

Sex-specific sexual-orientation disparities in modifiable dementia risk profiles and composite mid-life risk burden: Evidence from BRFSS 2023



BACKGROUND/OBJECTIVES

Dementia prevention targets multiple modifiable risk factors across adulthood, yet surveillance evidence is limited on whether risk profiles and cumulative burden differ by sexual orientation and sex.

This study evaluated sex-disaggregated sexual orientation differences in dementia-related modifiable risks and composite mid-life burden.

METHODS

- **Data source:** BRFSS 2023
- **Population:** adults aged 40 years and older
- **Sex strata:** female and male
- **Sexual orientation groups:** heterosexual/straight, gay/lesbian, bisexual
- **Outcomes (age 40+):** depression history, current smoking, low social support, physical inactivity, diabetes, stroke history
- **Mid-life outcomes (age 40-65):** high cholesterol, hypertension, obesity
- **Analyses:** weighted prevalence estimates and odds ratios (ORs)
- **Composite burden:** age-adjusted partial ANU-ADRI score

HIGHLIGHTED ODDS RATIOS

FEMALES

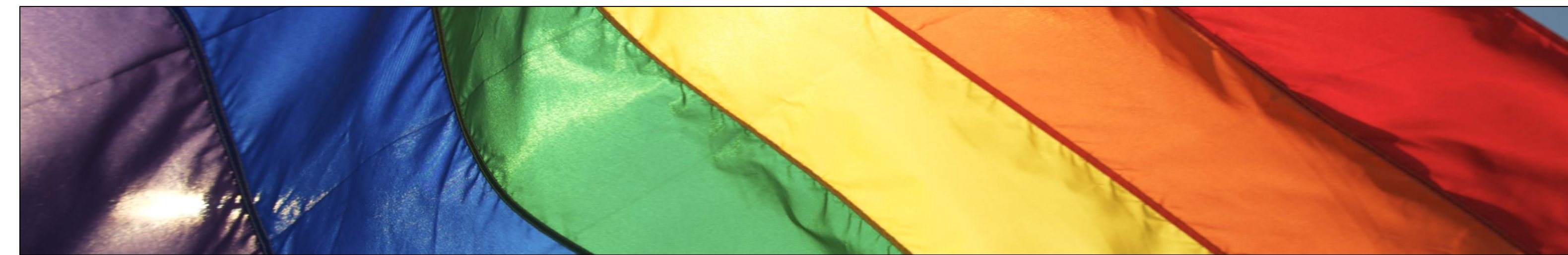
Bisexual women vs straight women: depression OR 2.71; smoking OR 1.90; low social support OR 1.62; mid-life obesity OR 1.40

Lesbian women vs straight women: depression OR 1.66

MALES

Gay men vs straight men: depression OR 2.90; low education OR 0.44; mid-life cholesterol OR 1.36; mid-life obesity OR 0.73

