

Kaleidoscope

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Kindness and compassion are important for all of us, not least when working in healthcare. Patients inevitably tell us it is important to them, and we believe that most staff care deeply, but perhaps we lack the hard data to back up its impact; how to weigh sunshine? Lee et al¹ followed up over a thousand members of the public (age range 27–101 years old) for just under 5 years, exploring their compassion towards others (CTO) and compassion towards self (CTS) across time. CTO was stable within individuals – one tends not to get more or less compassionate to others – but CTS changed with time in an inverse-U pattern (though peaking rather late at age 77). It might not surprise you that women tended to display greater CTO than men – it has been argued that there are evolutionary reasons for this, linked with typically greater child-rearing responsibilities – but, interestingly, there was no strong relationship between an individual's CTO and their CTS. Most importantly, greater CTO and CTS predicted better outcomes in one's own life and were associated with enhanced psychological and physical well-being, and reduced levels of loneliness. The study was not designed to determine causality, so it also remains possible that those with better physical and mental health will care more for themselves and others. Nevertheless, caring for others, as well as caring for yourself, appears to be good for you. The question for healthcare organisations is how we appropriately emphasise and appropriately recognise and reward these valuable and valued traits in our staff.

There has been increasing focus on how implicit racial biases may be perpetuated within routine medical education. The data are not disputed – from textbooks that show the appearance of dermatological lesions exclusively on white skin, to some doctors giving lower doses of analgesia to black patients under the belief that their pain thresholds were different – clearly showing that we are not where we want to be. This requires a change from condemning racism to actively becoming anti-racist – and making this everyone's business, to which we all need to contribute. Brown et al² suggest that the focus in the past has been largely on altering structural aspects of the curriculum, but now we need to better target clinicians and their implicit biases. Cognitive-behavioural therapeutic (CBT) approaches may offer an opportunity to teach clinicians to identify, respond to and correct 'problematic mental shortcuts' using clinical vignettes. The issue is compounded by our traditional use of quick implicit algorithms to jump from presenting symptoms to rapid management; this same system opens a door to prejudicial stereotyping. Teaching sessions that introduce cognitive dissonance – individuals learn they may have acted on implicit biases – may motivate individuals to seek out more information or alter their behaviour, as well as better understanding and managing these automatic responses. The authors helpfully provide sample scenario material, with automatic responses and consequences, and suggest some alternative responses. They emphasise that their approach is not prescriptive and needs more evaluation of effectiveness; perhaps supplemented with a greater contribution from those with lived experience.

Compassion is also needed across a range of different professions, including junior researchers such as PhD students and post-docs. A *Scientific Reports* article³ offers a meta-analysis exploring health concerns in over 23 000 PhD students. Rates of clinically significant depression were in line with those of other trainees in

biomedical sciences at 24%, while 17% of PhD students reported experiencing anxiety. This is significantly higher than rates in the general population of young adults and, further, in a group known for low help-seeking behaviour. This is echoed in a recent report⁴ of US postgraduates conducted by the Council of Graduate Schools and the JED Foundation. The pressure cooker environment, long-term financial instability and toll on work-life balance are given a personal voice. The report focuses on necessary structural and systemic changes towards creating a sustainable and nourishing research environment. It calls for increased access to mental health services, providing mentorship training to supervisors, and significant policy revisions to better address harassment, leave and flexibility. It is not only the right thing to do but is also critical to attracting, retaining and supporting the next generation of clinicians and researchers so they can flourish and produce the very best science.

'Am I well because I'm on antidepressants, or because I've recovered?' is a common question posed frequently to psychiatrists. While at a population level, medication undoubtedly keeps people well and helps prevent relapse, it's less clear at the individual level, particularly when the person wishes to discontinue medication. It's good to have options, and Josefiën Breedvelt et al⁵ carried out a helpful individual participant data meta-analysis (IPDMA) of the impact of a psychological intervention when discontinuing antidepressant monotherapy. A total of 714 individuals were included, from four randomised controlled trials that compared remaining on an antidepressant with replacing medication with CBT or mindfulness-based cognitive therapy. All participants were in full or partial remission for at least 6 months at the study's commencement. Across 15 months of follow-up, no differences were observed between those who continued on their medication and those who replaced it with one of the psychological therapies. The strength of IPDMA is disaggregation of participant profiles rather than the more standard pooled responses. In all participants, younger individuals, those with shorter duration of remission, and those with higher levels of residual symptoms at trial commencement were associated with greater risk of relapse. However, it is informative that these factors were common across both groups, helping to reassure, for example, that an individual with a more severe illness history is not unduly disadvantaged by moving to an appropriate talking therapy. Back to the individual in your clinic: not all may want a talking therapy, and we are reminded of the general waiting lists for such interventions, but it's good to have better solid data on what our evidence-based options are.

