

In this issue

This issue contains one review on the relationship between physical activity and neurodegenerative disease. Other sets of papers examine various aspects of dementia, common mental disorders, and self-harm. Six final papers examine other topics.

Physical activity and neurodegenerative disease

In the first paper, Hamer & Chida (pp. 3–11) report findings from a meta-analysis of 16 prospective studies of the relationship between physical activity and neurodegenerative disease. The pooled relative risks for those in the highest physical activity group, compared with the lowest, were: 0.72 ($p < 0.01$) for dementia, 0.55 ($p < 0.01$) for Alzheimer's and 0.82 ($p = 0.28$) for Parkinson's. The authors conclude that physical activity is inversely associated with risk of dementia.

Dementia

In the first of two original papers on dementia, Strydom *et al.* (pp. 13–21) investigated the impact of severity and age on the relationship between intellectual disability (ID) and dementia in a two-staged epidemiological survey of 281 adults with ID aged 60 years or older. The prevalence of dementia was compared with UK and European consensus rates using standardized morbidity ratios (SMRs). The authors found that the prevalence of dementia was elevated in this sample (SMR 2.77). The authors further found that prevalence rates did not differ by severity of ID, but that SMRs were highest for younger age groups.

Lonie *et al.* (pp. 23–31) examined the sensitivity of the dual task paradigm as a measure of Alzheimer's dementia (AD) early in the disease process in a sample of 33 patients with amnesic mild cognitive impairment (aMCI), 10 with early AD, 17 controls with depressive symptoms, and 21 healthy subjects. The authors found no group differences in dual task performance. The authors conclude that the dual task paradigm lacks sensitivity for early differential diagnosis of Alzheimer's disease.

Common mental disorders

In the first of five papers on various aspects of common mental disorders, Scott *et al.* (pp. 33–43) investigated the impact of physical co-morbidity on the relationship between age and mental disorders in a sample of 42 697 subjects drawn from 18 population surveys conducted as part of the World Mental Health Surveys. The authors found that (1) depressive and anxiety disorders decreased with age, a relationship that did not vary by

physical co-morbidity; (2) the majority of older people had physical health problems without co-morbid mental disorder; and (3) the majority of those with a mental disorder had co-morbid physical health problems, particularly in older groups.

Rijsdijk *et al.* (pp. 45–54) examined the impact of genetic and environmental factors on the previously reported link between neuroticism and biases in information processing towards emotional rather than neutral information. In a sample of 125 female twin pairs, who completed free recall tests of pleasant and unpleasant words and the dot-probe task, the authors found that the only significant correlation was between neuroticism and the proportion of unpleasant words recalled. The authors note that this association appeared to be due to environmental effects, and conclude that there was no evidence that a predisposition to focus on emotional stimuli is an underlying genetic mechanism of neuroticism.

Bromberger *et al.* (pp. 55–64) investigated predictors of a first lifetime episode of major depression in a sample of 266 midlife women followed over a 7-year period, focusing on life stress, health-related factors and aspects of the menopausal transition. The authors found that onset of depression was independently associated with a lifetime history of anxiety (HR 2.2) and role limitations due to physical health (HR 1.9) at baseline, and a very stressful life event (HR 2.3) prior to onset. There was no evidence that menstrual cycle characteristics were associated independently with risk of onset.

Schutter (pp. 65–75) reports findings from a meta-analysis of 30 double-blind sham-controlled studies ($n = 1164$ patients) of the efficacy of high-frequency repetitive transcranial magnetic stimulation (rTMS) applied to the left dorsolateral prefrontal cortex for depression. Schutter found a significant overall weighted mean effect size ($d = 0.39$) for active treatment. There was no evidence that medication resistance or intensity of rTMS modified the effect size. The author concludes that the efficacy of rTMS for depression is robust and the effect size is comparable to at least a subset of antidepressant drugs.

Diener *et al.* (pp. 77–86) investigated cognitive, behavioural and physiological effects of stressor uncontrollability in a sample of 24 unmedicated depressed patients and 24 matched controls that were tested in an expanded forewarned reaction paradigm. The authors found that depressed patients (1) showed enhanced post-imperative negative variation (PINV), an electrophysiological index of altered information processing, and (2) felt more helpless than controls. In addition, frontal PINV magnitudes were positively associated with rumination in the depressed group. The authors conclude that depressed patients are more susceptible to stressor

uncontrollability, and that alterations in prefrontal functioning appear to contribute to this vulnerability.

