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Combined Progressive Muscle Relaxation and Mindfulness in Patients with Schizophrenia Experiencing Auditory Hallucinations: A Two-Case Study

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ABSTRACT
Auditory hallucinations in schizophrenia remain a challenge in psychiatric nursing, highlighting the need for complementary interventions that support symptom management and patients' ability to cope with distressing experiences. However, evidence describing the implementation and patient-level responses to combined progressive muscle relaxation (PMR) and mindfulness remains limited. This study aimed to describe the implementation of a combined PMR and mindfulness intervention and the changes in reported hallucinations, observable behaviors, emotional responses, participation, and intervention performance among patients with schizophrenia. A descriptive case study was conducted with two purposively selected male inpatients experiencing active auditory hallucinations in the Sawit Ward of Rumah Sakit Khusus Daerah (RSKD) Dadi, South Sulawesi, Indonesia. Each patient received one 15–20-minute session daily for five consecutive days, with PMR followed by mindfulness. Data were collected through interviews, structured observations, medical record reviews, and information from ward nurses and analyzed descriptively. Both patients reported feeling calmer and experiencing fewer auditory hallucinations. Patient H reported that the voices were less frequent and easier to ignore and performed the intervention independently by Day 5. Patient R also reported improvement but continued to require guidance and intermittently displayed behaviors associated with responding to internal stimuli. The study's contribution is a detailed, patient-level account integrating subjective experiences, observable behaviors, and self-management performance. These preliminary findings support considering the combined intervention as a complement to individualized nursing care, while larger comparative studies with validated measures and longer follow-up are needed to establish its effects.

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1. Introduction

Schizophrenia is a complex mental health condition associated with disturbances in perception, thoughts, emotions, and behavior. Among its positive symptoms, auditory hallucinations are particularly relevant to psychiatric nursing because they can affect patients' emotional responses, behavioral regulation, and their interactions with others. These experiences involve hearing voices or sounds without an identifiable external

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stimulus and may be accompanied by fear, anxiety, self-directed speech, and difficulty in maintaining attention during communication (Erlanti & Suerni, 2024; Puspitasari & Astuti, 2024). In clinical settings, auditory hallucinations require attention not only as symptoms of psychiatric disorders but also as experiences that may influence patients' daily functioning and engagement with care. Indonesian health data and reports from clinical practice further indicate the continuing relevance of schizophrenia and hallucination management in mental health services (Kementerian Kesehatan Republik Indonesia, 2023; Pratiwi et al., 2024a). These concerns highlight the importance of nursing interventions that address patients' immediate experiences while supporting their ability to respond to hallucination.

Pharmacological treatment remains an important component of schizophrenia care, but nursing practice also incorporates non-pharmacological strategies intended to help patients manage distress and respond to their symptoms. These strategies include structured therapeutic communication, hallucination management techniques, and interventions that support emotional regulation. Studies in the supplied literature have examined approaches such as music therapy and nursing strategies for managing auditory hallucinations, illustrating the range of interventions applied in practice (Erlanti & Suerni, 2024; Meylisa et al., 2025; Puspitasari & Astuti, 2024). Mindfulness has also received attention as an approach that encourages awareness of present-moment experiences and less reactive responses to thoughts, feelings, and bodily sensations. In schizophrenia care, mindfulness-based interventions have been investigated in relation to emotional control and patients' experiences of well-being (Dwidiyanti et al., 2023; Hodann-Caudevilla et al., 2020; Pratiwi et al., 2024a). This study provides a rationale for examining interventions that may complement routine nursing care while also requiring careful consideration of the outcomes that existing evidence can support.

