



Communicating Research in Clear Language

COMPUTER SOFTWARE TO IMPROVE SOCIAL SKILLS OF CHILDREN WITH HIGH-FUNCTIONING AUTISM SPECTRUM DISORDER

What is the research about?

Children with Autism Spectrum Disorder (ASD) have difficulty with social skills and nonverbal communication. In this study, researchers used a software program with both audio and video features to teach children diagnosed with High Functioning ASD (HFASD) how to recognize their own and other people's emotions. The software, known as *Mind Reading*, was designed to improve emotion recognition by taking advantage of the ability to organize and to create systems that are frequently seen in people with ASD.

What did the researchers do?

Forty-four children diagnosed with HFASD, aged 7 to 12 years, were each assigned to one of two groups. One group used the software, over a 12-week period. The comparison group was composed of children on a wait list. The researchers used a combination of techniques to provide the treatment, including direct interaction with the children and the use of the computers to teach the children. These sessions were then followed by multiple opportunities to practice their new skills with clinical staff. The participants were given rewards for accurately recognizing pictured facial expressions and for making the correct facial expressions to show specific emotions. After treatment, several highly accurate rating scales were used to measure how effective the treatment was. The parents were also asked to rate their child's skills. The children were followed up at 5 weeks after treatment to see if the skills were long lasting.

What did the researchers find?

The information was gathered on 43 of the 44 children who entered the study. On testing, the children who took part in the treatment were better at both recognition and expression of emotions, as rated by their parents, compared to children who did not receive the treatment. Children in the treatment group also had significantly lower parent ratings of autism symptoms, such as difficulty in social situations. The improvement in skills was still maintained five weeks after the end of treatment.

Take home message

This was the first study using a comparison group to test the *Mind Reading* computer program for children with HFASD. It showed promising results, and when combined with other treatments, such as continued real-life practice of the techniques learned, there was more improvement. Many children with HFASD enjoy systematic tasks, like working on a computer. Their skills and interests make it more likely they will use and benefit from computerized social skills learning programs such as this.

NOTE: The original [Research Report](#) was written by M. L. Thomeer and colleagues, and was published in the *Journal of Autism and Developmental Disorders*. 2015.