# New study shines light on risk factors for suicidal thoughts in teens

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Séverine Lannoy, Ph.D., postdoctoral scholar at the VCU Virginia Institute for Psychiatric and Behavioral Genetics. Credit: Virginia Commonwealth University

A recent study led by researchers from Virginia Commonwealth University is shedding new light on how genetic and environmental factors influence the risk of suicidal thoughts in adolescents.

As one of the leading causes of death for teens in the United States, suicide is a major public health concern; however, the underlying factors that contribute to suicidal thoughts and behaviors in this population are not well understood.

Previous studies on adults have suggested that a person's risk of suicidal thoughts, plans and attempts are influenced by negative life events, family history and genetics, but there is limited research focusing on adolescents.

Through this study, published in the *Journal of Child Psychology and Psychiatry*, the research team gleaned new information about how an adolescent's genetic risk and exposure to stressful life events contribute to suicidal thoughts. These results could help clinicians, families, educators and community members better prevent suicidal thoughts and behaviors in teens.

Researchers from the VCU Virginia Institute for Psychiatric and Behavioral Genetics analyzed clinical assessments and genetic data collected as part of the Avon Longitudinal Study of Parents and Children, a long-term study led by the University of Bristol that surveyed children from infancy through to adulthood. They specifically evaluated both the participants' genetic risk for suicide attempts and their exposure to adverse life experiences between 16 and 17 years old. The team compared this data with surveys that documented whether participants harbored suicidal thoughts and feelings of hopelessness at age 17. Moreover, they examined how these effects vary according to biological sex.

Their research revealed that suicidal thoughts were associated with drug use, bullying and failure in both male and female participants. There was evidence that experiencing the death of a parent also increased the risk of suicidal thoughts in boys, while failure at school increased the risk of suicidal thoughts in girls. Additionally, the researchers found that, in female participants, using drugs while having a genetic predisposition for suicide further exacerbated the risk of suicidal thoughts.

The findings underscore the role that negative life events play in triggering suicidal thoughts during adolescence but also show that some experiences can have an especially adverse impact on girls that already have a high genetic risk for suicide.

Séverine Lannoy, Ph.D., a postdoctoral scholar at the VCU Virginia Institute for Psychiatric and Behavioral Genetics and corresponding author for the study, recently discussed her research and latest findings with VCU News.

**Why are suicidal thoughts and behaviors so prevalent during adolescence?**

Adolescence is characterized by many changes, such as the development of identity and the initiation of risk-taking. Additionally, at this point in life, a teen's ability to cope with stressful life events is still maturing. As such, negative life experiences may have a greater impact on young people and lead to suicidal thoughts and behaviors.

**Were any of the results from your study surprising to you?**

We know that drug use is one of the highest risk factors for suicidal thoughts and behaviors in adults, but I was surprised to see that this risk factor was already influential even in adolescence.

The study's findings also revealed that a few of the risk factors linked to suicidal thoughts differ between boys and girls. Why did you look into risk factor differences between sexes, and what do you think is behind your results?

We conducted sex-specific analyses because we know that the prevalence of suicidal thoughts and behaviors is different according to sex. We tend to see that girls have a higher risk of suicidal ideation, while there is a higher risk of suicide death in boys.

We indeed saw some differences between boys and girls in our analysis. For example, our results showed that, in girls, using drugs while having a high genetic risk for suicide increased the risk of suicidal thoughts, but we didn't see the same effect in boys. I think the reasons behind this discovery needs to be further explained, but it could be because girls tend to have a higher risk of suicidal ideation, which is what we were measuring in this study. If our focus were assessing the risk of suicide attempts and deaths, it's possible that genetics could be more of a contributing factor in boys.

**How is this research helping get us closer to preventing suicidal behavior in teens?**

A key part of suicide prevention is knowing what specific factors put adolescents at risk of going down this path. Our results suggest that monitoring the impact of certain negative life events during adolescence could help identify which teens are more vulnerable to developing suicidal thoughts and thus are more in need of intervention efforts.

I also think that it's important that this kind of preventative care extends beyond clinicians. Parents, family members, educators and other adults who are in an adolescent's life should be aware of the risk factors contributing to suicidal thoughts and behaviors. Prevention is really a

team effort.

**More information:** Séverine Lannoy et al, Suicidal ideation during adolescence: The roles of aggregate genetic liability for suicide attempts and negative life events in the past year, *Journal of Child Psychology and Psychiatry* (2022). DOI: 10.1111/jcpp.13653

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