Despite this growing interest, managing auditory hallucinations remains challenging. Patients may differ in the content and perceived intensity of voices, their ability to sustain attention, their willingness to participate in care, and the extent to which they can apply coping strategies independently. Observable behaviors, such as talking to oneself or appearing to listen to an internal stimulus, may persist even when patients report changes in their subjective experience. Consequently, an assessment based on a single symptom or observation may not adequately represent a patient's response to an intervention. Previous nursing studies have addressed auditory hallucinations through different approaches, including music therapy and structured hallucination-management strategies (Erlanti & Suerni, 2024; Meylisa et al., 2025; Puspitasari & Astuti, 2024). However, findings from individual interventions do not, by themselves, establish how a combined approach may be implemented or how patients with different baseline characteristics may respond over a short period of care.

Mindfulness and progressive muscle relaxation offer complementary but distinct

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intervention components. Mindfulness directs attention toward present-moment experiences and encourages individuals to notice their thoughts and emotions without immediately reacting to them. In contrast, progressive muscle relaxation involves systematically tensing and releasing muscle groups to promote awareness of physical tension and relaxation. Research on mindfulness-based interventions in schizophrenia has examined their potential relevance to psychological functioning, while reviews have identified questions that remain unresolved in applying mindfulness to psychosis (Hodann-Caudevilla et al., 2020; Ellett, 2024). Evidence concerning PMR has considered its use in schizophrenia and its effects on outcomes such as stress and anxiety in other populations (Melo-Dias et al., 2019; Khir et al., 2024; Luo et al., 2024). Together, these strands of literature provide a conceptual basis for combining attention with physical relaxation. Nevertheless, evidence concerning either component separately cannot be assumed to demonstrate the effectiveness of the combined intervention for auditory hallucinations in schizophrenia.

Previous studies provide several starting points for this approach. Hodann-Caudevilla et al. (2020) reviewed mindfulness-based interventions for individuals with schizophrenia, while Ellett (2024) discussed current evidence and unanswered questions concerning mindfulness for psychosis. Dwidiyanti et al. (2023) investigated spiritual mindfulness in relation to emotional control and activities of daily living in patients with schizophrenia. In the local clinical context, Pratiwi et al. (2024a) examined mindfulness interventions among patients at RSKD Dadi, South Sulawesi. Separately, Melo-Dias et al. (2019) reviewed the effectiveness of progressive muscle relaxation in schizophrenia, and Pratiwi et al. (2023) reported the application of PMR in relation to disturbed sensory perceptions. Research on PMR in other settings has also considered psychological and physical outcomes, including stress, anxiety, and sleep quality (Khir et al., 2024; Luo et al., 2024). These studies inform the selection of mindfulness and PMR as intervention components; however, they address different populations, outcomes, or intervention formats and should not be treated as interchangeable evidence.

Therefore, there remains a gap in the detailed description of how mindfulness and PMR can be implemented together in the nursing care of patients with schizophrenia who experience active auditory hallucinations. The supplied literature includes research on mindfulness in schizophrenia, PMR in schizophrenia, and other approaches to hallucination management; however, the available references provide limited direct evidence concerning the combined sequence of PMR followed by mindfulness and patients' responses during repeated, closely observed sessions. In particular, a descriptive account can help clarify how participation, ability to follow instructions, reported hallucination experiences, and observable behaviors may change or remain unchanged over the course of an intervention. This is important because subjective reports and behavioral observations may not follow

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identical patterns. The present study does not seek to establish causal efficacy or generalize treatment effects from a small number of cases. Rather, it addresses an applied nursing question by documenting the implementation process and the individual responses of two patients in a real inpatient setting.

Accordingly, this study aimed to describe the implementation of a combined mindfulness and PMR intervention among patients with schizophrenia experiencing auditory hallucinations at the Sawit Ward of Rumah Sakit Khusus Daerah (RSKD) Dadi, South Sulawesi, Indonesia. The intervention was delivered once daily over five consecutive days, with PMR preceding mindfulness. The study was guided by two research questions: (1) How was the combined mindfulness and PMR intervention implemented in the nursing care of patients experiencing auditory hallucinations? and (2) What changes in reported hallucination experiences, observable behaviors, emotional responses, participation, and ability to perform the intervention were documented across the five-day period? By presenting patient-level findings from repeated assessments, this study contributes a contextualized description of the feasibility and observed responses associated with the combined intervention, while recognizing the limitations inherent in a descriptive two-case design.

