

# **Sexual orientation and resilience: Exploring subgroup differences in stress experiences and mental health outcomes**

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## **Background**

It is well-established that chronic exposure to social stress is associated with poor mental health<sup>1</sup>. Indeed, mental health disparities among sexual minority populations (e.g., people who identify as lesbian, gay, or bisexual, people who are attracted members of the same-sex, and/or people who engage in same-sex behavior) can be attributed, in large part, to increased stress exposure (e.g., stigma, discrimination, victimization)<sup>2</sup>. Further, sexual orientation subgroup differences exist with regard to stress exposure and resulting disparities in mental health<sup>3</sup>.

However, while population-level health disparities signify that sizeable proportions of sexual minority people indeed have poorer health than heterosexuals, many sexual minorities do not suffer from chronically poor mental health, despite higher exposure to stressful experiences<sup>4</sup>. Coping and resilience research studies how exposure to stressful experiences can also lead to adaptive responses, which buffer the harmful effects of stress on health over time<sup>5</sup>. Using a large, nationally representative U.S. sample, this study identifies sexual orientation group differences in stress exposure and mental health resilience. Next, we assess the sociodemographic characteristics, individual risk factors and assets, and social resources contributing to resilience.

## **Methods**

*Study Design and Sample:* Data were from the National Epidemiologic Survey on Alcohol and Related Conditions, Wave III (NESARC-III), a nationally representative, cross-sectional sample of non-institutionalized adults living in the United States, collected in 2012-2013. A multi-stage probability sampling design was used to select a sample that was representative of the U.S. adult population. Participants completed the Alcohol Use Disorder and Associated Disabilities Interview Schedule-5 (AUDADIS-5) via Computer-assisted personal interviewing (CAPI) technology.

*Key variables:* Stressful life events (SLE) were measured with 16 items assessing exposure to both major and minor stressors during the past year. Minor stressors included “you moved or someone new came to live with you,” “you changed jobs, job responsibilities, or work hours,” and “you had trouble with neighbor, friend, or relative.” Major stressors included “have you at any time been homeless?,” “you were unemployed and looking for work for >1 month,” and “any family member or close friends died”<sup>6,7</sup>.

Mental health was first assessed using the SF-12 mental health component score (MCS, standard error of measurement: 6.24)<sup>8</sup>. Because mental health varies by age, respondents’ MCS were categorized relative to others in their decade cohort (e.g., 18-25, 26-35, 35-45, etc.)<sup>8</sup>, as being below average ( $\geq 6.24$  points below average), average (within 6.24 points of average), or above average ( $\geq 6.24$  points above average). Mental health resilience was then assessed among those reporting 2 or more past-year SLEs (median=1 event), as follows: “languishing” (2 or more SLEs and below average MCS), “average” (2 or more SLEs and average MCS), or “thriving” (2 or more SLEs and above average MCS).

Sexual orientation: Respondents were categorized as heterosexual if they identified as heterosexual and reported only opposite-sex attraction and behaviors. Other respondents were categorized into one of three sexual minority groups, based on their sexual identities:

lesbian/gay, bisexual, or heterosexual-identified sexual minority (HSM; identified as heterosexual, but also reported same-sex attraction or behaviors).

Other variables included sociodemographic characteristics (age, gender, race, nativity, education, household income, and unemployment status), individual risk factors and assets (smoking status, drinking status, problems sleeping, exercise status, emotional health, and having a future orientation), and social resources (social support).

*Statistical analyses:* Gender-stratified differences in SLE and mental health resilience were assessed between sexual orientation groups using chi-square and F-tests. A multivariate logistic regression assessed which sociodemographic characteristics, individual risk factors and assets, and resources contributed to thriving or average, versus languishing mental health resilience. All analyses used sample weights.

## Results

*Stressful life events (Table 1).* Among women, all sexual minority groups reported more past-year SLEs, compared to heterosexuals, with bisexual women reporting twice as many (3.20) such events as heterosexual women (1.54) ( $p < 0.01$ ). Lesbian and bisexual women reported greater numbers of both major and minor events in the past year ( $p < 0.001$ ), while HSM women reported more minor events, compared to heterosexuals ( $p < 0.001$ ). Among men, gay (2.17) and bisexual (2.75) men reported more past-year SLEs, compared to heterosexuals (1.59,  $p < 0.001$ ). Specifically, gay and bisexual men reported greater numbers of both major ( $p = 0.002$ ) and minor ( $p < 0.001$ ) events than heterosexuals.

