Explaining the relationship between temperament and symptoms of psychiatric disorders from preschool to middle childhood: hybrid fixed and random effects models of Norwegian and Spanish children.

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Abstract

BACKGROUND:
Four explanations for the concurrent and prospective associations between temperament and psychopathology in children have been suggested: predisposition, complication/scar, common cause/continuity, and pathoplasty/exacerbation. Because the confounding effects of common causes have not been ruled out in prior work, the support for the various explanations is uncertain.

METHODS:
Screen-stratified community samples of 4-year olds in Trondheim, Norway (n = 1,042), and 3-year olds in Barcelona, Spain (n = 622), were assessed biennially for symptoms of attention-deficit/hyperactivity (ADHD), oppositional defiant (ODD), conduct (CD), anxiety, and depressive disorders through interviewer-based psychiatric interviews across four waves of data collection. The parents completed child temperament ratings. The data were analyzed with random and fixed effects regression adjusted for all time-invariant unmeasured confounders (e.g., genetics, common methods bias, item overlap).

RESULTS:
In both Norway and Spain and across ages, negative affect predisposed children to symptoms of all disorders except CD, low effortful control predisposed children to ADHD and ODD-symptoms, and surgency predisposed children to increased ADHD-symptoms. Complication effects were observed in the Spanish children for ADHD-symptoms, which increased surgency and diminished effortful control, and for ODD-symptoms, which decreased surgency. The common cause and pathoplasty/exacerbation explanations were not supported.

CONCLUSIONS:
The present results are consistent with the view that temperament plays a causal role in the development of symptoms of psychiatric disorders in children. Because temperament is malleable, interventions targeting the affective, attentional, and behavioral regulatory components of temperament may reduce psychopathology in children.