2. Methodology

Research Design and Setting

This study employed a descriptive case study design to document the implementation of a combined mindfulness and progressive muscle relaxation intervention in patients with schizophrenia who experienced auditory hallucinations. The descriptive case study approach was used to examine each patient's condition in depth, including the presenting symptoms, nursing care provided, participation in the intervention, and the changes observed during the study period. The case study process comprised initial assessment, identification of the principal nursing problem, intervention planning, implementation and evaluation.

The study was conducted in the Sawit Ward of Rumah Sakit Khusus Daerah (RSKD) Dadi, South Sulawesi, Indonesia, from May 11 to 15, 2026. The five-day period allowed the researchers to document the patients' responses to the intervention through repeated interviews and observations. This study focused on the application of combined mindfulness and progressive muscle relaxation as a non-pharmacological nursing intervention for auditory hallucinations.

Participants and Case Selection

Two patients with schizophrenia and active auditory hallucinations participated in this study. Participants were selected purposively according to predefined inclusion and

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exclusion criteria. Eligible patients had a medical diagnosis of schizophrenia, had experienced auditory hallucinations during the preceding week, were sufficiently calm and cooperative to follow instructions, and were willing to participate in the intervention. Patients were also required to have no physical condition that would prevent them from performing progressive muscle relaxation, such as a severe muscle injury, neuromuscular disorder, or acute pain. In addition, participants were required to be receiving stable pharmacological treatment with no medication dosage changes during the preceding one to two weeks.

Patients were excluded if they did not have active auditory hallucinations, experienced severe agitation or aggression, were unable or unwilling to participate, had physical limitations that prevented relaxation exercises, or had undergone recent changes in their pharmacological treatment. These criteria were intended to ensure that the participants could safely engage in the intervention and that their responses could be documented throughout the five-day period.

The two participants were identified as Patient R and Patient H to protect their identities. Patient R was a 42-year-old man from Bulukumba who had completed elementary education and was admitted to the hospital on May 9, 2026. Patient H was a 27-year-old man from Sinjai who had completed senior high school; his recorded admission date was March 4, 2026. Both had a medical diagnosis of schizophrenia and a nursing diagnosis of disturbed sensory perception associated with auditory hallucinations.

Data Collection and Initial Assessment

Data were obtained through direct interviews, structured observations, a review of medical records, and information provided by ward nurses. Before the initial assessment, the researchers established a therapeutic relationship with each patient to facilitate communication and participation in the study. The interviews explored the content, frequency, timing, and circumstances of auditory hallucinations, as well as patients' responses when the voices occurred. The researchers also documented patients' accounts of their experiences and perceived ability to manage hallucinations.

Direct observations were conducted before, during, and after the intervention sessions. The observed indicators included talking to oneself, appearing to listen to sounds without an identifiable external source, turning toward an apparent sound source, covering the ears, restlessness, anxiety, social withdrawal, changes in facial affect, and intense eye contact. The researchers also observed patients' attention, cooperation, ability to follow instructions, and performance of the intervention steps. An observation sheet with “yes” or “no” response options was used to record the presence or absence of the specified behavioral indicators.

Medical records and information from ward nurses were consulted to obtain relevant clinical history, current treatment, medication information, and documented changes in the

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patients' conditions. The initial assessment also included physical observations and vital signs. Data from these sources were used to establish each patient's baseline condition and to inform subsequent nursing intervention and evaluation.

Intervention Procedure

Both patients received the combined intervention once daily for five consecutive days. Each session lasted approximately 15–20 min and consisted of progressive muscle relaxation followed by mindfulness. This sequence was consistent with the intervention protocol described in the source manuscript, in which progressive muscle relaxation preceded mindfulness practice (Melo-Dias et al., 2019).

