

The Effectiveness of Motor Imagery on Rehabilitation of Musculoskeletal Injuries

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Background

Motor imagery (MI) is an alternative therapeutic beneficial technique, which is used for physiotherapy rehabilitation of neurological diseases, elderly's impairments, sports and musculoskeletal injuries [1–4]. Only three systematic reviews have examined the effectiveness of MI on the rehabilitation of musculoskeletal injuries and only two outcomes have been measured, pain and range of motion [4–6].

Purpose

The purpose of the present systematic review is to examine the effectiveness of MI on the rehabilitation of musculoskeletal injuries. The main outcomes to be examined are pain, strength, range of motion (ROM) and functional ability.

Methods

The study was carried out based on PRISMA guidelines. PubMed, Scopus, Google Scholar and Cochrane Library, with particular key words and MeSH terms, were used for the selection of randomized controlled trials (RCTs). Specific inclusion and exclusion criteria of the studies were defined.

Instruments

The methodological quality of the RCTs was assessed using the PEDro scale, which is a valid and reliable tool and supports the practice of evidence-based physiotherapy interventions [7].

Results

Eleven RCTs met the inclusion criteria [8–18]. According to the PEDro evaluation, the methodological quality of the included RCTs was moderate (total score 5.2/10). The majority of the RCTs found that MI had a significant effect on pain ($p < 0.01$) and strength ($p < 0.02$). However, the results for the ROM and functional ability were controversial.

Conclusions and Implication

The study suggests that MI can be beneficial for patients with musculoskeletal injuries or patients after orthopedic surgery. When combined with MI training, the effectiveness of physiotherapy on musculoskeletal rehabilitation is enhanced. Due to the limitations of the present study, directions for future research are provided.

Keywords: motor imagery, musculoskeletal injuries, pain, strength, functional ability



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