

## Stanford study vanquishes social anxieties without drugs

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For most of his life, 24-year-old Steven Bringas so feared humiliating himself if he spoke that only an emergency would get him to enter a store.

The few times he shopped, he couldn't look at the clerk and barely managed a "thank you" when he left.

He avoided encountering others, thinking his small talk so clumsy that it would invite ridicule. Dealing with fellow students was so painful that he dropped out of community college.

"I was a mess" in college, said Bringas, of San Jose, Calif.

Today, he's unrecognizable from the withdrawn, anxious man he was. While squarely making eye contact, Bringas described how a clinical trial using cognitive behavioral therapy at Stanford University in 2009 all but vanquished his nearly lifelong social anxieties.

It isn't news that the well-known therapy would yield profound changes.

But the Stanford study generated a new kind of evidence: Brain scan images revealed the therapy caused dramatic changes in the brain's inner workings.

In the fall, Stanford researchers will start a new, five-year clinical trial to continue their study of non-drug treatments for <u>social anxiety</u>. As with



the previous one, the trial will test the effectiveness of cognitive behavioral therapy and <u>mindfulness meditation</u> in calming social anxiety.

The disorder affects about 7 percent of U.S. adults in varying severity, from the painfully shy to people deeply fearful of normal <u>social</u> <u>interaction</u>. The behavioral therapy changes distorted thinking about oneself, and mindfulness meditation trains in awareness skills that reduce anxiety. The researchers test one of the two approaches on each subject.

MRI scans and personal accounts confirm that mindfulness meditation also reduces social anxiety, said Philippe Goldin, a <u>clinical psychologist</u> and Stanford researcher involved in the studies.

The new round of research will directly compare <u>cognitive therapy</u> and mindfulness meditation. Results thus far show the behavioral therapy and the meditation practice each stimulate different neural networks, Goldin said.

After the behavioral therapy, the prefrontal cortex - the seat of logical, analytic thinking - was more engaged in controlling reactions in the brain region from which emotions arise, the amygdala.

Cognitive behavioral therapy challenges patients to reconsider distorted thinking that generates negative self views. Through gradual exposure to anxiety-arousing situations, it builds confidence as they realize their worst fears are unwarranted. "Fear exposure" also breaks hardened cycles of avoiding anxiety-provoking situations.

Mindfulness meditation, in contrast, stimulates a brain network in the posterior cortical region that helps us pay attention. The shift directs the mind away from distorted self-perceptions.



It also appears to reduce social anxiety by interrupting habitual poor self-judgments and ruminations on self-defined negative traits, among other changes, Goldin said.

The discovery that each treatment stimulated a different neural network - hence a different mental approach - is critical, he said, as some people will mesh more easily with one type of treatment.

"Just like the same drug won't help everyone, one form of mental training doesn't necessarily help everyone," Goldin said.

Brain scans for psychological research could ultimately prove useful in tailoring treatment approaches, said Judith Rumsey, a program officer with the National Institute of Mental Health who is overseeing the Stanford grant. The institute is funding the \$2.5 million, five-year study.

"For many years we couldn't look inside the black box," she said. "Now we can look at how these different treatments are affecting the brain, and hopefully use that to improve things."

Early psychological research with brain scans focused more on the effect of medications, Rumsey said. The Stanford study is part of a newer focus on analyzing non-drug approaches to mental health treatment.

Goldin said finding effective drug-free treatments for social anxiety is a critical motivation for the research.

"Medications can be very effective for some people, but they have side effects that most people don't really like that impact their quality of life," he said. Those include weight gain and grogginess.

The two therapies being investigated by the Stanford team - the behavioral therapy and mindfulness meditation - in effect teach the brain



new ways of managing emotional reactions.

"Our brain has been sculpted to learn, and medications are not about new learning," Goldin said.

The Stanford research is also intended to raise awareness of the prevalence of social anxiety, Goldin said, which often goes unrecognized even by those suffering from it. "All over the Bay Area, there are thousands and thousands of people with social anxiety sitting alone," he said.

The condition typically arises during childhood, and one study linked it to emotional abuse and emotional neglect, Goldin said.

The earlier a sufferer receives quality treatment, the more easily the condition is relieved. "It changes the trajectory of their whole life," he said.

About 40 percent of people coping with social anxiety are in treatment, but only one-third of them receive adequate therapy, according to the mental health institute.

It was the non-drug nature of the two treatments that drew Bringas to the Stanford study after a desperate Internet search when his mother's remarriage triggered a crisis.

He hit "rock bottom" in July 2009, when his mother's plan to move to Germany with her new husband threatened to leave him on his own.

The terrified young man's search for ways to overcome what he thought of as shyness turned up a checklist for social anxiety disorder. He was shocked to learn that his painful condition had a name and that many suffer from it.



"Every symptom was there," he said. "After reading a bit more, I knew I wasn't alone."

Bringas learned about medications for anxiety. "But I felt that would just be masking the problem. I just wanted to face the fear."

Then he came across the Stanford clinical trial for treating social anxiety without drugs.

He's deeply grateful to the Stanford team members, who opened the door to a new life.

With his outgoing girlfriend by his side, Bringas said he's going to enter San Jose State in the fall to study political science and psychology.

"Where I was then and where I am now is just such a huge difference," he said.

And Bringas wants to spread the word that there's effective help for those still suffering from the agonizing anxiety that once hobbled him.

"There could be a rocket scientist who's just too scared to come out and interact with people," he said. "So he's going to sit in his room and live a mediocre existence."

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