

Highlights of this issue

By Derek K. Tracy

(Not so) legal highs?

There's been a zombie outbreak in Gotham City. Before you yell for Batman, the culprit is a novel psychoactive substance ('legal high' to use the incorrect but problematically enduring term) called 'AK-47' that is causing a bizarre intoxication profile in consumers: Kaleidoscope (pp. 237–238) investigates the rise of the ultra-potent cannabinoids. Meanwhile Matthew Nour and Robin Carhart-Harris (pp. 177–179) evoke a sense of oceanic boundlessness in a mesmerising editorial on psychedelics and the science of self-experience. This class of drug is fascinating on many levels, having been used as entheogens in spiritual practice by human cultures for millennia, and producing a unique range of altered states of consciousness with a – relatively – low side-effect profile. In a return to their 1960s countercultural zenith, interest is renewing in their therapeutic potential and what they can tell us about the neuroscience of the self. Somewhere in an alternative dimension, Sasha Shulgin is smiling benignly.

Drug use – licit or illicit – and its acceptance or otherwise is largely sanctioned on societal and political grounds rather than being based on any scientific evidence of harms – think alcohol. Corrigan *et al* (pp. 180–181) explore the stigmas of different addiction types, provoking us to recognise how, unlike mental illness more generally, discrimination against those with addictions can be legal and indeed authorised for use in health campaigns and as part of self-stigma in treatment programmes. They challenge whether it is acceptable to use stigma as a public health tool. Their argument about stigma in substance misuse is very clear: stop it.

(Not so) hallucinatory hallucinations?

What are pseudohallucinations? Have you been stuck explaining the concept to a patient or student, perhaps stumbling to justify the use of a prefix that means 'false'? Yet most clinicians will recognise the phenomena, likely primarily associating them with borderline personality disorder (BPD). Hallucinations are increasingly recognised to be common outside of psychoses, from healthy populations through a wide range of mental health conditions. Despite this, non-psychosis variants remain less well explored and understood. Ian Kelleher and Jordan DeVylder update us (pp. 230–231), using data from the English Adult Psychiatric Morbidity Survey. Hallucinations were common across all described conditions, and, perhaps testing our assumptions, no more prevalent in people with BPD than in those with other non-psychotic disorders. The authors invoke the veridical paradox of Berkson's bias: those with BPD who hallucinate are more likely

to seek help than voice-hearers in other cohorts. Test yourself: do you use the word 'pseudo' describing hallucinations in anything except BPD?

Auditory verbal hallucinations (AVH) are associated with alterations to speech networks, but resting-state changes to cerebral blood flow in schizophrenia are less well established. Zhou *et al* (pp. 209–215) neuroimaged healthy volunteers and individuals with schizophrenia both with and without a history of AVH. Using a 3D pseudo-continuous (pseudo again) arterial spin labelling technique, those with schizophrenia were shown to have common changes in blood flow to several brain regions, but the AVH were specifically associated with increases to the auditory and striatal regions, and reductions in visual and parietal areas.

Our repertoire of interventions for negative and cognitive symptoms of psychosis is on the light side of scant. Cognitive remediation therapy (CRT) is showing some promise. Ramsay and colleagues (pp. 216–222) investigated neuroplastic changes induced by the technique, finding that it increases left dorsolateral prefrontal activation. There is interest in combining this intervention with neuromodulation: identifying the regions that respond to CRT this offers a specific target.

(Not so) different to medication? Severity and CBT outcomes.

Baseline depressive symptom severity is a standard confounder to unpick in trials of antidepressant medications, yet it has not been so tested in most trials of cognitive-behavioural therapy (CBT). Furukawa *et al* (pp. 190–196) meta-analysed individual participant-level data from five such randomised controlled trials (RCTs) with pill-placebo arms. Interestingly, and against hypothesis, baseline symptom severity had little impact on CBT efficacy over placebo; another way of looking at this is that individuals can expect as much benefit from CBT across a wide range of illness severities. The number needed to treat (NNT) to show benefit over placebo in major depression was 12, not far off antidepressants' NNT of 9. Higher rates of psychosis are a well-established phenomenon in immigrant populations; Mindlis & Boffetta (pp. 182–189) ask if the same is true of mood disorders, quantifying the incidence in first- and second-generation immigrant populations. They found higher rates in both groups compared with non-immigrant cohorts, with men at particular risk. Finally, Joas and colleagues (pp. 197–202) use psychiatric in-patient admissions as a 'real world' marker of effectiveness (or otherwise) of pharmacological treatments for bipolar affective disorder. The proposal is that this naturalistic design has better practical utility than the standard drug *v.* placebo RCT with all its limitations. Evaluating outcomes in over 35 000 individuals on national registers they found that lithium, valproate, lamotrigine, olanzapine, and quetiapine were associated with reduced admission, with lithium especially effective.