



Impact of Drawing Occupational Therapy on Auditory Hallucinations Among Mental Health Patients

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Article Information	ABSTRACT
Received : 03 June 2026 Revised : 10 July 2026 Accepted : 04 August 2026	Auditory hallucinations are a common positive symptom of schizophrenia that can impair psychosocial functioning and increase the risk of aggressive behavior. Drawing-based occupational therapy has been proposed as a simple nonpharmacological intervention to help patients manage hallucinations. This study evaluated the implementation of drawing-based occupational therapy in reducing the severity of auditory hallucinations in a client with schizophrenia using a psychiatric nursing care approach. A single-case study was conducted involving one client diagnosed with schizophrenia and auditory hallucinations. The intervention was delivered in six sessions over three days. Outcomes were assessed using the Auditory Hallucination Rating Scale (AHRS) and clinical observation before and after the intervention. The AHRS score decreased from 30 (severe) before the intervention to 25 on the second day and 23 on the third day, indicating reduced hallucination severity. The client also showed improved concentration, greater participation in therapy, and better control of auditory hallucinations during drawing sessions. These findings suggest that drawing-based occupational therapy may be a useful supportive intervention in psychiatric nursing care, although further studies with larger samples are needed
Keywords: Auditory Hallucinations, Drawing-Based Occupational Therapy, Sensory Perception Disorders, Schizophrenia, Psychiatric Nursing	
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Introduction

Mental health is an important component of overall health that allows individuals to think rationally, manage emotions, behave adaptively, and perform social functions optimally (*World Health Organization*, 2022). Mental health disorders can cause changes in cognitive, affective, and behavioral functions that cause obstacles in daily life (Fatimah *et al.*, 2021). One of the severe mental disorders that has a significant impact on an individual's quality of life is schizophrenia (Agusta *et al.*, 2024). Schizophrenia is characterized by disorders of thought, perception, emotion, and behavioral processes that cause individuals to have difficulty distinguishing reality from their internal experiences (Agusta *et al.*, 2024; Izati *et al.*, 2025).

One of the most common symptoms found in patients with schizophrenia is auditory hallucinations, which involve hearing voices or sounds in the absence of external stimuli. This condition may increase the risk of aggressive behavior, social isolation, and impaired psychosocial functioning if left untreated. Current schizophrenia management combines pharmacological treatment with non-pharmacological interventions to improve symptom control and psychosocial functioning. Among these, drawing-based occupational therapy has been recognized as a therapeutic approach that promotes emotional expression, improves concentration, and distracts patients from hallucinatory experiences. A recent literature review reported that drawing-based occupational therapy effectively reduces hallucination symptoms; however, its integration into routine mental health services in Indonesia remains limited, and variations in intervention procedures and duration indicate that its clinical implementation has not yet been standardized (Widyaningtyas & Kandar, 2025).

Similarly, a global survey involving 1,102 occupational therapists from 67 countries identified persistent barriers to implementing occupational therapy in mental health settings, including workforce shortages, inadequate funding, long waiting times, intervention costs, and limited intervention time (Jesus *et al.*, 2025). These findings highlight a gap between evidence supporting drawing-based occupational therapy and its routine implementation in clinical practice. Therefore, further research is needed to evaluate the effectiveness of drawing-based occupational therapy as a practical nursing intervention for managing auditory hallucinations in patients with schizophrenia.

The management of auditory hallucinations theoretically combines pharmacological and non-pharmacological interventions. Pharmacological therapy primarily aims to control psychotic symptoms through antipsychotic medication, whereas non-pharmacological

interventions focus on improving patients' ability to recognize, manage, and distract themselves from intrusive internal stimuli (Novitasari & Budiman, 2025). Activity-based approaches, including drawing-based occupational therapy, have been recognized as effective strategies for enhancing patient engagement and strengthening self-control over hallucinations (Agusta et al., 2024; Izati et al., 2025; Parapaga et al., 2025). Nevertheless, a gap remains between evidence-based recommendations supporting these interventions and their routine implementation in psychiatric nursing practice. This gap is particularly important given that mental health disorders continue to represent a major public health concern in Indonesia. The 2023 Indonesian Health Survey reported that the prevalence of depression among individuals aged ≥ 15 years was 1.4%, with relatively higher rates in several provinces, including East Kalimantan. Consistent with these national findings, Atma Husada Mahakam Mental Health Hospital in Samarinda reported that paranoid schizophrenia remained the most common diagnosis among both outpatient and inpatient populations. Furthermore, the hospital's 2025 quality indicator report showed that 76.3% of patients admitted to the Enggang Ward experienced sensory perception disorders, predominantly auditory hallucinations. These findings highlight the need for practical, evidence-based, and sustainable non-pharmacological interventions that can be effectively integrated into routine psychiatric nursing care.

