

## In this issue

In this issue, two papers examine aspects of borderline personality disorder (BPD), four report findings from studies of schizophrenia and substance use, seven examine aspects of smoking and use of other substances, and the final two papers examine other topics.

### Borderline personality disorder

In the first paper, Distel *et al.* (pp. 1219–1229) investigated genetic influences on BPD features in a sample of 5496 twins from The Netherlands, Belgium and Australia aged 18–86 years. Using data from a self-report questionnaire on BPD features, the authors found that women scored higher than men and that there was a tendency for younger adults to score higher. Additive genetic influences were found to explain 42% of the variance in BPD features, with the remaining 58% being accounted for by unique environmental influences.

Glaser *et al.* (pp. 1231–1239) examined stress sensitivity in BPD by comparing responses to daily stress, assessed using the Experience Sampling Method, in a sample of 42 BPD patients, 42 patients with psychosis, and 49 controls. The authors found that those with BPD experienced more emotional reactivity to daily stress than both of the other groups, as indicated by increases in negative affect and decreases in positive affect. The authors conclude that altered emotional stress reactivity may define BPD.

### Schizophrenia and substance use

In the first of four papers on various aspects of schizophrenia and substance use, Ringen *et al.* (pp. 1241–1249) compared the prevalence, patterns and frequency of substance use in schizophrenia and bipolar disorder in a sample of 336 subjects. They found that patients with schizophrenia more often used: centrally stimulating substances; non-alcoholic drugs; and more than one non-alcoholic drug. Patients with bipolar disorder had: higher rates of alcohol consumption; and more frequent single use of cannabis. The authors conclude that there may be diagnosis-specific patterns of drug use in serious mental illness.

Veling *et al.* (pp. 1251–1256) investigated the association between cannabis use and schizophrenia, and whether this association is influenced by gene–environment correlation, in a sample of 100 cases with schizophrenia (high genetic predisposition) and two

control groups: siblings of cases ( $n=63$ ; mid genetic predisposition) and attenders at non-psychiatric health services ( $n=100$ ; low genetic predisposition). The authors found that cases used cannabis significantly more often than either of the two control groups. However, genetic predisposition for schizophrenia did not predict cannabis use. The authors conclude that there was no evidence for gene–environment correlation in the association between schizophrenia and cannabis use.

Mata *et al.* (pp. 1257–1266) examined associations between cannabis use and cognitive impairment in tasks related to the dorsolateral prefrontal cortex (DLPFC) and the orbitofrontal cortex (OFC) in a sample of 132 patients with a first-episode of schizophrenia spectrum psychosis. The authors found no difference on any DLPFC-related tasks. However, cannabis users showed poorer total performance on a gambling task and lower improvement on a performance task. The authors conclude that pre-onset cannabis use is associated with decision making, but not working memory and executive function impairment, in first-episode schizophrenia spectrum psychosis.

Barkus & Lewis (pp. 1267–1276) investigated the relationship between subjective experiences of recreational cannabis use, schizotypy and psychotic-like experiences (PLE) in a sample of 532 young people who had used cannabis at least once. The authors found that those who scored high on schizotypal traits reported more pleasurable experiences when using cannabis and more PLEs during and after use. The authors conclude that cannabis use may reveal an underlying vulnerability to psychosis in those with high schizotypal traits.

### Smoking and use of other substances

Seven papers examine various aspects of smoking and use of other substances. In the first, Goodwin *et al.* (pp. 1277–1286) investigated associations between mental disorders and nicotine dependence (ND) by two modes of use (cigarette smoking and smokeless tobacco) in a sample of 43 093 subjects drawn from the National Epidemiologic Survey on Alcohol and Related Conditions. The authors found that ND (by cigarette smoking) was associated with an increased likelihood of all mental disorders examined. ND (by smokeless tobacco) was associated with an increased likelihood of anxiety disorders, specific phobias and alcohol abuse and dependence. The authors conclude

that the association between ND and mental disorder is relatively specific to the mode of nicotine administration.

