E-Poster

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Efficacy of Action Observation Therapy in Patients With Dementia or Cognitive Impairment: A Systematic Review and Meta-analysis of Randomized Controlled Trials

Topic: Neuroscience

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BACKGROUND

Action observation therapy (AOT) is a novel rehabilitation technique that has been shown to have significantly beneficial effects on patients with neurological disorders, such as stroke and cerebral palsy. However, the effects of AOT on dementia remain unclear. This study is the first ever meta-analysis to investigate the therapeutic effects of AOT in patients with dementia or cognitive impairments.

METHODS

We performed the literature search in the PubMed, Embase, and Cochrane Library databases in August 2025. Randomized trials comparing the outcomes of AOT with those of other interventions, including control or other common physiotherapies in patients with dementia were included. The standardized mean difference (SMD) were determined as the effect size for continuous outcomes, with outcome accuracy determined using 95% confidence intervals (CIs).

RESULTS

In total, nine studies involving 348 patients were included in a systematic review, and seven of them were further included in the meta-analysis. Two studies recruited patients with mild cognitive impairment (MCI), another two studies recruited patients with stroke-related cognitive impairment, and another study recruited patients with Parkinson's disease-dementia. The meta-analysis revealed that AOT significantly improved cognitive function (SMD = 0.86, 95% CI: 0.53 to 1.19, moderate evidence), activities of daily living (SMD = 0.67, 95% CI: 0.53 to 1.19), and naming aphasia (SMD = 0.53, 95% CI: 0.01 to 1.05) relative to control treatments after intervention. Moreover, AOT significantly improved motor function [gait velocity (SMD = 0.70, 95% CI: 0.24 to 1.16) and timed up and go test (SMD = −1.05, 95% CI: −1.89 to −0.21)] in dementia patients without stroke. In addition, AOT significantly improved cognitive function (SMD = 0.96, 95% CI: 0.41 to 1.50) relative to control treatments at one-month follow up after intervention.

CONCLUSION

Action observation therapy may serve as complementary and alternative treatments for patients with dementia or cognitive impairment.

Statement of Disclosures

None

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