



Effect of Dual Site Transcranial Direct Current Stimulation on Anxiety, Worry and Sleep in Generalised Anxiety Disorder- A Randomized Clinical Trial

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ABSTRACT

BACKGROUND: The most common disorder with Anxiety symptom is GAD, which is a disabling mental disorder. Treatment of GAD such as Pharmacotherapy causes side effects, CBT is not accessible to many patients and exercise therapy causes problems with adherence, so there is requirement for further exploration. Neuro stimulatory treatment method, such as tDCS is the developing treatment for GAD. To evaluate and compare the effect of dual site tDCS to single site tDCS on Anxiety, Worry and Sleep in GAD patients by using specific outcome measure such as HARS, PSWQ and SQS.

METHODS: 28 adults were recruited from various Psychiatry clinics and Tertiary care hospitals in Belagavi, Karnataka, based on inclusion criteria. Subjects included were randomly allocated into Group A and Group B. Demographic details GAD-7 scale score was noted at baseline assessment. Group A was given tDCS for two sites (with placement of cathode on DLPFC for 15minutes and IPL for another 15minutes and anode on contralateral deltoid) and Group B received tDCS for single site (with placement of cathode on right DLPFC and anode on contralateral deltoid for 30minutes). Both groups received total of 10sessions of tDCS treatment for a period of 3weeks. Pre and post Symptoms were assessed by HARS, PSWQ and SQS in pre and post treatment.

RESULTS: The results showed that there is effectiveness of both single and dual site stimulation using tDCS in improving GAD symptoms. But Dual site stimulation targeting right DLPFC and IPL regions was more effective compared to single-site stimulation and the difference between the 2 groups has shown to be significant ($p<0.05$).

CONCLUSION: Dual site stimulation targeting Right DLPFC and IPL cortical regions was more effective compared to single site stimulation in improving the Anxiety, Worry and Sleep symptoms in GAD. The tDCS is safe and convenient Neuro Stimulation treatment for GAD.

KEYWORDS: GAD, tDCS, Dual Site Stimulation, Worry, Anxiety, Sleep

DESCRIPTION:

Divya Shanthi is a Post Graduate student at KLES Institute of Physiotherapy in India. She gained her Bachelor's degree in Dayananda Sagar College of Physiotherapy. During the course of her Bachelor's degree, she developed a keen interest in Neurology Physiotherapy, which led her to pursue post-graduation in it. Divya Shanthi will be presenting her master's thesis wherein she studied the effect of Dual Site Transcranial Direct Current Stimulation in subjects with Generalised Anxiety Disorder on Anxiety, Worry and Sleep symptoms.