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Does repetitive transcranial magnetic stimulation have positive effects on adults with eating disorders and or excessive weight

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Eating Disorders (ED) are chronic illnesses with treatments of limited proven efficacy. There is increasing data to support therapeutic effects of repetitive Transcranial Magnetic Stimulation (rTMS) given its success in treating disorders such as treatment-resistant depression. Along with the encouraging studies on ED symptoms, there is a strong rationale for further exploring its therapeutic potential. Literature search was performed using PubMed/MEDLINE and Embase databases, using MeSH terms, Emtree terms and word combinations based in the following keywords: "Transcranial Magnetic Stimulation", "Theta Burst Stimulation", "rTMS", "TBS", "bulimia nervosa", "feeding and eating disorders", "anorexia nervosa", "binge-eating disorder", "obesity", "overweight", "food addiction", "craving", "body weight". Van den Eynde (2010), showed that the real rTMS group had a significant reduction in cue-induced food craving. M. Walpoth (2008) studied 14 women with a decline on average number of binges per day between baseline and the end of treatment. Aurelia Gay (2016), investigated 47 women and concluded that there were no significant improvement in bingeing symptoms. Se-Hong Kim (2017) concluded that 4 sessions of rTMS resulted in weight loss among 60 overweight patients. McClelland (2016), examined the effects of one rTMS session in 60 patients with anorexia, with no significant effects on reduction of symptoms. Given the heterogeneity of the participants and outcomes, a meta-analysis was not possible to be carried. Excitatory rTMS appears to reduce cravings and may be an important weight management tool in subjects with overweight. Further studies, especially with randomized, double-blind, sham controlled trials with large samples, on the neural effects of neuromodulation with rTMS, are needed.

Biography

Pedro G Batista is a Medical Student at University of Beira Interior (UBI) currently researching on eating disorders for his MD. Pedro Vasconcelos is a medical student currently researching in economics.

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