

Autism and depression: Study shows why ‘gold standard treatment’ sometimes fails

Cognitive behavioral therapy (CBT) is considered the gold standard treatment for depression. In fact, it is *the [gold standard treatment](#)* of the entire psychotherapy field due to its standing as the most researched and empirically supported form of therapy. For one group of people, however, the therapy does not always work and can lead to a worsening of symptoms. New research has found that those on the autism spectrum are less likely than their neurotypical counterparts to respond to the treatment for depression.

Though the failure of CBT to relieve depression symptoms in many of those with autism spectrum disorder has been detected by some therapists and counselors, research is beginning to provide explanations for these clinical findings. Interestingly, a diagnosis of autism spectrum disorder (ASD) was not required for researchers at Karolinska Institutet in Sweden to detect a link between autism and CBT failure, since the study looked at genetic risk scores for autism. A genetic risk score indicates how many genetic variants a person has for a particular illness or condition. The higher the [autism genetic risk score](#), the less the symptoms of depression decreased — the authors concluded in a paper published in *Molecular Psychiatry* in November.

Depression is [common in those with autism](#), a developmental disorder that ranges greatly in severity and symptom presentation. Experts do not yet agree on whether depression in ASD is a result of social rejection or physiological abnormalities (such as increased inflammation) found in those with autism. Most likely, depression arises as a consequence of both, along with many additional factors unique to each individual on the spectrum.

[Alicia Raimundo](#), 29, a youth mental health consultant who is on the autism spectrum, told Genetic Literacy Project that she tried CBT repeatedly, but found that it was harmful due to differences in her “autism brain.” Raimundo pursued therapy for depression, anxiety, and some suicidal thoughts, and CBT was the therapists’ tool of choice. “When I did my first bout of CBT it was mostly just frustrating,” Raimundo said. “I knew that all my thoughts were wrong and that other thoughts were valid, but I couldn’t stop the thoughts. It all seemed obvious to me, but it didn’t work.” Though she wanted to stop CBT after her initial experience, she found that therapists forced it on her:

It just frustrated me and made my mental health worse because it felt like even though I was asking for help, I was not getting it and no one was listening to me.

[Simone Sobel](#), an Atlanta-based clinical social worker and psychotherapist, uses CBT extensively in her private practice, including in her work with those on the autism spectrum. “I have found CBT to generally work well with folks on the autistic spectrum, particularly at the higher functioning end, such as those with Asperger syndrome,” Sobel told Genetic Literacy Project. “When it hasn’t worked for my autistic clients, it’s usually because they require an even more concrete, skills-based approach” than what CBT can provide. CBT requires working with thoughts and feelings, which can be too abstract or irrelevant to those with more moderate or severe forms of autism spectrum disorder, Sobel said:

One other reason I've found CBT to be ineffective with autistic individuals is because they have experienced significant trauma, usually from bullying and/or lack of understanding from family members that leads to harsh treatment. In this case, a cognitive approach may not be sufficient to treat the underlying trauma symptoms, and I use a brain-based processing approach, such as EMDR that can work very well for getting below the surface of the problem.

Sobel's clinical observations align with the findings of the Karolinska Institutet's research team, led by Christian Rück, psychiatrist and senior lecturer in the Department of Clinical Neuroscience. In the study, 894 participants who were diagnosed with depression completed a 12-week online CBT course (iCBT), and their [symptom severity](#) was tracked with the Montgomery-Åsberg Depression Rating Scale self report. The online CBT — which has been shown to be just as effective as traditional [face-to-face CBT](#) — was therapist-guided and presented as a series of modules with homework assignments.

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DNA was collected from [participants' blood samples](#) to find out how outcomes of CBT correlated with genetic variation. The participants' genomes were compared to results from [genome-wide association studies](#) published in Psychiatric Genomics Consortium and from GWAS meta-analyses, to look for known variants associated with ASD, depression, bipolar disorder, ADHD, IQ and educational attainment.

Once all participants had completed the course, the results showed patients' depression scores decreased during treatment, with the most improvement happening during the first few weeks. But “the higher the ASD genetic load, the less iCBT treatment response over time,” the researchers said. Patients with the highest ASD genetic risk scores had a poorer response to treatment than those with average or low ASD genetic risk scores.

The study was the first of its kind to show how genetic risk scores are associated with CBT treatment outcome. “Understanding how genetic variation affects the outcome of psychological treatment can help us understand why some people don't respond to it,” said Rück. “Ultimately this can lead to improved treatment options.” The study of genetic predictors of psychological treatment is called therapygenetics, and is a relatively new field.

The researchers involved in the Karolinska Institutet study are clear that their results are preliminary. Replication is required to strengthen conclusions and detect robust and reliable associations between treatment response and [autism genetic risk scores](#). Findings may show that CBT may not be the gold standard treatment for treating depression in those with autism spectrum disorder. Or CBT could be modified to address the unique mental health needs of those on the autism spectrum.

Kristen Hovet covers genetics, medical innovations, and the intersection of sociology and culture. Follow her on her [website](#) or Twitter [@kristenhovet](#)