## **New Research From Clinical Psychological Science**

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Read about the latest research published in Clinical Psychological Science:

Pubertal Timing as a Transdiagnostic Risk for Psychopathology in Youth Elissa J. Hamlat, Hannah R. Snyder, Jami F. Young, and Benjamin L. Hankin



With the onset of puberty, rates of psychopathology increase, and entering puberty earlier than one's peers seems to increase the risk for psychopathology. Hamlat and colleagues evaluated how pubertal timing is related to psychopathology, when assessed by models that conceptualize psychopathology either as (a) separate syndromes (e.g., social anxiety, depression, conduct disorder, physical symptoms, or separation anxiety), (b) internalizing factors (e.g., depression and anxiety) and externalizing factors (e.g., aggression and conduct disorder), or (c) a general psychological factor (p factor) and two internalizing-specific and externalizing-specific factors. The researchers recruited parents and youths from third, sixth, and ninth grades (youths 9–17 years old) and had them complete measures assessing current pubertal development and psychological functioning (i.e., depression, anxiety, conduct disorders, aggression, inattention, and hyperactivity). Results indicated that early puberty was equally associated with separate syndromes but also presented unique associations with conduct disorder and physical symptoms. Puberty was associated with internalizing and externalizing factors and with the p factor, as well as with the internalizing-specific and externalizing-specific factors. Thus, across the three different models used to assess psychopathology, early puberty was an important risk factor. The authors suggest that the transdiagnostic effect found for pubertal timing reinforces the importance of examining risk factors across different models of psychopathology.

Probabilistic Learning by Positive and Negative Reinforcement in Generalized Anxiety Disorder Lucas S. LaFreniere and Michelle G. Newman

Generalized anxiety disorder (GAD), characterized by excessive and uncontrollable worry, is

widespread and resistant to treatment. Examining the factors that contribute to GAD's maintenance may help to improve the efficacy of GAD treatments. To determine whether certain learning tendencies existed in individuals with GAD, LaFrenier and Newman tested university students with and without GAD in a probabilistic learning task in which participants were presented with pairs of slot machines and had to learn the probability rates at which each of the slot machines would remove an angry face from the screen (negative reinforcement) or make a happy face appear on the screen (positive reinforcement). Participants with GAD learned less and at a slower rate than those without GAD, regardless of positive or negative reinforcement. After the task, participants with GAD, relative to those without GAD, underestimated the likelihood of having a positive outcome (i.e., removing the angry face or making the happy face appear), especially when that likelihood was high. Participants with GAD also found the task less desirable and would have preferred a different type of reinforcement than the one they had received, regardless of the type of reinforcement received. Given their impaired probabilistic learning and dismissal of reinforcement, individuals with GAD may benefit from therapies that guide them to savor rewards and attend to favorable outcomes.

## Genetic and Environmental Links Between General Factors of Psychopathology and Cognitive Ability in Early Childhood

Andrew D. Grotzinger, Amanda K. Cheung, Megan W. Patterson, K. Paige Harden, and Elliot M. Tucker-Drob

To what extent do child psychopathology and individual cognitive ability (e.g., mathematic skills, reading skills) reflect shared genetic influences? To assess the genetic and environmental influences that contribute to an association between a general factor of psychopathology (*p*) and a general cognitive factor or intelligence (*g*), Grotzinger and coauthors used data from two American twin studies. These studies followed pairs of twins from early childhood and collected measures of cognitive and psychomotor abilities (e.g., walking backward, skipping), psychopathology — internalizing and externalizing behaviors (e.g., anxiety and aggressiveness, respectively), and psychosocial adjustment. Analyses indicated that when the general psychopathology factor was higher, the general intelligence factor tended to be lower. Moreover, twins with lower general intelligence tended to have cotwins with higher psychopathology factor too, which indicates that this relationship between intelligence and psychopathology was, in part, attributable to genetic factors. The association between psychopathology and intelligence thus seems to depend on shared genetic and environmental factors that operate in the first years of life, before formal schooling.