

# THERAPEUTIC HORTICULTURE IN OCCUPATIONAL THERAPY AMONG PEOPLE WITH MENTAL ILLNESS

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## ABSTRACT

Therapeutic horticulture as a healing power of nature has gained its recognition in promoting mental, emotional and physical wellbeing of an individual. This study aims to use horticulture as a treatment medium in occupational therapy interventions on persons with mental illness. And to assess the impact of horticulture in health, wellness and wellbeing of people with mental illness. The study was performed with a sample size of 30 on a population of persons with schizophrenia, mood disorders and anxiety disorders. The results were obtained from paired T tests, which provided results based on the tool COTE, Comprehensive Occupational Therapy Evaluation, which had significant differentiation in pre and post evaluations of task behavior in individuals throughout the experiment. Stating that the therapeutic horticulture has a beneficial effect on individuals with mental health conditions.

**KEY WORDS:** Occupational Therapy, Therapeutic Horticulture, Mental Illness.

## INTRODUCTION

Therapeutic horticulture, a branch of occupational therapy, has gained recognition as an effective intervention for individuals living with mental illness. It harnesses the healing power of nature and gardening activities to promote mental, emotional, and physical well-being. Occupational therapists play a crucial role in implementing therapeutic horticulture programs, providing individuals with a holistic approach to recovery and enhancing their overall quality of life. Horticulture is an art and science of growing plants, used as an occupation-based modality to improve physical, mental, and spiritual well-being, often known as gardening and also known as horticultural therapy in rehabilitation. [Naik, B. H. (2014-15)]

Horticulture therapy can be another alternative form of non-pharmacological treatment method provided by therapist. [Joyce, J., & Warren, A. (2016)]. The activities involve pre-designed intervention which involve therapeutic goals and objectives that improve health and recovery. In horticulture therapy program, the patients participate in some easy agriculture activities under therapist supervision, implanting seedlings of vegetables, fruits, or flowers with therapeutic purpose that can improve their creativity, physical, social and emotional functions [Haller, R. L., & Capra, C. L. (2016)] [Simson, S., & Straus, M. (1998)]

In therapeutic horticulture, individuals with mental illness engage in gardening activities, such as planting, cultivating, and tending to plants and gardens. [York, M., & Wiseman, T. (2012)]. These activities provide a structured and purposeful occupation, allowing participants to develop a sense of accomplishment, responsibility, and mastery over their environment. Moreover, the sensory experience of touching soil, smelling flowers, and observing the growth of plants can evoke positive emotions, reduce stress, and improve mood. [Boroujeni, A. (2022)]. Occupational therapists utilize therapeutic horticulture as a means to address various therapeutic goals. For instance, the engagement in gardening tasks can enhance fine motor skills, coordination, and sensory integration. [Boroujeni, A. (2022)] [Fjelstad, J., & Conklin, S. (2011)]. It also promotes social interaction and community integration as participants often collaborate on garden projects or participate in group gardening sessions, fostering a sense of belonging and support. The horticulture environment supports the healing process and the recovery from stress for the persons with mental illness. Initially, horticulture was used for occupational and recreational therapy as part of psychiatric rehabilitation. [Cipriani, J. 2018] [Kam, M. C. Y., & Siu, A. M. H. (2010)]. By providing goal-oriented activities, participants of horticulture program can increase in self-confidence

, self-esteem and hence improve the quality of life[PerrinsMargalis, N. M. (2000)][ Fjelstad, J., & Conklin, S. (2011)]

Research studies have shown the positive impact of therapeutic horticulture on mental health outcomes. Participants have reported decreased symptoms of anxiety and depression, improved self-esteem, increased attention span, and enhanced overall well-being. These outcomes underline the potential of therapeutic horticulture as a valuable adjunct to traditional mental health interventions.

In conclusion, therapeutic horticulture within the field of occupational therapy provides a unique and effective approach for individuals living with mental illness. By engaging in gardening activities, individuals can experience the therapeutic benefits of nature, improve their functional abilities, and foster their recovery journey.[ Hoseinpoor Najjar, A. 2018][ Sempik, J., Aldridge, J., & Becker, S. (2003)] The integration of therapeutic horticulture into occupational therapy practices offers a promising avenue for enhancing mental health care and promoting holistic well-being among those affected by mental illness.

## METHODOLOGY

- Research Design- QUASI EXPERIMENTAL STUDY
- Population -This study involves persons with mental illnesses
- Sample size- 30 All the participants were included in the study.
- Sampling technique - Convenient sampling technique was adopted.
- Duration of the study -Total duration of the study is 4 weeks and the duration of intervention period is 2 weeks

## TOOL DESCRIPTION

### COTE

- The Comprehensive Occupational Therapy Evaluation (COTE) is an instrument that assists therapists in evaluating some patient factors, performance skills, and patterns that impact engagement in occupation.
- It was originally designed as a means to delineate occupational therapy's role in a treatment milieu within an inpatient psychiatric setting and to provide a standard and objective means of reporting patient behaviors observed by occupational therapists
- Twenty-six behaviors are included in the COTE. These are divided into three areas: 1) general behaviors, 2) interpersonal behaviors, and 3) task behaviors.
- The eight behaviors included in part one of the scale provide information about the patient's overall performance patterns.
- The six behaviors listed in part two involve performance skills related to communication/interaction
- Part three of the COTE scale consists of 12 behaviors that relate to performance skills, an area central to occupational therapy. The COTE's emphasis on task behaviors emphasizes the importance of performance in occupation.

