**Background:** Epidemiological studies assessing rates of postnatal depression in relation to levels of fish consumption and reduced levels of omega-3 in the perinatal period indicate a possible link between lowered long-chain omega-3 fatty acids and perinatal depression.
**Aim:** To assess whether omega-3 fatty acid treatment is superior to placebo in the treatment of perinatal depression.
**Methods:** In a double-blind, randomized, placebo-controlled treatment trial, we recruited women from third trimester to 6 months postpartum with a diagnosis of major depression. Treatment was for 6 weeks with either 6 g of fish oil or placebo. Weekly follow-up was carried out by a psychiatrist and depression rating scales recorded. Fatty acid analysis was conducted on blood samples collected at baseline and posttreatment trial.
**Results:** There was significant improvement in depression scores for the treatment group during the trial. However, a repeated-measures ANOVA showed no statistically significant difference between treatment and placebo groups using intention-to-treat analysis. Trend for efficacy differentiation were noted when nonresponders and rapid remitters were excluded.
**Conclusions:** These results are likely to be affected by a strong placebo response, which is a common problem in clinical trials for the treatment of depression. Further study is needed in this area because treatment options are limited for perinatal depression.

## Understanding how young people cope with distress: the development of a mobile phone momentary sampling program (Mobile_TYPE)

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**Background:** Young people report that they typically respond to distress by talking to their friends, thinking and distracting themselves. By using retrospective questionnaires, research has examined what young people say but not what they actually do when distressed and what the impact of these responses are prospectively. The aim of this study was to design a mobile phone momentary sampling program that prospectively tracks the everyday mood, stresses and coping strategies of young people as they happen.
**Design:** A momentary sampling program was designed and translated into java-based language for mobile phones. The program ran for 7 days, administering four random samples per day. Participants were prompted to report current activity, companions, mood, response to low mood, recent stressful experiences, and alcohol and cannabis use. The program was reviewed by 11 high school students in focus groups, and 18 students completed 7 days of mobile monitoring.
**Results:** Engagement with the Mobile_TYPE program was high with a majority of students (82%) completing at least 75% of the entries. The most common responses to feeling distressed were do nothing (14.6%), eating (11.4%), sleeping (10.8%) and studying (7.5%). About 88% of active responses to distress lead to a later report of feeling good or better. The responses associated with a later report of not feeling better were worrying, doing nothing, crying, relaxing, eating, studying, pretending to be okay and shopping.
**Conclusion:** The Mobile_TYPE program captured a range of detailed and interesting qualitative, quantitative and prospective data about young people's everyday mood, stresses, responses and general functioning.

## Using ketamine to model thought disorder in schizophrenia

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**Background:** Ketamine is used acutely as a model of schizophrenia. It has been suggested that chronic ketamine use may also mimic aspects of this disorder, in particular cognitive function. Semantic processing deficits are considered to be central to cognitive impairments in schizophrenia and are related to thought disorder. This study aimed to characterize semantic impairments following both acute and chronic ketamine.
**Methods:** We examined the acute effects of ketamine using a double-blind, placebo-controlled, independent groups design with 48 volunteers examining the effects of two doses of ketamine (100 ng/ml and 200 ng/ml). The chronic effects of ketamine were explored with 32 volunteers, 16 regular ketamine users and 16 matched polydrug controls. Semantic processing was examined using a lexical-decision semantic priming task with a frequency (high and low) and stimulus onset asynchrony (SOA; short – 200 ms, long – 750 ms) manipulation. Schizophrenic and dissociative symptoms were also examined.
**Results:** Acute ketamine produced a dose-dependent reduction in priming (hypopriming) and increased schizophrenic thought disorder. Ketamine users showed impaired priming for low-frequency words at the long SOA compared with polydrug controls, and there was some evidence of increased priming for high-frequency words. Ketamine users did not differ



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from controls in schizophrenic-like or dissociative symptoms.
**Discussion:** The dose-dependent hypopriming effect at the long SOA induced by acute ketamine was indicative of controlled processing impairments. In ketamine users, there was also an indication of controlled processing impairments and a suggestion that long-term ketamine abuse results in damage to the semantic store.

## Behavioural and fMRI evidence of semantic category deficits in schizophrenia

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**Background:** Abnormalities in semantic processing are commonly proposed to be central to cognitive abnormalities and thought disturbances in schizophrenia. Deficits have been reported on a range of tasks including a categorization task. The current study investigated the underlying neural substrates involved during categorization.
**Method:** A revised version of Chen et al.'s (1994) categorization task was used. The task consisted of 18 categories with five different exemplar words (ie high frequency, low frequency, borderline, related but outside category and unrelated) selected for each category. Subjects were asked to say whether exemplars were or were not part of the category. Data for each exemplar type were examined; this included behavioural accuracy and an event-related analysis of the functional magnetic resonance imaging data using SPM2.
**Results:** Behaviourally, patients with schizophrenia had difficulty categorizing related words, while the controls had most difficulty with borderline examples. Performance in the controls was related to activity in the left inferior frontal, left inferior occipital/posterior temporal, bilateral precunues and the cerebellum; areas typically reported during semantic processing. Even when behavioural performance on some of the category types was no different to control performance, the patients with schizophrenia did not show any activation of this network.
**Conclusions:** The imaging data showed impairments in the distributed frontal temporal network that is engaged in the representation and processing of meaning of words, text and discourse. It is these abnormalities that may underlie schizophrenic thought disturbance.

## Jumping to conclusions in delusions: fact or fallacy?

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**Background:** A jumping-to-conclusions (JTC) bias refers to the gathering of minimal data when making probabilistic judgments and has been associated with delusion formation. Approximately 50% of patients who experience delusions have previously been shown to have a JTC bias. However, the literature is fraught with methodological differences. This study sought to address one of these differences by examining state and trait delusions using large groups of patients with psychosis.
**Methods:** Three matched groups (patients with bipolar disorder, patients with schizophrenia and healthy controls) completed the standard beads probabilistic reasoning task and two emotional variants, which examined reasoning using personality and health traits. For each of the three tasks, two probability ratios were used, 85:15 and 60:40. JTC was defined, using the Institute of Psychiatry, London, criteria, as requiring two or less draws. Patients were divided into those with state and trait delusions.
**Results:** On the beads 85:15 task, only 4% of patients with schizophrenia and 0% of patients with bipolar disorder showed a JTC bias. The emotional variants produced a similar degree of JTC bias. The 60:40 ratio resulted in an even smaller proportion of JTC. There were no state-trait differences.
**Discussion:** Two groups of Australian patients with psychosis (schizophrenia and bipolar disorder) did not show a JTC bias. The authors discuss possible explanations for the discrepancy of these findings with the literature. These include the following: are Australians more indecisive or cautious, how state and trait delusions influence performance, and methodological problems with the task itself.

## Building and evaluating effective mental health networks in rural communities

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**Background:** Rural communities suffer significant disadvantage in accessing mental health services. Conversely, these communities may have greater capacity



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