## New Research From Clinical Psychological Science

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Read about research recently published in *Clinical Psychological Science*:

Genetic and Environmental Associations Among Executive Functions, Trait Anxiety, and Depression Symptoms in Middle Age

Daniel E. Gustavson, Carol E. Franz, Matthew S. Panizzon, Chandra A. Reynolds, Hong Xian, Kristen C. Jacobson, Rosemary Toomey, Michael J. Lyons, and William S. Kremen

To determine whether anxiety and depression symptoms are associated with a decreased ability to control and modify one's own behavior in response to a goal (i.e., executive functioning), and to discern the role of genetic influences on this association, Gustavson and colleagues tested more than 500 middle-aged twin pairs. They measured participants' anxiety and depression symptoms and their executive functioning — general cognitive ability, working memory, ability to inhibit responses, and ability to shift task goals. More anxiety/depression symptoms were associated with poorer executive functioning, and this relationship was mostly explained by genetic influences. However, environmental influences also affected the relationship between depression and executive functioning but not the relationship between cognitive functioning and anxiety. These associations were observed in late middle age, when cognitive abilities begin to decline, suggesting the importance of considering executive functioning when examining the relationship between anxiety, depression, and cognitive decline. Moreover, decline in executive functioning may underlie age-related decline in other cognitive abilities. Psychological interventions for individuals with anxiety or depression may be more successful when they include training in executive-functioning tasks.

Motivations to Experience Happiness or Sadness in Depression: Temporal Stability and Implications for Coping With Stress

Yael Millgram, Jutta Joormann, Jonathan D. Huppert, Avital Lampert, and Maya Tamir



Individuals experiencing various levels of depression rated their motivations to experience sadness and happiness, their current emotions and stress, and their attempts to regulate or change their emotional reactions. They were assessed three times: before an exam period, during the academic semester, and 1 to 3 months later during an exam period. In all of the assessments, individuals experiencing more depression were less likely to be motivated to experience happiness and more motivated to experience sadness compared with individuals experiencing less depression. Thus, higher motivation to experience sadness and lower motivation to experience happiness seem to be stable predispositions associated with depression. Individuals experiencing more depression and who were less motivated to experience happiness were less likely to sustain happiness when exposed to happy stimuli and to downplay their negative emotions during real-life stressful events (i.e., exams) compared with individuals not experiencing depression. These findings suggest that helping individuals with depression enhance their motivation to experience happiness may promote better adjustment to stress in daily life.

Thoughts as Unexpected Intruders: Context, Obsessive-Compulsive Symptoms, and the Sense of Agency Over Thoughts

Isaac Fradkin, Baruch Eitam, Asher Y. Strauss, and Jonathan D. Huppert



To examine the relationship between sense of agency (SoA) over thoughts (i.e., the experience of being the source of one's own thoughts) and obsessive-compulsive (OC) symptoms, Fradkin et al. told participants that an imperceptible and nonaudible auditory message (sham) could insert thoughts in their minds and measured whether they reported having experienced inserted thoughts. Participants were informed about the message that they would supposedly randomly hear (e.g., a negative word, such as *death*, or a neutral word, such as *chair*) and were instructed to click the mouse whenever they thought they heard it. Participants also completed an OC Inventory. Participants with high OC symptoms were more likely to falsely hear the sham message than were participants with low OC symptoms, showing less SoA over their thoughts. This tendency was not altered by the valence of the thoughts. Low SoA seemed related to surprise (i.e., the extent to which a thought seems out of context, given one's other thoughts), and participants who reported experiencing out-of-context or surprising thoughts in daily life were more likely to hear the sham message. Thus, context and experience of violated expectations seem to accompany low SoA. These findings suggest that besides the content and appraisals of intrusive thoughts, researchers and practitioners should also focus on the contextual and phenomenological characteristics of intrusive thoughts.