

Experiencing discrimination increases risk-taking, anger, and vigilance

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Experiencing rejection not only affects how we think and feel—over the long-term it can also influence our physical and mental health. New research suggests that when rejection comes in the form of discrimination, people respond with a pattern of thoughts, behaviors, and physiological responses that may contribute to overall health disparities.

"[Psychological factors](#), like discrimination, have been suggested as part of the causal mechanisms that explain how discrimination gets 'under the skin' to affect health," says psychological scientist and senior researcher Wendy Berry Mendes of the University of California, San Francisco. "We wanted to explore the behavioral consequences that follow experiences of discrimination to better understand these mechanisms."

Based on previous research, Mendes and her colleagues hypothesized that people would react differently depending on whether they were rejected by members of their in-group or by members of an out-group. Specifically, they predicted that people who experienced perceived discrimination—rejection from someone of another race—would show responses characteristic of approach-orientation, including anger, increased [blood flow](#), greater [vigilance](#), and more risk-taking behavior.

The researchers recruited 91 [participants](#) to take part in a study investigating social interactions and online communication. The participants completed an initial [memory task](#) and selected an online avatar that matched their race and sex. They provided a [saliva](#) sample and were hooked up to sensors that monitored cardiovascular activity.

The participants were told that they would be communicating with two "partners" over an online [chat program](#), giving a speech and taking part in a discussion as the partners provided feedback via chat. In reality, the partners' responses were controlled by research assistants in another room and their feedback was adapted from a list of negative statements that the research assistants typed in real-time.

Afterward, the participants provided another saliva sample and performed cognitive tasks that measured their recall from the earlier memory test, their vigilance, and their risk-taking.

The results from the study are reported in *Psychological Science*, a journal of the Association for Psychological Science.

The participants who were rejected by partners of a different race (i.e., White participants rejected by Black partners, Black participants rejected by White partners) showed increased cardiac output, lower vascular resistance, and lower cortisol reactivity than participants rejected by same-race partners. They also showed more anger.

The researchers note that these findings are consistent with previous research demonstrating that anger, not shame, is the dominant emotional response following experiences of racial bias.

Participants rejected by cross-race partners also showed greater sensitivity to rewards, leading them to engage in riskier behavior on a gambling task when the potential gain was greater.

Finally, participants who experienced cross-race rejection also showed increased vigilance for emotionally negative information. While vigilance can help individuals to detect danger and respond to stressors, it can also lead to "false alarms" in which individuals detect bias in ambiguous situations. Mendes and colleagues observe that this kind of

bias for emotionally negative information has been linked to anxiety and a host of clinical conditions.

As the researchers expected, same-race rejection was associated with a different pattern of physiological and cognitive responses.

Participants who were rejected by members of their own race showed greater cortisol increases, less efficient cardiac output, increased vascular resistance, and impaired memory recall—a pattern of physiological reactivity that, when experienced chronically and excessively, has been linked to accelerated "brain aging," cognitive decline, and early risk for Alzheimer's disease.

"Together, these findings suggest that while social rejection creates strong negative emotions that are manifested in changes in the brain and body, the race of the person who rejects you alters the responses to social rejection," Mendes explains.

Notably, White and Black participants responded similarly when they were rejected by cross-race partners, indicating that being on the receiving end of discrimination is painful regardless of your racial identity.

The researchers believe that these findings have broad implications. "Health care workers, epidemiologists, and others interested in understanding and combating racial [health disparities](#) may find the effects important because they offer a glimpse into the kinds of behavior that can be potentiated following an experience of discrimination," says Mendes.

Mendes and her colleagues plan to continue this line of research by examining how discrimination might influence various real-world behaviors, such as eating, sleeping, driving, and how people attend to

health messages.

Provided by Association for Psychological Science

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