

and that relapse would be likely, and were treatment successful. At the same time, most participants believed that the problem described was common among women in the community and many had thought that 'it might not be too bad' to have the problem described. When asked about the 'main problem' of the person described in the vignette, the modal response (48.4%) was 'low self-esteem'.

Conclusions: Attitudes and beliefs likely to be conducive to low or inappropriate treatment seeking exist among individuals with eating disorders in the community. These need to be targeted in prevention and early intervention programs.

The role of mu-opioid receptors in the pathology of schizophrenia

T Money, B Dean, E Scarr

The Mental Health Research Institute, Melbourne, Australia

Background: Decreased [3H]pirenzepine binding to cortical M1 receptors is a consistent finding in subjects with schizophrenia (Crook et al. *Am J Psychiatry* 2001, 158 918–925), but the mechanisms causing such decreases are unknown. Recently, low levels of cortical M1 receptors have been reported in mu-opioid receptor knockout mice (Yoo et al. *Synapse* 2004, 54 72–82), suggesting that receptor has a role in regulating levels of cortical M1 receptors. We have therefore determined levels of cortical mu-opioid receptors in three cohorts (1 = controls, 2 = schizophrenia with normal levels of [3H]pirenzepine binding, 3 = schizophrenia with low levels of [3H]pirenzepine binding) to determine if decreased mu-opioid receptors are associated with low levels of M1 receptors in schizophrenia.

Methods: Western blotting with a rabbit anti-mu-opioid receptor antibody was used to measure the levels of mu-opioid receptor in Brodmann's area (BA) 9 from 20 subjects from each of the three cohorts described above.

Results: There was no significant difference ($P = 0.79$) between levels of mu-opioid receptors in the controls (0.98 ± 0.10) and either of the two cohorts of subjects with schizophrenia (cohort 3: 1.01 ± 0.11 , cohort 2: 1.01 ± 0.19).

Conclusions: These data suggest that, at least in BA 9, the mu-opioid receptor is not altered in subjects with low levels of [3H]pirenzepine binding and probably does not play a direct role in the regulation of the muscarinic M1 receptor in subjects with schizophrenia.

The 21-item Depression Anxiety Stress Scales as a valid routine clinical outcome measure in the private in-patient setting

F Ng^{1,2}, M Berk², S Campbell³, T Callaly¹, S Dodd², T Trauer²

¹Barwon Health; ²The University of Melbourne, Melbourne, Australia; and ³Healthscope, Melbourne, Australia

Background: The self-reported 21-item Depression Anxiety Stress Scales (DASS-21) measure and differentiate negative affective states, which is especially meaningful in the acute psychiatric treatment setting. This study aimed to test the validity of DASS-21 as a routine clinical outcome measure in the private psychiatric in-patient setting.

Methods: The sample consisted of all admissions to a private psychiatric hospital from January 2004 to December 2005. Scores of four routine measures administered at admission and discharge were retrospectively collected. These measures were the clinician-rated Clinical Global Impression Scale (CGI) and Health of the Nation Outcome Scales in its adult or older persons format (HoNOS or HoNOS65+), and the self-reported Mental Health Questionnaire (MHQ-14) and DASS-21. The four measures were compared using correlation statistics, and differences in measure scores from admission to discharge were analyzed by *t* test.

Results: Of 786 total admissions, there were 337, 328 and 347 fully completed (ie paired admission and discharge) data sets for the DASS-21 depression, anxiety and stress subscales, respectively. All subscales showed significant reductions in mean scores, in the order of 50%, at discharge compared with baseline ($P < 0.001$). All subscales were correlated with the MHQ-14 subscales ($P < 0.0001$). They also related to partially collapsed CGI categories ($P = 0.006$), except for the baseline stress subscale. The total DASS-21 correlated with the total HoNOS scores ($r = 0.31$, $P < 0.0001$).

Conclusion: The results support the validity of DASS-21 as a routine clinical outcome measure in the private in-patient setting.

Pilot study of physical activity in bipolar disorder

F Ng^{1,2}, S Dodd², M Berk²

¹Barwon Health; and ²The University of Melbourne, Melbourne, Australia

Background: Physical activity has shown efficacy in depression and anxiety, but its benefits in bipolar

disorder have not been investigated, despite its potential relevance in this disorder, given its high cardiovascular and metabolic comorbidities and the encouraged maintenance of social rhythms in its management. This study aimed to explore the effectiveness of an adjunctive walking program in the acute treatment of bipolar disorder.

