

Metaphor Comprehension in Schizophrenia

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Background

Schizophrenia is a lifelong psychiatric condition characterised by disordered thought, language and communication. Comprehension of figurative language, such as metaphor, may be particularly compromised. Cognitive aptitudes required for metaphor comprehension are characteristically impaired in schizophrenia, including abstract thought, inhibitory control and theory of mind (ToM). Associated deficits contribute to psychosocial dysfunction.

Aims

(i) Investigate metaphor comprehension in patients with schizophrenia (S), normal controls (NC) and first-degree relatives (FDR) (ii) Explore possible mechanisms underlying deficits.

Methods

Metaphor comprehension was investigated using a novel picture selection task (PST) in which participants chose which of three pictures corresponded with novel metaphorical sentences. One picture depicted the correct metaphorical interpretation; one a literal interpretation of the metaphorical expression (the literal target); and one a control with neither a figurative nor a literal target. Participants' eye gaze was tracked to analyse the cognitive process preceding a response. ToM was assessed using the 'Revised Eyes Test'.

Results

12 NC, 10 S and 4 FDR were examined. Mean frequency of correct PST answers was significantly lower in S compared with NC ($p = .001$) and FDR ($p = .043$), and erroneous responses were more frequently literal in S than in NC ($p = .001$). Longer gaze fixation on the literal target strongly correlated with decreased PST performance in S ($p = .019$), but not NC. Increased ToM scores strongly correlated with increased PST performance in S ($p = .040$), but not in their comparators.

Conclusions

Metaphor comprehension is impaired in S compared with NC and FDR. Deficits may reflect reduced ability to inhibit literal interpretations and impaired ToM.