

Discrimination may increase risk of anxiety disorders regardless of genetics, study finds

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Exposure to discrimination plays a significant role in the risk of developing anxiety and related disorders, even—in a first—after accounting for potential genetic risks, according to a multidisciplinary

team of health researchers led by Tufts University and the Harvard T.H. Chan School of Public Health.

Researchers determined that even after controlling for genetic risk for anxiety, depression, and neuroticism, greater reports of discrimination experiences remained associated with higher scores of anxiety and related [disorders](#). The findings, recently published in *Proceedings of the National Academy of Sciences*, suggest that discrimination is a risk factor for anxiety and related disorders rather than solely a result of common genetic liability.

The study authors included researchers from Stony Brook University, University of Minnesota, in addition to Harvard's School of Public Health and Tufts.

"The study results demonstrate that discriminatory experiences can potentially cause stress and [mental health problems](#) regardless of the genetic constitution of the individual," said Adolfo G. Cuevas, an assistant professor of community [health](#) and director of the Psychosocial Determinants of Health Lab at Tufts' School of Arts and Sciences, who is first author of the study. "From regular slights in public spaces to more significant incidents, such as being passed over for a promotion or a loan, these experiences can take a toll on your [mental health](#)."

Anxiety disorders, including generalized anxiety disorder, panic disorder or phobias, are the most common mental illness, affecting over 40 million people in the United States every year, according to the Anxiety and Depression Association of America. While exposure to discrimination has long been established as a risk factor in the development of these disorders, the relationship between discrimination and anxiety, when factoring in the role genetics play, has remained less clear.

To gain insight on the connection, the research team used data from a national probability sample of approximately 1,500 non-institutionalized, all English-speaking adults aged 25-74 and living in the mainland United States. Approximately 49 percent of the sample were women.

Three self-report scales were used to measure discrimination and other forms of social exclusion, including:

- everyday discrimination, e.g. "being treated with less courtesy than other people" and "receiving poorer service than other people at restaurants or stores;"
- major discrimination, e.g. "discouraged by a teacher or advisor from seeking higher education" and "being prevented from renting or buying a home in the neighborhood you wanted;" and
- chronic job discrimination, e.g. "being unfairly given the jobs that no one else wanted to do" and "whether your supervisor or boss use ethnic, racial, or sexual slurs or jokes."

After accounting for increased genetic liability for anxiety, depression, neuroticism, and other potential genetic and sociodemographic factors, the researchers found a high degree of interdependence between discrimination and anxiety.

The team said the findings demonstrate that alleviating the impact of discrimination has the potential to improve mental health within the overall population. "Anxiety is one of the most significant issues in mental health today, and our study conclusions underscore the importance of reducing discrimination exposure and thereby improving the public's mental health overall," said the senior author of the study, Robert F. Krueger, Distinguished McKnight University Professor of Psychology at the University of Minnesota.

"These findings allow us to engage in conversations with political

leaders, health officials, and community members to develop functional approaches to reduce exposure to discrimination and improve the mental health of all," David R. Williams, a study co-author and the Florence Sprague Norman and Laura Smart Norman Professor of Public Health at the Harvard T.H. Chan School of Public Health. Williams is also a professor in the department of African and African American Studies at Harvard.

The impact of [anxiety disorders](#) is significant. Symptoms are a common associated feature of depressive disorders and, generally, account for a substantial burden of morbidity and mortality as well as long-term work disability and absenteeism. For instance, [anxiety](#) disorders are associated with several chronic health conditions, including heart disease, hypertension, and diabetes.

The researchers identified key limitations of the study, including the use of a cohort of white-identifying respondents who were predominately of European ancestry. They noted while the effects of discrimination seem to be similar across racial/ethnic groups, racial/ethnic minorities experience more discrimination than their white counterparts, placing them at an increased risk for poor mental health. In addition, questions remain about the extent to which self-reported experiences of [discrimination](#) by whites are equivalent to those of more socially stigmatized groups.

More information: Adolfo G. Cuevas et al, Discrimination and anxiety: Using multiple polygenic scores to control for genetic liability, *Proceedings of the National Academy of Sciences* (2020). [DOI: 10.1073/pnas.2017224118](https://doi.org/10.1073/pnas.2017224118)

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