



The Effect of Planting Occupational Therapy in Reducing Signs and Symptoms of Auditory Hallucinations in Patients With Auditory Hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026

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ABSTRACT

Hallucinations are a symptom of mental illness characterized by sensory changes, in which individuals experience false perceptions, such as hearing voices, seeing things, tasting tastes, smelling odors, or experiencing sensations that are not actually there (Sekar, 2021). Occupational therapy can be implemented through gardening activities. Planting activities not only help reduce patients' involvement with their hallucinatory world but also stimulate more conscious thoughts, emotions, and behaviors. Furthermore, this activity can stimulate feelings of happiness and provide entertainment, aiming to distract patients from hallucinations without focusing directly on the hallucinatory experience (Gede, 2022). The purpose of this study is Analyzing the Effect of Planting Occupational Therapy in Reducing Signs and Symptoms of Auditory Hallucinations in Patients with Auditory Hallucinations in the Siak of Tampan Mental Hospital, Pekanbaru, Riau Province. This study employed a quantitative method with a quasi-experimental design with a one-group pretest-posttest design, this research was conducted in the Tampan Mental Hospital Pekanbaru- Riau Province which was carried out from April – Juni 2026 With a population of 25 schizophrenia with auditory hallucinations patients with a sample of 10 patients. This research used purposive sampling technique. Data analysis used univariate and bivariate analysis using paired t-test statistical tests with a 95% confidence level $\alpha = 0.05$. The results show that the average value of respondents' signs and symptoms of auditory hallucinations patients before planting occupational therapy was 29.60 with a standard deviation of 5.929

INTRODUCTION

Hallucinations are a symptom of mental disorders characterized by sensory changes, in which individuals experience false perceptions, such as hearing voices, seeing things, tasting tastes, smelling odors, or experiencing sensations that are not actually there (Sekar, 2021). Approximately 90% of people with mental disorders experience various forms of hallucinations, with the majority being auditory hallucinations. The voices heard can originate from within the individual or from the external environment. These voices can be familiar to the sufferer, with a single or multiple characteristics, often giving commands or prompting them to perform activities to influence their behavior. Hallucinations occur when a person has difficulty distinguishing between stimuli from their own mind and those from the external world. Sufferers of hallucinations often hear disembodied voices or see things that are not real, either a single voice or a variety of voices (Suminanto, 2024).

Treatment of patients with hallucinations involves pharmacological and non-pharmacological therapies. Non-pharmacological therapies can include modalities such as cognitive therapy, family therapy, and occupational therapy. One effective method for treating hallucinations is occupational therapy, a science- and art-based approach that focuses on individual participation in specific activities. In this case, occupational therapy can be implemented through gardening. Planting not only helps reduce the patient's involvement in their hallucinatory world but also stimulates more conscious thoughts, emotions, and behaviors. Furthermore, this activity can stimulate feelings of happiness and provide entertainment, aiming to distract the patient from hallucinations without directly focusing on the hallucinatory experience (Gede, 2022).

Planting therapy is not only beneficial psychologically but also has positive impacts on patients' physiological and social aspects. Light physical activities such as digging soil, watering plants, or moving pots provide good fine and gross motor stimulation for patients with chronic mental disorders. These activities also increase the production of serotonin and dopamine, which play a role in regulating mood and feelings of pleasure. Furthermore, being in a green and natural environment can reduce cortisol levels, the stress hormone, resulting in calmer and more relaxed patients. This combination of benefits makes plant therapy a holistic intervention that not only focuses on reducing symptoms, but also supports the patient's overall quality of life (Gede, 2022).

The results of Sriyanti et al.'s (2024) study on occupational therapy of planting had a positive impact in reducing hallucination symptoms in schizophrenia patients at the Karang Anyar Community Health Center, Lampung, reported that occupational intervention of planting could reduce the intensity of hallucinations from the moderate category to mild, with a pre-test score of 19 and a post-test score of 13. This therapy was able to divert the patient's attention from the hallucinations experienced, as well as arouse positive emotions and motivation to recover.

A preliminary survey conducted on April 26, 2026, at Tampan Mental Hospital in Riau Province, interviewed two mentally ill patients with auditory hallucinations. They reported hearing voices that constantly disturbed their lives.

The voices appeared when they were alone, and sometimes disturbed their sleep. Based on the description above, the researcher has conducted research on "The Effect of Planting Occupational Therapy in Reducing Signs and Symptoms of Auditory Hallucinations in Patients with Auditory Hallucinations in the Siak of Tampan Mental Hospital, Pekanbaru, Riau Province.