Cognitive side-effects of electroconvulsive therapy (ECT) remain controversial. It is impossible to ignore the many anecdotal stories on the topic, but more difficult to find robust data. Retrospective surveys typically identify persisting memory problems in about a third to half of respondents, but prospective data tend not to replicate this, primarily showing only initial short-term difficulties – albeit there is considerable heterogeneity in the literature. It is not entirely clear how to reconcile this, though an argument is that differential impact on memory subdomains, not least autobiographical, and neurocognitive impact of (particularly refractory) depression itself might be factors. Anderson et al⁶ try to redress this, with an analysis of the impact of mood on cognitive functioning following a course of (ketamine-augmented) ECT. Thirty-seven patients, all of whom had significant baseline cognitive impairment across a range of measures, were followed up for 4 months, by which point half were in remission. Initial depression severity had no effect on clinical outcomes. There was a significant initial deterioration in anterograde memory, but this improved after ECT, and no one showed any subsequent deterioration in memory

below their baseline (i.e. no worsening of memory). Those in remission showed significant improvement in anterograde verbal memory, category (semantic) verbal fluency and self-rated memory; the last of these correlated with autobiographical memory. Nevertheless, even remitted patients had deficits when compared with healthy controls, which may contribute to ongoing functional impairments. The authors summarise that they found no evidence of persisting ECT-induced impairments, but remission significantly enhanced self-rated memory, and this might explain the retrospective survey/prospective data discrepancy. They recommend utilising self-rated memory as a monitor of purported effects of ECT on longer-term neurocognitive functioning.

Finally, sometimes the daily news cycle often makes us question our integrity. In laboratory behavioural economic experiments, people behave in pro-social ways even in experiments that will favour more selfish behaviour, suggesting that the experiments are recruiting the wrong people or that they lack ecological validity. Alós-Ferrer et al⁷ describe results that apparently reconcile this schism. They argue that previous experiments such as trust, ultimatum and dictator games are usually about one player negotiating with or ‘cheating’ another opponent. Importantly, in the commonly utilised two-player iterated games, ‘offering’ 50% of a reward to another player (‘selfishly’ keeping 50%) is considered fair or even generous, whereas in a multiplayer game taking 50% of everyone’s earnings would be considered egregious. So, the authors recruited 640 people (a mixture of economics and other undergraduate students), who completed a sequence of two-player games including the trust, dictator and ultimatum games (which all fundamentally hinge on making decisions about how to divide a pot of money between two participants, allowing for a range of selfish or pro-social behaviours). Before playing sequences of these two-player games, the participants were equally and randomly allocated to ‘robber’ or ‘victim’ roles described to the participants as their being ‘type I’ and ‘type II’ players. The victims were told that their paired participant in the other games might be a robber, who could opt to steal a proportion of their winnings on the other games. By experimental design, each robber was paired with a total of 16 other victims in their session. The 320 robbers were further divided into two equal groups – one group were told they could steal winnings and asked what percentage they wanted to steal (50, 33, 10 or 0%) before playing the games, and the other half were only told they could steal (and asked by what percentage) after playing the games. This was to establish whether the usually pro-social behaviours ‘primed’ by participating in the two-player games carried over to a post-games decision to steal less.

No feedback on winnings/losses was provided to any players during the games, and overall winnings were only revealed at the end. After the games were completed, but before revealing the participants’ winnings, each participant was asked whether they wanted to

donate any percentage of their (as yet unknown) winnings to a local charity. For the decision to rob other players, the sobering result was that 180 (of 320) robbers opted to steal the maximum 50% of earnings and 86 robbers took 33% (leaving a mere 41 and seven robbers opting for 10 and 0% respectively). This did not differ between robbers who were asked how much to steal before or after playing the two-player games. However, during the actual two-player games, robbers and victims displayed pro-social (generous) behaviours completely consistent with those found in previous studies and meta-analyses of the ultimatum, dictator and trust games. Therefore, stealing from 16 people represents a discrete behaviour divorced from the more pro-social behaviour seen in individual dyads during two-player games. The decision times for how much to steal were subsequently analysed: the group who opted to take 50% of winnings made the decision far quicker than the group opting for 33%, suggesting less moral struggle with ripping off their 16 peers. For the charitable donations, those stealing 50% were much less likely to donate generously to the charity (irrespective of whether they were asked before or after the two-player games what they would steal). In conclusion, the authors argue that high-stakes but diffuse or less visible harms (stealing a lot, from many people) are easy for some people, but they will still show pro-social behaviours on a one-to-one basis. A person can be generous to another but feel less moral aversion when stealing from many. This certainly fits with our evaluation of some of the folk who populate many news stories and scandals. Perhaps the late Bill Hicks was right after all: ‘Isn’t humanity neat? Bull****. We’re a virus with shoes, okay? That’s all we are’. It would be interesting to pair this study with the CTO and CTS we discussed at the start of this Kaleidoscope.

References

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