







Implementation of hallucination strategies - A case study on adolescent with hearing hallucinations

Rosalia Firdaus^{1*} 
Taty Hernawaty¹ 
Suryani Suryani¹ 
Kondwani Joseph Banda² 

¹ Faculty of Nursing, Universitas Padjadjaran, Bandung, Indonesia

² Endoscopy Unit, Surgery Department, Kamuzu Central Hospital, Lilongwe, Malawi

***Correspondence:**

Rosalia Firdaus
Faculty of Nursing, Universitas Padjadjaran Bandung 43351, Indonesia,
Email: rosyelia2316@gmail.com

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ABSTRACT

Background: Schizophrenia stands out as a prominent type of psychosis among various mental disorders. Auditory hallucinations, a prevailing symptom, particularly affect patients with primary psychotic disorders, showcasing a lifetime prevalence rate of 60-80% within the spectrum of schizophrenia disorders.

Objective: This case study presents data and insights concerning the management of nursing challenges linked to auditory hallucinations.

Case: A 17-year-old male was admitted to the psychiatric hospital after being involved in a violent incident with his family. He contended that he was compelled by an external entity to carry out this act. When in his room, the patient exhibits pronounced hallucinatory behavior, including tangential thinking, inability to concentrate during conversations, physically covering his ears in fear, and restless pacing, occasionally attempting to conceal himself under the bed. The nurse employs intervention strategies to address the client's hallucinations, incorporating methods to gain control over them. These strategies involve encouraging breaks, fostering engagement in positive activities, closely monitoring the patient, and providing education on consistent medication adherence.

Conclusions: After a nine-day period of effectively managing the hallucinations, the patient gains substantial control over them, thereby leading to the resolution of his hallucinatory issues. This research holds potential as a valuable resource for psychiatric nurses in devising interventions within psychiatric hospital settings. Furthermore, it can serve as a foundational component for the evaluation of psychiatric facilities in their provision of effective interventions for patients with psychiatric conditions.

Keywords: hallucinations; implementation strategy; schizophrenia; case study; nurse

INTRODUCTION

Schizophrenia is a complex mental disorder marked by hallucinations, delusions, and impaired cognitive functions (Zhuo et al., 2021). For over 60 years, researchers have striven to develop biological tests to diagnose schizophrenia, aiming

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- *This research can be used as a reference for interventions by psychiatric nurses in psychiatric hospitals.*
- *Nurses can further examine the patient's mental health problems from the parenting style provided, then determine the appropriate intervention.*
- *It is recommended that this research be given to the Psychiatric Hospital in order to be able to apply an implementation strategy in an orderly and structured manner.*

to enhance diagnostic rates and optimize treatment strategies. As a result, the diagnosis of schizophrenia is primarily based on the criteria outlined in the most recent version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). The DSM encompasses symptoms such as delusions, hallucinations, disorganized speech, catatonic behavior, and negative symptoms. Additionally, the DSM mandates criteria such as social or occupational dysfunction, persistent signs, and symptoms that endure for a minimum of six months. Notably, the DSM excludes certain criteria like medical conditions, mood disorders, developmental disorders (such as autism), and substance use (Kapur, 2011).

Schizophrenia stands out as a significant form of psychosis among mental disorders (Gupta et al., 2015), with an incidence rate of 1 per 1,000 and an average relapse rate of approximately 80% across cases. Initial investigations led by Siddiqui et al. examined 127 patients diagnosed with hebephrenic schizophrenia, comprising 60 existing cases and 67 new cases. Among these, 35 (52%) were male and 32 (48%) were female (Siddiqui & Khalid, 2019). Both internal and external factors contribute to these cases, where internal factors encompass variables such as age, gender, education, occupation, economic status, onset, and schizophrenia subtype (Dassa et al., 2010; Siddiqui & Khalid, 2019). Concurrently, external factors encompass family awareness, the family's and healthcare workers' roles,

environmental factors, medication adherence, and treatment modality (Dassa et al., 2010; Ferliana et al., 2020). Furthermore, substantial life stress is often implicated as a prominent trigger for schizophrenia (Kemenkes et al., 2019). Individuals affected by mental disorders frequently undergo prolonged stress, leading to persistent anxiety and eventual failure in various life domains. These conditions arise when individuals fail to employ their inner coping mechanisms to alleviate the internal stressors (Mahmuda et al., 2018).