Bisexual men vs straight men: depression OR 2.91; low social support OR 1.86



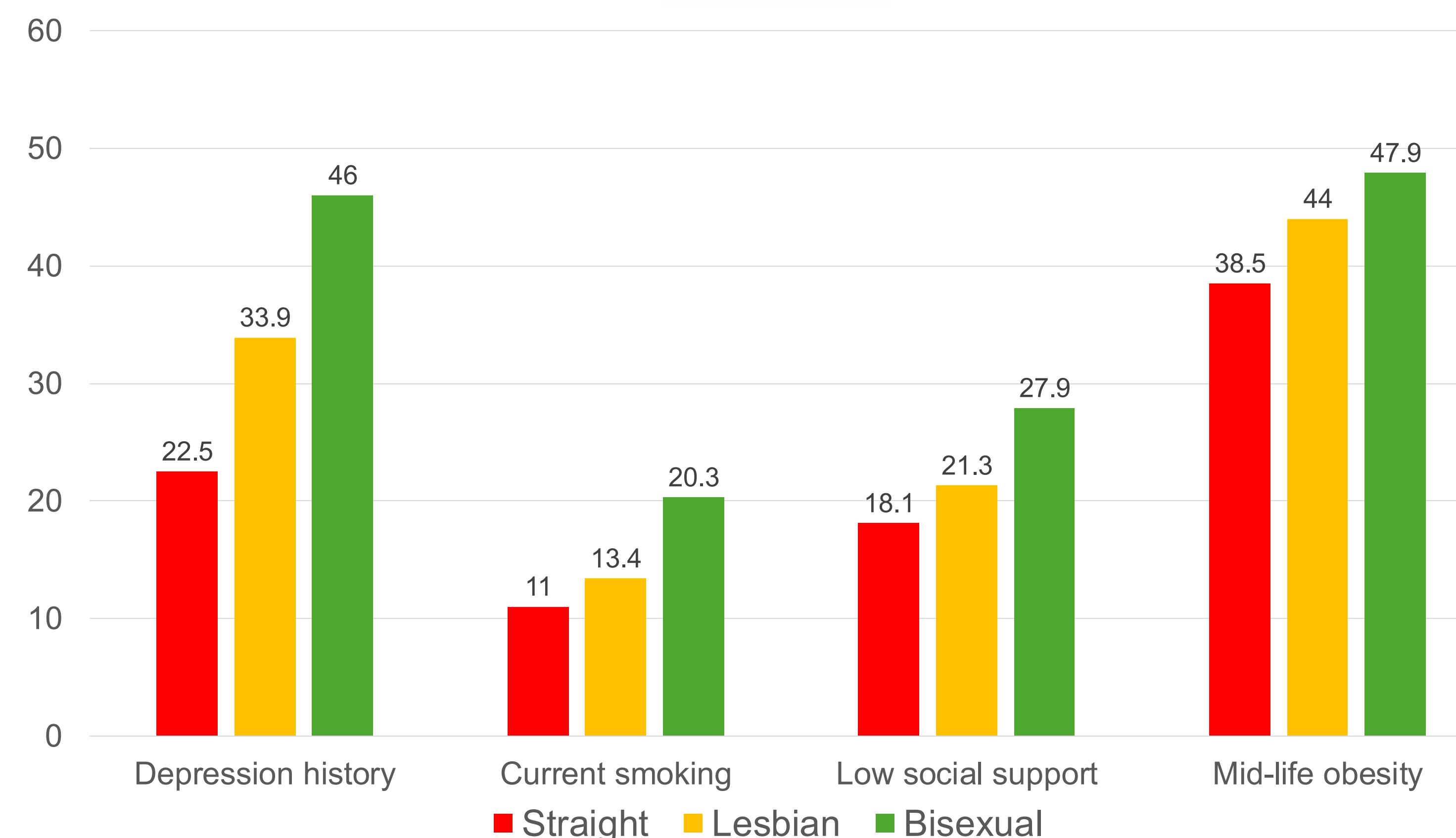
KEY RESULTS