### PROCEDURE

- Study on the process of horticulture program is studied.
- Samples from the mental health settings about to be chosen, According to the participant recruitment who have diagnosed mental illness and are interested in participating in therapeutic horticulture sessions, ensure that participants meet inclusion criteria
- They are introduced to the horticulture program and their interest in Participation are to be check listed. Obtaining their informed consent and explaining the purpose and procedures of the study, potential risks and benefits, and confidentiality.
- Consent forms to be signed.
- Early interview sessions and assessment with COTE scale are to be taken as a pre intervention program.
- Intervention program with certain horticulture and gardening activities are planned
- Post-test with COTE assessment and followed by interviews are to be held. Analyse the data collected using appropriate statistical methods, to assess the significance of changes in COTE scores • Pre and post-test scorings where done by a volunteer occupational therapist, in order to avoid research bias.

- Analysis on the results, interpretation of the data collected and their clinical implications were discussed

## **THERAPY SESSIONS**

### **WEEK 1**

#### **SESSION 1**

Warm up Task session: self introduction; general introduction about the study, and the therapist. SESSION 2

Warm up Task session: fertilization techniques, watering techniques

#### **SESSION 3**

Warm up Task session : weeding , soil preparation

#### **SESSION 4**

Warm up Task session: seeding techniques

### **WEEK 2**

#### **SESSION 5**

Warm up Task session: planting samples

#### **SESSION 6**

Warm up Task session: cactus gardening

#### **SESSION 7**

Warm up Task session: floral decorations

#### **SESSION 8**

Warm up Task session: overall maintenance ,feedback session and responsibility allotments.

## **RESULT AND DISCUSSION**

The aim of the study was to use horticulture as a treatment medium in occupational therapy interventions on persons with mental illness.

A total of 30 participants were selected based on the inclusion criteria. And to collect the data of the participants including the demographic data , present severity and cooperative condition .Comprehensive Occupational Therapy Evaluation -COTE is the outcome measurement scale.

The results show significance difference after intervention for two weeks Where the Table 1 and 2; figure 1 and 2 represent the frequency of age distribution and gender distribution among the participants , male participants contribute for about 90 percentage of participants and female in about 10 percentage . Under age distribution the frequency is high for 42,46 and 47 years .

This study has found support for the positive influence of gardening group participation on well-being as defined for individuals and communities has identified the role of task, setting, and ethos in the effect of such group participation . These findings all support occupational therapy's view of the environment as a key factor in therapy. Findings from the current study regarding the gradable and inclusive, and therefore engaging, nature of the tasks of gardening as an influence on well-being are in synchrony with the concept of flow and engagement through meaningful and purposeful occupation [Wilcock, A. A. (2006)][ Joyce, J., & Warren, A. (2016)]

Result of the study shows that therapeutic horticulture has a beneficial effect in people with mental illness and can be used as a productive medium of intervention in occupational therapy. It is clear that there are individual differences in Population that should be taken into account when providing therapeutic horticulture in occupational therapy among people with mental illness.

## **CONCLUSION**

Therapeutic horticulture has proven to be a valuable intervention in the field of occupational therapy for individuals with mental illness. This nature-based approach combines gardening activities with therapeutic techniques to promote physical, psychological, and social well-being. Where this study was conducted with a thirty sample size , using COTE Comprehensive Occupational Therapy Evaluation as a measuring tool .From the pre and post tests evaluation there where significant positive correlations in all the behavioural areas .

After statistical analysis the data provided significant improvement in the areas of punctuality, following directions, activity neatness ,problem solving , complexity and organization of tasks, interest in activity , interest

in accomplishment, decision making skills and frustration and tolerance. Participating in therapeutic horticulture provides individuals with mental illness a sense of purposeful occupation and accomplishment of a task. Therapeutic horticulture aligns with the core principles of occupational therapy, which aim to enable individuals to engage in meaningful activities and occupations. Gardening provides a purposeful and satisfying occupation that promotes well-being and contributes to overall occupational balance.

### LIMITATIONS

- Duration of the therapy was shorter.
- The present study was done with limited sample size.
- This study focuses only on persons with mental illness.

### RECOMMENDATIONS

- A large sample size and longer duration of intervention could be considered.
- Study can be done on different age group.
- Study could have been an experimental study with experimental and control group participation which would provide much strong evidence in using therapeutic horticulture as an effective medium of intervention in occupational therapy.
- To date, Occupational therapy practitioners have conducted very few studies of Horticulture therapies's effectiveness. It is strongly recommended OCCUPATIONAL THERAPY IN MENTAL HEALTH, 21 researchers in Occupational Therapy explore this intervention via well-designed studies with adequate sample sizes. Occupational Therapy practitioners should consider Horticulture therapy as a viable intervention strategy for clients with mental health condition.
- Continued research and evaluation are crucial to expand the evidence base for therapeutic horticulture in occupational therapy. Studies assessing the long term effects, specific populations and optimal dosage of this intervention will contribute to its refinement and further establish its effectiveness.

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