., any, single, and multiple) by sexual orientation.

Results: 3.5% of heterosexuals Utahns reported recent suicidal/self-harming thoughts in the last 2 weeks compared to 14.7% of LGB Utahns (OR = 4.73 95% CI [2.67, 8.36]). 5.8% of heterosexuals reported a lifetime prevalence of any suicidal attempts compared to 37.2% of LGB folx (OR = 9.58 95% CI [7.16, 12.81]) with similar differences occurring for single and multiple attempts. Comparing LG versus B, there was no difference in ideation or prevalence of any attempt, but bisexuals reported higher rates of multiple suicide attempts.

Conclusion: LGB folx in Utah are drastically more likely to have thought about suicide/self-harming in the last 2 weeks and to have attempted suicide in their lifetime when compared to heterosexuals in Utah.

KEYWORDS
BRFSS; LGBT; Utah

Compared to heterosexuals, sexual minorities (e.g., lesbians, gays, and bisexuals; LGB) are at greater risk for suicidal thoughts and attempts (Capistrant & Nakash, 2019; Fish, Rice, Lanza, & Russell, 2019; Fox et al., 2018; Johns et al., 2018; Salway, Plöderl, Liu, & Gustafson, 2019). For instance, in a sample of college-aged individuals ($N = 21,247$), sexual minorities have reported higher frequency of suicidal thoughts in the last 6 months (10.5% vs 3.7%) and higher lifetime prevalence of suicide attempts (17.5% vs 5%), than heterosexuals (Lytle, Blosnich, De Luca, & Brownson, 2018). Although an accurate portrayal of the prevalence of suicide attempts is often hindered by sampling methodology (i.e., online or community samples), a recent meta-analysis of population-based surveys of the United States, Canada, and European nations found that the lifetime prevalence of suicide attempts by sexual minorities was 11% compared to 4% of heterosexuals (Hottes, Bogaert, Rhodes, Brennan, & Gesink, 2016)

Unique risk factors have been explored regarding suicidal thoughts and behaviors among sexual minorities across the US including bullying, harassment, discrimination, and family rejection based on sexual orientation, coming out, and internalized heterosexism (Cawley, Pontin, Touhey, Sheehy, & Taylor, 2019; Johns et al., 2018; McLaren, 2016; Poon & Saewyc, 2009; Poštuvan, Poldogar, Šedivy, & De Leo, 2019; Ryan, Huebner, Diaz, & Sanchez, 2009; Salentine, Hilt, Muchlenkamp, & Ehlinger, 2020). Similarly, sexual minorities' risk for suicidal thoughts and behaviors also increases in rural areas (Irwin, Coleman, Fisher, & Marasco, 2014). Further, sexual minorities frequently describe internal and interpersonal conflicts with religion, although studies have yielded mixed findings on links between religious and suicidal variables among this population (Boppana & Gross, 2019; Bourn, Frantell, & Miles, 2018; Gibbs & Goldbach, 2015; Lytle, Blosnich, De Luca, & Brownson, 2018; Schneeberger, Dietl, Muenzenmaier, Huber, & Lang, 2014; Shearer et al., 2018).

Suicidal thoughts and attempts by sexual minorities may be of particular concern in Utah, which is ranked fifth in the nation for deaths by suicide and has demonstrated a 46.5% increase in suicide deaths over the last decade across all ages (Stone et al., 2018). Among Utah youths (ages 10–17), the rate of suicide more than doubled from 2011 to 2015, making it the leading cause of death (Annor et al., 2018). As of 2017, suicide was the first leading cause of death for Utahns ages 15–24 and the second leading cause of death for ages 25–44 (American Foundation for Suicide Prevention, 2019).

Several risk factors may be present in Utah for suicide, such as population density, presence of rural communities, high altitude, and access to firearms (Betz et al., 2011; Brenner, Cheng, Clark, & Camargo, 2011; Haws et al., 2009; Hirsch & Cukrowicz, 2014; Irwin et al., 2014; Kim et al., 2011; Kious, Kondo, & Renshaw, 2018; Poon & Saewyc, 2009). Sexual minorities in Utah may also experience additional risk-factors such as high levels of family rejection and internalized heterosexism, potentially related to the unique religious context within Utah, which is disproportionally comprised of members of the Church of Jesus Christ of Latter-day Saints (Bridges, Lefevor, Schow, & Rosik, 2020; Etengoff & Daiute, 2014; Ryan et al., 2009). However, no published research has yet reported the prevalence of suicidal thoughts and attempts among sexual minorities living in Utah.

