

Perspective-taking difficulties diminished when autistic and psychosis tendencies balance

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Researchers at the University of Birmingham have Ahmad Abu-Akel, Doctoral Researcher at the shed new light on the relationship between autistic tendencies and psychosis proneness in neurotypical adults.

If a similar pattern were found in people diagnosed with these conditions, their findings would suggest that a co-occurrence of both conditions might balance, and diminish problems associated with perspective-taking difficulties.

The study, published in the journal *Proceedings* of the Royal Society B, indicates that while increased tendencies for either condition are associated with perspective-taking difficulties, unexpectedly, these difficulties are diminished in individuals with similar tendency to both autism and psychosis.

As a result, the team believe that the key lies in the balance between the degrees of autistic tendencies and proneness to psychosis.

Autism and psychosis-related conditions affect more than 2% of the world population and lead to marked social and cognitive dysfunctions.

The expected rate for autism or psychosis-related conditions, such as schizophrenia, is estimated at about 1% of the population for each.

These conditions can co-exist in the same individual, but their combined effect on behaviour and cognition remains unknown. Both conditions are associated with difficulties in taking the perspective of others.

The team evaluated the effect of psychosis and autism tendencies on the perspective-taking abilities of 201 neurotypical adults, by asking them to complete a number of tasks.

University of Birmingham, said, "Being able to appreciate the perspective of others feeds into a lot of our social encounters; it's an important component of our ability to empathise, for example."

These findings build on the idea of the diametric brain theory - which was based on the observation that autism and schizophrenia often appear to exert opposing influences on phenotypes and behaviour.

It is the first study to test the theory on a functional outcome that is central to both conditions. It is also the first to show that a compensatory effect can be detected within individuals when performing cognitive tasks.

Mr Abu-Akel continued, "Everyone expresses both autistic and psychotic tendencies, to varying degrees. Crucially, it is the bias towards one condition that seems to be the main determinant of an outcome. Someone could have a high proneness to both and be mediated by the balancing act of the two."

"It's highly variable throughout the population. It's less common for people to have heavily biased traits, or balanced traits. Truth be told, most of us are just slightly balanced towards one, just to varying degrees."

If replicated in people diagnosed with these disorders, the findings could have far reaching implications to understand the relationship between autism and psychosis, and their concurrent effect on social cognition.

Mr Abu-Akel added, "Hopefully this might inform interventions for people with either autism or psychosis. An individual with autism might benefit



from behavioural therapies which improve mentalistic thinking, whereas those displaying psychotic traits might be aided by a more mechanistic approach."

Furthermore, the team believe that if <u>autism</u> and psychotic traits are proven to be reciprocal then it could be mean a significant breakthrough for pharmacological interventions - by reversing the therapies given to the other group.

Provided by University of Birmingham

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