LITERATURE REVIEW

Occupational therapy involving planting plants is one approach that has proven effective. This activity not only distracts the patient from hallucinations but also increases focus, relaxation, and interaction with the real environment. Engaging in activities such as planting can reduce the intensity of hallucinations and provide a sense of responsibility and happiness in patients (Ferdo, 2024). A study by Sriyanti & Hernanda (2024) entitled "Implementation of Planting Occupational Interventions for Hallucinatory Patients in the Karang Anyar Community Health Center Work Area, Lampung Province, in 2024" showed that hallucination symptoms decreased from moderate to mild. Therefore, it can be concluded that planting occupations can be implemented as an effort to reduce the recurrence of hallucinations. Planting activities can help patients channel or express feelings, thoughts, and emotions that have previously influenced their behavior unconsciously. They provide joy, entertainment, and divert patients' attention to their own world and engage in group activities.

METHODOLOGY

This study employed a quantitative method with a quasi-experimental design with a one-group pretest-posttest design (Notoatmodjo, 2018). This research was conducted in the Tampan Mental Hospital Pekanbaru- Riau Province in 2026 which was carried out from April – Juni 2026 With a population of 25 schizophrenia with auditory hallucinations patients with a sample of 10 patients. This research used purposive sampling technique. the This research uses instrument "Auditory Hallucinations Rating Scale (AHRS) from Hoffman RE, et al (2003). Data analysis used univariate and bivariate analysis using paired t-test statistical tests with a 95% confidence level $\alpha = 0.05$.

RESULTS

1. Sample distribution schizophrenia patients with Auditory Hallucinations patients in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026

Table 1. Sample Distribution Schizophrenia Patients With Auditory Hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province

Schizophrenia patients with Auditory Hallucinations	Frequency (n)	Percentage (%)
Female	10	100%

Based on Table 1. the largest proportion of the sample of schizophrenia patients with Auditory Hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province was female (100%).

2. Univariate Analysis

a. Average Signs and Symptoms of Auditory Hallucinations Patients Before Planting Occupational Therapy in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026

Tabel 2. Average Signs and Symptoms of Auditory Hallucinations Patients Before Planting Occupational Therapy in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026

Variabel	Mean	Std. Devation	Min	Max
Pre	29.60	5.929	20	37

Table 2. shows that the average value of respondents' signs and symptoms of auditory hallucinations patients before planting occupational therapy was 29.60 with a standard deviation of 5.929. The maximum value signs and symptoms of auditory hallucinations was 37 and the minimum value was 20 signs and symptoms of auditory hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026.

b. Average Signs and Symptoms of Auditory Hallucinations Patients After Planting Occupational Therapy in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026

Tabel 3. Average Signs and Symptoms of Auditory Hallucinations Patients After Planting Occupational Therapy in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026

Variabel	Mean	Std. Devation	Min	Max
Post	22.30	3.802	16	28

Table 3. shows that the average value of respondents' signs and symptoms of auditory hallucinations patients after planting occupational therapy was 14.42 with a standard deviation of 3.802. The maximum value signs and symptoms of auditory hallucinations was 28 and the minimum value was 16 signs and

symptoms of auditory hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026.

3. Bivariate Analysis

a. The Effect of Planting Occupational Therapy in Reducing Signs and Symptoms of Auditory Hallucinations in Patients with Auditory Hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026

Tabel 4. The Effect of Planting Occupational Therapy in Reducing Signs and Symptoms of Auditory Hallucinations in Patients with Auditory Hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026

Variable	Mean	SD	SE	P-Value
Pre	29.60	5.929	1.875	0.001
Post	22.30	3.802	1.202	

Table 4. shows a difference between the respondents' signs and symptoms of Auditory Hallucinations before and after being given with planting occupational therapy an average value of 29.60 with a standard deviation of 5.929 to an average value of 22.30 with a standard deviation of 3.802. The results of the statistical test obtained a p-value of 0.001 ($p < 0.05$) which means there is a difference Effect of Planting Occupational Therapy in Reducing Signs and Symptoms of Auditory Hallucinations in Patients with Auditory Hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026.

DISCUSSION

The Result research is difference between the respondents' signs and symptoms of Auditory Hallucinations before and after being given with planting occupational therapy an average value of 29.60 with a standard deviation of 5.929 to an average value of 22.30 with a standard deviation of 3.802. The results of the statistical test obtained a p-value of 0.001 ($p < 0.05$) which means there is a difference Effect of Planting Occupational Therapy in Reducing Signs and Symptoms of Auditory Hallucinations in Patients with Auditory Hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026.

