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Anxious people worry about risk, not loss

Reports new study in Biological Psychiatry

Philadelphia, PA, June 6, 2017 – Life is a series of choices. Every time you make a decision, there is a possibility that things won't go as expected (risk) or that something bad will happen (loss). Aversion to risk and loss have powerful influences on how we make decisions. In a [new paper](#) in *Biological Psychiatry*, co-senior authors Dr. Jonathan Roiser and Dr. Oliver Robinson, both of the Institute of Cognitive Neuroscience, University College London, and colleagues studied the influence of risk and loss aversion in people with anxiety, a disorder characterized by debilitating avoidance behavior and difficulties making daily-life decisions.

Anxious people might, for example, avoid driving over bridges because they are concerned that the bridge might collapse, explained first author Dr. Caroline Charpentier also of the Institute of Cognitive Neuroscience. “But is this because they overestimate the risk of this happening (i.e., a difference in risk aversion), or because the devastating consequences loom larger (i.e., a difference in loss aversion)?” The findings of the new study indicate that it may be more about risk than loss.

“This paper uses a sophisticated computational approach to shed light on why anxiety can be so disabling,” said Dr. John Krystal, Editor of *Biological Psychiatry*. “Nearly all life decisions involve risk. It appears that anxious people are hypersensitive to these risks, influencing their emotions, thoughts and behavior.”

In the study, 25 unmedicated patients diagnosed with generalized anxiety disorder and 23 healthy participants performed a gambling task to assess decision making. The design of the task addressed a significant omission of previous risky decision-making studies, the independent contributions of risk aversion (from uncertainty about the outcome) and loss aversion (from a disproportionate focus on potential losses). In the task, participants had to make decisions between a safe and risky option. Changing up the gamble — such as a sure gain versus a riskier higher gain or a potential gain versus a potential loss — allowed the researchers to separately assess risk and loss aversion.

Anxious people had similar levels of loss aversion to healthy people, but showed enhanced risk aversion. “In other words, everyone is loss averse, but anxious people are more reluctant to take risks than non-anxious people,” said Dr. Charpentier.

The findings refine the understanding of altered cognitive processing in anxiety disorder by disentangling the contributions of risk and loss aversion. Similar levels of loss aversion contrast previous assumptions that people with anxiety dwell excessively on potential negative outcomes, and instead suggest that aversion to taking risks drives avoidance behavior observed in anxious people.

The study takes an important step toward determining the best approach for cognitive behavioral therapy to reduce avoidance behavior in anxiety disorders. "It suggests that we should focus on encouraging anxious individuals to increase their tolerance of risk rather than dampening down their sensitivity to negative outcomes," said Dr. Charpentier.

Notes for editors

The article is "Enhanced Risk Aversion, But Not Loss Aversion, in Unmedicated Pathological Anxiety," by Caroline J. Charpentier, Jessica Aylward, Jonathan P. Roiser, and Oliver J. Robinson (<http://dx.doi.org/10.1016/j.biopsych.2016.12.010>). It appears in *Biological Psychiatry*, volume 81, issue 12 (June 15, 2017), published by [Elsevier](#).

Copies of this paper are available to credentialed journalists upon request; please contact Rhiannon Bugno at Biol.Psych@UTSouthwestern.edu or +1 214 648 0880. Journalists wishing to interview the authors may contact Dr. Caroline Charpentier at caroline.charpentier1@gmail.com or Dr. Oliver Robinson at o.robinson@ucl.ac.uk.

The authors' affiliations and disclosures of financial and conflicts of interests are available in the article.

John H. Krystal, M.D., is Chairman of the Department of Psychiatry at the Yale University School of Medicine, Chief of Psychiatry at Yale-New Haven Hospital, and a research psychiatrist at the VA Connecticut Healthcare System. His disclosures of financial and conflicts of interests are available [here](#).

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