

Excessive worrying may have co-evolved with intelligence

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Worrying may have evolved along with intelligence as a beneficial trait, according to a recent study by scientists at SUNY Downstate Medical Center and other institutions. Jeremy Coplan, MD, professor of psychiatry at SUNY Downstate, and colleagues found that high intelligence and worry both correlate with brain activity measured by the depletion of the nutrient choline in the GlaxoSmithKline Pharmaceuticals, Sackler Institute of Columbia University, NIH/National Institute of Mental Health, National Alliance for Research on Schizophrenia and Depression, Psychiatric Institute subcortical white matter of the brain. According to the researchers, this suggests that intelligence may have co-evolved with worry in humans.

"While excessive worry is generally seen as a negative trait and high intelligence as a positive one, worry may cause our species to avoid dangerous situations, regardless of how remote a possibility they may be," said Dr. Coplan. "In essence, worry may make people 'take no chances,' and such people may have higher [survival rates](#). Thus, like intelligence, worry may confer a benefit upon the species."

In this study of anxiety and intelligence, patients with [generalized anxiety disorder](#) (GAD) were compared with healthy volunteers to assess the relationship among [intelligence quotient](#) (IQ), worry, and subcortical white matter metabolism of choline. In a control group of normal volunteers, high IQ was associated with a lower degree of worry, but in those diagnosed with GAD, high IQ was associated with a greater degree of worry. The correlation between IQ and worry was significant in both

the GAD group and the healthy control group. However, in the former, the correlation was positive and in the latter, the correlation was negative. Eighteen healthy volunteers (eight males and 10 females) and 26 patients with GAD (12 males and 14 females) served as subjects.

Previous studies have indicated that excessive worry tends to exist both in people with [higher intelligence](#) and lower intelligence, and less so in people of moderate intelligence. It has been hypothesized that people with lower intelligence suffer more anxiety because they achieve less success in life.

The results of their study, "The Relationship between [Intelligence](#) and Anxiety: An Association with Subcortical White Matter Metabolism," was published in a recent edition of *Frontiers in Evolutionary Neuroscience*, and can be read [online](#).

The study was selected and evaluated by a member of the Faculty of 1000 (F1000), placing it in their library of the top 2% of published articles in biology and medicine.

Provided by SUNY Downstate Medical Center

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