Highlights of this issue

By Derek K. Tracy

A momentary lapse of reason

There has been much debate on antidepressants and harm, including, in the UK, a controversial television documentary proposing that they may in rare instances induce homicidal thinking. While the evidence underpinning that has been robustly challenged, the wider issue of violence and mental health is a real one however, and Kaleidoscope this month (pp. 186–187) reviews an important piece that explored what happened on in-patient units once smoking bans came into force. Lin *et al* (pp. 157–162) look more broadly at the impact of tobacco smoking and exposure to air pollution on rates of depression in six low- and middle-income countries (which typically have higher rates of both). Their 3-year averaged concentration of ambient fine particulate matter $\leqslant 2.5\ \mu m$ ($PM_{2.5}$) was about 24 $\mu g/m^3$. WHO guidelines recommend cities have $< 10\ \mu g/m^3$: to put this in perspective, London has an annual average of about 15 $\mu g/m^3$, while Beijing regularly clocks at 85, and Gwailor in India has been measured at over 175 $\mu g/m^3$. In this prospective cohort of over 40 000, increasing pollution and tobacco smoking were consistently associated with greater rates of depression across the different countries, encompassing both rural and city dwellers; their interaction appeared synergistic but was non-significant. How such fine particulate matter (and which particular subcomponents) causes depression remains unknown, though DNA methylation, oxidative stress and proinflammatory responses have been suggested.

The association between sleep loss and mood episodes in bipolar disorder is well-recognised, but individual vulnerabilities to this had not been well-established. Lewis *et al* (pp. 169–174) report on semi-structured interviews with an impressive 3140 individuals with this condition, finding that highs triggered by sleep loss were particularly associated with female gender and BD-I subtype. Other potential triggers were not over-endorsed by women, increasing confidence that this was not a reporting bias. The authors propose their findings should help risk stratification and focused discussion on factors such as shift-work. Paul Stokes and colleagues continue the theme (pp. 132–134), this time addressing what they label the elephant in the bipolar room: the high prevalence of addictions in this group, which is up to five times greater than that seen in the general population. Shared neurobiological changes – with common alterations in dopamine and GABA systems noteworthy – and self-medication hypotheses are discussed as attractive but unproven links, and the real challenge at present is clinical management.

Another brick in the wall

A maternal history of early-life maltreatment has been shown to be associated with offspring internalising and externalising difficulties; Plant *et al* (pp. 144–150) tap into the rich and hugely valuable ALSPAC cohort to help characterise mediating pathways underpinning this. Evaluating the almost 10 000 mother–child dyads that were followed prospectively from pregnancy to age 13, they found that maternal antenatal and postnatal depression, and offspring maltreatment, independently significantly mediated this

association. Of note, maladaptive parenting did not. Kaleidoscope reviews a putative novel hormonal treatment for postnatal depression, though it is interesting that the impact of fathers' histories remains an overall far less-tested field. Among children in the UK, 6–22% do not finish school, and their long-term outcomes are frequently poorer along a range of measures. Adolescent internalising symptoms have been linked to such non-completion, but previous scientific work has not always adequately controlled for confounders such as academic performance and socio-demographic factors. Brière and colleagues (pp. 163–168) rectify this, examining associations between depressive and anxiety symptoms in almost 5000 adolescents aged 12–14 and their subsequent school completion. Interestingly, after adjustment, depressive symptoms did not predict school non-completion across the wider group, though an association was found in academically higher-achieving students. Fascinatingly both high and *low* levels of anxiety were predictive of school non-completion. The authors invoke the (in)famous U-shaped stress/arousal and performance graph, and propose that pupils may need an optimal degree of anxiety to succeed: a message I suspect *BJPsych*-reading parents will disseminate domestically. Tomassi *et al* (pp. 151–156) tested how childhood trauma impacted specific psychopathology and substance use in a cohort with first-episode psychosis. In their relatively large 'real world' setting, reported rates of severe sexual and physical abuse were notably lower (at 8% and 14%) than in many previous works. Those who had suffered severe sexual abuse had significantly greater rates of affective psychoses and lifetime use of cannabis and heroin; severe physical abuse was associated with later heroin and cocaine use.

The division bell

On or off antipsychotic medication when stable? One of our endless debates, which tends to return to the principle of joint decision-making and 'treat the person in front of you'. While this area has been evaluated before, Takeuchi *et al* (pp. 137–143) report their meta-analysis of 11 studies comparing symptom trajectories between antipsychotic and placebo in a maintenance phase. They found both total symptom scores and percentage change remained almost unchanged in those continuing medication, whereas they continuously worsened over time in those switched to placebo. Joanna Moncrief's RADAR study is currently prospectively addressing this issue; crucially, this programme will evaluate *gradual* medication reduction and assess longer-term social functioning as well as symptomatology. The results will be of great interest when they become available in a few years. Rounding this off, Joe Hayes *et al* (pp. 175–181) report on the mortality gap in those with bipolar disorder and schizophrenia. (Do read our latest Mental Elf blog led by Jude Harrison, which is on Joe's paper: https://elfi.sh/bjp-me6). Redressing the average loss of life expectancy is a well-recognised priority, so given our awareness and supposed focus, might this gap be reducing with time? Using a nationally representative cohort from primary care records, Hayes and colleagues found decreasing rates of all-cause mortality in both SMI groups since 2000. However, critically, compared with the general population, the mortality gap from 2000 to 2014 had *widened*. It's just not acceptable. The *BMJ* recently published data (http://bit.ly/2vOjdgA) showing that targeted health inequality strategy had reduced broader social and geographical gaps in life-expectancy England: it can be done. Now there's a topic for an investigative documentary to explore.