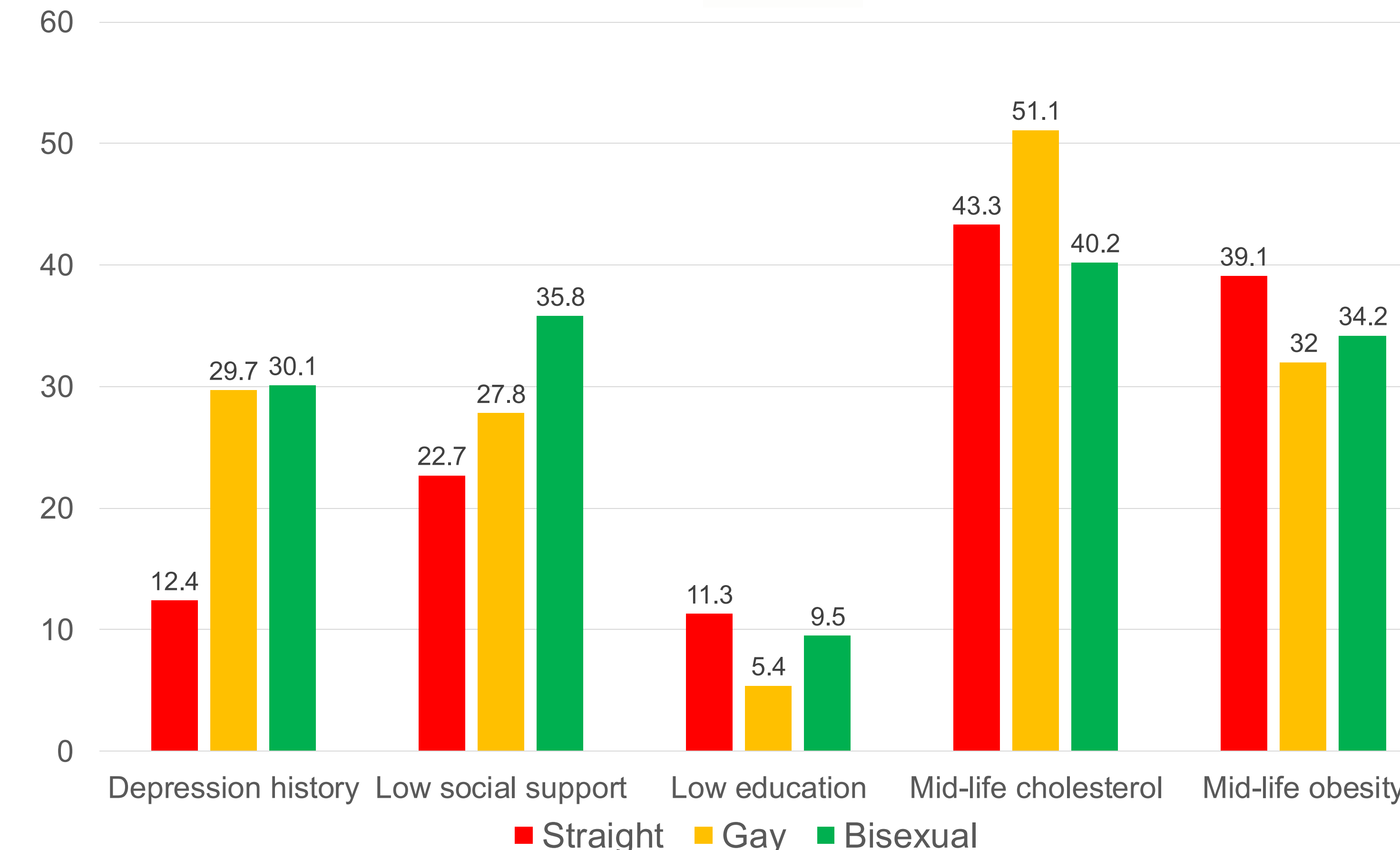
Psychosocial risks showed the clearest disparities, especially among bisexual adults.

Selected weighted prevalence disparities (%)