Several previous studies have reported that drawing-based occupational therapy can reduce the signs and symptoms of auditory hallucinations in patients with schizophrenia. Agusta et al. (2024) reported that drawing activities improved patients' concentration and reduced responses to hallucinatory stimuli. Similar findings were reported by Izati et al. (2025) and Parapaga et al. (2025), who found that drawing-based occupational therapy created positive distractions, enabling patients to become calmer, more cooperative, and better able to control hallucinations. However, these studies primarily focused on overall symptom improvement and provided limited evaluation using standardized outcome measures. In addition, the implementation of drawing-based occupational therapy as an integrated component of the comprehensive psychiatric nursing care process has received limited attention. Therefore, the present study extends previous research by evaluating changes in the frequency and severity of auditory hallucinations using the Auditory Hallucination Rating Scale (AHRS) while integrating drawing-based occupational therapy into a structured psychiatric nursing care process in a

clinical setting. This approach provides a more comprehensive evaluation of the clinical application of drawing-based occupational therapy than previous studies.

Based on these considerations, this study aims to evaluate the implementation of drawing-based occupational therapy as part of psychiatric nursing care by analyzing changes in the frequency and severity of auditory hallucinations among patients with sensory perception disorders in the Hornbeam Room of Atma Husada Mahakam Psychiatric Hospital, Samarinda. Drawing-based occupational therapy was selected because it is a simple, low-cost, safe, and easily implemented intervention that actively engages patients in meaningful activities while promoting cognitive distraction from hallucinatory stimuli. Considering the high prevalence of auditory hallucinations and the limited implementation of structured nonpharmacological interventions in routine psychiatric nursing practice, further evidence regarding its clinical effectiveness is needed. The findings of this study are expected to strengthen evidence-based psychiatric nursing practice by providing standardized clinical evidence using the Auditory Hallucination Rating Scale (AHRS), supporting the integration of drawing-based occupational therapy into comprehensive psychiatric nursing care, and contributing to the development of practical, activity-based interventions that enhance patient recovery and the quality of mental health services..

Method

This study employed a case study design using a mental health nursing care approach for a client with auditory hallucinations treated in the Enggang Ward of Atma Husada Mahakam Mental Health Hospital, Samarinda, Indonesia, in 2026. The study population comprised clients with sensory perception disorders in the ward, and one client meeting the inclusion criteria was selected through purposive sampling. Data were collected using the Auditory Hallucination Rating Scale (AHRS) and an observation sheet to assess changes in hallucination severity and patient behavior before and after the intervention. Data were analyzed descriptively by comparing AHRS scores and observational findings before and after drawing-based occupational therapy to evaluate changes in the client's auditory hallucination symptoms..

Research Results

This study was conducted on one client with a nursing diagnosis of sensory perception disorders: auditory hallucinations in the Hornbeam Room of Atma Husada Mahakam Hospital Samarinda. Clients were given innovative interventions in the form of occupational therapy

drawing for six sessions for three consecutive days with a frequency of twice a day and a duration of 35 minutes per session. Evaluation was conducted using *the Auditory Hallucination Rating Scale* (AHRS) as well as observation of client behavior before and after the intervention.

Table 1. Client Characteristics

Features	Remarks
Client's Initials	Mr. M
Gender	Male
Rooms	Hornbill Room
Medical Diagnosis	Skizofrenia
Primary Nursing Diagnosis	Sensory Perception Disorders: Auditory Hallucinations
Problems Found	Hearing whispers, daydreaming, talking to yourself
Innovation Intervention	Occupational Therapy Drawing
Duration of Intervention	3 days (6 sessions)

Results of the Measurement of the Severity of Hallucinations

The results of measurements using AHRS showed a decrease in hallucination scores after the administration of occupational drawing therapy.

Table 2. Changes in AHRS Score Before and After Intervention

Measurement Time	AHRS Score	Category
Day 1 (Pretest)	30	Weight
Day 2	25	Weight
Green K-3 (Posttest)	23	Weight

Based on Table 2, there was a decrease in the AHRS score by 7 points from the initial score of 30 to 23 after the implementation of occupational drawing therapy for three days. The decrease in score indicates an improvement in the client's condition in controlling auditory hallucinations.

Client Behavior Observation Results

In addition to the decrease in AHRS scores, changes were also seen in client behavior during the intervention process.

