



Neurotypical:
a term used
to describe
people with
typical brain
development
(non-autistic
people)

A new look at empathy in autism

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We often hear or read that autistic individuals lack or have diminished empathy, a statement confirmed by most studies up until now. However, this conclusion does not mirror the experiences of autistic people, who often report feeling just as much empathy as **neurotypical** individuals. What could explain this gap between scientific literature and personal experience?

Part of the answer could be that studies tend to use scenarios developed for neurotypical people. This is problematic because empathy is facilitated when the observer can relate to the person they are observing. Since most autistic people feel different from their neurotypical peers from a young age, this could contribute to observations of reduced empathy as reported in these studies. Thus, a Japanese research team led by Hidetsugu Komeda decided to investigate whether using scenarios constructed specifically for autistic people would give different results when measuring empathy in autistic individuals.


To test this, 15 autistic adults without intellectual disabilities (14 men and 1 woman) and 15 neurotypical adults (13 men and 2 women) were asked to read sentences describing either an autistic or a non-autistic character while lying in a brain scanner (an fMRI). One of the sentences used was the following: “Yuya (a Japanese male name) would rather be alone than with others”.

The participants had to judge how similar they felt to the characters described in the sentences and whether they agreed or not with the sentences. At the same time, the brain scanner measured activity in a part of the brain

called the ventromedial prefrontal cortex (vmPFC), which is involved in empathy and in processing self-related information.

The researchers found that neurotypical participants tended to recognize themselves in sentences describing non-autistic (i.e. neurotypical) characters. On the other hand, autistic individuals recognized themselves just as much in sentences describing autistic and non-autistic characters. The researchers interpreted this finding as a relative lack of self-awareness in autistic individuals, because autistic participants did not report feeling more similar to autistic characters. However, results from the brain scanner painted a slightly more complex picture.

In terms of brain activity, ventromedial prefrontal cortex (vmPFC) activation was significantly greater in autistic individuals when they judged sentences describing an autistic character than when they judged sentences featuring a non-autistic character. An opposite brain activity pattern was observed in neurotypical people; the ventromedial prefrontal cortex activation was greater when neurotypical participants judged sentences describing non-autistic individuals than when they judged sentences describing an autistic person.

These findings are important, because they show that autistic people, just like neurotypical people, feel more empathy towards those who are similar to them. This could explain why previous studies, which used scenarios built for neurotypical individuals, found an empathy deficit in the autistic population. From a clinical point of view, these results suggest that autistic individuals may be well positioned to help others with autism, as they do have empathy 

Original article:
Komeda, H., Kosaka, H., Saito, D. N., Mano, Y., Jung, M., Fujii, T., Okazawa, H. (2015). Autistic empathy toward autistic others. *Social Cognitive and Affective Neuroscience*, 10(2), 145-152. doi: 10.1093/scan/nsu126.