

Sexuality orients stress reactivity

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Sexual orientation is a variable more strongly linked with cultural gender than biological sex. Credit: Thinkstock

Gay and bisexual men and heterosexual women have lower stress reactivity compared to heterosexual men. This is the surprising conclusion of a doctoral study undertaken by Robert-Paul Juster of the Institut universitaire en santé mentale de Montréal's Centre for Studies on Human Stress, under the supervision of Sonia Lupien, a professor at the University of Montreal's Department of Psychiatry.

"When exposed to performance-related stressors, gay and [bisexual men](#) react in a way comparable to heterosexual women, who seem to have lower [stress](#) responses compared to [heterosexual men](#). In contrast, [stress hormone levels](#) are higher in lesbians and bisexual women, who have a similar profile to heterosexual men."

The study published in the journal *Biological Psychiatry* sought to compare the biological stress reactivity of lesbian, gay, and bisexual (LGB) individuals with heterosexual individuals. "Studies in psychology and public health have shown that as a result of stigma-related stress, LGB individuals have more mental health problems compared to heterosexual individuals," said Juster. "So we thought it might be possible to see something in terms of cortisol levels – to know for sure."

Cortisol, a hormone secreted under stress, places the organism in a state of alert and harnesses the necessary energy to deal with danger. Over time, however, cortisol-induced reactions can have a significant impact on overall health. "By looking at certain criteria of psychological well-being, and cortisol and blood samples, we were able to determine the biological profiles of the participants and whether mental and physical health differs between LGB and heterosexual individuals," said the researcher.

LGB and heterosexual participants from the Montreal area were invited to Lupien's laboratory on two occasions. Her team recruited 87 men and women whose average age was 25 years. To measure [cortisol levels](#), saliva samples were collected from the participants following exposure to a stressor. Participants also completed psychological questionnaires and provided blood samples.

Resilience

The results confirmed a significant link between stress reactivity and sexual orientation, which had never been demonstrated before using cortisol samples. "We were surprised to find that [heterosexual](#) men had much stronger biological stress responses compared to gay and bisexual men, who did not seem disturbed by the stressor. For their part, lesbians and bisexual women reacted strongly compared to [heterosexual women](#), whose profile is more similar to gay and bisexual men."

According to the researcher, gay and bisexual men may show greater resilience, i.e., a better ability to cope with life's hardships and to bounce back after a difficult event. "Stigma-related stress encourages sexual minorities to develop adaptation strategies that make them better able to manage stress," said Juster. But why is this resilience not evident in lesbians and bisexual women? It is possible that performance-related stressors have an influence on certain subjects, admits Juster. "Studies have shown that women are generally more sensitive to stressors related to social rejection, while stressors related to achievement affect men more. Is masculine behaviour more present among lesbians and [bisexual women](#)?" asked the researcher. "Our study did not answer this question."

For Juster, however, the study reveals to what extent sexual orientation is a variable related more to gender identity than to the biological sex of individuals. "Men and women react differently to daily stress," he said, "but there are differences even within the LGB community. Thanks to our work, we have a better understanding of the interactions between sex, gender roles, sex hormone levels, [sexual orientation](#), and how these various concepts are associated with stress-related illnesses. Hence the importance of addressing mental health differently depending on both the biological sex and gender identity of individuals."

More information: Robert-Paul Juster et al. Sexual Orientation Modulates Endocrine Stress Reactivity, *Biological Psychiatry* (2015). [DOI: 10.1016/j.biopsych.2014.08.013](https://doi.org/10.1016/j.biopsych.2014.08.013)

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