Planting therapy is not only beneficial psychologically but also has positive impacts on the patient's physiological and social well-being. Light physical activities such as digging, watering plants, or moving pots provide good fine and gross motor stimulation for patients with chronic mental disorders. These activities also increase the production of serotonin and dopamine, which play a role in regulating mood and feelings of pleasure. Furthermore, being in a green and natural environment can lower cortisol levels, the stress hormone, resulting in a calmer and more relaxed patient. This combination of benefits makes plant therapy a holistic intervention that focuses not only on symptom reduction but also on supporting the patient's overall quality of life (Gede, 2022). The main advantages of plant therapy are its flexibility, ease of implementation, and natural appeal to patients. This therapy does not require specialized medical equipment, is relatively inexpensive, and can be conducted in various

environments such as hospital gardens, community health center yards, or even community gardens. Furthermore, this therapy is repetitive and has a clear work pattern, making it ideal for patients with schizophrenia who require structured activities. Unlike verbal therapy, which requires intense concentration, plant therapy facilitates healing through hands-on practice and multisensory stimulation. Therefore, this therapy is a suitable option in ongoing occupational therapy programs and can be integrated into community-based mental health rehabilitation (Mufarrohah, 2025).

Recent research has shown that occupational therapy involving plants has a positive impact on reducing hallucination symptoms in schizophrenia patients. A study by Sriyanti et al. (2024) at the Karang Anyar Community Health Center in Lampung reported that occupational therapy involving plants reduced the intensity of hallucinations from moderate to mild, with a pre-test score of 19 and a post-test score of 13. This therapy was able to divert patients' attention from the hallucinations they were experiencing, while also generating positive emotions and motivation for recovery. Furthermore, research by Kartika Sari et al. (2023) at the Dr. RM. Soedjarwadi Mental Hospital in Klaten also supported similar findings. After six sessions of plant therapy, two patients experienced a significant reduction in their hallucination scores: Mrs. G, from 17 to 4 (mild) and Mrs. M, from 30 to 13 (moderate). This significant reduction was even influenced by the patients' interest in the plant activity, which accelerated the recovery process from hallucination symptoms.

Equally interesting is the community service conducted by Ridfah et al. (2021) at Dadi Regional General Hospital, South Sulawesi Province, also showed positive results. Five patients who underwent four weeks of occupational therapy involving planting showed increased motivation for daily activities. They reported feeling more relaxed, happier, and having improved memory and focus. The planting activity brought them back to a sense of home, which emotionally strengthened the rehabilitation process.

The program was conducted for 10 patients with sensory perception disorders and hallucinations in the Siak Ward of Tampan Mental Hospital Pekanbaru - Riau Province, over five days. The program began with session 1, an introduction to hallucinations. In this session, patients were educated about the definition of hallucinations, their types, signs and symptoms, and the timing of their occurrence. Patients were also encouraged to share their own hallucination experiences so they could recognize their condition. Throughout the program, the patients appeared quite cooperative and were able to follow the facilitator's directions. Planting occupational therapy was not performed in the first session, as the focus was on recognizing hallucinations and establishing a trusting relationship with the patients.

On the second day, session 2, a rebuke to hallucinations, was conducted. Patients were taught how to reject hallucinations by saying "no" to the hallucinatory voices, focusing on their surroundings, and practicing rebuke techniques independently. Following the session, the program continued with occupational therapy, planting using polybags, soil, and plant seeds such as chilies, tomatoes, eggplants, and bell peppers. Patients were encouraged to put

soil into polybags, plant seedlings, and water the plants under the guidance of a facilitator. During the planting process, patients appeared more focused on the activity and began to enjoy it. Patients also appeared more active in interacting with the facilitator and other patients during the planting process. The planting activity helped patients shift their attention from hallucinatory stimuli to real-life activities. On the third day, session 3 was conducted, focusing on conversations with others. In this session, patients were encouraged to communicate with the facilitator and other patients to help reduce their focus on hallucinations. After the session, patients were again directed to engage in occupational therapy, watering and caring for the plants they had previously planted. Throughout the activity, patients appeared enthusiastic and began to demonstrate a sense of responsibility for their plants. Some patients even watered them without the facilitator's prompting. Furthermore, patients appeared more active in speaking and were better able to maintain attention throughout the activity. This indicates that planting activities can help improve patients' concentration and social interaction.

