TMS TRENDS

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NEUROECONOMICS: ANXIETY AND FINANCIAL DECISION-MAKING

Each year, 40 million American adults are reported to suffer from anxiety disorders. Although treatable, anxiety has the potential to inhibit many aspects of daily life that are otherwise taken for granted, especially decision-making. A scientific review by Drs. Elizabeth Phelps and Catherine Hartley explored just how much influence anxiety disorders exert on the decision-making process.

Their approach to describing this issue is a novel one: using neuroeconomics. Neuroeconomics is a hybrid field of study incorporating resources from the studies of neuroscience, psychology, and economics.

From a neuroscientific perspective, the brain systems implicated in decision-making, anxiety, and fear overlap significantly, most notably the regions of the amygdala, insular cortex, and prefrontal cortex. The researchers here postulate that this individual-variant circuitry mediates the role that anxiety plays in making decisions.

This review is just the start of future research in the novel field of neuroeconomics as it relates to the daily lives of those living with different psychiatric disorders.

HTTP://WWW.FLICKR.COM/PHOTOS/BISMAC/3943372959/

PUPIL DILATION: PREDICTIVE OF RESPONSE TO CBT?

Although efficacious overall, like most treatments, Cognitive Behavioral Therapy (CBT) is not for everyone. In fact, only about half of patients have been shown to benefit. However, there are ways to tell beforehand if a patient will likely benefit from treatment—for one, a brain scan. But who would want to go through the time and expense of a procedure instead of trying therapy first?

Researchers at the University of Pittsburgh and the University of Pennsylvania might have found a viable alternative. Through findings published in *Biological Psychiatry*, researchers have shown that the efficacy of CBT may be predicted through the monitoring of pupil dilation responses to emotion-charged words. If that seems strange to you, consider this: your eyes are your brain's most direct connection to the outside world and, conversely, the most direct connection to your brain. Emotion regulation is directly tied to the pupil dilation response.

Although limited in participants, this study shows promise for future patients being able to elect the treatment most suited to their specific needs—and their brains' primary wiring.

Happy New Year from the TMS Institute of Pennsylvania!