We sought to fill this gap using data collected from 2016 and 2017 from Utah's Behavioral Risk Factor Surveillance System (BRFSS). Specifically, we examine the prevalence of suicidal/self-harming thoughts (SSH) in the past two weeks and the prevalence of lifetime suicidal attempts (SA), including rates of any attempt, a single attempt and multiple attempts, among adult sexual minorities in Utah compared to heterosexuals. In addition, we explore differences in the suicide indices for Utahns' identifying as gay and lesbian versus bisexual.

METHOD

Sample

Data were extracted from the 2016 ($N = 10{,}988$) and 2017 ($N = 10{,}251$) datasets from Utah's BRFSS, an annual population-based survey conducted by the Utah Department of Health, coordinated with the Centers for Disease Control and Prevention (CDC).

TABLE 1. Demographic characteristics.

Variables		
Dataset year	2016 $N = 10,988$	2017 $N = 10,251$
Sex		
Male	46.40%	47.8%
Female	53.50%	52.1%
Age (years)	$M = 51.39$ (19.22)	$M = 49.06$ (19.21)
Sexual orientation		
Straight	92.90% (9877)	92.4% (9136)
Lesbian/gay	0.90% (91)	1% (95)
Bisexual	1.30% (136)	1.5% (149)
Race		
White	90.70% (9962)	94.00% (9132)
Black/African-American	0.60% (71)	0.70% (69)
American Indian/Alaskan Native	1.50% (162)	1.60% (151)
Asian	0.40% (48)	1.10% (107)
Pacific Islander	0.50% (54)	0.50% (47)
Other	6.30% (691)	2.20% (209)
Ethnicity		
Hispanic	6.30% (685)	8.60% (872)
Non-Hispanic	93.70% (10202)	91.40% (9272)
Marital status		
Married	66.50% (7265)	65.80% (6695)
Divorced/widowed/separated	18.90% (2063)	17.60% (1795)
Unmarried	14.60% (1597)	16.60% (1691)
Education		
No high school/GED	4.70% (511)	4.60% (472)
High school/GED graduate	25.40% (2780)	26.40% (2693)
Some college	33.50% (3667)	32.00% (3271)
College graduate	36.50% (3993)	37.00% (3772)
Income		
Less than $25,000	18.20% (1651)	17.70% (1517)
$25,000–$50,000	24.40% (2217)	23.80% (2039)
$50,000–$75,000	19.70% (1795)	19.10% (1636)
More than $75,000	37.70% (3427)	39.30% (3366)

The BRFSS is conducted via landlines and cellphones (dual mode random digit dialed survey), which uses a disproportionate stratified sampling design (by phone type and region). Participants had to be 18 years or older to respond to the survey. Demographic characteristics of each sample can be found in Table 1.

Measures

We used the single item about suicidal/self-harming thoughts ("Over the last 2 weeks, how often have you had the thoughts that you would be better off dead or of hurting yourself in some way?") from the 2016 dataset to generate the prevalence of SSH (i.e., "not at all" versus "several days" or more). We used the single item about suicide attempts from the 2017 dataset ("During your lifetime, how many times have you attempted suicide?") to generate three prevalence rates for each respondent: any attempt; a single attempt; or multiple attempts.

Statistical Analysis

Due to the disproportional stratified sampling method used to collect the data, the prevalence rates were weighted based on phone type (i.e., listed/unlisted) and region.

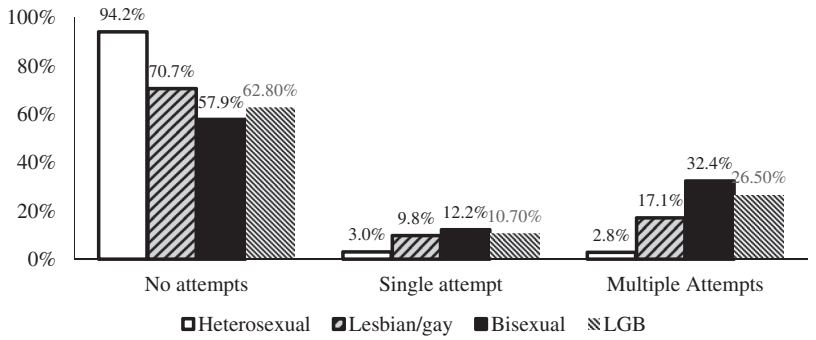

FIGURE 1. Prevalence rates of no, single, and multiple lifetime 'suicide attempt(s) among heterosexual ($n = 8{,}582$), lesbian/gay ($n = 82$), bisexual ($n = 133$), and LGB ($n = 215$) Utah adults.

Mann-Whitney *U* tests were conducted to compare prevalence rates, due to the non-normal distribution of the suicide indices. In addition, odds ratios were calculated by Chi-Squared tests between LGB vs. Hetero and LG vs. B.

RESULTS

The population-estimated prevalence of recent suicidal/self-harming ideation (SSH) was significantly higher among LGB (14.3%) than heterosexuals (4.3%); $X^2(1) = 14{,}651.00$, $p < .001$ and to a large degree; $OR = 3.71$ (95% CI [3.63, 3.80]). The population-estimated difference in the prevalence of any suicide attempt among LGB (36.6%) and heterosexuals (7.0%) was also significant; difference 29.6% (95% CI [29.4%,29.8%]), $X^2(1) = 172{,}602.82$, $p < .001$; and large; $OR = 7.66$ (95% CI [7.57,7.74]; see Figure 1). Furthermore, LGB were more likely than heterosexuals to both endorse a *single* attempt (10.7% vs. 3.0%); $X^2(1) = 40.29$, $p < .001$, difference = 7.7% (95% CI [4.22, 12.55]); and *multiple* attempts (26.5% vs. 2.8%; difference = 23.7%, 95% CI [18.24, 29.98]); $X^2(1) = 360.79$, $p < .001$, $OR = 12.49$ (95% CI [8.99, 17.35]).

When examining differences amongst Utah sexual minorities, adults who identified as lesbian/gay versus bisexual did not significantly differ from each other either in the prevalence of SSH (*p*s = .61 and .66, respectively) or lifetime SA ($p = .06$). Notably, however, bisexuals reported higher ($p = .02$) rates of *multiple* suicide attempts (32.4%) than lesbians/gays (17.1%) with a moderate effect size; $OR = 2.32$ (95% CI [1.18, 4.58]).

DISCUSSION

Utah is ranked fifth in the nation for deaths by suicide and has shown a considerable rate increase in the past decade (Stone et al., 2018). Prior research supports that sexual minorities are at greater risk for SSH and SA when compared to heterosexuals (Capistrant & Nakash, 2019; Fish et al., 2019; Fox et al., 2018). To our knowledge, no published research has yet reported the population-representative prevalence of SSH and SA among sexual minorities living in Utah, despite potential additional risk. To fill this gap, we used a population-based sample from Utah's BRFSS to calculate prevalence rates of SSH and SA for LGB and Heterosexual Utahns. Overall, Utahn sexual minority

individuals–and particularly those identifying as bisexual–are drastically more likely to report recent SSH and lifetime SA when compared to heterosexuals in Utah.

Limitations

This study took an epidemiological approach to the prevalence of SSH and SA by Utahns identifying as LGB or heterosexual. As such, it did not assess other factors that may contribute to or reduce the risk of suicide (e.g., religious affiliation). Future research should explore these areas.

CONCLUSION

There is a need for research to examine suicide risk and protective factors for LGB and heterosexual Utahns. The magnitude of the effects of identifying as a sexual minority on the odds of endorsing SSH or a lifetime history of SA suggests a need to understand the impact of sexual orientation on suicide risk within the context of other factors (e.g., religiosity, rurality, childhood adversity). A more comprehensive understanding of the relations between risk and protective factors may facilitate the development and implementation of targeted interventions to decrease suicide rates for all sexual orientations.

AUTHOR NOTES

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