

# The Relationship of Family Support and Medication Adherence on Recurrence of Patients with Auditory Hallucination

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## Abstract

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**Background:** Recurrence of auditory hallucinations refers to the reappearance of signs and symptoms of a disease after an adverse event. Recurrence is influenced by several factors, including lack of family support and poor medication adherence.

**Objective:** This study aimed to examine the relationship of family support and medication adherence with on recurrence of auditory hallucination sufferers at the Jongaya Health Center Makassar.

**Methods:** This study utilized a correlational design with a cross-sectional study approach. The sampling technique in this study employed total sampling, which included 34 respondents.

**Results:** The Chi-Square test showed that there was a relationship between family support and recurrence of auditory hallucination sufferers ( $p$ -value= 0.001) and there was a relationship between medication adherence and recurrence of auditory hallucination sufferers ( $p$ -value= 0.007).

**Conclusion:** There is a relationship of family support and medication adherence on the recurrence of auditory hallucination sufferers at Jongaya Health Center Makassar. Thus, it is expected to increase family knowledge regarding the importance of family support to prevent the auditory hallucination recurrence.

**Keywords:** family support; medication adherence; recurrence of auditory hallucination

## Introduction

Mental disorders are syndromes of attitude that are linked to difficulties to perform a role in life. One of the types of mental disorders is schizophrenia. Schizophrenia is a group of psychotic responses that affect various parts of personal roles, including assuming, speaking, feeling, and expressing sentiments, as well as brain constraints signaled by disorganized images, delusions, hallucinations, and strange attitudes (Wulandari & Pardede, 2022). Hallucinations are alternations of sensory understanding in the form of sounds, sights, tastes, touches, or smells that cannot be distinguished from internal stimuli (thoughts) and external stimuli (the outside world) without the presence of a subject or obvious stimuli. People with schizophrenia face hallucinations due to the inability of sufferers to cope with the stress of the mind and limited skills to know and regulate hallucinations. Signs and symptoms of hallucinations can be smiling at themselves, laughing at themselves, withdrawing from others, and being unable to distinguish reality (Kristina, 2020).

Globally, mental disorders are still one of the significant health problems (WHO, 2021). There are 264 million people who have depression, 45 million people have bipolar disorder, 20 million people have schizophrenia, and 50 million people have dementia worldwide (Maddock et al., 2021). In Indonesia, people with mental disorders in 2018 increased, including schizophrenia which increased from 1.7 per mile to 7.0 per mile, depression from 6 per mile to 6.1 per mile, while mental emotional 6-9.8 per mile (Riskesdas, 2018). The most common

mental disorder is schizophrenia with a prevalence of 7% per 1000 population. In Indonesia, people treated in mental hospital consisted of 70% auditory hallucinations, 20% visual hallucinations, and 10% olfactory, tactile and taste hallucinations. In South Sulawesi province, the number of schizophrenia/psychosis cases was 13,356 people or 3.3% of the prevalence of Indonesia (Riskesmas, 2018). In Makassar, the number of mental disorders cases was 2,427 people or 18% of the prevalence of South Sulawesi province. According to the initial data collection at Jongaya health center Makassar, there were 46 patients who experienced mental disorders in 2018 which increased every year. In 2022, there were 74 people who experienced mental disorders and currently counted 52 people or 2.1% of the prevalence of the city of Makassar with 46 cases with hallucinatory disorders (Data from the Jongaya Health Center Makassar, 2022).

The recurrence rate of people with mental disorders is very high, ranging from 60% to 75% after a psychotic episode when left untreated. In 2018, every year the increase continues to be experienced from 28.0%, 43.0% and 54.0% for 2020 (Tanjung et al., 2022). Relapse is a condition in which schizophrenics re-experience signs of symptoms that have long been controlled. Almost all sufferers with chronic schizophrenia often experience relapses that can cause a lack of self-skills. This is because relapses leave 72% of schizophrenics unable to work, 69% hospitalized, 22% attempt suicide, and 20% shackled (Antari & Suariyani, 2021). Not only himself, but his family and community will also feel aggrieved if schizophrenics experience a relapse. Deviant behavior such as throwing tantrums and hurting himself or others are signs of relapse or relapse (Ramadhani et al., 2022).

