

## **Background**

A higher burden of cardiovascular disease risk factors has been reported in sexual minority populations. Primordial prevention may therefore be a relevant preventative strategy. The study's objectives are to estimate the associations of Life's Essential 8 (LE8) and Life's Simple 7 (LS7) cardiovascular health scores with sexual minority status.

## **Methods**

The CONSTANCES is a nationwide French study that recruited randomly selected participants above 18 years in 21 cities. Sexual minority status was based on self-reported lifetime sexual behavior and categorized as lesbian, gay, bisexual, or heterosexual. The LE8 score includes non-smoking, diet, physical activity, Body Mass Index, blood glucose, blood pressure, blood lipids, and sleep health. The previous LS7 score included seven metrics without sleep health. Sexual minority status in the study was defined by participants' sex and their lifetime sexual partners' genders.

## **Results**

The study included 169,434 CVD-free adults (53.64% women, mean age: 45.99 years). Among 90,879 women, 555 (0.61%) were lesbian, 3,149 (3.47%) bisexual, and 84,363 (92.83%) heterosexual and 2,812 (3.09%) declined to disclose information about their sexual behavior. Among 78,555 men, 2,421 (3.08%) were gay, 2,748 (3.50%) bisexual, and 70,994 (90.37%) heterosexual and 2,392 (3.05%) declined to disclose information about their sexual behavior. In multivariable mixed effects linear regression models, lesbian ( $\beta$  -0.95 [-1.89; -0.02]) and bisexual women ( $\beta$  -0.78, 95% CI [-1.18; -0.38]) had a lower LE8 CVH score compared to heterosexual

women. Conversely, gay ( $\beta$  2.72, 95% CI [2.25; 3.19]) and bisexual men ( $\beta$  0.83, 95% CI [0.39; 1.27]) had a higher LE8 CVH score compared to heterosexual men. The findings were consistent, although of smaller magnitudes for the LS7 score.

## **Conclusions**

CVH disparities exist in sexual minority adults, particularly lesbian and bisexual women, who may represent a priority population for primordial CVD prevention.