Highlights of this issue

By Kimberlie Dean

Neighbourhood-level environmental influences on depression

Several papers in the *Journal* this month consider the potential effect of neighbourhood-level environmental factors on depression and associated outcomes. These papers consider 'environmental' factors in the sense of both the physical and social aspects of neighbourhoods. Perrino *et al* (pp. 476–480) found that higher levels of neighbourhood 'greenness', reflected in a vegetative index obtained from assessment of satellite imagery, was associated with reduced risk of depression in a sample of older adults living in Florida. The association persisted after adjustment for a range of individual- and neighbourhood-level factors. The authors note that research using the same sample has found similar associations with physical health outcomes such as diabetes, hypertension and hyperlipidaemia. The authors also comment on the implications of their findings for community policy and planning.

Gu *et al* (pp. 456–467) move into the atmosphere to consider the relationship between particulate matter air pollution and risk of both depression and suicide. Following a systematic review and meta-analysis, the authors conclude that increased ambient $PM_{2.5}$ (particles with a diameter of 2.5 μm or less) concentration is strongly associated with increased depression risk in the general population, with evidence to support the possibility of a cumulative exposure effect over time. A marginally significant positive association with risk of suicide was also identified in this study but no associations were found between concentration of PM_{10} and either of the outcomes of interest. The authors note that the mechanisms underlying the associations found remain unclear and call for further research, including to examine the impact of lowering pollution levels.

In a short report focused on seasonal patterns of mental health problems and the utility of using publicly available information, Lansdall-Welfare *et al* (pp. 481–484) found that prescriptions of antidepressants were highly seasonal and were correlated with web queries for seasonal affective disorder. Both antidepressant prescriptions and web queries for seasonal affective disorder were found to correlate with day length, rather than levels of solar energy.

Looking right across the range of neighbourhood-level factors in a pooled analysis of eight Dutch cohort studies, Generaal *et al* (pp. 468–475) found the following factors to be associated with depression prevalence: higher urbanisation, lower socioeconomic status, higher number of social security recipients, higher percentage of non-Dutch residents, higher pollution levels, less green space and reduced levels of social safety.

Interventions for depression

Two papers and two editorials in the *Journal* this month consider aspects of treatment for depression. Kohler-Forsberg *et al* (pp. 494–501) compared switching between the tricyclic antidepressant nortriptyline and the selective serotonin reuptake inhibitor escitalopram, in the context of individuals experiencing side-effects or non-response to the first agent prescribed. A reduction in symptoms of depression was observed following switching irrespective of the direction (i.e. from nortriptyline to escitalopram or vice versa). López-Díaz *et al* (pp. 447–448) consider the off-label use of ketamine for treatment-resistant depression in a European public healthcare context and propose an ethical, regulatory and procedural framework for its use. They also note the likely future availability of intranasal esketamine, which is due to be reviewed by the US Food and Drug Administration in 2019, and highlight the impact this will have on the use of off-label ketamine. In another editorial, Kiebs *et al* (pp. 445–446) argue that studies of repetitive transcranial magnetic stimulation (rTMS) in depression have tended to include patients with high levels of treatment resistance. The authors call for trials of rTMS in non-treatment-resistant groups given the low level of undesired effects associated with rTMS, the results of cost-effectiveness studies and the likely future increased accessibility of rTMS through the development of more portable devices.

Inspired by the recommendations of the Mental Health Gap Action Programme, Jordans *et al* (pp. 485–493) tested the effectiveness of adding psychological treatments delivered by community-based counsellors to primary care-based mental health services for depression and alcohol use disorder in the low-resource setting of Nepal. In the depression trial, those in the intervention arm were found to have a greater reduction in depression symptom scores at 12 months post-treatment, whereas no significant benefit was found for the intervention tested in the alcohol use disorder trial. The authors highlight the substantial training and ongoing supervision received by the counsellors involved in the depression trial, arguing that this may have been a key ingredient in the success of the intervention. They also argue that patients with a diagnosis of harmful use of alcohol should be differentiated from those with dependence if appropriate and effective interventions are to be targeted to these subgroups.

A key outcome of depression

Wei *et al* (pp. 449–455) conducted a systematic review and meta-analysis of studies investigating the association between late-life depression and both all-cause and cardiovascular mortality among community-dwelling older adults. Overall, 61 prospective cohort studies were included in the review. Late-life depression was found to be associated with both all-cause mortality and cardiovascular mortality but heterogeneity in results was seen across studies. The authors call for studies to investigate any benefit on mortality outcomes resulting from optimal treatment of late-life depression.