

Highlights of this issue

By Sukhwinder S. Shergill

Autism spectrum disorder, callous traits and empathy

Autism spectrum disorder (ASD) is characterised by lack of social reciprocity, impaired communication and a restricted repertoire of behaviour. It is not clear whether this is also commonly accompanied by the presence of callous-unemotional traits. A new study by Carter Leno *et al* (pp. 392–399) established that half of adolescents with ASD met cut-off for callous-unemotional traits but few (17%) exhibited concurrent conduct problems, unlike the pattern in the general population. The presence of callous-unemotional traits was related to impaired fear recognition in the adolescents with ASD, but not to theory of mind or cognitive flexibility, suggesting some commonalities with the presence of these traits in the general population. A study examining the quantitative nature of empathy in a sample of individuals with ASD, their relatives and population-based controls found that two factors, empathy and systematising, were able to best capture the nature of autistic traits. These together may provide a cognitive explanation for the characteristics of autism. Three groups of homogeneous individuals could be identified on the basis of their scores on empathy, systemising and autistic traits. Grove and colleagues (pp. 400–406) suggest that this is in accordance with the proposed DSM-5 diagnostic criteria predicated on two main factors with a dimensional approach. Derntl *et al* (pp. 407–413) found no behavioural differences between empathy measures in individuals at high risk of psychosis, when compared with healthy controls; however, functional magnetic resonance imaging (fMRI) revealed that the high-risk individuals showed greater activation of regions associated with emotion processing. The authors suggest that this could be indicative of increased sensitivity to emotional stimuli or elevated levels of negative affect.

Old age psychiatry and resilience

There is an active debate about the value of an ageless mental health service, rather than separate services for adults and older adults. Abdul-Hamid and colleagues (pp. 440–443) have examined the needs of a group of elderly patients with psychiatric disorder and show that those in contact with old age psychiatry had fewer unmet needs compared with those in contact with adult services. The authors caution against an uncritical movement towards ageless services in mental health. They highlight the differences in skills mix necessary to manage disturbed young people and frailty in older people. An accompanying editorial by Warner (pp. 375–376) reviews the development of the old age psychiatry services from the 1950s to the establishment of the Faculty of the Psychiatry of Old Age at the Royal College of Psychiatrists in the 1980s, and the more recent vogue for ageless services. He describes the active advocacy approach taken to support these age-specific services, suggesting that it is crucial to evaluate the evidence before dismantling valuable services. An interesting question with regard to ageing is what are the brain correlates of declining cognitive function? Topiwala *et al* (pp. 435–439) performed magnetic resonance neuroimaging in the Whitehall 2 sample of civil servants and identified changes in deep white matter and hippocampal brain atrophy as being related to cognitive impairment. Other changes in periventricular white matter and global brain atrophy were not related to cognitive

impairment, supporting the suggestion that these are more likely to occur as incidental findings. The additional observation that higher premorbid IQ and socioeconomic status, but not education, were associated with increased resilience to cognitive impairment, leads the authors to suggest that this supports the idea that increased cognitive reserve is a protective factor against cognitive decline.

Sides of the same coin? Neurology and psychiatry, and attention in schizophrenia

The widespread availability of brain imaging has provided rich data to examine distinctions in the classification of disorders. It has been mooted that differences between neurology and psychiatry are largely historical and given that they are instantiated in the same organ, the brain, there should be a greater attempt to integrate these disciplines. Crossley and colleagues (pp. 429–434) carried out a meta-analysis of structural brain changes taken from studies of both neurological and psychiatric disorders and found different patterns of brain structure in the neurological disorders relative to the psychiatric disorders. There were greater changes evident in the basal ganglia, sensorimotor cortex and temporal cortex in neurological disorders, but in cingulate, medial and superior frontal and occipital cortex in psychiatric disorders. They suggest that this supports two distinct classes of disorder from a neuroimaging perspective. An accompanying editorial by David & Nicholson (pp. 373–374) places this question in a wider context, raising the issue of neuroimaging commonalities between the different psychiatric disorders themselves. They conclude by highlighting the fact that psychiatric concerns extend beyond the structure of the body or the brain, to the relationships between minds and the social context in which they interact. One common domain that is affected across both neurology and psychiatry are impairments in attention. Mayer *et al* (pp. 420–428) used fMRI during a cognitive control task in patients with schizophrenia to show that they exhibited functional abnormalities in auditory and sensorimotor areas. The authors highlight greater deficits in the auditory cortex than in the prefrontal cortex or the wider cognitive control network, they suggested an increased focus on the auditory cortex function in these patients. This suggestion has been advanced by Rayner and colleagues (pp. 414–419) who examined auditory processing bias and the propensity towards auditory hallucinations in a sample of healthy volunteers. They reported that the high hallucination-proneness group exhibited reduced sensitivity to auditory attention. They suggest that this may occur because of an increased intrinsic bias towards internal acoustic signals in these people, rather than the normal focus of externally presented stimuli, and could potentially lead to therapeutic trials to retrain attention.

Stigma interventions

Stigma is damaging, but can interventions be successful in reducing stigma over the medium to long term? A systematic review by Mehta and colleagues (pp. 377–384) suggests that the answer is 'yes'. They found that interventions with follow-up beyond 4 weeks demonstrated a medium-sized effect on knowledge outcomes and a small effect on attitude. There were insufficient data to be able to draw a conclusion about reductions in discrimination, and they found that, contrary to their hypothesis, the interventions involving social contact were no better than other interventions. The authors make a clear case for better studies in this important area.