In the first session, the researchers explained the purpose and procedures of the intervention, established a therapeutic relationship, and obtained informed consent. The patients were then guided through progressive muscle relaxation, which involved systematically tensing and releasing selected muscle groups. The exercises were accompanied by controlled breathing and verbal guidance to help the patients recognize the difference between muscular tension and relaxation. The procedure was adapted to each patient's ability to understand and follow the instructions.

After progressive muscle relaxation, the patients completed the mindfulness component. They were instructed to adopt a comfortable and stable sitting position and direct their attention to their breathing and present-moment bodily experiences. Patients were encouraged to notice sensations, thoughts, and emotions without immediately reacting to them, while gradually returning their attention to the breath. Positive self-talk was incorporated into the practice, including statements such as, “I am calm, I am safe, and I can control myself when these voices occur.” This component was intended to help patients focus their attention and practice responding to the experience of auditory hallucinations.

At the beginning of subsequent sessions, the researchers asked the patients about their current condition and any occurrence of auditory hallucinations. The combined exercises were then repeated, with verbal prompts or guidance provided when necessary. Throughout each session, the researchers recorded the participation, ability to follow the instructions, apparent concentration, and responses during and after the exercises. The final session included an assessment of each patient's ability to perform the intervention, including the extent to which the steps could be completed independently.

Data Processing and Analysis

Data were analyzed descriptively using a qualitative approach. Interview notes, observation records, relevant medical information, and nursing documentation were organized according to the participant and assessment period. The information was then grouped into categories relating to patient characteristics, auditory-hallucination experiences, observable behavioral indicators, emotional and physical responses,

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participation, and ability to perform the intervention.

For each patient, the researchers compared the initial assessment with observations and reports recorded over the five-day intervention period. The analysis focused on changes in the reported occurrence of auditory hallucinations, observable behaviors associated with hallucinations, perceived calmness, cooperation, and independence in performing the exercises. The findings were presented in a descriptive narrative form and compared across the two cases to identify similarities and differences in their responses.

Given the descriptive design and inclusion of only two cases, the analysis did not involve inferential statistical testing. The findings were interpreted as case-specific observations rather than estimates of treatment effects that are applicable to a wider population.

3. Results and Discussion

Case characteristics and initial assessment

This case study involved two male patients diagnosed with schizophrenia and the nursing diagnosis of disturbed sensory perception (auditory hallucinations) at the Sawit Ward of the Regional Special Hospital (RSKD) Dadi, South Sulawesi, Indonesia. The intervention and observations were conducted over five consecutive days, from May 11 to 15, 2026.

Patient R was 42 years old, from Bulukumba, and had completed elementary school. He was admitted to the hospital on May 9, 2026. Patient H was 27 years old, from Sinjai, and had completed senior high school. His recorded hospital admission date was March 4, 2026. Both patients had a medical diagnosis of schizophrenia and a nursing diagnosis of disturbed sensory perception related to auditory hallucinations.

During the initial assessment, both patients reported hearing voices without an identifiable external source. Patient R described voices containing statements about his relationships and beliefs that his wife used supernatural means against him. He was observed talking to himself, directing his ear as if listening to something, and maintaining an intense eye contact. His responses during the interview were sometimes unrelated to the questions, and his speech was disorganized. Patient H reported hearing voices referring to an angel flying through the seventh heaven and being called foolish. He occasionally talked to himself and directed his ears as if listening to voices. In contrast to Patient R, Patient H generally responded appropriately during the interview and maintained their attention.

The initial physical assessment of Patient R showed a blood pressure of 125/75 mmHg, pulse rate of 80 beats/min, respiratory rate of 20 breaths/min, temperature of 36.8 °C, and oxygen saturation of 98 %. Patient H had a blood pressure of 120/70 mmHg, pulse rate of 70 beats/min, respiratory rate of 20 breaths/min, temperature of 36.8°C, and oxygen saturation of 98%. These findings are summarized in Table 1.