On the fourth day, session 4 was conducted, practicing scheduled or daily activities. Patients were taught the importance of engaging in routine activities to maintain focus on real-life activities and avoid hallucinations. After the session, they continued with occupational therapy, a scheduled positive activity. Patients watered, cleaned the area around the plants, and observed the development of the plants they had planted. During the session, patients appeared calmer, more easily directed, and better able to follow instructions than before. They also appeared to enjoy the process of caring for the plants and began to show interest in their development. These activities helped them remain active in their daily activities while in the treatment room.

On the fifth day, session 5 was conducted, focusing on taking their medication regularly. During this session, patients were educated about the benefits of their medication, the medication schedule, and the importance of adherence to treatment to prevent recurrence of hallucinations. After the session, patients resumed occupational therapy, watering and caring for the previously planted plants. The plants appeared to be growing well and began to show new leaves during the observation period. This made patients feel happy and proud of the results of the activities. They also appeared more active in the activities compared to the beginning of the therapy. Furthermore, they appeared to be better able to focus on real-life activities during the planting process.

Based on observations during the activity, occupational therapy involving planting proved effective in reducing the signs and symptoms of hallucinations in patients. Prior to the therapy, patients frequently daydreamed, talked to themselves, laughed to themselves, and had difficulty concentrating. However, after participating in gradual and repeated planting activities, patients appeared calmer, more interactive, and better able to focus on their surroundings. Planting activities helped patients shift their focus from internal stimuli to real-world activities. In addition to providing a positive distraction, planting activities also provided a relaxing effect and increased patient enjoyment during the therapy process. The light physical activity of planting also helped reduce anxiety, which

can trigger hallucinations. Thus, plant-based occupational therapy can be used as an effective non-pharmacological intervention to help reduce hallucinations in patients with mental disorders.

To determine the effect of plant-based occupational therapy on the signs and symptoms of hallucinations in patients, measurements were conducted using the Auditory Hallucination Rating Scale (AHRS) questionnaire before and after the intervention (pre-test) and after the intervention (post-test). Measurements were conducted on five patients over a five-day period. The AHRS questionnaire consists of 11 questions used to assess the severity of hallucinations experienced by the patients. The results were then presented in pie charts to compare the pre-test and post-test scores for each patient. This comparison of scores was used to observe changes in the patients' conditions after undergoing plant-based occupational therapy in a gradual and scheduled manner.

Planting Occupational Therapy activities are also expected to help patients shift their attention from hallucinatory stimuli to more positive, real-life activities. By involving patients in these activities, therapy is expected to support the gradual recovery process. Planting occupational therapy is expected to increase patient involvement in daily activities and help patients interact more actively with their surroundings. Plant care activities are also expected to foster a sense of responsibility and improve patients' ability to follow instructions. Through repeated activities, patients are expected to be able to maintain concentration on real-life activities for longer periods. This therapy is also expected to help patients reduce the tendency to talk to themselves due to hallucinations. In addition to being easy to implement, planting occupational therapy uses simple tools and materials, making it possible to continue throughout the treatment process. This intervention is expected to be a form of non-pharmacological therapy that supports holistic, evidence-based psychiatric nursing services. With regular implementation and good support, planting occupational therapy is expected to support patients' recovery process gradually and optimally.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study "The Effect of Planting Occupational Therapy in Reducing Signs and Symptoms of Auditory Hallucinations in Patients with Auditory Hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026" the following conclusions can be drawn: the average value of respondents' signs and symptoms of auditory hallucinations patients before planting occupational therapy was 29.60 with a standard deviation of 5.929. the average value of respondents' signs and symptoms of auditory hallucinations patients after planting occupational therapy was 14.42 with a standard deviation of 3.802. The results of the statistical test obtained a p-value of 0.001 ($p < 0.05$) which means there is a difference Effect of Planting Occupational Therapy in Reducing Signs and Symptoms of Auditory Hallucinations in Patients with Auditory Hallucinations in the Siak of Tampan Mental Hospital Pekanbaru - Riau Province 2026.

It is recommended that occupational therapy involving planting can be scheduled routinely twice a week at Tampan Mental Hospital, Pekanbaru, Riau Province, so that it can be implemented sustainably for patients with auditory hallucinations. This activity is expected to continue home planting activities as a form of support during the recovery process. Occupational therapy involving planting can be combined with other interventions, such as pharmacological therapy and group communication therapy, to reduce the signs and symptoms of hallucinations.

FURTHER STUDY

Further study could research about possible interventions and therapies occupation other such as manik-manik for skizofrenia patient.

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