McCaffery *et al.* (pp. 1287–1297) examined the genetic and environmental role that socioeconomic status (assessed using educational attainment) plays in smoking initiation and nicotine dependence in a sample of 5119 monozygotic and 4295 dizygotic male twins from the Vietnam-era Twin Registry. The authors found that additive genetic, shared environmental, and unique environmental components contributed to the observed association between educational attainment and smoking initiation. In addition, educational attainment moderated the variance in smoking initiation, suggesting gene  $\times$  environment interaction. No similar effects were observed for nicotine dependence.

Furberg *et al.* (pp. 1299–1308) investigated the correlates of smoking cessation in a sample of 14715 twins aged 42–64 years who were regular smokers. The authors identified a large number of significant predictors of smoking cessation, the strongest being use of Swedish oral smokeless tobacco (snus), followed by more than 11 years education, and being married or cohabiting. The authors conclude that further studies need to investigate the mechanism of the association between snus and smoking cessation.

Schilt *et al.* (pp. 1309–1317) examined the specific sustained effects of ecstasy on the brain, relative to amphetamine, cocaine and cannabis, using neuropsychological tests in a sample of 67 poly-substance users. The authors found that ecstasy use had a specific dose-related negative effect on verbal delayed recall, independent of other drug use. The authors note, however, that the clinical relevance of these findings is not immediately clear, given that test performances generally remained within the normal range.

Bedi & Redman (pp. 1319–1330) investigated associations between ecstasy use and higher levels cognitive functions in a sample of 45 past ecstasy poly-drug users, 48 cannabis poly-drug users and 40 legal drug users. The authors found that cognitive tests were not able to discriminate between the three groups. Ecstasy was negatively associated with verbal memory performance. In addition, a combination of drug use variables, including ecstasy use, were associated with attention and working memory, but only to a small degree. The authors conclude that the findings, while suggesting ecstasy may be associated with some lowering of higher cognitive functions, do not point to substantial cognitive decline.

Morgan *et al.* (pp. 1331–1340) examined attentional biases to incentive stimuli in a sample of 30 frequent

ketamine users, 30 infrequent ketamine users, 30 ex-ketamine users, 30 poly-drug users and 30 non-drug using controls. Using a dot-probe paradigm, the authors found that frequent ketamine users showed an attentional bias to both drug-related and money-related stimuli at short, but not long, stimulus presentation intervals. This was correlated with the degree of ketamine use. No attentional biases were found for any of the other groups. The authors conclude that these findings support incentive models of drug use.

Legrand *et al.* (pp. 1341–1350) investigated whether rural environments moderate the genetic influence on adolescent substance use and externalizing behaviour in a sample of over 1200 17-year-old twins. The authors found that area of residence had an impact only for men. That is, in urban environments genetic factors had substantial influence on externalizing behaviour; in rural areas shared environmental factors were more relevant. The authors conclude that these findings are suggestive of gene  $\times$  environment interaction in the development of male adolescent problem behaviours.

#### *Other topics*

In the first of the final two papers, Kessler *et al.* (pp. 1351–1360) examined the prevalence and correlates of pathological gambling (PG) in the US National Comorbidity Survey. The authors found the prevalence of problem gambling was 2.3% and of PG was 0.6%. PG was associated with being younger, male, Non-Hispanic Black, and earlier age of first gambling. PG was both predicted by a number of prior mental disorders (e.g. anxiety, impulse control disorders) and predicted the subsequent onset of mental disorder (e.g. anxiety, substance dependence). The authors conclude that PG is a rare but seriously impairing disorder.

Lahuis *et al.* (pp. 1361–1367), using structural MRI, investigated the neurobiological specificity of multiple complex developmental disorder (MCDD), compared with autism spectrum disorder, in a sample of 22 high-functioning subjects with MCDD, 21 high-functioning subjects with autism, and 21 matched controls. The authors found that subjects with MCDD, compared with controls, showed an enlarged cerebellum and a trend towards larger grey-matter volume. Compared to those with autism, subjects with MCDD had smaller intracranial volume. The authors conclude that the neurobiological markers associated with MCDD only partially overlap with those in autism.

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