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Table 1. Characteristics and initial clinical assessment of the two patients

Characteristic	Patient R	Patient H
Age	42 years	27 years
Sex	Male	Male
Origin	Bulukumba	Sinjai
Education	Elementary school	Senior high school
Medical diagnosis	Schizophrenia	Schizophrenia
Nursing diagnosis	Disturbed sensory perception: auditory hallucinations	Disturbed sensory perception: auditory hallucinations
Initial auditory-hallucination presentation	Reported voices concerning relationships and beliefs about being bewitched; talked to himself; directed his ear as if listening; intense eye contact	Reported voices referring to an angel, flying through the seventh heaven, and being called foolish; occasionally talked to himself; directed his ear as if listening
Interview and interaction	Sometimes gave irrelevant answers; speech was poorly organized	Generally answered questions appropriately and maintained attention
Blood pressure	125/75 mmHg	120/70 mmHg
Pulse rate	80 beats/min	70 beats/min
Respiratory rate	20 breaths/min	20 breaths/min
Body temperature	36.8°C	36.8°C
Oxygen saturation	98%	98%

Implementation of the combined intervention

Both patients received the combined intervention once daily for five days. Each session involved progressive muscle relaxation, followed by mindfulness. During progressive muscle relaxation, the patients were guided to tense and release their muscle groups. The mindfulness component involved directing attention to breathing and the present-moment experience. Patients were also encouraged to use positive self-talk, including statements such as "I am calm, I am safe, and I can control myself when these voices occur."

The first session included an explanation of the intervention, establishment of a therapeutic relationship, and obtaining informed consent. In subsequent sessions, the patients were asked about their condition and the occurrence of auditory hallucinations before repeating the exercises. The researcher observed their participation, ability to follow instructions, and their responses during and after each session. The final session included an assessment of their ability to perform combined exercises.

Patient responses during the five-day intervention

On Day 1, both patients continued to report auditory hallucinations. Patient R was less cooperative when answering questions but could follow the intervention instructions.

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Patient H was cooperative during the interview and followed the instructions provided.

On Day 2, both patients participated in the intervention. Patient R began to provide more relevant answers, showed greater focus during mindfulness practice, and followed verbal instructions. Patient H reported that the voices had begun to decrease and that she was able to repeat the combined exercises independently.

On Day 3, Patient H was able to perform mindfulness and some progressive muscle relaxation movements independently when the voices occurred, although he had not yet completed all the steps without guidance. Patient R continued to talk to himself and occasionally appeared to respond to the internal stimuli. His intense eye contact persisted, but he began to follow the combined exercises with guidance from the instructor.

On Day 4, Patient H performed progressive muscle relaxation exercises followed by mindfulness using breathing-focused self-talk. Although he still displayed signs of anxiety and restlessness, he reported being able to calm himself during the exercises. Patient R continued to require instructions for the progressive muscle relaxation movements. He reported feeling calmer and that the voices had begun to decrease, although changes in his observed behavior were inconsistent.

On Day 5, Patient H was able to perform all stages of the combined intervention independently and with less continuous prompting. He reported that the voices occurred less frequently and were easier to ignore. Patient R remained cooperative and actively participated but still needed guidance with some steps of both interventions. He reported feeling calmer and experiencing fewer voices. However, he occasionally continued to talk to himself, and intense eye contact was still observed, although it was described as less pronounced than at baseline.

The patient-specific changes over the five days are presented in Table 2.

Table 2. Summary of patient responses to the combined mindfulness and progressive muscle relaxation intervention

Outcome	Patient R	Patient H
Reported auditory hallucinations	Reported that the voices had decreased, but they still occurred occasionally	Reported that the voices occurred less frequently and were easier to ignore
Observable behavior	Talking to himself and intense eye contact persisted intermittently; both were reported to have decreased	Initially displayed occasional self-talk and listening behavior; by the final assessment, he no longer directed his ear toward an apparent sound source
Emotional and physical response	Reported feeling calmer and more relaxed	Appeared calmer and more relaxed; reported reduced anxiety and greater physical comfort

