

# Imaging study shows decrease in empathic responses to outsiders

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An observer feels more empathy for someone in pain when that person is in the same social group, according to new research in the July 1 issue of *The Journal of Neuroscience*. The study shows that perceiving others in pain activates a part of the brain associated with empathy and emotion more if the observer and the observed are the same race. The findings may show that unconscious prejudices against outside groups exist at a basic level.

The study confirms an in-group bias in empathic feelings, something that has long been known but never before confirmed by neuroimaging technology. Researchers have explored group bias since the 1950s. In some studies, even people with similar backgrounds arbitrarily assigned to different groups preferred members of their own group to those of others. This new study shows those feelings of bias are also reflected in [brain activity](#).

"Our findings have significant implications for understanding real-life social behaviors and social interactions," said Shihui Han, PhD, at Peking University in China, one of the study authors.

Other recent brain imaging studies show that feeling empathy for others in pain stimulates a brain area called the [anterior cingulate cortex](#). Building on these results, the study authors tested the theory that these empathic feelings increase for members of the same [social group](#). In this case, the researchers chose race as the social group, although the same effect may occur with other groups.

The researchers scanned brains areas in one Caucasian group and one Chinese group. The authors monitored participants as they viewed video clips that simulated either a painful needle prick or a non-painful cotton swab touch to a Caucasian or Chinese face. When painful simulations were applied to individuals of the same race as the observers, the empathic neural responses increased; however, responses increased to a lesser extent when participants viewed the faces of the other group.

Martha Farah, PhD, at the University of Pennsylvania, a cognitive neuroscientist and neuroethicist who was not affiliated with the study, says learning how empathic responses influence our behavior in many different situations is interesting both practically and theoretically. "This is a fascinating study of a phenomenon with important social implications for everything from medical care to charitable giving," she said.

But the finding raises as many questions as it answers, Farah said. "For example, is it racial identity per se that determines the brain's empathic response, or some more general measure of similarity between self and other?" she said. "What personal characteristics or life experiences influence the disparity in empathic response toward in-group and out-group members?"

Source: Society for Neuroscience ([news](#) : [web](#))

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