Recurrence of hallucinations can be overcome with family support and medication adherence. The attitude of the family in accepting sick family members is one of the necessary supports for sufferers. The family also has a function and role to support and help sick family members, such as assistance in taking medication. There are 4 dimensions of family support, namely appreciation support, instrumental support, information support, and emotional support (Ministry of Health, 2021). The success of the development and healing of the patient's personality depends on the adequacy or lack of family support at each stage. Family support can improve patients' health status and adaptation to life (Putri & Yanti, 2021). Similarly, medication adherence is an important aspect in the post-treatment recovery process to prevent patients from experiencing relapses.

Based on the description above, the authors were interested in exploring the relationship of family support and medication adherence on recurrence of auditory hallucination sufferers at Jongaya health center Makassar.

## Methods

### Study Design

This study used a correlational design with a cross-sectional approach to determine the relationship between the independent and dependent variables (Nursalam, 2017).

### Samples/Participants

The population in this study was mental disorders patients with auditory hallucinations who were in the working area of Jongaya health center Makassar and underwent outpatient treatment. The population in this study was 40 people. The sampling technique used was total sampling, with a total of 34 samples that met the inclusion criteria. The inclusion criteria included: 1) respondents with auditory hallucinations who were willing to fill out the questionnaire and understand the intent of the questionnaire; 2) respondents who lived with auditory hallucinations. In addition, exclusion criteria included 1) patients with mental problems with diagnoses of other diseases, 2) sufferers with no family members, 3) uncooperative respondents, and 4) respondents who did not answer the questionnaire completely.

## Instruments

The instruments used in the study were the family support questionnaire which had been tested for validity and reliability. The Cronbach's alpha of this questionnaire was 0.928 (Suwardiman, 2011). This questionnaire used the Likert scale, which aimed to determine family support on auditory hallucination recurrence. A questionnaire about medication adherence employed MMAS-8 (Morisky Medication Adherence Scale) using the Guttman scale. The Cronbach's alpha of this questionnaire was 0.83. For recurrence, questions were given using multiple choices to determine the frequency of recurrence of the patient.

## Data Collection

This study was conducted in 2023 at Jongaya health center Makassar. The primary data in this study were the number of family support, the number of medication adherence and the number of relapses of patients with auditory hallucinations, which obtained by visiting the research site through the results of the researcher's interview with the resource person and filling out questionnaires that have been compiled by the researcher. The secondary data of this study were the amount of data on auditory hallucination sufferers and respondents' home address data, obtained from the medical record section of the Jongaya health center Makassar.

## Data Analysis

All data were analyzed using the SPSS statistical program. Descriptive statistics were used to analyze the characteristics of participants. Univariate analysis was presented as frequency distribution table. Bivariate analysis was an analysis between two variables that were thought to be correlated. The variables were tested utilizing the Chi-Square statistical test.

## Ethical Considerations

This research has been approved by the ethics committee of STIKES Panakkukang Makassar.

## Results

### Characteristics of respondents

Table 1 depicted that the majority of respondents were female which were 26 (76.5%) respondents, early elderly which were 12 (35.3%) respondents, Makassar ethnic which were 24 (70.6%) respondents, education level of senior high school accounted for 18 (52.9%) respondents, housewives accounted for 25 (73.5%) respondents, in married status accounted for 25 (73.5%) respondents, and parent as family support accounted for 13 (38.2%) respondents.