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Outcome	Patient R	Patient H
Participation	Progressed from less cooperative responses at baseline to active participation; continued to require guidance	Cooperative and able to repeat the exercises, with increasing independence
Ability to perform the intervention	Continued to need guidance for some mindfulness and progressive muscle relaxation steps	Performed all stages independently by Day 5
Status at the end of the intervention	Partial improvement was documented, but behavioral changes were not consistent and independent performance remained incomplete	Improvement in reported symptoms and independent performance of the intervention were documented

Summary of findings

Five days after the combined intervention, both patients reported feeling calmer and experiencing a reduction in auditory hallucinations. Their observed responses and ability to perform the exercises differed. Patient H reported that the voices occurred less frequently and were easier to ignore, and he was able to complete the intervention independently by Day 5. Patient R also reported reduced auditory hallucinations and greater calmness, but continued to require guidance during some stages of the intervention. Occasional self-talk and intense eye contact remained evident at the final assessment.

Discussion

This case study provides a preliminary account of the implementation of a combined mindfulness and progressive muscle relaxation (PMR) intervention in the nursing care of two patients with schizophrenia who experienced auditory hallucinations. Following five consecutive daily sessions, both patients reported that their voices had diminished and that they felt calmer. However, their responses were not uniform. Patient H described the voices as less frequent and easier to ignore and achieved independent performance of the intervention by Day 5, whereas Patient R continued to require guidance and displayed intermittent behaviors associated with hallucinations. These findings address the study objectives by documenting both the practical implementation of the combined intervention and the distinct ways in which the patients responded to it. Their principal significance lies not in demonstrating that the intervention is effective, but in illustrating how perceived symptom change, observable behavior, and the development of self-management skills may evolve differently during a brief period of nursing care.

The reported reduction in auditory hallucinations is consistent with the rationale for incorporating mindfulness into care for people with schizophrenia. Mindfulness encourages

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individuals to attend to present-moment experiences, including thoughts, emotions, and bodily sensations, without responding automatically to them. In the present study, patients were guided to focus on their breathing and bodily experiences after completing PMR, while positive self-talk reinforced the intention to remain calm when voices occurred. This approach may have supported a change in how patients responded to hallucinations, even when the voices did not disappear. Patient H's report that the voices were easier to ignore is particularly relevant: it suggests a possible shift in the perceived manageability of the experience, rather than complete symptom resolution. This interpretation is compatible with the broader focus of mindfulness-based approaches on awareness and response to internal experiences. Nevertheless, the study did not directly measure changes in acceptance, attentional control, or the perceived meaning of voices; these mechanisms should therefore be regarded as plausible interpretations rather than demonstrated explanations.

The findings also correspond with the literature on mindfulness in schizophrenia. Hodann-Caudevilla et al. (2020) reviewed mindfulness-based interventions for individuals with schizophrenia, while Ellett (2024) discussed the evidence and unresolved questions concerning mindfulness for psychosis. These studies provide a relevant foundation for considering mindfulness as a potential component of care, but they also underscore the need to interpret findings in light of differences in intervention design and clinical outcomes. The present study adds a practice-based account from an inpatient psychiatric setting in South Sulawesi, where mindfulness was delivered as part of a short, structured nursing intervention rather than being examined as a stand-alone program. These observations are also broadly relevant to Dwidiyanti et al. (2023), who investigated spiritual mindfulness in relation to emotional control and activities of daily living among patients with schizophrenia. However, the interventions and outcomes were not identical. The current findings concern patients' reports of hallucinations, observable behavior, emotional responses, and ability to perform the exercises; they should not be interpreted as direct confirmation of the effects on the broader functional outcomes examined in other studies.

The contribution of PMR is best understood in relation to the physical and emotional dimensions of the intervention. PMR involves systematically tensing and releasing muscle groups, directing attention to bodily sensations, and the contrast between tension and relaxation. In this study, PMR preceded mindfulness, and both patients reported greater calmness or relaxation during the intervention period. This sequence may have provided a structured transition from physical relaxation to focused attention, potentially making it easier for patients to engage with the subsequent mindfulness exercise. This interpretation is consistent with the distinct but complementary aims of the two components: PMR focuses on bodily tension, whereas mindfulness directs attention toward present-moment experience. However, because the study did not compare different sequences or include

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separate PMR-only and mindfulness-only conditions, it cannot establish whether the sequence itself contributed to the reported changes or whether combining the components provided benefits beyond either intervention alone.

