

Efficacy of Mindfulness-based Stress Reduction in Hemodialysis Patients with Anxiety and Depression: a randomized, double-blind, parallel-group trial

Diseases with a chronic and debilitating nature, such as chronic kidney disease, are frequently associated with psychiatric disorders like anxiety and depression. To assess the efficacy of mindfulness-based stress reduction (MBSR) on anxiety and depression in hemodialysis patients. In this randomized clinical trial, fifty hemodialysis patients were selected from two dialysis centers of Kashan city in Iran in 2016. The patients had desired cognitive status based on MMSE (Mini Mental Status Examination) and clinical interview, and were randomly allocated into the intervention and control groups. The intervention group (n=25) received a Mindfulness-Based Stress Reduction (MBSR) program in addition to the health education program in eight sessions, whereas the control group (n=25) received only the health education program. To measure the anxiety and depression score before and after study, the Hospital Anxiety and Depression Scale were used. Data were analyzed by SPSS version 11.5, using Analysis of Covariance (ANCOVA), t-test, Chi-square, Mann-Whitney U, and Fisher exact test. The mean age of intervention and control groups were 46.86 ± 11.66 and 46.26 ± 11.71 respectively. The mean duration of illness was 2.47 ± 1.78 and 2.62 ± 1.32 in intervention and control groups respectively. There were no significant differences between the two groups regarding age, sex, education level and job. Depression and anxiety were reduced in the intervention group compared with the control group ($p=0.0001$). The MBSR program may reduce anxiety and depression in hemodialysis patients.

Vitamin D in neurological and neurodegenerative patients: Current knowledge and future perspectives

Effective pharmacological treatments for neurological and neurodegenerative patients have not yet been identified. Previous studies show that vitamin D may be involved in neurodevelopment adult brain. Reduced status of vitamin D have been reported in various neurological and neurodegenerative disorders. Insufficient levels of vitamin D in neurological and neurodegenerative have been confirmed. The neuroprotective effect of vitamin D is associated with its

effects on neurotrophin synthesis and prevention of oxidative or inflammation damage to nervous tissue. We here review

the role of vitamin D in the pathogenesis disease, such as seizure, Pain, depression and anxiety, sleep, sexual dysfunction, addiction, alzheimer's, parkinson's. Adequate administrate of vitamin D in the lifetime seems to be crucial in terms of prevention of these diseases. The aim of this review is to assess the current knowledge related to the role of vitamin D supplementation on the pathogenesis and disease course of neurological and neurodegenerative.

The Effectiveness of Gemfibrozil on Nicotine Dependence, Smoking Cessation, and its Symptom Among Smokers: A Randomized, Double-Blind, Placebo-Controlled Clinical Trial

Based on animal models, the antagonists of alpha-peroxisome proliferator-activated receptors (PPAR- α) such as fibrates decrease reinforcement, brain rewards, and nicotine-related effects. The present study aimed at investigating the effect of Gemfibrozil on smoking cessation. This is a double-blind, randomized clinical trial that performed on 75 adult cigarette smokers from 200 smokers. Hence 75 adult cigarette smokers were divided into two groups after matching. The experimental group (37 peoples) and the placebo group (38 peoples). The participants received 300 mg Gemfibrozil or placebo at the same amount twice a day for 7 weeks. This study was conducted in a university affiliated hospital, Kashan, Iran. To investigate nicotine dependency, signs of deprivation syndrome and smoking cessation, the Fagerstrom test, Minnesota Scale (MNWS), and exhalation carbon monoxide markers were used. There was no significant difference in demographic characteristics between the two groups. At the seventh week, Fagerstrom mean score was 3.1 ± 3.1 and 5.1 ± 3.4 ($P = 0.023$) for the treatment and placebo groups respectively. According to the Minnesota criteria, the treatment group showed more increased weight gain and appetite, as well as more decreased desire to smoke ($P < 0.001$). The success rate of smoking cessation at the end of the intervention and follow-up periods indicated that there was no significant difference between the two groups in this factor ($P > 0.05$). Conclusions: Gemfibrozil only reduced the symptoms of nicotine deprivation syndrome but did not show significant potential for smoking cessation.

