

'Emotional blindness'—not autism—linked to impaired perception of internal sensations

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Credit: King's College London

A new study by researchers from the Institute of Psychiatry, Psychology & Neuroscience (IoPPN) has identified a link between impaired interoception - the ability to perceive internal sensations such as hunger, pain, disgust or fear - and alexithymia or 'emotional blindness.'

Autism spectrum disorder (ASD) has previously been linked to interoception, which is thought to be responsible for the social and emotional difficulties that are experienced by people with autism.

Alexithymia or 'emotional blindness' results in difficulties in experiencing and expressing one's emotions, and is found in approximately one in two people with ASD, compared to one in 10 people without ASD. Until now it has been unclear whether people with ASD have poor interoception due to their symptoms of ASD or

alexithymia.

Punit Shah, first author from the MRC Social, Genetic and Developmental Psychiatry Centre at the IoPPN, King's College London, said: 'Interoception could be described as how you sense internal body signals. This is related to a variety of different socio-emotional abilities such as recognising one's own emotional state, a necessary precursor for the recognition of other's emotions and empathising with them.

'One example could be if someone is visibly angry towards you and your body processes this by increasing your heart rate, making you feel anxious and upset. If you are unable to experience this, it may hamper the social interaction by responding inappropriately.'

The researchers investigated interoception by examining heartbeat perception in three groups of people. First they measured the relationship between both autistic and alexithymic traits and interoception in a non-clinical sample. Second, they recruited a group of people with and without a clinical diagnosis of autism who had similar levels of alexithymia. Participants were asked to sit in a quiet a room and asked to close their eyes and count their heartbeats for four different intervals.

Heartbeat signals were recorded by the researchers using a pulse monitor but the participants were instructed not to measure their pulse by any other means than 'concentrating on their heartbeats.' Other factors that relate to heartbeat perception were recorded and controlled for, including anxiety, depression, BMI, IQ and time perception ability.

The researchers found that ASD was unrelated to interoceptive ability, but that alexithymia predicted impaired interoception. By understanding that impaired heartbeat perception is a mechanism underlying alexithymia - and therefore emotional difficulties experienced by many

people with ASD - the researchers hope these findings could provide a therapeutic target for clinical intervention. There is an increasing awareness of alexithymia and it may prove to be important for management of emotional difficulties across many clinical conditions.

Punit Shah added: 'Our study suggests that it could be possible to train people to improve their heartbeat perception, which has previously been shown to relieve symptoms in conditions even when there is no obvious medical cause. This raises the potential of managing alexithymia and [emotional difficulties](#) in people with and without ASD, in a process similar to mindfulness training (i.e. by focusing on and improving awareness of bodily sensations).'

More information: Punit Shah et al. Alexithymia, not autism, is associated with impaired interoception, *Cortex* (2016). [DOI: 10.1016/j.cortex.2016.03.021](#)

Provided by King's College London

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