Table 1. Characteristics of respondents

Characteristics	n	%
Gender		
Male	8	23.5
Female	26	76.5
Age		
Early adulthood	4	11.8
Late adulthood	5	14.7
Early elderly	12	35.3
Elderly	7	20.6
Seniors	6	17.6
Ethnic		
Makassar	24	70.6
Bugis	4	11.8
Jawa	3	8.8
Toraja	2	5.9

Nusa Tenggara Timur	1	2.9
Education level		
Elementary school	5	14.7
Junior high school	9	26.5
Senior high school	18	52.9
Bachelor	2	5.9
Occupation		
Entrepreneur	7	20.6
Housewives	25	73.5
Civil servant	1	2.9
Unemployed	1	2.9
Marital status		
Married	25	73.5
Unmarried	1	2.9
Widower	3	8.8
Widow	5	14.7
Family relationship		
Parent	13	38.2
Child	1	2.9
Younger sibling	9	26.7
Older sibling	7	20.6
Husband	2	5.9
Wife	2	5.9
Total	34	100%

Source: Primary Data, 2023

### Univariate analysis of family support, medication adherence, and recurrence of auditory hallucination

Table 2 showed that most respondents had good family support which accounted for 18 (52.9%) respondents, low medication adherence which accounted for 20 (58.8%) respondents, and experienced relapse which were 21 (61.8%) respondents.

Table 2. Results of univariate analysis

Characteristics	n	%
Family support		
Good	18	52.9
Worse	16	47.1
Medication		
Adherence		
Low	3	8.8
Moderate	11	32.4
High		
Recurrence of auditory hallucination		
Relapse	21	61.8
No relapse	13	38.2

Source: Primary Data, February-March 2023

### Bivariate analysis

Table 3 showed that Chi-square test obtained p-value of 0.001. Thus, it can be concluded that there was a relationship between family support and the recurrence of auditory hallucination sufferers at the Jongaya health center. Meanwhile, Table 4 depicted that Kolmogorov Smirnov

test obtained p-value of 0.007, which meant that there was a correlation between medication adherence and recurrence of auditory hallucination.

Table 3. The relationship between family support and recurrence of auditory hallucination

Family support	Recurrence of auditory hallucination				Total		p-value
	Relapse		No relapse		n	%	
	n	%	n	%			
Worse	15	93.8	1	6.3	16	47.1	0.001*
Good	6	33.3	12	66.7	18	52.9	
Total	21	61.8	13	38.2	34	100	

\*Chi-Square test

Table 4. The relationship between medication adherence and recurrence of auditory hallucination

Medication adherence	Recurrence of auditory hallucination				Total		p-value
	Relapse		No relapse		n	%	
	n	%	n	%			
Low	17	85.0	3	15.0	20	58.8	0.007*
Moderate	2	66.7	1	33.3	3	8.8	
High	2	18.2	9	81.8	11	32.4	
Total	21	61.8	13	38.2	34	100	

\*Kolmogorov-Smirnov test

## Discussion

### Family support of people with auditory hallucinations

This study found that of 34 respondents, the majority of respondents with auditory hallucinations at Jongaya health center Makassar had good family support category. This suggests that family support is needed by respondents. According to Friedman (2010), family can provide proper care and treatment, such as motivating to solve their problems and encouraging healthy behavior. However, sufferers not always can receive this support because two factors, including the support recipient and support provider.

### Medication adherence in correlation with auditory hallucinations

This study showed that most respondents had low medication adherence. Butarbutar et al., (2022) suggested that medication adherence can be influenced by several factors, such as individual factor, treatment factor, and environmental factor. In line with the research conducted by Muliani et al (2020) involving 50 respondents. Their finding showed that there were 29 (58%) respondents who had moderate awareness of medication adherence and 11 (22%) respondents had low awareness of medication adherence. Another study was also conducted by Putra et al (2021) involving 54 respondents with the results that there were 32 (66.7%) respondents who were obedient to taking medicine, while 16 (33.3%) respondents were not obedient in taking medicine. This can be concluded that family support is associated with patient reoccurrence. Family with good support can be an encouragement in treatment and patient supervision while family who consider patients are not part of the family, can be an obstacle for patients' recovery.

