ANZJP This Month

Cumulating Evidence in Psychiatry

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This month a theme can be seen across a number of the contributions, which deal with cumulating evidence in psychiatry. Because mental disorders are complex in both their presentations and causes, there is often conflicting evidence and non-replication of findings. Recent decades have seen increasing use of systematic reviews and the associated statistical methods of meta-analysis to make sense of these complexities, including in this journal.

Furber and colleagues (this issue) present a systematic review of meta-analyses on risk factors for mental disorders. They found 1628 meta-analyses of risk factors since 2000, with genetic, psychological and physiological risk factors dominating. More telling are the areas that have been relatively neglected and are more relevant to preventive efforts, such as lifestyle (including diet and physical activity) and relational factors (including parent-child relationships). This month's issue makes some contribution to these areas of neglect by presenting a new meta-analysis of dietary magnesium and calcium as risk factors for depression (Zhang et al., this issue). It finds that dietary magnesium is associated with reduced risk for depression, but also evidence for a curvilinear trend, suggesting an optimal dietary dose.

Another meta-analysis is reported by Twomey and O'Reilly (this issue) on the internet therapy program MoodGYM. MoodGYM is an Australian-developed cognitive-behavioural therapy program for depression and anxiety that is freely available on the internet. Work on MoodGYM has been an important contributing factor in establishing Australia as a leading country in e-mental health (Christensen and Petrie, 2013). Twomey and O'Reilly confirm that MoodGYM is effective, with medium effects on anxiety but only small effects on depression. However, they also raise the possibility of publication bias, whereby trials with non-significant results may not have been published.

The issue of publication bias is very important if valid conclusions are to be drawn from systematic reviews. In an Editorial, Porter and colleagues (this issue) discuss the distorted conclusions that can

arise if negative results are less likely to be published, as has been shown to have occurred with trials of antidepressants. While registration of treatment trials before they commence is helping to reduce this type of biased reporting, much more needs to be done in other areas like risk factor studies, such as the dietary factors reviewed by Zhang and colleagues (this issue). Fortunately, the journal is contributing to good practice by publishing the negative results from a trial of N-acetyl cysteine in children with autism (Dean and colleagues, this issue), which had received some indications of positive effects in earlier smaller studies.

Contributions this month also caution us to be wary of over-generalizing conclusions based on studies from a limited range of countries and cultural groups. While there is abundant evidence for a socio-economic gradient in mental health in many countries, Kachi and colleagues (this issue) report data from a national sample of Japanese adolescents showing that those from high income households had a higher rate of psychological distress, as well as those from low-income households, which they attribute to stress about school achievement. Similarly, in Snowden's contribution on suicide research in the journal (this issue), he reminds us that general trends seen in Australia and New Zealand, such as a decline in suicide rates in males in their 20s since the 1990s, do not apply to indigenous males, who have shown alarming rises. Similarly, the epidemiology of suicide in some Asian countries shows some major differences from Australia and New Zealand. These examples remind us that cultural factors can have a major impact on mental health and of the importance of cumulating evidence from diverse populations and settings.

References

Christensen H and Petrie K (2013) State of the e-mental health field in Australia: where are we now? *Australian & New Zealand Journal of Psychiatry* 47: 117-120.