The literature on PMR offers relevant but indirect support for this interpretation. Melo-Dias et al. (2019) examined the effectiveness of PMR in schizophrenia, making their review particularly pertinent to the clinical population in the present study. Khir et al. (2024) considered PMR in relation to stress, anxiety, and depression among adults, while Luo et al. (2024) examined anxiety and sleep quality among healthcare practitioners in a mobile cabin hospital. These studies address outcomes and populations that differ from those reported in the two cases. Therefore, they provide a rationale for considering PMR as a relaxation strategy, but do not establish that PMR reduces auditory hallucinations or that its combination with mindfulness produces a specific therapeutic effect. The current study extends the applied nursing literature by documenting the use of both components in a defined sequence and by recording patients' responses during repeated sessions. Consequently, its contribution is descriptive and contextual rather than confirmatory.

An important finding is the difference between the trajectories of the two patients. Patient H entered the intervention with the ability to maintain attention and respond appropriately during the interview. Across the five days, he increasingly performed the exercises with less guidance and ultimately completed all stages independently. Patient R, by contrast, initially gave irrelevant answers and displayed less organized speech. Although he became more cooperative and reported reduced hallucinations and greater calmness, he continued to need prompts and occasionally talked to himself or maintained intense eye contact. These differences suggest that participation in a structured intervention and the ability to perform it independently may depend on the patient's clinical presentation and capacity to sustain attention. They also illustrate why a uniform expectation of response is inappropriate. The case material does not allow the differences to be attributed to age, educational attainment, illness severity, or any other single characteristic. Rather, the contrasting trajectories demonstrate the value of individualized assessment and flexible guidance when delivering nursing interventions to patients experiencing active hallucinations.

The divergence between patients' subjective reports and observable behaviors is clinically important. Both patients described improvement; however, some behaviors associated with hallucinations persisted, particularly for Patient R. This does not necessarily invalidate the patients' accounts. Subjective experience and observable behavior capture different aspects of the clinical situation; a patient may feel less distressed or more able to disregard voices while still displaying behaviors that an observer associates with responding to internal stimuli. Conversely, a reduction in a particular behavior does not by itself establish that hallucinations have ceased. The present findings therefore support a

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multidimensional approach to evaluation that combines patient interviews with structured observation. This is consistent with the study's use of repeated interviews, behavioral indicators, and assessments of participation. It also highlights the importance of describing precisely what has changed, rather than treating a general impression of improvement as evidence that all aspects of the symptom have resolved.

The observed increase in participation and independent performance may represent a practically meaningful outcome in its own right. By the final session, Patient H could complete the combined exercises without continuous prompting, suggesting that the intervention was learnable for this patient within the five-day period. However, Patient R's continued need for assistance indicates that the same level of independence was not achieved in both cases. From a nursing perspective, this distinction matters because the potential value of a coping strategy depends not only on whether a patient can perform it during a guided session, but also on whether the patient can recall and use it when needed. The present study documented the performance during the intervention period but did not establish whether either patient continued using the exercises independently after discharge or whether the skills were maintained over time. Accordingly, the findings support the feasibility of teaching the intervention under guided conditions, while leaving its durability and use in everyday situations unresolved.

In practical terms, the findings suggest that a brief, structured combination of PMR and mindfulness may be considered an adjunct to individualized nursing care for selected patients who are sufficiently calm and able to follow instructions. The intervention was delivered in sessions lasting approximately 15–20 min, once daily over five consecutive days, and incorporated therapeutic communication, verbal guidance, and adaptation to patients' abilities. These features are relevant to clinical implementation because they position the exercises within an ongoing care relationship rather than as isolated techniques. Simultaneously, this study does not justify replacing pharmacological treatment or established nursing care with the combined intervention. Both patients continued to receive routine treatment, and the study did not isolate the contribution of the intervention from medication, other nursing activities, therapeutic relationships, or changes occurring naturally during hospitalization. Therefore, the results should be interpreted as observations made during combined care, not as evidence of an independent treatment effect.

