

# INPLASY

## Effects of Horticultural Therapy on Symptom and Emotion in Schizophrenia

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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:** INPLASY202440073

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 April 2024 and was last updated on 18 April 2024.

### INTRODUCTION

**Review question / Objective** Patient: Schizophrenia spectrum disorder. Intervention: Horticultural therapy. Comparison: Treatment as usual or other non-drug intervention. Outcome: Total symptom, positive symptom, negative symptom, depression and anxiety. Study design: Limited to randomized controlled trials.

**Condition being studied** The inclusion criteria for this study were as follows: (1) Participants diagnosed with schizophrenia, (2) Application of horticultural therapy, (3) Studies assessing symptoms and emotional aspects, (4) randomized controlled trials.

### METHODS

**Participant or population** patients with schizophrenia spectrum disorder.

**Intervention** Horticultural therapy including participatory horticultural therapy and observational horticultural therapy.

**Comparator** Treatment as usual or other intervention.

**Study designs to be included** Randomized controlled trial.

**Eligibility criteria** The exclusion criteria for this study were: (1) studies that have irrelevant outcomes, (2) studies were dissertations or conference proceedings.

**Information sources** We conducted a systematic search in the following databases: Pubmed, Embase, Cochrane Library, CINAHL, CNKI, Wanfang database and Yiigle. The search was conducted up to March 2024. We also manually searched for potentially eligible studies in the relevant review articles.

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**Main outcome(s)** The main outcomes included the acute effect (intervention lasted less than 3 months) and chronic effect (intervention lasted more than 3 months) on total symptom, positive symptom, negative symptom, depression and anxiety.

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

**Strategy of data synthesis** We assessed the pre-post changes of the aforementioned outcomes. We calculated Standardized mean difference with 95% confidence interval.

**Subgroup analysis** There was no sub-group analysis in this study.

**Sensitivity analysis** We conducted a sensitivity analysis with the leave-one-out method.

**Language restriction** No.

**Country(ies) involved** Taiwan.

**Other relevant information** (1) The search texts were as follows: schizophrenia, severe mental illness, gardening, horticultural therapy, plant, farm, pressure, depression, anxiety, mood, affect, stress, symptom.

(2) Meta-regression was performed by using the mean age of participants, duration of illness, percentage of female participants, and weekly dosage of intervention in minutes.

**Keywords** schizophrenia, horticultural therapy, meta-analysis, psychiatric symptoms, emotion.

#### **Contributions of each author**

Author 1 - Yi-Wen Lee.

Author 2 - Chi-Wei Hsu.

Author 3 - Chyi-Rong Chen.