

## Meta-analysis highlights important challenges in cognitive processing for adults with ASD

*Date:* January 2, 2019

*Source:* The Mount Sinai Hospital / Mount Sinai School of Medicine

*Summary:* New study results contribute to understanding of patterns of cognitive functioning in adults with autism and highlight the importance of a broader approach when studying cognition.

### FULL STORY

---

The first comprehensive, systematic review and meta-analysis of adults with autism shows that despite having an intact IQ, these adults have medium to large impairments in four key social- and non-social cognitive domains: theory of mind, emotion perception and knowledge, processing speed, and verbal learning and memory.

The results may help create a roadmap for treating autism in adults, a population that is less studied and understood than children with the condition.

The meta-analysis was conducted by the Seaver Autism Center for Research and Treatment at the Icahn School of Medicine at Mount Sinai in collaboration with City University London and published Wednesday, January 2, in *JAMA Psychiatry*.

Autism is characterized by persistent deficits in social communication and social interaction along with restricted, repetitive patterns of behavior, interests, or activities. While autism affects functioning in many domains throughout an individual's lifespan, research and treatment efforts have largely been dedicated to children. A critical question that has remained largely unaddressed is whether there are cognitive domains that are more severely impaired than others. Despite the efforts of individual studies to increase the understanding of cognitive deficits in adults with autism, sample sizes were often small, yielding inconsistent findings.

To directly compare the relative severity of impairments across cognitive domains in adults, Mount Sinai researchers aggregated all available autism literature and conducted a systematic review and analysis. Specifically, researchers from the Seaver Autism Center conducted a systematic review and meta-analysis of autism-related studies published in the PubMed, PsychINFO, EMBASE, and MEDLINE databases between 1980 (first inclusion of autism diagnosis in the DSM-III (The Diagnostic and Statistical Manual of Mental Disorders) and July 2018. Studies were included if they were published as a primary peer-reviewed research paper in English, included individuals with autism aged 16 or over, and assessed at least one domain of neurocognitive functioning or social cognition using standard measures. The meta-analysis included 75 studies and a combined sample of 3,361 individuals with autism and 5,344 neurotypical adults.

"Our findings have important implications for cognitive interventions in adults with autism. Current interventions for these individuals are primarily focused on improving individual adaptive social skills and social functioning," says Tjasa Velikonja, PhD, a postdoctoral research fellow at the Seaver Autism Center and first author of the paper. "While our results support the key social cognitive theories of autism treatments, they also highlight the importance of a broader approach when studying cognition and support interventions that also include non-social cognitive domains."

## Story Source:

Materials provided by **The Mount Sinai Hospital / Mount Sinai School of Medicine**. *Note: Content may be edited for style and length.*

---

## Journal Reference:

1. Tjasa Velikonja, Anne-Kathrin Fett, Eva Velthorst. **Patterns of Nonsocial and Social Cognitive Functioning in Adults With Autism Spectrum Disorder**. *JAMA Psychiatry*, 2019; DOI: 10.1001/jamapsychiatry.2018.3645
- 

## Cite This Page:

MLA

APA

Chicago

---

The Mount Sinai Hospital / Mount Sinai School of Medicine. "Meta-analysis highlights important challenges in cognitive processing for adults with ASD." ScienceDaily. ScienceDaily, 2 January 2019. <[www.sciencedaily.com/releases/2019/01/190102151224.htm](http://www.sciencedaily.com/releases/2019/01/190102151224.htm)>.

## RELATED STORIES

---

### Contrasting Long-Term Cognitive Effects of Psychiatric Drugs in Schizophrenia

Sep. 5, 2017 — A long-term study has found that low cumulative exposure to benzodiazepine and antidepressant medications does not seem to affect cognition in schizophrenia. However, long-term high-dose use of ... **read more »**

### Money a Barrier to Independence for Young Adults With Autism

Apr. 17, 2017 — When teenagers and young adults with autism enter adulthood and age out of many of the services designed to help them, they often are anxious about how to handle new adult responsibilities such as ... **read more »**

### Genomic Region Associated With Autism Plays Role in Specific Cognitive Functions

July 18, 2016 — A new study reports that variations in 16p11.2, a region of the genome associated with risk of autism spectrum disorder (ASD), have distinct effects on cognition. The findings highlight the diversity ... **read more »**

### Cognition in Multiple Sclerosis: Researchers Publish Results of One of the Longest Longitudinal Studies

June 24, 2014 — One of the longest longitudinal studies of cognition in multiple sclerosis has been completed, and its results published. These results provide insight into the natural evolution of cognitive changes ... **read more »**