Several methodological considerations further define the contributions of this study. The descriptive two-case design enabled close attention to individual responses across repeated assessments, but the small purposively selected sample limits its transferability. The participants were both male, were treated in one inpatient ward, and were selected based on their ability to participate safely and follow instructions. Therefore, the findings may not represent patients with severe agitation, substantial communication difficulties, or

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physical conditions that prevent PMR. In addition, symptom changes were documented descriptively rather than through standardized numerical measures, and no inferential analysis was performed. Although interviews and observations provided complementary perspectives, behavioral indicators were recorded using yes-or-no options, which may not fully capture changes in frequency, intensity, or context. The five-day observation period also precluded conclusions regarding sustained symptom management or relapse. These limitations reinforce the need to avoid causal claims and highlight the value of future studies using larger and more diverse samples, clearly defined symptom measures, longer follow-ups, and designs that can distinguish the effects of PMR, mindfulness, and their combination.

Overall, this study contributes a contextualized account of implementing PMR followed by mindfulness in the nursing care of two inpatients with schizophrenia and auditory hallucinations. The distinctive contribution is the joint documentation of reported hallucination experiences, observable behavior, emotional responses, participation, and independent performance over five consecutive days. The findings indicate that patients may report greater calmness and reduced hallucinations while differing in behavioral change and their ability to perform the intervention without assistance. This pattern supports individualized, multidimensional evaluation and provides a basis for further investigation of the combined approach. The results are best understood as preliminary evidence of its practical application and patient-specific responses, rather than proof of efficacy. Future research should examine whether these observations can be replicated, whether the sequence of PMR followed by mindfulness offers advantages over either component alone, and whether any improvements persist beyond the immediate intervention period.

4. Conclusion

This study describes the implementation of a combined progressive muscle relaxation (PMR) and mindfulness intervention in the nursing care of two patients with schizophrenia experiencing auditory hallucinations. Following five consecutive daily sessions, both patients reported feeling calmer and experiencing a reduction in auditory hallucinations. However, their responses differed in terms of observable behavior, participation, and independent performance of the intervention. Patient H reported that the voices occurred less frequently and were easier to ignore, and he was able to perform all stages of the intervention independently by Day 5. Patient R also reported reduced hallucinations and greater calmness, but continued to require guidance and occasionally exhibited behaviors associated with responding to internal stimuli. These findings demonstrate the value of examining subjective experiences alongside behavioral observations when evaluating patients' responses to nursing interventions. Overall, the study provides a contextualized account of the practical implementation of PMR followed by

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mindfulness and the individual responses observed during a brief period of inpatient care. The findings should be interpreted as preliminary descriptive observations rather than evidence of causal efficacy.

Several limitations should be considered when interpreting the findings of this study. The study involved only two purposively selected male patients in a single inpatient ward, used descriptive assessments without standardized numerical measures of symptom change, and covered a five-day period without follow-up. Consequently, the findings cannot be generalized to a wider population of patients with schizophrenia or establish the independent effects of either intervention component. Future research should involve larger and more diverse samples, use validated measures of auditory hallucinations and related outcomes, and include longer follow-ups to examine whether the observed changes are sustained. Comparative designs examining PMR alone, mindfulness alone, and their combination are also needed to clarify the contribution of each component and sequence of delivery. Despite these limitations, this study contributes a practice-based description of a structured, brief intervention that can be adapted to patients' individual abilities and delivered alongside routine nursing care in the future. The findings highlight the importance of individualized guidance and multidimensional assessment, while providing a foundation for more rigorous investigations of combined PMR and mindfulness as a complementary approach to support patients who experience auditory hallucinations.

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