

## In this issue

This issue contains an editorial review on the utility of interventionist causal models in psychiatry and a meta-analysis of working memory in schizophrenia. Other sets of papers examine various aspects of psychosis, concepts of mental illness, depression and anorexia nervosa.

### Interventionist causal models in psychiatry

In the first paper, Kendler & Campbell (pp. 881–887) assess the utility of the interventionist model (IM) of causality as a basis for evaluating causal claims in psychiatric research. The authors argue that the IM, which defines causation in terms of ‘what would happen under interventions’, has a number of benefits. For example: that it can help distinguish between predictive-correlative and true causal relationships; that it is non-reductive and agnostic to the mind–body problem; and that it clearly separates issues of causation from questions of underlying mechanisms. The authors provide examples of how this framework can be applied, including in evaluating claims that environmental factors cause mental disorders.

### Schizophrenia and other psychoses

In the first of seven papers on aspects of psychosis, Forbes *et al.* (pp. 889–905) present findings from a meta-analysis of 187 studies comparing working memory in subjects with schizophrenia and healthy controls. The authors found evidence of significant deficits in all working memory domains (phonological, visuospatial, and executive) in those with schizophrenia compared with controls. No differences were found across subdomains or between particular working memory tasks.

Huddy *et al.* (pp. 907–916) investigated voluntary and involuntary response inhibition in a sample of 33 subjects with a first episode of psychosis (27 schizophrenia, 6 schizoaffective) and 24 healthy controls. The authors found that those with schizophrenia showed increased duration of voluntary response inhibition (indexed by the stop-signal reaction time). In contrast, there was no evidence of differences in involuntary response inhibition (indexed by the pattern of priming on the masked priming task). The authors conclude that these findings provide evidence for a specific impairment of voluntary response inhibition in schizophrenia.

Brébion *et al.* (pp. 917–926), in a sample of 41 subjects with schizophrenia, tested the hypotheses that extra-list intrusions (assumed to arise from poor monitoring of internally generated words) are associated with verbal hallucinations and intra-list intrusions are associated with global hallucination scores. The authors found that verbal hallucination scores were associated with extra-list intrusions and that global, but not verbal, hallucination

scores and delusion scores were associated with intra-list intrusions. The authors conclude that verbal hallucinations may be linked to defective monitoring of internal speech and that errors in context processing may be involved in hallucinations and delusions.

Bach *et al.* (pp. 927–938) investigated the influence of emotional clarity on emotional prosody identification in a sample of 25 in-patients with schizophrenia, 25 in-patients with depression, and 25 controls. The authors found that those with paranoid schizophrenia performed worse than the other two groups in identifying emotional prosody. This deficit, however, was only evident for high-clarity, but not low-clarity, stimuli. The authors further found that performance in a facial control task (assessing identification of emotional facial expression) was impaired in those with schizophrenia.

Brett *et al.* (pp. 939–950) examined the relationship between metacognitive beliefs, anomalous experiences, distress, and psychopathology in a sample of 27 subjects with a psychotic disorder, 32 with an At Risk Mental State (ARMS), 24 with psychotic-like experiences, and 32 healthy controls. The authors found that the clinical groups (psychotic disorder, ARMS) scored higher on most subscales of the Metacognitions Questionnaire (indicating maladaptive beliefs) than the other two groups. These differences became non-significant when depression and anxiety were controlled. Few other differences were found.

Mason *et al.* (pp. 951–956) investigated the relationship between cannabis use and psychotic experiences in a sample of 140 cannabis users (assessed both while intoxicated and when free of cannabis) and 144 controls. The authors found that cannabis use induced marked increases in psychotomimetic symptoms. In addition, those assessed as psychosis-prone experienced enhanced psychotomimetic states following acute cannabis use.

In the final paper on aspects of psychosis, McNeil *et al.* (pp. 957–965) examined the relationship between unwanted pregnancy and risk of schizophrenia and affective disorders in adulthood in a sample of 75 genetic high-risk (i.e. maternal psychosis) and 91 normal-risk offspring. The authors found that unwanted pregnancy was specifically associated with risk of schizophrenia-spectrum disorders and affective disorders in the high-risk group, independent of potential confounders including other pregnancy stressors and early childhood stressors.

