

Identifying Training Protocol for Brain Exercise Among the Mild Cognitively Impaired (MCI) Elderly: A qEEG Study

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Abstract

This article report the dominant brain waves of Mild cognitive impaired (MCI) elderly with the objective of identifying the appropriate training protocol for the intervention. 64 participants volunteered for the study. However, the screening using Mini mental state showed a total of 56 subjects were qualified to participate in the research. Subjects were divided into two groups which are normal and mild cognitive impairment (MCI). 21 subjects were in normal group while 35 subjects were in MCI group. Results confirm and extend those of previous EEG and studies indicating that Beta 2 is generated in temporal (Left and Right) regions and Sagital Midline (FZ,CZ, and PZ) during cognitive tasks requiring focused attention and working memory process. Our results suggest that right parietal cortical areas subserve basic numerical processing and number-based spatial attention, namely the IPS (corresponding PZ) and the adjacent postero-superior parietal lobule, respectively. Based on the identified region of interest (ROI), the appropriate training protocol for the brain exercise using NFT was identified, i.e., Alpha training protocol (Bipolar training) at the Temporal lobe (T3, T4) area. Further protocol depends on the symptoms observed.

Keywords: Alzheimers; Brain Waves; Mild Cognitive Impair; QEEG

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