*Mental health resilience (Figure 1).* Among women reporting 2 or more past-year SLEs, over half of bisexual women (51%) were categorized as “languishing” in terms of mental health resilience, compared to 33% of heterosexual women. Conversely, about half as many bisexual women were “thriving” (9%), as compared to other groups (17% of lesbian women, 18% of HSM women, and 22% of heterosexual women). Among men reporting 2 or more past year SLEs, a greater proportion of gay men (35%) were “languishing,” compared to 28% of bisexual and HSM men, and 23% of heterosexual men. However, bisexual men were least likely to be categorized as “thriving” (16%), with 24% of gay, 28% of HSM, and 30% of heterosexual men categorized as “thriving.”

*Factors contributing to thriving/average mental health resilience (results not shown).* Several sociodemographic characteristics were associated with being categorized as “thriving” or “average”, rather than as “languishing.” Compared to younger respondents, older respondents had higher odds of being thriving/average, rather than languishing (OR: 1.02; 95% CI: 1.01, 1.02). Compared to males, females had lower odds of being thriving/average (OR: 0.64; 95% CI: 0.56, 0.74). Finally, compared to White respondents, American Indian/Alaska Native respondents had higher odds of being categorized as thriving/average, rather than languishing (OR: OR: 1.69; 95% CI: 1.05, 2.73). No other sociodemographic differences were found.

There were also several personal risks and assets, as well as resources, associated with categorization as thriving/average, rather than as languishing. Compared to current smokers, both former smokers (OR: 1.36; 95% CI: 1.11, 1.67) and non-smokers (OR: 1.22; 95% CI: 1.04, 1.41) had higher odds of being categorized as thriving/average. Similarly, compared to current drinkers, former drinkers (OR: 1.33; 95% CI: 1.12, 1.58) and lifetime abstainers (OR: 1.42; 95% CI: 1.11, 1.82) had higher odds of being categorized as thriving/average. Those reporting problems sleeping had lower odds of being categorized as thriving/average (OR: 0.60; 95% CI: 0.53, 0.68), compared to those with no sleeping problems. Greater emotional health was

associated with higher odds of thriving/average mental health (OR: 1.19; 95% CI: 1.18, 1.20), as was being future-oriented (OR: 1.34; 95% CI: 1.12, 1.61). Finally, in terms of resources, greater social support was associated with higher odds of thriving/average mental health (OR: 2.18; 95% CI: 1.91, 2.49). No differences were found in terms of exercise status.

## Discussion

This study highlighted several differences in social stress exposure among four sexual orientation groups, with sexual minority groups reporting more stressful events than heterosexuals. Further, among those reporting two or more stressful events in the past year, heterosexual men and women were the most resilient, with greater proportions of heterosexuals being categorized as “thriving,” compared to all sexual minority groups. However, key differences also emerged *among* sexual minority groups, with greater proportions of gay men and bisexual women being categorized as languishing, compared to other sexual minority men and women, respectively. It is possible that group differences across risk and protective factors may contribute to the abilities of sexual minorities in different subgroups to be resilient to stress.

Multivariate analysis revealed key social and behavioral factors contributing to mental health resilience. Sexual minority populations have been shown to use substances at higher rates<sup>9</sup>, and also report lower levels of social support<sup>10</sup>, compared to heterosexuals, and both of these factors were found to be significantly associated with mental health resilience in these analyses. These findings have tangible implications for social interventions and clinical practice.

## References

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**Table 1. Past-Year Stressful Life Events, Major and Minor, by Sexual Orientation Group, NESARC-III**

	Heterosexual	Lesbian/Gay	Bisexual	HSM	P-value
N (Weighted %)	31,369 (91.34%)	586 (1.53%)	566 (1.40%)	2,076 (5.72%)	
<b>Women (N=19,399)</b>					
Stressful life events, Mean (SE)	1.54 (0.02)	2.50 (0.13)	3.20 (0.16)	2.04 (0.07)	<0.001
Major Events, Mean (SE)	0.86 (0.02)	1.24 (0.09)	1.52 (0.17)	0.86 (0.04)	<0.001
Minor Events, Mean (SE)	0.83 (0.02)	1.41 (0.09)	1.84 (0.10)	1.17 (0.05)	<0.001
<b>Men (N=15,198)</b>					
Stressful life events, Mean (SE)	1.59 (0.02)	2.17 (0.15)	2.75 (0.31)	1.63 (0.07)	<0.001
Major Events, Mean (SE)	0.73 (0.01)	0.93 (0.07)	1.23 (0.16)	0.77 (0.04)	0.002
Minor Events, Mean (SE)	0.86 (0.02)	1.24 (0.09)	1.52 (0.17)	0.86 (0.04)	<0.001

**Figure 1. Percentages of heterosexual, lesbian/gay, bisexual, and HSM men and women categorized as having thriving, average, or languishing mental health resilience, among those reporting 2 or more past-year stressful life events**