Table 3. Changes in Client Behavior Before and After Intervention

Observation Indicators	Before Intervention	After Intervention
Snoring	Frequent	Reduced
Speaking for yourself	Frequent	Rare
Focus on activities	Lack of focus	Increased focus
Ability to follow instructions	Enough	Good
Involvement in activities	Passive	Active
Ability to complete tasks	Less than optimal	Able to finish drawings and coloring

Based on the results of observations, clients showed an improvement in the ability to concentrate during the occupational therapy of drawing. Clients appear calmer, more cooperative, able to follow instructions well, and can complete drawing and coloring activities independently.

Daily Evaluation Results

Table 4. Client Development During the Intervention

Day 1	Clients still often daydream and talk to themselves. AHRS score of 30.
Day 2	The client begins to focus while drawing, the response to hallucinations decreases. AHRS score is 25.
Day 3	Clients were able to complete drawing activities well, were calmer, and reported reduced hallucination sounds while performing activities. AHRS score 23

Overall, the results of the study showed that occupational therapy drawing had a positive effect on decreasing the frequency and severity of auditory hallucinations in clients. This intervention helps clients shift their attention from internal stimuli to real activities, thereby improving the ability to control hallucinations and supporting the psychosocial recovery process.

Discussion

The results showed that the application of drawing-based occupational therapy had a positive impact on reducing the frequency of auditory hallucinations in a client with sensory perception disorders. The study objective was achieved, as demonstrated by the reduction in the Auditory Hallucination Rating Scale (AHRS) score from 30 at baseline to 25 on the second day and 23 on the third day following the intervention. In addition, the client demonstrated improved concentration, reduced self-talking behavior, greater cooperation during therapy sessions, and the ability to complete drawing and coloring activities successfully.

These findings suggest that drawing-based occupational therapy functions as an effective cognitive distraction strategy. Drawing activities simultaneously engage cognitive, motor, visual, and emotional processes, enabling clients to redirect their attention from internal hallucinatory stimuli to meaningful external activities. This process may strengthen reality orientation, enhance self-control, and reduce the frequency and intensity of auditory hallucinations.

The present findings are consistent with psychiatric nursing theory, which emphasizes activity-based therapy as an effective strategy for redirecting attention from internal to external stimuli while improving reality orientation and self-control. Similar findings have been reported

by Agusta et al. (2024), Izati et al. (2025), and Parapaga et al. (2025), who demonstrated that drawing-based occupational therapy reduced hallucination symptoms, improved concentration, and enhanced psychosocial functioning among individuals with schizophrenia.

A notable contribution of this study is the use of the Auditory Hallucination Rating Scale (AHRS) as a standardized instrument to objectively monitor changes in hallucination severity throughout the nursing care process. Furthermore, this study integrated drawing-based occupational therapy into each stage of psychiatric nursing care, including assessment, intervention, implementation, and evaluation, thereby providing a structured description of its application in clinical nursing practice. Although the AHRS scores decreased following the intervention, the client's hallucination severity did not change from the severe category to the moderate or mild category. This finding may be explained by the relatively short intervention period, the chronic nature of schizophrenia, and the influence of biological and psychosocial factors that often require long-term multidisciplinary management before substantial clinical improvement can be achieved.

From a practical perspective, these findings suggest that drawing-based occupational therapy is a simple, safe, low-cost, and feasible non-pharmacological intervention that can be incorporated into both individual and group psychiatric nursing care. Theoretically, the findings support the concept of activity-based therapy as an effective cognitive distraction strategy for reducing auditory hallucinations and strengthening patients' adaptive coping abilities. This study has several limitations. First, it involved only a single participant using a case study design, which limits the generalizability of the findings. Second, the intervention was conducted over a relatively short period, making it difficult to evaluate the long-term effectiveness of drawing-based occupational therapy. In addition, the absence of a comparison group limits the ability to determine whether the observed improvements were solely attributable to the intervention.

Future studies are recommended to employ quasi-experimental or randomized controlled trial designs with larger sample sizes and longer intervention periods. Comparative studies evaluating drawing-based occupational therapy alongside other non-pharmacological interventions are also needed to generate stronger evidence regarding its effectiveness in reducing auditory hallucinations and to support its broader integration into routine psychiatric nursing practice.

Conclusion

The application of drawing-based occupational therapy for clients with sensory perception disorders, specifically auditory hallucinations, has shown positive results in reducing the frequency and severity of hallucinations. This is evidenced by a decrease in Auditory Hallucination Rating Scale (AHRS) scores following the intervention, as well as an improvement in the clients' ability to focus their attention on real-world activities. Drawing-based occupational therapy can serve as an effective, safe, and easily implementable non-pharmacological intervention in psychiatric nursing practice to help clients manage auditory hallucinations and support the recovery process.

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