

Mother-daughter conflict, low serotonin level may be deadly combination

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A combination of negative mother-daughter relationships and low blood levels of serotonin, an important brain chemical for mood stability, may be lethal for adolescent girls, leaving them vulnerable to engage in self-harming behaviors such as cutting themselves.

New University of Washington research indicates that these two factors in combination account for 64 percent of the difference among adolescents, primarily girls, who engage in self-harming behaviors and those who do not.

“Girls who engage in self harm are at high risk for attempting suicide, and some of them are dying,” said Theodore Beauchaine, a UW associate professor of psychology and co-author of a new study. “There is no better predictor of suicide than previous suicide attempts.”

The paper, co-authored by Sheila Crowell, one of his doctoral students, appears in the current issue of the *Journal of Consulting and Clinical Psychology*.

Beauchaine said the relationship between the level of mother-daughter conflict and self-harming behavior was not strong. There was a stronger relationship between serotonin levels and self-harming behavior. But when both factors were considered together, the relationship to self-harming behaviors was very strong.

“Most people think in terms of biology or environment rather than biology and environment working together,” he said. “Having a low level of serotonin is a biological vulnerability for self-harming behavior and that vulnerability increases remarkably when it is paired with maternal conflict.”

To understand this relationship, the researchers recruited 20 adolescents with a history of self-harming behavior and 21 age-matched

adolescents who did not harm themselves.

Adolescents were considered self-injuring if they had harmed themselves three or more times in the past six months or five or more times in their lifetimes. The mean age of both groups was 15 years and the participants were predominantly white. There were two boys in each group.

Each mother and child separately filled out behavioral questionnaires that examined the adolescent’s mental health and self-injurious behaviors, and one that identified areas of conflict between parents and teenagers. To assess negativity in each parent-child relationship, the researchers selected a topic that both parties said was a serious issue. Crowell said that doing chores at home was the most common area of conflict. Then each mother and child were asked to discuss a specific problem topic for 10 minutes. The discussion was taped and the interaction was later coded. After the discussion small amounts of blood were drawn from the adolescents to assess their serotonin level.

“You would think that they would be civil to each other in this kind of situation, but many of these topics were hot and within five minutes some of our subjects were arguing with each other,” Beauchaine said.

He said most of the teenage participants in the study were girls because self-inflicted injuries are far more common among girls. Mothers, rather than fathers, were chosen because research has shown that the relationship between girls and mothers is usually closer than it is between daughters and fathers.

Beauchaine believes finding the underlying causes of self-inflicted injuries and developing prevention programs should be a national priority because self-harming behavior can lead to suicide which is a leading cause of death among American adolescents and young adults.

“Once self-harming behavior starts it is difficult to stop. Over time, with something such as cutting, children’s bodies react to it in a way that helps reduce biological and psychological pain. They essentially become addicted to this behavior. So you want to prevent this behavior before it starts,” he said.

Source: University of Washington

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