Brain-Wave Stimulation as a Technique for Preventing and Treating Alzheimer's, Parkinson's and Other Movement Disorders and Improving Cognitive Abilities

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Parkinson's disease (PD) and Alzheimer's disease (AD) are two brain disorders that predominantly cause behavioural changes and cognitive decline. Presently, there is no cure for these diseases, and there is a significant impact on person’s quality of life. In this study, I aim to develop a prototype for brain-wave therapy and investigate its effects on PD and AD patients. I hypothesize that brain wave stimulation therapy using different frequency waves: Delta and Theta Waves to improve sleep, Gamma Waves to improve memory and cognition, Mid-range beta waves and theta waves to reduce anxiety ; all these could potentially improve the cognitive abilities and quality of life of PD and AD patients. To test this hypothesis, medical professionals tested my Brain Wave Stimulation Technique, which involves auditory, visual, and bone conductance-based stimulations. This pilot study will measure the feasibility of the brain-wave therapy applied through a comprehensive prototype – Brain ReWireo. The results of this pilot study will help to plan and conduct a detailed interventional study. My proposal suggests that exposure to binaural beats in the gamma range and other frequency ranges will result in improved cognitive, memory, and reasoning abilities. Regular stimulation may help to regulate the brain waves towards normalcy, potentially serving as a therapeutic approach to improve behavioural and cognitive abilities in these patients. It is important to note that my research is not a cure for Alzheimer's and Parkinson's diseases, but rather a potential therapeutic approach to improve the quality of life of patients suffering from these debilitating conditions.

Awards Won: