

individual but also on the family, community and society. Just as the mental health effects on the individual psyche can result in nonpathological distress as well as a variety of psychiatric disorders, massive and widespread trauma and loss can impact on family and social processes as well as the collective unconscious causing changes at the family, community and societal levels.

Methods: This ecological study used qualitative methods of Participatory Action Research in Cambodia and Northern Sri Lanka, while involved in community mental health programmes among the Tamil and Khmer communities. Participant observation, key informant interviews and focus group discussion with community relief and rehabilitation workers and officials were used.

Results: Fundamental changes in the functioning of the family and the community included the dynamics of single-headed families, lack of trust among members, and changes in significant relationships (mother-child), and childrearing practices. Communities were more dependent, passive, silent, without leadership, mistrustful and suspicious. Additional adverse effects included the breakdown in traditional structures, institutions and familiar ways of life, and deterioration in social norms and ethics. On the positive side, the study observed the emergence of community organizations, enhanced female role and leadership, and a decrease in suicide rates.

Conclusions: Exposure to conflict, war and disaster impact on family and community dynamics resulting in changes at a collective level. Relief, rehabilitation and development programmes will need to use integrated multilevel approaches.

Multilevel modeling of rural mental health

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Background: The lack of consistent findings regarding comparisons of mental health between rural and urban areas has been attributed in part to methodological shortcomings, including poor conceptualization of rurality. The influence of social environment context (community, family and individual factors) on mental health may be addressed through multilevel modeling. A rural mental health database was developed to address the diversity of rural communities and included data on health, lifestyle, social capital, climate patterns, agricultural activity and primary industry.

Aim: The study sought to investigate the association between mental health, health behaviours and social context in rural communities.

Method: Items from the NSW Health Survey were used, initially across the 37 Divisions of General Practice in New South Wales. The response variable of the percentage of people who had high or very high psychological distress, as measured by the K10, was regressed against social capital items (such as attending community events), health accessibility item (difficulties in accessing health care) and measures of rurality (remoteness, population density and changes in population structure over time).

Results and Conclusions: Associations between psychological distress and measures of health service accessibility, social capital, lifestyle and rural population changes will be reported. Analyses will be extended in a multilevel framework to include important agricultural, meteorological and environmental stress indicators, to assess the effects of drought on psychological distress. This analysis will be conducted using the 176 local government areas in New South Wales and will allow more detailed analysis to examine any heterogeneous effects in rural New South Wales.

Prevalence of mental disorders in the elderly: the Australian National Mental Health and Well-being Survey

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Background: We describe 1- and 12 month prevalence of mental disorders, demographic correlates and impact on service utilization and disability in individuals 65 years of age and over in the Australian National Mental Health and Well-being Survey (NMHWS)

Methods: A noninstitutionalized national probability sample of elderly Australian residents was interviewed as part of NMHWS. The prevalence of ICD-10 and DSM-IV mental disorders was estimated from the Composite International Diagnostic Interview and other screening instruments.

Results: Of 1792 elderly NMHWS respondents, 13% reported symptoms consistent with a mental disorder in the past month, and 16% reported symptoms consistent with a mental disorder in the past 12 months. Women experienced higher rates of affective disorders and generalized anxiety disorder and had lower rates of substance abuse compared with men. Increasing age was associated with less likelihood of having

symptoms of any mental disorder. Older age and never having been married were associated with less likelihood of having symptoms of an affective disorder. Those with cognitive impairment were more likely to have had symptoms consistent with an affective disorder. Comorbidity was predictive of increasing disability on the SF-12 but rates of mental health consultation were low, even for those with multiple disorders.

Conclusions: Community-dwelling elderly Australians experience substantial rates of mental disorders. Demographic correlates of mental disorder in this elderly population appear to differ from those established in younger populations. Mental disorder in elderly Australians is associated with significant disability, but rates of specialist mental health consultation is low.

Innovative ways of treating comorbid diabetes type II and depression: piloting the 'MADE-IT' program

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Background: Both diabetes and depression are considered 'chronic' conditions and affect an increasing number of people each year. The pilot phase of an innovative eight-session treatment program using an integrated CBT and diabetes education model was undertaken, prior to commencing a larger randomized controlled trial.

Methods: Participants with diabetes type II were recruited from two specialist diabetes clinics in New South Wales. Screening was conducted for depressive symptoms (BDI-II), Problem Areas in Diabetes (PAID) Scale, psychological distress (K10) and quality of life. Those with scores >15 on BDI-II were invited to participate. Participants were evaluated on physical and psychological measures pre/posttreatment, and tracked each 2 weeks on BDI-II, PAID Scale and fasting BGL's. Data were analyzed using matched paired *t*-tests. Qualitative information on the acceptability of the program was gathered.

Results: Thirteen subjects (7 men/6 women) aged 36–69 years attended sessions once a week for 8 weeks. Significant postintervention improvement was detected in depressive symptoms ($P \leq 0.001$), improved diabetes knowledge ($P = 0.008$) reported number of PAID ($P = 0.029$) and psychological distress scores ($P = 0.001$).

Conclusions: The 'MADE-IT' program marries evidence-based interventions for depression and diabetes

and looks at the connections between the disorders. The program uses a small group context and has a standardized leader's manual and participant handbook to assist enhance treatment fidelity. While outcomes are positive, the sample is small and no control comparison was included. Further evaluation of the program will be undertaken with a multisite randomized controlled trial in the near future.

Complex mental activity and risk for dementia

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Background: This paper will review our work in the area linking complex mental activity and dementia risk, focusing on epidemiological evidence and potential underlying mechanisms based upon *in vivo* metabolic and structural neuroimaging.

Methods: A quantitative parametric meta-analysis of cognitive dementia studies. Mechanistic studies include a longitudinal study of cognition and magnetic resonance imaging volumetry as well as a randomized control trial of a memory training intervention with pre- and postmagnetic resonance spectroscopy of the medial temporal, frontal and occipital lobe.

Results: Meta-analysis of 22 cohort studies showed a significant reduction in risk for dementia incidence based on history of high complex mental activity (odds ratio: 0.54, confidence interval: 0.49–0.59). Longitudinal analysis found that a history of complex mental activity was significantly associated with a slower rate of hippocampal atrophy over 3 years after controlling for relevant confounders ($P < 0.01$). Furthermore, differential rates of hippocampal atrophy accounted for the different rates of cognitive decline in the high- and low-mental-activity groups. Systematized memory exercise selectivity increased phosphocreatine-creatine signal in the medial temporal lobe over our 5-week intervention.

Conclusions: There is compelling epidemiological evidence that complex mental activity is associated with a lower risk for dementia and cognitive decline. We have found that part of this association may be mediated by differential hippocampal atrophy. This link was further supported by finding selectively increased phosphocreatine-creatine in the medial temporal lobe as a consequence of focused memory exercises, particularly because upregulation of this high-energy buffer system has a neuroprotective effect in mouse models of neurodegeneration.