Researchers see links between genes and PTSD after NIU shootings

Study might help understand and treat post-traumatic stress disorder

By Dan Hinkel
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By examining students who were studying at Northern Illinois University when a gunman killed five people and himself, researchers say they have cast light on a link between certain genetic variations and symptoms of post-traumatic stress disorder.
A study released Monday showed that students with particular genetic variations related to the regulation of serotonin — a chemical that affects mood and mental function — displayed PTSD symptoms more frequently than students without the variations.

Researchers drew the conclusion by questioning students about such PTSD symptoms as anxiety and nightmares following Steven Kazmierczak's shooting spree on Valentine's Day 2008.

The study could help guide efforts to understand and treat the disorder, said Holly Orcutt, an NIU associate professor of psychology who worked on the study.

"This was my way to make something good out of this senseless tragedy," said Orcutt, who was off campus when Kazmierczak opened fire in a classroom.

"It's not just academic for me, certainly. It's very personal," she said.

The study, published in this month’s Archives of General Psychiatry, grew out of Orcutt’s prior research on female students’ responses to stress, which she began updating just after the killings.

Because Orcutt had collected data from women before and after they lived through the same traumatic event, she had an opportunity to research PTSD symptoms, said Dr. Kerry Ressler, the lead author of the study and an associate professor of psychiatry at Emory University in Atlanta.

Of 204 women — drawn from more than 500 involved in Orcutt’s prior study — about 50 carried a variation in a gene commonly targeted by anti-depressants, Ressler said. Fifty-two percent of those women reported symptoms of PTSD after the shooting, the study found, compared with 43 percent among the women without the variations.

Though he said the findings are significant, Ressler acknowledged the study’s relatively small sample size. He also said that the genetic variations are only one clue among many needed to understand PTSD.

Orcutt said she hopes to continue the research with more women from her original study.

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