Exploring the Effects of Vitamin D Supplementation on Cognitive Functions and Mental Health Status in Subjects Under Methadone Maintenance Treatment

Vitamin D deficiency may be linked to several mental complications including cognitive deficits, depression, and anxiety in patients under methadone maintenance treatment (MMT). This study was designed to explore the effect of vitamin D supplementation on cognitive functions and mental health parameters in subjects under MMT. Methods: This randomized, double-blinded, placebo-controlled clinical trial was carried out among 64 patients under MMT. Participants were randomly allocated to receive either 50,000 IU vitamin D supplements ($n=32$) or placebo ($n=32$) every 2 weeks for 24 weeks. Cognitive functions and mental health parameters were taken at baseline and post-treatment to evaluate relevant variables. Results: After the 24-week intervention, compared with the placebo, serum 25(OH) vitamin D levels significantly increased in participants who received vitamin D supplements ($b = 14.50$; 95% confidence interval [CI], 13.17–15.83; $P < 0.001$). In addition, compared with the placebo, subjects who received vitamin D had a significant reduction in Iowa Gambling Task ($b = -6.25$; 95% CI, -8.60 to -3.90; $P < 0.001$), and significant increases in Verbal Fluency Test ($b = 2.82$; 95% CI, 0.78–4.86; $P = 0.007$), Immediate Logic Memory ($b = 1.32$; 95% CI, 0.27–2.37; $P = 0.01$), Reverse Digit Span ($b = 2.06$; 95% CI, 1.18–2.94; $P < 0.001$) and visual working memory ($b = 0.75$; 95% CI, 0.33–1.16; $P = 0.001$). Also, vitamin D supplementation significantly improved BDI ($b = -2.76$; 95% CI, -3.97 to -1.55; $P < 0.001$) compared with the placebo. When we applied Bonferroni correction, LM-Immediate ($P = 0.07$) became nonsignificant, and other mental health parameters did not alter. Conclusions: Overall, taking 50,000 IU vitamin D supplement every 2 weeks

for 24 weeks by patients under MMT had beneficial effects on cognitive functions and some mental health parameters. Further studies are needed to confirm our findings.

Mental health and cognitive function responses to quetiapine in patients with methamphetamine abuse under methadone maintenance treatment

Background: Patients with methamphetamine (MA) abuse under methadone maintenance treatment (MMT) are susceptible to several complications including cognitive disturbance and mental health disorder. This trial was designed to determine the impacts of quetiapine administration on cognitive function and mental health scale in patients with MA abuse under MMT. **Methods:** This study was carried out in 60 MA abusers under MMT. Patients were randomly allocated to receive either 100 mg quetiapine (n=30) or control (n=30) daily for 8 weeks. Cognitive function and mental health scale were taken at baseline and post-treatment to evaluate relevant variables. **Results:** Quetiapine significantly decreased depression (b -3.94; 95% CI, -7.73, -0.16; P=0.04) and sleep disorder (b -2.18; 95% CI, -2.89, -1.47; P < 0.001). Also, quetiapine administration resulted in a significant reduction in Iowa Gambling Task (b -2.70; 95% CI, -4.69, -0.71; P=0.009), and significant increases in Verbal Fluency Test (b 3.04; 95% CI, 1.24, 4.85; P=0.001), Reverse Digit Span (b 2.80; 95% CI, 2.13, 3.47; P=0.001) compared with the placebo. **Conclusion:** Overall, taking 100 mg quetiapine daily for 8 weeks by patients MA abuse in MMT had favorable effects on some of cognitive functions and mental health parameters. The impact of dialectical behavior therapy on emotion regulation and distress tolerance in patients under methadone therapy

The Effects of Curcumin on Weight Loss Among Patients With Metabolic Syndrome and Related Disorders: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

Background and objective: The current systematic review and meta-analysis of randomized controlled trials (RCTs) was carried out to assess the influence of curcumin intake on weight among patients with metabolic syndrome and related disorders. We searched the following databases up until January 2018: MEDLINE, EMBASE, Web of Science, and Cochrane Central Register of Controlled Trials. The relevant data were extracted and evaluated for quality of the studies in accordance with the Cochrane risk of bias tool. Data were pooled using the inverse variance method and expressed as standardized mean difference (SMD) with 95% confidence intervals (95% CI). Eighteen articles (21 studies) that comprised a total of 1,604 individuals were finally included in the meta-analysis. Curcumin intake significantly reduced body mass index (BMI) (SMD -0.37; 95% CI, -0.61, -0.13; P < 0.01), weight (SMD -0.23; 95% CI, -0.39, -0.06; P < 0.01), waist-circumference (WC) (SMD -0.25; 95% CI, -0.44, -0.05; P = 0.01), leptin levels (SMD -0.97; 95% CI, -1.18, -0.75; P < 0.001) and increased adiponectin levels (SMD 1.05; 95% CI, 0.23, 1.87; P = 0.01). We found no significant effect of curcumin intake on hip ratio (HR) (SMD -0.17; 95% CI, -0.42, 0.08; P = 0.18). Overall, we have found that curcumin intake among patients with metabolic syndrome and related disorders was correlated with a significant reduction in BMI, weight, WC, and leptin, and a significant increase in adiponectin levels, but did not affect HR.