

Low attention control in early adolescence is a genetic risk factor for anxiety disorders

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University of Texas at Arlington researchers have found that low attention control in early adolescence is related to a genetic risk factor for four different anxiety disorders. Young teens who suffer from anxiety are also more vulnerable to additional problems like depression, drug dependence, suicidal behavior and educational underachievement.

The National Institutes of Mental Health reports that 8 per cent of teens ages 13 to 18 have an anxiety disorder, with anxiety-related problems often peaking during this time. Most adults diagnosed with anxiety or mood disorders also report the presence of symptoms earlier in their lives.

"Appropriate and earlier intervention could really assist these patients and improve their outlooks on the long-term," said Jeffrey Gagne, UTA assistant professor of psychology and lead author of the study. "Having a visible marker like low attention control, which usually appears and can be identified before anxiety, could improve the treatment of these disorders."

Gagne and UTA graduate student Catherine Spann recently published their research as "The Shared Etiology of Attentional Control and Anxiety: An Adolescent Twin Study" in the *Journal of Research on Adolescence*. Deirdre O'Sullivan, Nicole Schmidt and H. Hill Goldsmith, all of the University of Wisconsin-Madison, also participated in the study, which was supported by several grants from the National Institute of Mental Health including a Silvio O. Conte Center for Neuroscience

grant.

This research constitutes the first twin study-based examination of genetic and environmental factors that contribute to both low attention control and four distinct [anxiety symptoms](#) in [early adolescence](#).

The researchers used a combination of self-ratings and mother ratings to assess scores for obsessive, social, separation and [generalized anxiety symptoms](#) in 446 twin pairs with a mean age of 13.6 years, all enrolled in the Wisconsin Twin Project.

They then explored the extent to which links between low levels of attention and anxiety symptoms are genetically and environmentally mediated in adolescence.

Non-shared environmental influences were significant across [attention control](#) and all anxiety variables. Genetic correlations ranged from 36 to 47 per cent, a pattern that suggests that low attention can be considered a phenotypic and [genetic risk factor](#) for anxiety.

Risk level varied, however, depending on the specific type of disorder, with the highest correlations being for generalized and separation anxieties, and the lowest for obsessive-compulsive disorder.

Perry Fuchs, chair of UTA's department of Psychology in the College of Science, emphasized the importance of this work in the context of the university's increasing focus on health and the human condition within the Strategic Plan 2020: Bold Solutions|Global Impact.

"Adolescence is clearly an important development period," Fuchs said. "Better assessment of teens' ability to concentrate could facilitate the identification of those at risk of [anxiety](#) and could also inform molecular genetic studies, which would be the logical next stage for research."

More information: Jeffrey R. Gagne et al, The Shared Etiology of Attentional Control and Anxiety: An Adolescent Twin Study, *Journal of Research on Adolescence* (2016). [DOI: 10.1111/jora.12260](https://doi.org/10.1111/jora.12260)

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