Based on data from the World Health Organization (WHO) in 2016, approximately 21 million individuals are affected by schizophrenia (Maulana et al., 2019). According to the National Alliance on Mental Illness (NAMI), utilizing the 2013 United States population census data, it is estimated that over 61.5 million individuals aged 18 and above grapple with mental disorders, with approximately 13.6 million of them experiencing severe conditions like schizophrenia (Duckworth & Halpern, 2014). Meanwhile, as per the 2018 Riskesdas data, the prevalence of schizophrenia in Indonesia has reached approximately 400,000 individuals, which equates to around 1.7 cases per 1,000 in the population (Depkes. RI, 2018). These interventions targeting hallucination control aim to facilitate the efforts of psychiatric nurses, particularly in Indonesia, to provide effective care. These interventions encompass distinct strategies, including aiding patients in recognizing their hallucinations, practicing control over auditory experiences through reprimanding, engaging in conversations with others, participating in positive activities, and emphasizing the significance of medication adherence. The patient's secondary and tertiary diagnoses stemming from auditory hallucinations involve the risks of suicide and violent behavior.

Auditory hallucinations entail perceiving sounds without any external source, wherein individuals believe the voices they hear emanate from within themselves (Del Barrio, 2016). Hallucinations are present in nearly 10% of the general population throughout their lifetimes (Lim et al., 2016), affecting even those without clinical conditions. Individuals with various clinical conditions, such as mood disorders, dissociative disorders, neurological disorders, and hearing impairments, may also experience hallucinatory phenomena (Larøi et al., 2012). Among patients with primary psychotic disorders, auditory hallucinations

are most prevalent, with a lifetime occurrence rate of 60-80% within the spectrum of schizophrenia-related disorders (Lim et al., 2016). Moreover, the prevalence rate over the past year indicates that men are predominantly affected, accounting for approximately 50-70% of schizophrenia cases. Auditory hallucinations stand as a chief positive symptom of schizophrenia (Del Barrio, 2016), and they can significantly impact mental well-being, leading to increased depressive symptoms (Chiang et al., 2018) and even fostering suicidal thoughts or attempts (Smith et al., 2021). Thus, this case study aimed to present data and insights concerning the management of nursing challenges linked to auditory hallucinations.

CASE PRESENTATION

A 17-year-old male diagnosed with hebephrenic schizophrenia was interviewed as part of the study. During the initial interview on the first day, the patient expressed persistent feelings of profound sadness that seemed unshakeable. The patient shared a story about a sheep that had died due to a sheep fighting competition, leading to feelings of frustration as the sheep had an estimated value of 20 million rupiahs. This was the first time the patient had experienced failure, as they had previously consistently won competitions involving sheep races, a washing machine, and cash prizes. Subsequent to the incident with the deceased sheep, the patient faced reprimands from both their father and grandfather. In response to this scolding, the patient reacted with physical aggression towards their grandfather, beating him. The patient clarified that this violent act was not arbitrary; they explained that it felt as if they were prompted by an auditory hallucination to assault their grandfather. Additionally, the patient reported hearing ambulance sirens for approximately 1 minute, 2-3 times a day.

Before being admitted to the Mental Hospital, the patient revealed that the auditory hallucinations continuously urged them to engage in fights with others and even instructed them to take their own life. Consequently, the patient frequently attempted to choke themselves and harm themselves physically. Upon admission to the Mental Hospital, the patient exhibited a tantrum and suddenly exhibited a lack of recognition towards their parents. They expressed not knowing who their parents were. This response stemmed from the patient's lack of familiarity with receiving

affection and care from both parents. The diagnosis for the patient was formulated based on the aforementioned case study, indicating hebephrenic hallucinations.

