

Why do people with schizophrenia misinterpret social cues?

September 30 2015



Functional magnetic resonance imaging (fMRI) and other brain imaging technologies allow for the study of differences in brain activity in people diagnosed with schizophrenia. The image shows two levels of the brain, with areas that were more active in healthy controls than in schizophrenia patients shown in orange, during an fMRI study of working memory. Credit: Kim J, Matthews NL, Park S./PLoS One.

A new study from the Institute of Psychiatry, Psychology & Neuroscience (IoPPN) at King's College London sheds light on why people with schizophrenia misinterpret social cues in others, often leading to unpleasant paranoid and persecutory thoughts.

Insights from this research, published in *Psychological Medicine*, could help develop [psychological interventions](#) to assist people with [schizophrenia](#) to interpret [social cues](#), which might also improve their symptoms.

The researchers studied the behaviour of 54 participants, including 29 people with schizophrenia, as they viewed the body position and gestures of an actor on a silent video clip. These included gestures such as putting a finger to the lips to indicate 'be quiet' or incidental movements such as scratching an eye.

They found that patients with schizophrenia are able to interpret meaningful gestures and incidental movements as accurately as healthy subjects. However, when the direction of the gestures was ambiguous (i.e. not obviously directed at or away from them), they were much more likely to misinterpret the gestures as being directed towards them.

According to the researchers, this could indicate an increased tendency to self-infer these ambiguous social cues or to 'hyper-mentalise', whereby intent is falsely inferred from the actions of others. Both of these misinterpretations could underpin the incidence of paranoid thought experienced by patients with schizophrenia, suggest the study authors. The patients' confidence in their interpretation was found to be strongly associated with their propensity to experience hallucinatory symptoms.

Professor Sukhi Shergill from the Department of Psychosis Studies, said: 'Humans are social beings, often finding joy in interacting with others. While most attention is on talking with each other, non-verbal behaviour such as [gestures](#), body movement and facial expression also play a very important role in conveying the message.

'However, the message being conveyed is not always clear, or perceived

as a positive one, and an extreme example is evident in patients suffering from schizophrenia who show a strong tendency to misinterpret the intentions of other people in a malevolent manner.

'Our study offers a basis for psychological interventions aimed at improving gestural interpretation. It could also provide guidance for health professionals and carers on how to communicate with patients who have schizophrenia, in order to reduce misinterpretations of non-verbal behaviour.'

Professor Shergill added: 'The recent advent of adaptable virtual-reality technology provides a means of investigating the psychological effects of gestural communication with greater flexibility, which may prove a boon for our future understanding of social deficits in schizophrenia.'

Provided by King's College London

Citation: Why do people with schizophrenia misinterpret social cues? (2015, September 30) retrieved 3 May 2024 from

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