

OPINION

New tests extend prospects for 'reading the mind in the eyes'

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Researchers have **revamped a screen** for 'mind blindness' — an impaired understanding of others' intentions and perspectives — which is a key deficit in autism. The revised test could increase understanding of exactly how autism develops, the researchers reported in the May issue of *Research in Developmental Disabilities*.

A central theory about autism is that it is primarily an impairment of the ability to understand the thoughts, intentions and feelings of other people — a capacity known as **theory of mind**. Since the mid-1990s, this ability has often been measured by a scale called the **Reading the Mind in the Eyes Test**, developed by **Simon Baron-Cohen** of Cambridge University and his colleagues.

However, the test — which involves identifying people's emotions from photographs of their eyes — requires significant language ability. This makes it difficult to determine whether difficulties that children with autism have with this test stem from their inability to **visually recognize emotions** or merely from an inability to name them.

The classic version of the test asks children to choose from four words, each describing a different emotion, to label each picture. The terms are often complex, such as 'incredulous' or 'dispirited,' so the task requires a large vocabulary and cannot be used with young children or those with low intelligence quotients.

To extend the test's application to these populations, the researchers created two simplified versions. The first shows photos of two sets of eyes and asks participants to identify which of the two shows a particular emotion — 'angry,' for example. The second version presents one face and two words describing emotions, such as 'happy' and 'sad.' Here the participants must identify

which word more accurately describes the picture.

The study, which included 20 children with autism and 57 controls, found that children with autism do better on the version that shows two pictures and one word than on the version with a single picture and two words. The controls did equally well on both versions.

The results suggest that children with autism perform poorly on the earlier version of the test because of language or vocabulary issues — not because they have trouble distinguishing between the emotions.

The study also found that children with autism have less difficulty identifying basic emotions such as happiness or sadness than they do discriminating between mental states such as ‘excited’ or ‘thinking.’ For instance, on the first version, children with autism identified negative emotions correctly 91 percent of the time but correctly labeled only 77 percent of negative mental states.

Children with autism and controls were both most accurate when identifying pictures displaying anger — perhaps because being able to detect threats from others, including parents and peers, can be critical to survival. In fact, the research showed that children with autism are not impaired at all in spotting angry faces.

Apart from offering a way to measure theory of mind in younger children and in those with a wide range of cognitive abilities, the new tests may help researchers determine how theory of mind develops. The tests also suggest more specifics on how children with autism are different, which may be valuable for managing their challenges.