Following a comprehensive assessment, the patient exhibited symptoms consistent with perceptual disorders. These symptoms encompassed auditory hallucinations, often associated with mental illnesses, a susceptibility to suicide linked to social factors, and instances of violent behavior stemming from difficulty managing intense anger impulses. Employing a standardized nursing care plan, this study aimed to address the identified challenges, with a primary focus on managing auditory hallucinations.

The interventions employed aimed to guide the patient in recognizing their hallucinations, acquiring coping mechanisms to manage auditory challenges, enhancing communication with others, participating in positive activities, and understanding the critical importance of consistent medication usage. Ensuring the safety of a patient at risk of suicide involved identifying potential harm, implementing appropriate precautions, maintaining vigilant supervision, conducting periodic checks at intervals of 15 minutes and 1 hour, empathetically assessing the patient's emotions to gauge suicidal tendencies, promoting effective coping strategies, and inspiring the patient to strive for future achievements.

Regarding violent behavior, the patient received instruction on recognizing indicators of anger and its triggers. Coping strategies such as deep breathing, singing, chanting, and engaging in social interactions were encouraged to effectively manage anger. The patient was also advised to employ the three communication approaches—asking, refusing, and expressing—in verbal interactions. Additionally, spiritual practices such as prayer and meditation were integrated, emphasizing the importance of adhering to prescribed medication.

After implementing nursing interventions over a span of nine days, positive outcomes were achieved. The auditory hallucinations were successfully resolved, and effective measures were taken to address and alleviate the risk of suicide. However, it's important to acknowledge that the issue of violent behavior wasn't entirely resolved, as the patient persisted in engaging in physical altercations with friends.

The patient and their parents willingly signed and approved the informed consent

form provided by the researcher, signifying the patient's voluntary agreement to participate in the study. The results of the interventions implemented over the 9-day study period are detailed in Table 1.

DISCUSSION

In the study mentioned above, patients exhibited a range of symptoms that culminated in the diagnosis of perceptual disorders, specifically auditory hallucinations associated with psychotic disorders. The medical record specified the patient's diagnosis as hebephrenic schizophrenia. Nursing diagnoses were identified as auditory hallucinations, the risk of suicide, and violent behavior. Notably, the progression from suicidal and violent tendencies traces back to the patient's auditory hallucinations. This classification aligns with the 2017 Indonesian Nursing Diagnosis Standards, Edition 1, where primary indicators in individuals experiencing hallucinations involve perceiving whispers or voices as if they are audible sounds. In this particular case study, the patient conveyed feelings of persistent irritation, daydreaming, social withdrawal, restlessness, and disorientation to time, place, person, and situation.

Auditory hallucinations constitute a principal symptom of schizophrenia and hold significant clinical relevance as a distinctive hallmark of psychosis, severely affecting patients' lives. Individuals undergoing auditory hallucinations might engage in repetitive conversations with the voices they hear, contributing to cognitive disarray and a distorted perception of reality. The nature of the content within auditory hallucinations can greatly vary among patients. Another crucial clinical aspect of auditory hallucinations involves their capacity to capture the individual's attention, diverting focus inward towards the inner voice rather than the external environment.

The patient's violent behavior is a manifestation closely intertwined with the auditory hallucinations experienced by the client. These hallucinations often manifest as distinct voices, which can be either loud or buzzing, but frequently appear in the form of coherent, well-structured sentences. These sentences usually pertain to the patient's own condition. Consequently, patients may respond to these hallucinatory voices through actions like fighting or verbal engagement (Rabba et al., 2014). Furthermore, patients might exhibit

behaviors such as appearing as though they are hearing something, speaking aloud as if responding to an inquiry, or moving their lips. At times, patients may attribute these hallucinations to external sources, perceiving them as originating from others or outside their own body. These auditory experiences can range from being pleasant to unsettling (Rabba et al., 2014).

