

# Youth with family history of suicide attempts have worse neurocognitive functioning

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Children and adolescents with a family history of suicide attempts have lower executive functioning, shorter attention spans, and poorer language reasoning than those without a family history, according to a new study by researchers from the Lifespan Brain Institute (LiBI) of Children's Hospital of Philadelphia (CHOP) and the University of Pennsylvania. The study is the largest to date to examine the neurocognitive functioning of youth who have a biological relative who made a suicide attempt.

The findings, which were first published online last March, were published in the January 2021 edition of *The Journal of Child Psychology and Psychiatry*.

Researchers looked at 3,507 youth aged 8 to 21. Of those, 501 participants had a [family history of suicide](#), defined as a fatal or non-fatal suicide attempt by a first-degree biological relative like a parent, full sibling, or child. Participants were divided into test groups and matched by age, sex,

race, and lifetime depression. Researchers found that those with a family history of suicide attempt had significantly lower executive functioning and performed worse on tests that measured attention span and language reasoning. The differences in test scores could not be explained by overall [psychiatric problems](#), [suicidal ideation](#), trauma exposure, or socioeconomic status, leading scientists to believe family history of [suicide attempt](#) is the contributing factor.

"Executive functioning skills are incredibly important in youth development," said Jason Jones, Ph.D., lead author and research scientist at PolicyLab and the Youth Suicide Prevention, Intervention and Research Center at CHOP. "Even a small difference could cascade into a progressively larger issue over the course of a child's lifetime, affecting things like academic achievement, mental health, and risk-taking behaviors."

Suicide is currently the second leading cause of death in children and young adults aged 10 to 24. Previous research has shown suicidal tendencies to be highly hereditary.

"Lower executive functioning may result in poorer decision making and problem solving," said Rhonda Boyd, Ph.D., co-author and psychologist in the Department of Child and Adolescent Psychiatry and Behavioral Sciences at CHOP. "It's also been linked to impulsive and aggressive behavior, which has consistently been linked to suicidal behavior. This study shows us the importance of asking about suicide attempts among relatives when conducting clinical evaluations with pediatric patients, as it may be a risk factor for suicidal behavior."

The researchers say [cognitive-behavioral therapy](#), such as helping youth verbalize thoughts and

feelings, problem-solve, and understand consequences, may help address [executive functioning](#) and language difficulties. They also suggest incorporating other family members in early intervention, as other people in the family may be at-risk but not yet show risk signs for suicidal behavior.

**More information:** Jason D. Jones et al, Association between family history of suicide attempt and neurocognitive functioning in community youth, *Journal of Child Psychology and Psychiatry* (2020). [DOI: 10.1111/jcpp.13239](https://doi.org/10.1111/jcpp.13239)

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