Attention at **12 Step meetings reduces depression in patients with comorbid substance use and major depressive disorder**

**The Problem**

Major depressive disorder (MDD) is the most common comorbid mental health disorder among people with substance use disorder (SUD) and is present in around half of patients being treated for SUD. These patients generally have more severe problems when they start treatment and have poorer outcomes from drug and alcohol treatment. Few of the studies investigating how and why treatments works, have focussed on patients with comorbid SUD and major depression.

**Goal**

The goal of the study was to look at the impact of attendance at 12 Step meetings on depression - independent of its impact on alcohol and drug use.

**How did they investigate?**

The research team from San Diego State University and the University of California randomly assigned 209 veterans with comorbid SUD and (substance-independent) depression to 12 Step Facilitation (TSF) therapy or integrated cognitive behaviour therapy (ICBT). They measured 12 Step attendance, depression and drug and alcohol use at baseline, 3 months, 6 months and 9 months.

**What did they find out?**

Contrary to the researchers’ expectations the TSF group had greater reductions in symptoms of depression than the ICBT group. Further analysis found that attendance at 12 Step meetings reduced symptoms of depression. In both treatment groups reduced depression predicted lower future alcohol use. These results were independent of current drinking and suggest that 12 Step meeting attendance had mental health benefits that extended beyond substance use. Reduced symptoms of depression appear to be a key mechanism whereby 12 Step meetings reduce drinking in this comorbid group of patients.

**What does it mean for health care professionals?**

Comorbid major depression is a significant problem in the treatment of people with SUD. But little is known about what treatment works and how in this group. This study is a significant contribution to understanding, demonstrating that attending 12 Step programs reduces symptoms of depression and this reduces future drinking in this group. TSF therapy would appear to be a superior treatment for this group than integrated cognitive behaviour therapy.

The Problem

Social anxiety disorder (SAD) is one of the most common psychiatric conditions and is a chronic and disabling disorder associated with substantial impairment and reduced quality of life. The gold standard treatments for SAD, cognitive behaviour therapy and pharmacotherapy, are only moderately effective and it is difficult to predict who will respond to treatment.

Goal

To see whether functional magnetic imaging (fMRI) could better predict which patients with social anxiety disorders would respond best to cognitive behaviour therapy.

How did they investigate?

39 patients meeting DSM IV criteria for SAD underwent fMRI prior to commencing CBT. They were shown angry and neutral faces and scenes with and without people; their electrophysiological response was measured. They then underwent CBT programs at Boston University or Massachusetts General Hospital.

What does it mean to health care professionals?

Those patients who showed the greatest response to angry faces responded best to CBT. Those patients who showed a particularly low response to angry faces benefitted least from CBT. Brain imaging provided bio markers, particularly in regions of the higher order visual cortex, that substantially improved predictions for success of treatment, compared with predictions based on clinical measures alone. Combining the brain measures with information on clinical severity accounted for more than 40% of the variance in treatment response and substantially exceeded predictions based on clinical measures alone.

Results

Currently only half of patients with SAD respond to either CBT or pharmacological treatment. Neuro-imaging may offer an evidence base for selecting which patients would benefit from CBT or pharmacological therapy. The results of brain activity seemed to be more predictive of response to treatment than standard clinical measures. Neuromarkers may become a practical clinical tool to select optimal treatments for individual patients. To date they have been studied more frequently in disorders such as schizophrenia and major depression but less so in anxiety disorders – which is surprising given the high prevalence of anxiety disorders.

A fundamental goal of CBT in patients with social anxiety disorder is to enhance emotion regulation. The authors suggest therefore that CBT was particularly successful in patients with superior emotion regulation capacities, as indicated by their already stronger responses to angry faces.

**Background**

An estimated two thirds of Australians with anxiety and depression to not have access to effective treatment. Waiting lists for individual cognitive behaviour therapy in public health care settings can be prohibitive. Mindfulness-based cognitive therapy (MBCT) is a group based intervention for depression with a specific focus on relapse prevention. As a group based therapy it has the potential to increase access to treatment. Results of a randomised controlled trial from the Netherlands, published in the British Journal of Psychiatry, where access to MBCT is restricted to patients with three or more prior episodes of depression, suggests that it reduces residual depressive symptoms regardless of the number of previous episodes of major depression.

**Goal**

To determine the effectiveness of MBCT in patients with persistent and harmful residual symptoms of depression who may have only had one or two prior episodes of depression.

**How did they investigate?**

A total of 204 Patients were randomised to continue with their usual treatment (if any) or to receive eight weeks of MBCT in addition to their usual treatment 9 (if any). Randomisation was stratified according to the number of prior depressive episodes – two or less; three or more. Mindfulness practice was based on self report and limited to a maximum of 45 minutes in a day to prevent skewing of results.

**Results**

Across the whole sample MBCT was associated with a 30-35% reduction in residual symptoms of depression among currently non-depressed patients, compared with the control group. There was no difference in the effect of MBCT among patients who had only had one or two previous episodes of depression compared with those with three or more previous episode so depression.

**Implications for health care professionals**

Mindfulness based cognitive therapy has the potential to improve the quality of life and reduce the risk of relapse among people with residual symptoms of depression, regardless of how many prior episodes of depression they have experienced. As a group based therapy, it has the potential to increase access to therapy for Australians with residual symptoms of depression who are at risk of relapse. This study was specifically designed to investigate whether MBCT should be restricted according to the number of previous depressive episodes experienced by patients. However it also adds to the growing body of literature supporting the role of group MBCT in improving the quality of life and risk of relapse among people with residual symptoms of depression.