Interventions are implemented to aid patients in several ways. This includes helping them recognize their hallucinatory experiences, imparting skills for managing auditory challenges, enhancing communication with others, promoting engagement in positive activities, and emphasizing the importance of adhering to prescribed medications (Larøi et al., 2012). When addressing hallucinations that may incite suicidal tendencies, interventions encompass efforts to minimize potential harm. These interventions involve preemptive steps to ensure the patient's safety through constant supervision, regular checks at intervals of 15 minutes and 1 hour, validating the patient's feelings to assess for recurring suicidal thoughts, promoting the adoption of effective coping strategies, and motivating the patient to strive for accomplishments in the future (Koyanagi et al., 2015).

Hallucinations directing patients towards violent actions are countered with interventions like deep breathing exercises and an exploration of the origins, signs, and symptoms of violent behavior. Practicing activities during moments of anger, such as taking breaks, sitting, standing, singing, and engaging in verbal interactions using the approaches of asking, refusing, and expressing, are recommended strategies. Spiritual practices like prayer and meditation are also integrated, underscoring the importance of consistent medication adherence (Ferliana et al., 2020; Stępnicki et al., 2018). In this case study, the root factors influencing the patient's condition stem from familial circumstances. The patient has primarily lived with their grandfather since a young age, receiving care solely from this family member. Notably, despite having a complete family, the patient lacks the emotional nurturing typically provided by parents.

During an interview with the patient's parents in December 2022, they acknowledged their lack of knowledge in effective parenting practices, leading to a lack of supervision over their child's social interactions. This absence of monitoring from both parents and grandparents

Table 1. Description of Assessment, Intervention and Outcomes

Day/Date	Assessment	Intervention	Outcome
Tuesday / November 29, 2022	<p>During the first assessment day, the patient looked unfocused and alone, pacing back and forth and suffocating. When examined, the patient felt the most profound sadness because the patient felt guilty for his grandfather.</p>	<ul style="list-style-type: none"> • Provide an implementation strategy (SP 1 Hallucinations) related to rebuking employing istighfar. • Provide an implementation strategy (SP1) for the risk of suicide related to monitoring the patient for 15 minutes and 1 hour periodically to avoid unwanted things 	<p>Can be used to manage hallucinations. This intervention is offered to patients with the hope that patients can control their hallucination. The patient is not at risk for suicide.</p>
Wednesday / November 30, 2022	<p>On the second day, the patient was seen crying suddenly and trying to strangle himself again. When questioned, the patient felt sad and sorry for his actions, which often beat his grandfather. When asked why the patient was choking himself, he replied that someone ordered him to do so.</p>	<ul style="list-style-type: none"> • Continuing the second implementation strategy regarding hallucinations by way of conversation. • The strategy for implementing suicide risk is carried out by SP 1, monitoring the patient regularly, and SP 2, validating the client's feelings. 	<p>Patients can rebuke hallucinations by validating sounds heard with other friends, whether the sounds they hear are heard with other friends or not. Continue monitoring patients by keeping sharp objects away, telling roommates to care for each other, and monitoring on Closed Circuit Television (CCTV). Then validate the patient's feelings, whether there is a desire or hear voices that are heard, to order him to commit acts of self-harm.</p>
Thursday / December 1, 2022	<p>Patients often fall asleep, and patients feel tired throughout the day.</p>	<p>Provide SP 3 regarding carrying out positive activities that can be carried out in a mental hospital.</p>	<p>During lunch, patients can do positive things by watching YouTube and playing with friends.</p>
Friday / December 2, 2022	<p>The patient appears cooperative and can be spoken to generally so that the patient can participate in group activity therapy together.</p>	<ul style="list-style-type: none"> • Providing interventions related to group activity therapy, continuing SP 1 and SP 3 • Give SP 4 related to taking medicine. 	<ul style="list-style-type: none"> • The patient can do group activity therapy by telling the things he likes and discussing the problems felt by his friends. • Patients receive information about treatment that must be undertaken after discharge and while in a mental hospital.

Table 1. Description of Assessment, Intervention and Outcomes (Continued...)