Self-harm

Two papers examine aspects of self-harm. In the first, Jablonska *et al.* (pp. 87–94) investigated the relationship between ethnicity, socio-economic status and self-harm in adolescence in a cohort of 1 009 157 Swedish children born between 1973 and 1982 who were followed from 1991 to 2002 in Swedish national registers. The authors found that those with two parents born outside Sweden were at increased risk of hospitalization for self-harm compared with the majority population. When socio-economic status was controlled, this effect was explained for all but a small number of ethnic groups.

Oldershaw *et al.* (pp. 95–104) examined decision making and problem solving in adolescents with past and current self-harm (SH). In a sample of 54 adolescents with a self-harm history (current self-harm, $n=30$), and 22 depressed and 57 healthy controls, all assessed using the Iowa Gambling Task (IGT) and Means-Ends Problem-Solving Procedure (MEPS), the authors found that there were no overall differences between the SH group and others on the IGT. There was a trend for current self-harming adolescents to make more high-risk choices than those with a history of SH. The authors conclude that, as poor decision making is evident in current but not past self-harming adolescents, improvements in decision-making skills may be linked to cessation of SH.

Other topics

In the first of the final six papers, Anderluh *et al.* (pp. 105–114) report findings from a study to design and validate an approach to defining an eating disorders phenotype based on retrospective assessment of lifetime eating disorder symptoms (the EATATE Lifetime Diagnostic Interview). In a sample of 97 females with varying current eating disorder diagnoses, the authors confirmed the temporal instability of eating disorder subtype diagnoses. Four common lifetime diagnostic courses were identified that correlated with distinct childhood traits: (1) lifetime anorexia nervosa, (2) binge/purge anorexia nervosa with or without an antecedent episode of restrictive anorexia nervosa, (3) bulimia nervosa after an episode of anorexia nervosa, and (4) lifetime bulimia nervosa. The authors conclude that the assessment of lifetime symptoms may produce more accurate definitions of the eating disorder phenotype, with implications for nosology, treatment and aetiological studies.

Witting *et al.* (pp. 115–127) investigated the contribution of genetic and environmental influences on diverse sexual dysfunctions, assessed using the Female Sexual Function Index, in a sample of 6446 female twins (aged 18–43 years) and 1994 female siblings (aged 18–49

years). The authors found that individual differences in the six sub-domains considered (desire, arousal, lubrication, orgasm, satisfaction and pain) were primarily due to non-shared environmental influences, with some modest genetic influences, but no shared environmental influences. The authors conclude that female sexual dysfunctions are separate entities, with some shared aetiology.

Gehlert *et al.* (pp. 129–136) report findings from a study of the prevalence of premenstrual dysphoric disorder (PMDD) using all four DSM-IV research diagnostic criteria and data collected in a sample of 1246 women aged 13–55 years recruited from two urban and two rural sites in the US. On the basis of data collected using self-report questionnaires, urine samples and clinical interviews, the authors found a prevalence for PMDD of 1.3%, which is substantially lower than DSM-IV estimates.

Kessler *et al.* (pp. 137–147) investigated the prevalence and workplace costs of adult attention deficit hyperactivity disorder (ADHD) in employees of a large manufacturing company surveyed in 2005 and 2006 ($n=4140$ in 2005, 4423 in 2006). The authors found a current prevalence adult ADHD of 1.9%. ADHD was associated with a 4–5% reduction in work performance and two-fold increased odds of both sickness absence and workplace accidents-injuries. In the year before interview, the human capital value of the lost work performance associated with ADHD was \$4336 per worker. Of those with adult ADHD, only a small minority were in treatment.

Marmorstein *et al.* (pp. 149–155) investigated the impact of parental alcohol and drug dependence on risk of a range of externalizing disorders in offspring in a sample of 1252 adolescents drawn from the Minnesota Twin Family Study. The authors found that both parental alcohol and parental drug dependence were similarly associated with increased risks for nearly all offspring disorders. Compared with low-risk offspring, those with a substance-dependent parent were around 2–3 times more likely to develop a disorder by late adolescence.

In the final paper, Degenhardt *et al.* (pp. 157–167) investigated the effects of pre-existing mental disorder and sociodemographic characteristics on violations of the ‘gateway’ pattern of drug initiation (i.e. a pattern beginning with use of alcohol, tobacco, followed by cannabis, then other illicit drugs). In a sample of 9282 subjects drawn from the US National Comorbidity Survey Replication, the authors found that gateway violations were largely unrelated to later dependence risk. Early-onset internalizing disorders were associated with gateway violations. Both internalizing and externalizing disorders increased risk of dependence in users of all drugs.

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