

Self-Affirmation Enhances Performance, Makes Us Receptive to Our Mistakes

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Life is about failure as much as it is about success. From the mistakes we make at work or school to our blunders in romantic relationships, we are constantly reminded of how we could be better. By focusing on the important qualities that make us who we are – a process called *self-affirmation* – we preserve our self-worth in the face of our shortcomings.

Self-affirmation has been shown to have powerful effects – research suggests that it can minimize the anxiety, stress, and defensiveness associated with threats to our sense of self while keeping us open to the idea that there is room for improvement. But how does the process of self-affirmation actually work?

New research published in [Psychological Science](#), a journal of the [Association for Psychological Science](#), explores the neurophysiological reactions that could explain how self-affirmation helps us deal with threats to our self-integrity.

“Although we know that self-affirmation reduces threat and improves performance, we know very little about why this happens. And we know almost nothing about the neural correlates of this effect,” says lead researcher Lisa Legault of Clarkson University.

Legault and her colleagues Michael Inzlicht of the University of Toronto Scarborough and Timour Al-Khindi of Johns Hopkins University posed several hypotheses. They theorized that because self-affirmation has been shown to make us more open to threats and unfavorable feedback, it should also make us more attentive and emotionally receptive to the errors that we make.

The researchers further hypothesized that these effects on attention and emotion could be measured directly in the form of a well-known brain response called error-related negativity, or ERN. The ERN is a pronounced wave of electrical activity in the brain that occurs within 100 ms of making an error on a task.

To test their hypotheses, the researchers randomly assigned 38 undergraduates to either a self-affirmation or a non-affirmation condition at the beginning of the study. In the self-affirmation condition, participants were asked to rank six values – including aesthetic, social, political, religious, economic, and theoretical values – from most to least important. They then had five minutes to write about why their highest-ranked value was important to them. In the non-affirmation condition, participants also ranked the six values, but they then wrote why their highest-ranked value was not very important to them. This was done in order to undermine self-affirmation in that group.

After ranking the values, the participants performed a test of self-control – the “go/no-go” task – in which they were told to press a button whenever the letter M (the “go” stimulus) appeared on a screen; when the letter W (the “no-go” stimulus) appeared, they were supposed to refrain from pressing the

button. To increase the sense of threat in the task, participants were given negative feedback (“Wrong!”) when they made a mistake.

While they were completing the go/no-go task, the participants’ brain activity was recorded using electroencephalography, or EEG.

The findings suggest that self-affirmation improved participants’ performance on the go/no-go task. Participants in the self-affirmation condition made fewer errors of commission – pressing the button when they shouldn’t have – than did those in the non-affirmation condition.

But the participants’ brain activity revealed an even more interesting story. While the self-affirmation and non-affirmation groups showed similar brain activity when they answered correctly, self-affirmed participants showed a significantly higher ERN when they made an error. This effect held up even after the researchers accounted for the number of errors of commission and errors of omission the participants made, in addition to their reaction times for the task.

Notably, the association between the ERN and the number of errors that participants made was stronger for the self-affirmed group. This suggests that self-affirmation enhanced the ERN response for those participants, which in turn predicted their performance on the task. The researchers speculate that participants who were self-affirmed were more receptive to errors which allowed them to better correct for their mistakes.

“These findings are important because they suggest one of the first ways in which the brain mediates the effects of self-affirmation,” says Legault.

While these findings help to demystify the mechanisms that underlie self-affirmation, they may also have important practical implications. According to Legault, “Practitioners who are interested in using self-affirmation as an intervention tactic in academic and social programming might be interested to know that the strategy produces measurable neurophysiological effects.”

Legault says that, ultimately, this research helps to show that “error-related distress, and our awareness thereof, can actually be a good thing.”