FEMALES



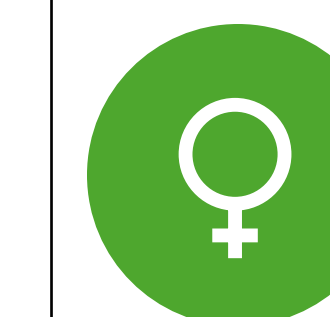
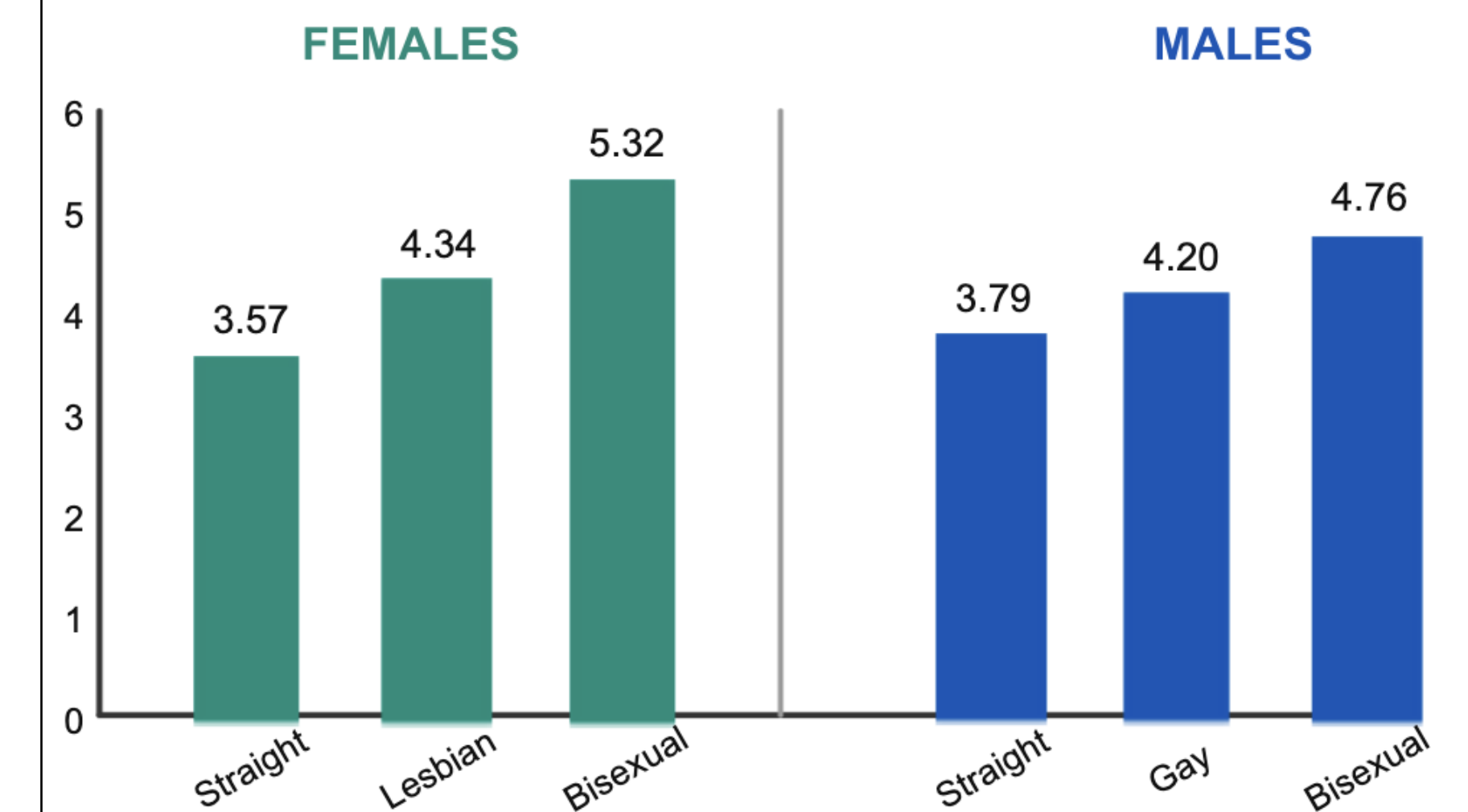
MALES



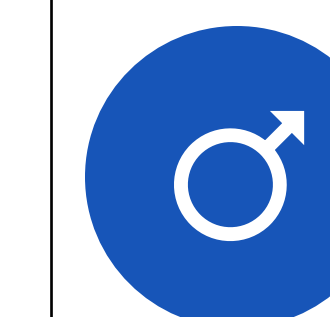
No other comparisons reached $\alpha=0.05$.

COMPOSITE MID-LIFE BURDEN

Composite mid-life burden
(parital ANU-ADRI)
Age-adjusted mean score



Compared with straight women, partial ANU-ADRI increased by +0.79 (95% CI 0.17-1.42) in lesbians and +1.65 (95% CI 1.21-2.09) in bisexual women.



In males, elevation was statistically significant only for bisexual men: +0.86 (0.12-1.61) vs straight men.

CONCLUSIONS

Sex-disaggregation is crucial because sexual orientation disparities in dementia related risks differ in both pattern and magnitude across females and males.

Disparities were concentrated in psychosocial risks, highlighting critical prevention targets in sexual minority populations.

Higher composite mid-life burden was most consistent among bisexual adults – especially women – supporting tailored, multidomain prevention approaches that incorporate psychological risk reduction.

NEXT STEPS

Investigate changes over time using BRFSS 2014-2024 data, and the impact of policy shocks on sex x sexual orientation dementia risk burden.