

EP24.03

Efficacy of home-based non-pharmacological interventions in depression treatment: A systematic review and network meta-analysis

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Background & Aim: Depression is a common psychiatric disease. Non-pharmacological interventions are accepted as a standard depression treatment but initiation and maintenance rate of these interventions are low because of limitation to treatment access, especially in elderly and patients with co-morbidities. This study aimed to systematically review all available home-based interventions for depression treatment, pool effect size of each intervention, and compare efficacy among all available home-based interventions.

Methods: Medline, Scopus, and CINAHL databases were searched since inceptions to 21st September 2015. Randomized-controlled trials including depressed patients and comparing home-based interventions with usual care, were included in the review. Standardized mean difference(SMD) and random effect model were applied to pool mean difference of depressive score and relative risk of disease remission between each home-based intervention and usual care. Multivariate random effect meta-analysis was applied to compare the efficacy among all available home-based interventions.

Results: Among 656 identified studies, 17 studies met inclusion criteria and were included in the review. Nine, 3, and 4 studies considered home-based psychotherapy, home-based exercise, and combined home-based psychotherapy with exercise as interested interventions, respectively. SMDs of home-based psychotherapy, home-based exercise, and combined home-based psychotherapy with exercise were -0.69 (95%CI:-0.97,-0.42), -1.03 (95%CI:-2.89, 0.82), -0.78 (95% CI:-1.09,-0.47), respectively. These suggested that only home-based psychotherapy and combined home-based psychotherapy with exercise could significantly decrease depressive scores. Disease remission rate was also significantly higher in home-based psychotherapy and combined home-based psychotherapy with exercise groups than in the usual care group. Moreover, combined home-based psychotherapy with exercise was the best treatment regimen that had the highest probability of having disease remission among all home-based interventions.

Conclusion: Our study confirmed the efficacy of home-based psychotherapy and combined home-based psychotherapy with exercise in depression treatment. Combined home-based psychotherapy and exercise was the best treatment and should be considered in a clinical practice guideline for depression.