INPLASY

Efficacy of horticultural therapy on patients with depressive disorder.

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ADMINISTRATIVE INFORMATION

Support - Not applicable.

Review Stage at time of this submission - Data analysis.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202520057

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 10 February 2025 and was last updated on 10 February 2025.

INTRODUCTION

Review question / Objective Patients: Patients with depressive disorder. Intervention: Horticultural therapy. Comparison: Treatment as usual or other non-drug intervention. Outcomes: Depressive symptoms, anxiety symptoms, cognitive function, social function and quality of lives. Studies:Randomized controlled trials.

Condition being studied Depressive disorder.

METHODS

Participant or population Patients with depressive disorders.

Intervention Horticultural therapy including outdoor horticultural activities, indoor horticultural activities, or both.

Comparator Standard care or other non-pharmacological interventions.

Study designs to be included Randomized controlled trial.

Eligibility criteria The inclusion criteria for this study were as follows: (1)Randomized controlled trial (RCT) design. (2)Participants diagnosed with depressive disorders based on the DSM-5, ICD-10, or other diagnostic criteria, or diagnosed by a psychiatrist. (3)Application of horticultural therapy (4) Studies assessing emotional symptoms, physical function, cognitive function, or social function and quality of lives.
The exclusion criteria for this study were: (1)Studies involving aromatherapy, animal-assisted therapy, forest bathing, or forest therapy as the primary intervention. (2)Studies focusing on secondary depression resulting from other

neurological or physiological conditions, such as Alzheimer's disease, stroke, diabetes, or cancer.

Information sources We conducted systematic search in the following databases: PubMed, PubMed, Embase, CINAHL, Cochrane Library, and Chinese databses such as CEPS, CNKI and Wanfang database. The search was conducted up to January 2025. We also manual searched for potentially eligible studies in the relevant references.

Main outcome(s) The primary outcome of current study is depressive symptoms.

Additional outcome(s) The secondary outcomes were anxiety symptoms, physical functions, cognitive functions, or social functions and quality of lives.

Quality assessment / Risk of bias analysis Risk of bias tool in the Cochrane handbook for included studies. We assessed crtainty of evidence using the Grading of Recommendations, Assessment, Development and Evaluation (GRADE).

Strategy of data synthesis We assessed the pre-post changes of the outcomes. We calculated Hedges's g with 95% confidence interval.

Subgroup analysis The subgroup analyses was prformed on primary outcome of the study. The analyses were based on the characteristics of horticultural therapy, including treatment duration, participatory or observational format, indoor or outdoor setting, and hospital or non-hospital context. Subgroup analyses were conducted according to participant characteristics, such as initial symptom severity. Additionally, meta-regression was performed based on participant attributes, including age, gender ratio, and age of onset, as well as treatment characteristic such as weekly minutes.

Sensitivity analysis The leave-one-out method was applied for the sensitivity analysis.

Country(ies) involved Taiwan.

Keywords Depressive disorder, depression, horticultural therapy, meta-analysis.

Contributions of each author
Author 1 - Chyi-Rong Chen.
Author 2 - Yi-Wen Lee.