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| Paper Category: | Prevention and Public Health |
| Paper Title: (Arial Font; 14 Pt Size) | The Effectiveness of Horticultural Therapy on the Psychosocial and Physical Function of Older Adults with Normal Cognitive Function: A Systematic Review and Meta-Analysis. |
| Abstract Body: (Arial Font; 12Pt Size) | |

(Maximum word limit - 300 words)

Background

Horticultural therapy (HT) is not uncommonly used as non-pharmacological therapy for patients with dementia. However, less is known about its effects on older adults with normal cognition.

Objectives

This review synthesises available evidence to evaluate the effects of HT on psychosocial and physical function in cognitively intact older adults.

Method

A systematic search in 9 electronic databases for experimental and quasi-experimental studies was performed between January 1, 2001, and July 19, 2021. Studies involving participants above 60 years old with normal cognition, analysing psychosocial and physical effects of HT, were included. Cochrane Risk of Bias 2 (RoB2) tool and Risk Of Bias In Non-randomised Studies- of Interventions (ROBINS-I) were used to assess risk of bias. Meta-analysis was conducted using Stata software. Cochran's Q test and I^2 were used to explore statistical heterogeneity. Narrative synthesis was conducted for trials unsuitable for quantitative pooling.

Results

Nineteen articles (2191 participants) were included. Meta-analyses found that HT showed moderate-large effects on psychosocial outcomes, with improved self-efficacy (Hedges' $g=0.49$, 95%Confidence Interval:0.07,0.91, 3 trials, $I^2:0.00\%$) and self-esteem ($g=1.01$, 95%CI:0.33,1.68, 2 trials, $I^2:0.00\%$), and decreased depressive symptoms ($g=-3.33$, 95%CI:-6.29,-0.37, 4 trials, $I^2:98.51\%$). Narrative synthesis suggested benefits in Health-related Quality of Life. Regarding physical effects, HT improved exercise duration and intensity ($g=1.37$, 95%CI:0.92,1.82, 2 trials, $I^2:0.00\%$). Effects on anxiety, social engagement and fitness did not achieve statistical significance.

Discussions and Conclusions

The findings support the potential role of HT in promoting psychosocial and physical function among older adults with intact cognition. Given high statistical heterogeneity, more work is needed to explore the effect of possible moderators on treatment effects.

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