### Recurrence of auditory hallucinations

The study showed that the majority of respondents experienced relapses. This result is in line with research conducted by Ika (2020) involving 36 respondents which showed that 19 (52.8%) respondents often experienced relapses, 12 (33.3%) respondents rarely experience relapses, and 5 (13.9%) respondents never experienced relapses. This happens because

patients were late in taking medicines or did not take medication at all because they felt they have recovered. Another study was also conducted by Simatupang (2014) who explained that patients with chronic mental disorders are estimated to experience 50% recurrence in the first year and 70% in the second year. This happens due to several factors, including non-adherence to taking medication and social factors (Budiani et al., 2020). The analysis that can be taken from the results of these studies is that mental disorder patients who often experience relapses have something to do with the patient's motivation, awareness in medication adherence and the role of family in supervising patients.

### **The relationship of family support with recurrence of auditory hallucinations**

This study depicted that there is a relationship between family support and recurrence of auditory hallucination sufferers at Jongaya health center.

This shows that the better the family support, the frequency of relapse decreases. In this study, there were also respondents with good support still experiencing relapse. This shows that there are other factors that can contribute in it related to providing support to people with auditory hallucinations, such as the level of knowledge and relationships between respondents and sufferers in providing appropriate support. Furthermore, low education level is at risk of inability to care for people with hallucinatory disorders. An educated family will easily understand what should be done to optimize patient recovery (Suwardiman, 2011).

This study also found that there was a relationship between medication adherence and good family support. Not only does it have a good impact, but the family can also have a bad impact if the family does not know clearly what happened and how the illness suffered by sick family members. Therefore, the family should get specific information about the disease suffered by the patient and how to prevent recurrence.

In addition, there were also respondents adhere in taking medication but experiencing relapse. This shows that there are other factors that can contribute in recurrence of auditory hallucinations. For example, the symptoms of schizophrenia experienced by patients, especially it its acute, and the effect of the medicine itself. The medicine cannot work in an instant to relieve the symptoms. Azizah et al (2016) suggested that in the period of acute schizophrenia symptoms begin to arise slowly. Symptoms that arise are shorter but stronger, such as hallucinations, delusional thoughts, and failure to think.

According to Niven (2010), there are various kinds of patient non-compliance behavior, including stopping drug consumption, taking drugs not in accordance with the dose given, and abuse in taking drugs and inappropriate time. Therefore, there is a very small chance of success in therapy. Full compliance is a condition where the patient not only takes treatment regularly according to the set time, but also obediently takes medication regularly as recommended. Meanwhile, compliance that is not at all compliant is patients who have dropped out of medicine or do not take medicine at all (Setyawan, 2021).

According to Keliat (2016), non-compliance is an important factor in relapse. One of the therapies in schizophrenia patients is the administration of antipsychotic. There are about 7% of schizophrenic patients who refuse to take the medicine. This is why schizophrenia patients who are in the treatment stage often experience a relapse. A study by Astuti et al. (2018) revealed that patients who are not obedient to taking medication will very often experience more severe relapses when compared to patients whose compliance is quite good. Putra et al. (2021) found that medicine is needed for the treatment process of schizophrenia patients. Not only medicine, support and supervision in taking medication are also needed by sufferers.

According to the researchers' analysis, most sufferers refuse to take medication because the action of antipsychotic medication is very slow. Not infrequently patients also feel other side effects before the side effects of the medicine work. Various studies about schizophrenia have shown that patients tend to become discouraged by long therapy programs that do not result in a cure for the condition.

## **Conclusion**

There is a relationship between family support and recurrence of auditory hallucination sufferers at Jongaya health center Makassar with good category. Furthermore, there is a relationship between medication adherence and the recurrence of auditory hallucination sufferers at Jongaya health center Makassar. The majority of sufferers have a low level of medication adherence and the majority of respondents experience recurrence of auditory hallucinations.

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