

Gratitude may improve your health

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Be thankful for what you have—it might improve your physical and mental health, according to a new global study that uses cell phone data.

People who were more grateful had [lower blood pressure](#) and [heart rate](#), as well as greater feelings of appreciation toward others. The study

found that optimism was also linked to health and mental benefits, such as [better sleep quality](#) and more positive expectations and reflections.

Researchers from the University of Michigan and University of California, San Francisco, examined these traits through a cell phone app called MyBPLab with embedded sensors that measured blood pressure and heart rates of 4,825 participants from around the world including the U.S., Australia, India and Hong Kong. Previous studies on gratitude and optimism often involved laboratory visits or brain scans for data collection.

The optic sensors send different light waves through the tissue to detect changes in [blood volume](#) and an algorithm in the phone is used to calculate blood pressure. To have accurate [blood pressure](#) levels, the user calibrates the phone sensor against an external arm cuff.

Respondents reported stress levels, health behaviors (sleep, exercise, daily expectations), and thoughts three times a day for 21 days from March 15, 2019, until Dec. 8, 2020. They rated 12 items such as "I have so much in life to be thankful for" and "In uncertain times, I usually expect the best."

The findings showed that gratitude and optimism are positive psychological dispositions associated with beneficial outcomes. Gratitude highlighted the positive aspects of the day, whereas optimism minimized the negative aspects of the day, the study indicated.

"Gratitude also orients people toward others and the benefits they have bestowed to them, whereas optimism may orient people to themselves as they focus on their own specific future," said Amie Gordon, the study's co-author and assistant professor in U-M's Department of Psychology.

The findings also contradicted the researchers' hypothesis that higher

optimism would be associated with forward-looking responses and interpretations of positive events. Optimism predicted the ratings of the unpleasantness of the worst part of the day—a backward-looking response focused on a negative event, the study showed.

David Newman, the study's lead author and UCSF postdoctoral scholar of psychiatry, said highly optimistic people were likely to think their worst part of the day was relatively less unpleasant than were less optimistic people.

In addition, optimism was a better predictor of sleep quality and stress frequency and intensity than gratitude.

"Our findings provide important advances to our understanding of gratitude and optimism by showing that [gratitude](#) contributes to accentuating the positive aspects of the day, whereas optimism functions by minimizing the negative aspects of the day," he said.

The study, which was led by UCSF psychiatry professor Wendy Berry Mendes, appears in the online publication *Emotion*.

More information: David B. Newman et al, Comparing daily physiological and psychological benefits of gratitude and optimism using a digital platform., *Emotion* (2021). [DOI: 10.1037/emo0001025](https://doi.org/10.1037/emo0001025)

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