

Does a 'bad' apple spoil the bunch? Study shows how problem behaviors spread in siblings

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Siblings bear responsibility for the spread of problem behaviors. Adolescents with a delinquent brother or sister are more likely to misuse alcohol and other substances than those without a delinquent sibling. Identifying the exact nature of that influence has proven difficult, because behavior problems in siblings can also be traced to friends, shared genetics and shared experiences with parents. Evidence describing how problem behaviors spread between siblings and across domains has been scarce - until now.

Researchers from Florida Atlantic University and a consortium of universities in Quebec, Canada, conducted a first-of-its-kind longitudinal study on identical and fraternal twins to identify the degree to which siblings contribute to the increase in delinquent behavior and alcohol misuse. Results of the study, published in the journal *Developmental Psychology*, found that siblings play a key role in the escalation of problem behaviors over time, over and above the contributions of genes, friends and parents. The findings offer important clues into why [delinquency](#) exacerbates the growth of substance misuse in adolescents.

Participants were drawn from the Quebec Newborn Twin Study, an ongoing [longitudinal study](#) of twins born between 1995 and 1998 in the greater Montreal area. Data for this study were collected at ages 13 (seventh grade), 14 (eighth grade), and 15 (ninth grade). By examining the spread of problems between twins, the researchers were able to rule

out alternative explanations for increases in [alcohol misuse](#), such as parent modeling and an inherited susceptibility to alcohol abuse that can emerge with puberty.

"The hypothesis that we were testing is that somehow bad behavior on the part of one sibling—the 'bad apple'—spreads not just between siblings but also across domains, so that one sibling's delinquency seems to spoil everything the other sibling does, increasing problems in a host of other areas. In other words, the more delinquent one sibling is the more different problems the other sibling has," said Brett Laursen, Ph.D., lead author, professor, and graduate studies coordinator in FAU's Department of Psychology. "This turns out not to be the case. Instead, we found that problems spread between siblings within problem behavior domains—one sibling's delinquency affects the other sibling's delinquency. Then, once the teen finds him or herself on the road of greater delinquency, problem behaviors escalate and spread of their own accord into domains such as alcohol use."

Thus, problem behaviors spread indirectly between the siblings via a two-step process; first, a problem is shared between twins within a behavioral domain, then second, within each twin the problem grows and spreads across different behavioral domains. Twin sibling influence is a risk factor for illicit substance use, both because substance use by one twin predicts substance use by the other twin, but also because delinquency in one twin predicts delinquency in the other twin, which then gives rise to greater substance use.

"Because problem behaviors spread indirectly between siblings, the key take home message from this study is that intervention programs needs to be targeted at specific problem behaviors and not the relationship itself," said Laursen. "It is insufficient and impractical to try to keep siblings apart, advice we often give when we try to separate adolescents from their problematic friends."

Findings from this study confirm that sibling resemblance in [problem behaviors](#) cannot be entirely explained by genetics or shared environments.

"Although parents are often the target of intervention, practitioners would be well advised to focus their efforts on [siblings](#), who are more influential than parents when it comes to substance use and delinquency, and whose influence rivals that of friends," said Laursen.

Provided by Florida Atlantic University

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