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## A brain computer interface neuro feedback training system to improve cognition in mild cognitive impairment and normal elderly

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**Introduction:** A brain computer interface Neuro Feedback Training system (NFT) has been first developed to enhance attention for Attention Deficit Hyperactivity Disorder ADHD children. There are many well results supporting this intervention in this specific group. Anyway, not only Attention Deficit Hyperactivity Disorder (ADHD) Children, but also aging population is suffering from attention problems. Most elderly have to cope with attention, concentration, memory and other cognitive decline, especially when they have dementia. A game-based NFT system is a potential technology for improving cognitive function in both mild cognitive impairment and healthy groups. These 5 games especially designed to boost up attention, concentration, executive function in elderly.

**Method**: 32 Mild Cognitive Impairment (MCI) patients and 26 healthy elderly diagnosed by senior neuropsychiatrists following DSM-IV criteria. Thai mental state examination and Montreal cognitive assessment test underwent 20 sessions of 30-minute NFT interventions, 2-3 sessions per week. The study compared intervention group with 14 MCI patients

**Result**: This study shows a significant treatment effect of NFT interventions improving sustained attention and working memory in control group.

**Conclusion**: Treatment with the NFT system improves sustained attention suggesting that this training potentially improve other cognitive functions such as executive functions and working memory in elderly.

## Biography

Solaphat Hemrungrojn has her proficiency in clinical dementia care, cognitive assessment and computerized cognitive training. She has experience in dementia research, service, teaching medical students and psychiatric residents in University Hospital, Bangkok, Thailand.

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