

In this issue

This issue contains one review of cognitive function in euthymic bipolar patients and their first-degree relatives and one commentary. Four papers examine various aspects of social cognition in severe mental illness, five examine memory and executive function in schizophrenia and three examine further aspects of schizophrenia.

Cognitive function in bipolar disorder

In the first paper, Arts *et al.* (pp. 771–785) present findings from a systematic review of cognitive function in euthymic bipolar patients and first-degree relatives. In patients, medium to large effect sizes were found for various aspects of executive function (including working memory, executive control and fluency), verbal and visual memory, mental speed and sustained attention. In first-degree relatives, similar, but smaller, differences were found compared with healthy controls, especially for executive function and verbal memory. The authors conclude that executive function and verbal memory are candidate endophenotypes for bipolar disorder.

Commentary

In this issue's commentary (pp. 787–789), Corcoran discusses Tsoi *et al.*'s (this issue) study of humour experience in those with schizophrenia. While acknowledging the potential contribution of research on humour in schizophrenia as a way of investigating social cognition, Corcoran notes a number of important methodological issues for future work arising from Tsoi *et al.* These include carefully considering the type, and likely degree of familiarity, with presented humorous material. For example, the use of slapstick comedy, as in Tsoi *et al.*, may not be best suited to investigating humour appreciation in everyday life.

Social cognition

Five papers examine various aspects of social cognition. In the first, Schenkel *et al.* (pp. 791–800) examined theory of mind in a sample of 26 children and adolescents with bipolar disorder (BD) and 20 matched controls, using two tasks – the Affective Story Task and the Hinting Task. As in studies of adult BD, the authors found that cases performed poorly compared with controls on both tasks. In cases, the following were associated with poorer theory-of-mind

performance: younger age, earlier illness onset, and manic symptoms. One conclusion the authors draw is that earlier onset may interfere with the development of social-cognitive skills.

Tsoi *et al.* (pp. 801–810) investigated the relationship between humour experience and clinical symptoms, and cognitive and social function in a sample of 30 patients with schizophrenia and 30 matched controls, who were each shown four slapstick comedy clips. Humour recognition (calculated as d prime according to signal detection theory) was lower in patients after adjusting for confounders, including depressed mood. However, patients and controls did not differ in funniness ratings attributed to the video clips. The authors conclude that humour recognition difficulties may contribute to psychosocial impairment in patients with schizophrenia.

Debbané *et al.* (811–820) examined source monitoring for actions in a sample of 18 adolescents with velocardio-facial syndrome (VCFS), a syndrome associated with risk of schizophrenia, and two groups of matched controls ($n = 17$ in each). In a series of tasks in which subjects were asked to visualize a series of actions in three different conditions, the authors found that subjects with VCFS committed more source confusion errors on correctly recognized items. In particular, they were more likely to demonstrate confusions between exterior sources in which the self was not involved in the visualized action.

Costafreda *et al.* (821–824) investigated the effect of emotional valence on external attribution bias in 30 subjects with schizophrenia who were required, alternately with an experimenter, to produce neutral and negative words and then describe who (self or experimenter) had generated the item. External misattributions were (a) more common than self misattributions and (b) greater in those with active hallucinations and delusions compared with those in remission. These patients, moreover, were more likely to generate misattributions with negative words relative to neutral words.

Memory and executive function in schizophrenia

Five further papers examine aspects of memory and executive function in schizophrenia. In the first, Moritz *et al.* (pp. 825–832), in a sample of 68 subjects with schizophrenia and 25 controls, examined a central assumption of the liberal acceptance theory of schizophrenia, i.e. that patients differ from healthy

controls in their propensity to accept weak 'lures' but not in their propensity to accept strong 'lures'. Using a visual memory task with distractors that resembled targets to varying degrees, the authors found evidence to support this assumption, i.e. false recognition was increased for patients for weakly and moderately related distractors, but not for strong lure items.

Ornstein *et al.* (pp. 833–842) investigated memory and executive impairment in 30 patients with schizophrenia, 24 with frontal and temporal brain damage and 30 health controls assessed at baseline and 6 months. Carers of the two patient groups also completed questionnaires rating memory and executive failures in everyday life. The authors found that both the group with schizophrenia and the group with brain damage were significantly impaired on most tests, compared with controls. Carers rated patients with schizophrenia as having more executive failures than memory failures; the converse was the case for patients with brain damage.

Hurlemann *et al.* (pp. 843–851) combined measures of brain structure and the Rey Auditory Verbal Learning Test (RAVLT), in a sample of 36 never-medicated subjects in early (EPS) or late prodromal states (LPS) of schizophrenia and 30 health controls, to investigate hippocampal structure and function. They found that, in both EPS and LPS subjects, hippocampal volumes were reduced relative to controls, but that these reductions only correlated with poorer performance on the RAVLT in the LPS subjects. The authors conclude that their findings are suggestive of progressive and interrelated structural-functional pathology of the hippocampus as the prodrome progresses and risk of schizophrenia increases.

Guillem *et al.* (pp. 853–860) investigated the relationships between positive symptoms of schizophrenia and several sub-processes of executive function in a sample of 96 stable patients with schizophrenia. The authors found evidence of relationships between delusions, disorganization and inhibition and between hallucinations and interference sensitivity. However, some of these relationships were dependent on interactions between symptoms. The authors consequently conclude that global measures usually employed in studies of executive function and symptoms may not be appropriate and may partly account for inconsistencies in previous reports.

Landgraf *et al.* (pp. 861–870) compared memory-guided saccade (MS) error rates in a sample of 16 patients with schizophrenia, 19 siblings and 18 controls, who completed MS, reflexive saccade (RS) and

central fixations tasks. The authors found that patients and siblings showed elevated MS error rates, reflecting a failure to inhibit RS to a visible target. In contrast to controls, prior errors did not improve MS accuracy in patients and siblings. The authors conclude that the specific characteristics of the elevated MS error rate help to clarify the nature of the disinhibition impairment found in those with schizophrenia and their siblings.

Other topics

The final three papers examine further aspects of schizophrenia. De Wilde *et al.* (pp. 871–875), in a sample of 55 subjects with first-episode schizophrenia, 28 healthy siblings and 36 healthy controls, investigated the hypothesis that antisaccade performance in siblings of patients with schizophrenia is worse than in healthy controls and better than in patients. They found that patients had a significantly higher error rate on a test of antisaccade performance than siblings and controls. Siblings had a higher mean error rate than controls, but this did not reach statistical significance.

Cheung *et al.* (pp. 877–885) examined cerebral structural connectivity in 25 never-medicated subjects with first-episode schizophrenia and 26 matched controls using diffusion tensor imaging. The authors found evidence that widespread structural disconnectivity was already present in neuroleptic naive patients. For example, frontal anisotropy values were significantly lower in patients compared with controls in the left fronto-occipital fasciculus, left inferior longitudinal fasciculus, white matter adjacent to right precuneus, splenium of corpus callosum, and right cerebral peduncle.

Scholten *et al.* (pp. 887–898), in a sample of 48 patients with schizophrenia and 46 controls, assessed whether the previously observed female advantage in processing emotional prosody and semantics was preserved in patients with schizophrenia. The authors found that, on an emotional language task, patients made more errors compared with controls and women outperformed men, irrespective of diagnosis. The authors conclude that emotional prosody and semantic processing is preserved in women with schizophrenia and that this may partly explain why social functioning is often less compromised in women than in men with schizophrenia.

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