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Paper Title: Effects of multiple-session of transcranial Direct Current Stimulation on arithmetic ability and EEG

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Abstract

This study evaluated the effects of transcranial direct current stimulation (tDCS) on arithmetic ability, working memory, and EEG in healthy participants when applied over multiple sessions spanning 5-day durations. In a double-blind, randomized controlled study, participants received either active left tDCS or sham stimulation. Although no significant changes in arithmetic ability or working memory reaction time were observed between the treatment and control groups, electroencephalography (EEG) measurements showed an increase in alpha band within the treatment group over the experimental period, suggesting modulations in cortical activity. Further research is needed to understand the specific cognitive regions affected by tDCS and the underlying neurophysiological mechanisms.
