

The effect of mental practice on coordination of upper limb movements in hemiplegic patients

abstract

Mental Practice (MP) can be defined as the symbolic, covert, mental rehearsal of a task in the absence, overt physical rehearsal.

Elements such as similar time between actual execution and mental performance of a task, the increase of regional cerebral blood flow, vegetative activation, and enhancement in muscle electromyographic (EMG) activity during Mental Practice suggests that mental practice imitates physical performance of a task. Since physical practice (PP) can, to some extent, improve movement coordination in stroke patients, it is assumed that the application of MP would be beneficial to enhance movement coordination in such patients.

The purpose of this study was to investigate the effect of MP on coordination of upper limb movements in hemiplegic patients.

Fifteen hemiplegic patients (age range 20-70 yrs) were participated in this study. All patients were selected of the following criteria: absence of aphasic, apraxia, and cognitive problem. The patients were randomly assigned to three groups, MP, PP, and PP+MP.

Results: 1. PP and MP significantly improved movement coordination. 2. PP did not give different results when compared to MP. 3. PP Combined with MP Produced significantly higher scores than each one alone.

Conclusion: In spite of the small size in this study, the efficacy of MP shown here.

Therefore MP similar to PP should be used in physiotherapy.

Key words: Rehabilitation / Mental Practice / Hemiplegia

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