### Concepts of mental illness

Harland *et al.* (pp. 967–976) investigated concepts of mental illness in relation to eight models, including biological, social and psychodynamic, in a sample of 76 trainee psychiatrists. The authors found that model endorsement varied with disorder, with views on

schizophrenia being most strongly expressed and the biological model being the most strongly endorsed. Using principal components analysis to identify the dimensions around which the trainees understood mental illness, the authors found three main distinctive combinations of models: biological *v.* non-biological (33% of variance); eclectic, combining various models (12% of variance); and psychodynamic *v.* sociological (10% of variance).

### Depression

Five papers examine aspects of depression. In the first, Vasic *et al.* (pp. 977–987) investigated patterns of functional coupling of temporally dissociable dorsolateral prefrontal and cingulate networks during working memory processing in a sample of 14 subjects with major depressive disorder and 14 controls. The authors found, in the prefronto-parietal network, a decreased functional connectivity pattern in those with MDD comprising inferior parietal, superior prefrontal and frontopolar regions. In a second, temporally anti-correlated network, controls exhibited higher connectivity in the anterior cingulate cortex, the ventrolateral and superior prefrontal cortex. The authors conclude that the findings demonstrate a dysconnectivity of dissociable prefrontal and cingulate regions in those with a MDD.

Parker *et al.* (pp. 989–998) report on a study designed to develop a self-report measure differentiating melancholic and non-melancholic depression, comparing an approach based on prototypic symptoms (using the Q-sort strategy) and severity [using the Severity-based Depression Rating Scale (SDRS) strategy] in a sample of 228 depressed outpatients. The authors found that the prevalence of melancholia ranged from 21% to 54% across the subtyping measures. The Q-sort measure had the highest overall correct classification rate in differentiating melancholic and non-melancholic depression (82%).

Gausia *et al.* (pp. 999–1007) investigated the prevalence of, and risk factors for, postnatal depression (PND) in a sample of 346 women in Bangladesh, followed from late pregnancy to post-partum. The authors found a prevalence of PND of 22% at 6–8 weeks post-partum. Independent predictors of PND included: past history of mental illness (OR 5.6); perinatal death (OR 14.1); and poor relationship with mother-in-law (OR 3.6). The authors note that the high prevalence of PND observed in this study is similar to what has been reported in other South Asian regions.

Maselko *et al.* (pp. 1009–1017) examined the relationship between aspects of religiosity, spirituality (religious and existential) and life-time risk of major depression in a sample of 918 subjects drawn from the New England

Family Study. The authors found that religious service attendance was associated with 30% lower odds of depression and that existential well-being was associated with 70% lower odds of depression. However, religious well-being was associated with 1.5 times higher odds of depression. The authors conclude that specific aspects of religiosity may be differentially associated with risk of depression.

Leyman *et al.* (pp. 1019–1028), concerned with identifying the potential mechanisms underlying the effects of repetitive transcranial magnetic stimulation (rTMS) on depression, examined the temporary effects of high-frequency rTMS applied over the right and left dorsolateral prefrontal cortex (DLPFC) on processing of emotional information and self-reported mood. In two experiments, involving 40 healthy volunteers, the authors found that one session of rTMS over the right DLPFC produced instant impairments in the ability to inhibit negative information, consistent with cognitive vulnerabilities found in depression. No such change was found for rTMS applied over the left DLPFC.

### Anorexia nervosa

In the first of the final two papers, Nakazato *et al.* (pp. 1029–1036) investigated relationships between brain-derived neurotrophic factor (BDNF), set-shifting and anorexia nervosa (AN) in a sample of 29 women with current AN, 18 women who had recovered from AN, and 28 matched controls. The authors found that serum BDNF concentrations were lower in the current AN group compared to the recovered AN and control groups. The current AN group made more errors on the set-shifting task than controls. No associations were found between serum BDNF concentrations and set-shifting. The authors conclude that BDNF may be a biological marker for eating-related psychopathology.

Kaplan *et al.* (pp. 1037–1045) examined predictors of weight maintenance in a sample of 93 patients with AN followed at 6 and 12 months after achieving a minimally normal weight. The authors found that the most powerful predictors of weight maintenance at each time point were a higher baseline body mass index (BMI) and a lower rate of weight loss in the first 28 days of follow-up. The authors conclude that outcomes may be improved by achieving a higher BMI during structured treatment programmes and preventing weight loss immediately following discharge from such programmes.

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