

Enhancing cognition in older adults also changes personality

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Engagement in cognitively challenging tasks led to an increase in openness to new experiences, researchers found. Credit: Thompson-McClellan

A program designed to boost cognition in older adults also increased their openness to new experiences, researchers report, demonstrating for the first time that a non-drug intervention in older adults can change a personality trait once thought to be fixed throughout the lifespan.

Personality psychologists describe openness as one of five major personality traits. Studies suggest that the other four traits ([agreeableness](#), conscientiousness, [neuroticism](#) and extraversion) operate independently of a person's [cognitive abilities](#). But openness – being flexible and creative, embracing new ideas and taking on challenging intellectual or cultural pursuits – does appear to be correlated with cognitive abilities.

The new study, published in the journal *Psychology and Aging*, gave [older adults](#) a series of pattern-recognition and problem-solving tasks and puzzles that they could perform at home. Participants ranged in age from 60 to 94 years and worked at their own pace, getting more challenging tasks each week when they came to the lab to return materials.

"We wanted participants to feel challenged but not overwhelmed," said University of Illinois educational psychology and Beckman Institute professor Elizabeth Stine-Morrow, who led the research. "While we didn't explicitly test this, we suspect that the training program – adapted in difficulty in sync with skill development – was important in leading to increased openness. Growing confidence in their reasoning abilities possibly enabled greater enjoyment of intellectually challenging and creative endeavors."

Researchers tested the cognitive abilities and personality traits of 183 participants and a control group of 131 older adults a few weeks before and after the intervention.

At the end of the program, those who had engaged in the training and practice sessions saw improvement in their pattern-recognition and problem-solving skills, while those in the control group did not. And those who improved in these inductive reasoning skills also demonstrated a moderate but significant increase in openness.

This study challenges the assumption that personality doesn't change once one reaches adulthood, said Illinois psychology professor and study co-author Brent Roberts.

"There are certain models that say, functionally, personality doesn't change after age 20 or age 30. You reach adulthood and pretty much you are who you are," he said. "There's some truth to that at some level. But

here you have a study that has successfully changed [personality traits](#) in a set of individuals who are (on average) 75. And that opens up a whole bunch of wonderful issues to think about."

More information: "Can An Old Dog Learn (and Want to Experience) New Tricks: Cognitive Training Increases Openness to Experience in Older Adults," *Psychology and Aging*.

Provided by University of Illinois at Urbana-Champaign

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