

Student seeks understanding of suicide

November 17 2014, by Todd R. Mcadam

We know a surprising amount about suicide and self-injurious thoughts.

- People likely to injure or kill themselves have a certain cognitive inflexibility: They get in a rut of thinking that they can't break out of.
- They process visual inputs differently and may have difficulty disengaging their attention from emotionally salient cues.
- They frequently deal with some form of <u>clinical depression</u> and have difficulty regulating emotions.
- They often have difficulty sleeping.

What we don't know is how all those factors relate, says Aliona Tsypes, a doctoral student in <u>clinical psychology</u> at Binghamton University. Tsypes' mission for the three years of her National Science Foundation graduate research fellowship will be to explore that in a way that could re-write suicide treatment protocols within a decade.

What she learns could help to reduce some staggeringly large figures: More than 38,000 people in America will kill themselves this year. About 485,000 will be treated in hospitals for self-inflicted injuries. Another 2 million non-hospitalized cases of self-injury will be reported.

"It's such complex behavior, it's like we're looking at different sides of an elephant," Tsypes says. "A person with one disorder tends to have multiple disorders; there's a lot of overlap."

Does one disorder cause the other? Do they develop independently or in



tandem? Do they combine to create a self-injurious or suicidal behavior or is one element alone the key factor?

To find answers, Tsypes plans a study of 60 people: 20 people with depression who have made a suicide attempt; 20 with <u>depression</u> who have not attempted suicide; and a 20-person control group.

After a clinical interview, participants will complete a series of tasks during which their neural and physiological responses are recorded, including an eye-tracking study showing the subjects two photos simultaneously: one sad and one neutral face.

"We want to see how long it takes to disengage from the emotional face," Tsypes says.

Then subjects will be fitted with portable monitors for seven days, recording activity levels, light, sleep efficiency, emotional distress and other factors.

Studies of cognition, behavior, psychophysiology and brain activity have been done before, but never so many elements on the same study group at the same time. Tsypes says she hopes to get a far more complete picture of what's going on inside a suicidal person and what may put a person at risk.

"We think of this project as a first step," she says. The next step depends on the data, but Tsypes gets excited when she considers the possibility of being able to predict and prevent <u>suicidal behavior</u>.

Even absent that, within 10 years, treatment will coalesce around Tsypes' research, says Brandon Gibb, director of the Mood Disorders Institute at Binghamton University. "We're really looking for a personalized medicine approach," he says.



"There hasn't been as much appreciation as there should be across (research) platforms," he adds. "She's examining how things look in the lab and then comparing that to what's going on in the real world."

Provided by Binghamton University

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