Methods: The sample consisted of a retrospective cohort of in-patients at a private psychiatric hospital with a primary diagnosis of bipolar disorder, who were admitted from January 2004 to December 2005. All patients were invited to participate in a 40-min walking group that took place on weekdays. Those who reliably attended the walking group (participants) were compared against those who never attended (nonparticipants), using the Clinical Global Impression (CGI) scales and the 21-item Depression Anxiety Stress Scales (DASS).

Results: The participants ($n = 24$) and nonparticipants ($n = 74$) were comparable in age, length of stay, bipolar subtype distribution, and baseline CGI and DASS measures, except for a lower DASS stress subscore for the participants (19.4 vs. 25.3, $P = 0.049$). The groups did not differ in their discharge CGI scores, but participants showed significantly lower scores on DASS (23 vs. 44.6, $P = 0.005$) and all its subscales (depression 7.2 vs. 13.7, $P = 0.048$; anxiety 6.6 vs. 13.8, $P = 0.002$; stress 9.2 vs. 17.1, $P = 0.01$) at the time of discharge.

Conclusions: Physical activity may have an adjunctive therapeutic role in bipolar disorder. Further investigation with randomized controlled trials is warranted.

The utility of the Clinical Global Impression Scale in the clinical setting

F Ng^{1,2}, T Trauer², M Bernardo², S Campbell³, T Callaly¹, S Dodd², M Berk²

¹Barwon Health; ²The University of Melbourne, Melbourne, Australia; and ³Healthscope, Melbourne, Australia

Background: The Clinical Global Impression (CGI) scale is an established outcome measure in psychopharmacology research and has been applied to specific disorders, including schizophrenia, anxiety disorders, depression and bipolar disorder. Its simplicity and ability to transcend diagnostic boundaries support its utility in the general clinical setting. This study was conducted to test the validity of the CGI in a private psychiatric in-patient setting.

Methods: Consecutive admissions ($n = 786$) to a private psychiatric hospital from January 2004 to December 2005 were studied. Retrospective data

were collected on four outcome measures that were routinely administered at admission and discharge. These were the self-rated 21-item Depression Anxiety Stress Scales (DASS-21) and the Mental Health Questionnaire (MHQ-14), and the clinician-rated CGI and Health of the Nation Outcome Scales (HoNOS). In relation to the CGI, only the severity (CGI-S) and global improvement (CGI-I) subscales were used. Comparative statistical analyses were performed.

Results: The numbers of completed CGI ratings were 624 admission CGI-S, 614 discharge CGI-S and 610 CGI-I. The admission and discharge CGI-S scores were correlated ($r = 0.40$), and the indirect improvement measures obtained from their differences were highly correlated with the direct CGI-I scores ($r = 0.71$). The CGI-S categories reflected similar trends in scores on the other three measures, and the CGI-I showed parallel changes with improvement on HoNOS.

Conclusions: The CGI-S and CGI-I are comparable to other measures of illness severity and improvement. They appear to be valid instruments in the private psychiatric in-patient setting.

Alzheimer's disease, delusions and cognitive decline

D O'Connor^{1,2}, S Rossell¹

¹Mental Health Research Institute; and ²The University of Melbourne, Melbourne, Australia

Background: The authors reviewed studies published between 1992 and 2005 that reported on the prevalence and phenomenology of delusions in Alzheimer's disease (AD), as well as any relationship with cognitive decline.

Methods: The terms 'delusions, cognitive and Alzheimer's disease/dementia' were used to search the PubMed and PsychINFO databases. Empirical investigations and reviews were included in our report but were dependent upon quantitative data on the above factors being available.

Results: Data from a meta-analysis show that the overall prevalence for delusions in AD is 36%. There is, however, a broad range of reported prevalence rates across studies, from 9% to 70%. Variations in prevalence rates are because of methodological differences, such as inconsistent consideration of neuroleptic use, participants being included at various stages of AD and failure to consider other neuropsychiatric symptoms. One study did address factors that lead to inconsistent findings and subsequently reported that 34% of a sample of patients with AD were found to experience delusions and that these patients were at a higher risk of