

When angry, talk: Describing emotional situations alters heart rate, cardiac output

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The act of describing a feeling such as anger may have a significant impact on the body's physiological response to the situation that elicits the emotion, according to research published June 5 in the open access journal *PLOS ONE* by Karim Kassam from Carnegie Mellon University and Wendy Mendes from the University of California San Francisco.

Participants in the study were asked to complete a difficult math task in the presence of evaluators trained to offer negative feedback as they worked through the assignment. [Negative feedback](#) was designed to elicit anger in some participants and shame in others. At the end of the task, participants were given a questionnaire that appraised their feelings (e.g. How angry are you right now?), or a set of neutral questions that did not assess their emotional state.

In the 'anger' condition, participants who completed the questionnaire about emotional state had different physiological responses, measured by heart rate changes, compared to those who answered neutral questions. Among these participants, reporting on one's [emotional state](#) was associated with a smaller increase in heart rate compared to not reporting on it. As the study explains, "Measurement effects exist throughout the sciences - the act of measuring often changes the properties of the observed. Our results suggest that emotion research is no exception."

Lead author Karim Kassam added: "What impressed us was that a subtle manipulation had a big impact on people's [physiological response](#). Essentially, we're asking people how they're feeling and finding that

doing so has a sizeable impact on their cardiovascular response."

More information: Kassam KS, Mendes WB (2013) The Effects of Measuring Emotion: Physiological Reactions to Emotional Situations Depend on whether Someone Is Asking. *PLOS ONE* 8(6): e64959. [doi:10.1371/journal.pone.0064959](https://doi.org/10.1371/journal.pone.0064959)

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