Day/Date	Assessment	Intervention	Outcome
Saturday / December 3, 2022	<p>The patient suddenly beat his roommate; after being asked, the patient felt annoyed because he heard someone say that the patient was crazy.</p> <ul style="list-style-type: none"> • The patient is still annoyed because the sound he heard yesterday is still ringing in his ears, so the intervention is continued to reduce the patient's violent behavior. 	<ul style="list-style-type: none"> • Provide an implementation strategy (SP Give SP 1 regarding hallucinations to rebuke the voices heard by making istighfar. • Provide SP 1, namely identifying the patient's violent behavior and performing deep breathing techniques. 	<p>When seen and observed, it turns out that the voices heard by the patient are from their hallucinations, so the patient is given an implementation strategy related to rebuking the hallucinations and can perform deep breathing techniques to reduce the patient's anger.</p>
Sunday / December 4, 2022	<ul style="list-style-type: none"> • The patient suddenly spoke chaotically, could not focus when asked to communicate, covered his ears and felt scared, and paced back and forth to hide under the bed. • The patient was seen beating other patients and kicking chairs and tables upside down when in a state of anger, the patient covered his ears and said, "Stop." Patients must be restrained in order to prevent other unwanted things. 	<ul style="list-style-type: none"> • Give SP 1 regarding hallucinations to rebuke by doing istighfar. • Give SP 2 related to the patient's violent behavior by intervening when the patient is angry; the patient can stand, sit, sing, and pray. 	<p>The patient can make istighfar when a sound comes, and the patient can fight his anger by diverting it, such as sitting, standing, singing, and making istighfar.</p>
Monday / December 5, 2022	<ul style="list-style-type: none"> • The patient looks silent, and his eyes look empty. After being asked what he was doing yesterday, the patient answered, "Forget." Then the patient is explained how to reduce anger. 	<ul style="list-style-type: none"> • Gives SP 1 hallucinations, related to responding to hallucinations by doing istighfar. • Provide SP 3 regarding violent behavior by expressing what the patient feels and restraining the patient. 	<p>The patient can istighfar and can express what he feels, so he knows why the patient is angry; the patient is restrained because he has exceeded the limits of violence.</p>
Tuesday / December 6, 2022	<ul style="list-style-type: none"> • The patient looks silent, and his eyes look empty. After being asked what he was doing yesterday, the patient answered, "Forget." Then the patient is explained how to reduce anger. 	<ul style="list-style-type: none"> • Give SP 4 related to violent behavior through worship and SP 5 related to taking medicine. 	<p>Validating how the patient feels and how he felt yesterday and continuing the intervention when the patient is angry can carry out worship activities too.</p>

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Table 1. Description of Assessment, Intervention and Outcomes (Continued...)

Day/Date	Assessment	Intervention	Outcome
Wednesday / December 7, 2022	The patient could speak and talk with other friends, so the researchers asked about his feelings, whether he was still sad, and whether he heard voices telling the patient to commit violence against himself.	Gives SP 2 the risk of suicide-related to the patient's feelings.	Validating the patient's feelings, whether the patient still wants to hurt himself or not, and directing the patient not to do dangerous things or injure himself.
Thursday / 08 December 2022	The patient looks more cheerful, plays with other patients, sings in the game room, and participates in rehabilitation in the arts section.	Provide SP 3 regarding the patient's goals and expectations.	Warm conversations make the patient more able to express what he aspires to and make the patient hope for a better life; the patient reveals that he wants to become a lecturer in Sundanese arts, and the patient is also sorry for what happened to him and says he will not hurt himself return.

allowed the patient to freely engage with the external environment, which, unfortunately, resulted in harmful consequences for the patient. The patient began experimenting with alcohol in the sixth grade of elementary school, engaged in fights since junior high school, and was never reprimanded by either their parents or grandfather. This permissive parenting approach granted the patient autonomy to shape their own life choices.

However, this style of parenting hindered the development of effective coping mechanisms that could help the patient effectively navigate failures in life. Adding to this, the individual the patient holds dear, their grandfather, criticized them for their failures. Such failures induced stress and depression in the patient. Various contributing factors, including the absence of parental affection, intensified the patient's sense of being unloved. This corresponds with the theory that family and community support can mitigate stress and depression (Linggi, 2018; Rabba et al., 2014).

The plans crafted for the patient from November 29 to December 2, 2022, were designed to manage auditory hallucinations. These interventions aimed to empower the patient to gain control over their hallucinatory experiences. These interventions were aligned with the patient's preferences during hallucinations, as they mentioned engaging in prayer and other activities when they encountered these experiences. Group activity therapy was implemented to assist patients in controlling their hallucinations. This form of therapy involves training patients to engage in conversation. A similar study conducted by Fresa et al. (2017) demonstrated that 27 patients with auditory hallucinations managed to control their hallucinatory experiences through spoken communication.

Group Conversation Activities (GCA) are designed to mitigate patient illusions by engaging them in group discussions, diverting their focus from interacting with their hallucinations. GCA involves six patients gathered in one room. Eligible participants for GCA include those experiencing impaired perception due to auditory or visual hallucinations (SP 1) and those capable of open communication with others (SP 3). Discussion topics are chosen based on patient preferences or related to their nightmares, such as hobbies, favorite movies, exciting experiences, overcoming nightmares, and more. A discussion table containing these topics serves as the tool for

this activity. Discussions are conducted freely during designated times, usually in the morning (10:00-12:00 WIB) and afternoon (15:00-17:00 WIB), lasting for about 20-30 minutes.

The GCA process comprises several stages: (1) Nurse selection of participating patients based on their characteristics. (2) Preparation of selected topics in alignment with the chosen theme. (3) Welcoming patients and inquiring about their current feelings. (4) Explanation of the purpose of group activity therapy. (5) Patients selecting a topic for discussion in writing. (6) Patients initiating conversations about their chosen topics. (7) Positive responses from participating patients. (8) Nurse assessment of patients' feelings and concerns.

Addressing auditory hallucinations associated with the risk of suicide was implemented over two days, December 7-8, 2022, utilizing existing interventions. These include hazard identification, supervised observation, periodic checks (every 15 minutes and 1 hour), validating the patient's feelings regarding self-harm, and encouraging positive distractions and coping mechanisms. The focus is on fostering positive coping strategies that extend into activities related to achieving a realistic future, encompassing goals and plans. Following the intervention, the patient reported a reduction in self-harm tendencies.

The patient's violent behavior, which stemmed from hallucinations, involved physically assaulting others and damaging furniture. To address this, a three-day intervention (December 3, 5, and 6, 2022) was conducted. The approach included identifying the underlying problem, practicing deep breathing, engaging in activities during moments of anger, employing social and verbal approaches such as asking, refusing, and expressing, incorporating spiritual practices, and emphasizing medication adherence. After this intervention, the patient displayed a calmer demeanor, albeit responding minimally when questioned about their behavior. It's important to note that these interventions showcase a multifaceted approach tailored to each patient's unique circumstances and challenges.

CONCLUSION

Based on the detailed account provided, the nursing care implemented through a nine-day intervention successfully yielded positive outcomes. The patient achieved control

over their auditory hallucinations and gained understanding that self-harm was ultimately unproductive. However, while progress was observed in managing the patient's violent behavior during the intervention process, it is apparent that complete control over their anger was not achieved. This outcome underscores the need for continued and focused intervention to effectively address and reduce the patient's violent tendencies. Given the complexity of violent behavior and its underlying triggers, it's prudent to design and implement further interventions tailored specifically to managing and mitigating the patient's anger-related behaviors. These interventions should be systematically designed, possibly incorporating additional therapeutic techniques, coping strategies, and counseling sessions that are specifically aimed at addressing and minimizing the patient's violent outbursts. By acknowledging the partial success in managing violent behavior and recognizing the necessity for additional interventions, the patient's overall well-being and progress can be further advanced. This approach aligns with the ongoing nature of patient care and the dynamic nature of behavioral interventions.

Declaration of Interest

The authors declare that no conflicts of interest exist.

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Data Availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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