

# THE CORRELATION BETWEEN MEDICATION ADHERENCE AND THE RELAPSE AMONG PATIENTS WITH SCHIZOPHRENIA IN KUDUS, CENTRAL JAVA

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## ABSTRACT

**Background:** Mental health disorders are problems that need treatment. This treatment focuses on rapidly reducing the symptoms of psychosis in the acute phase, prolonging the period of relapse, and preventing the recurrence of worse symptoms. This study aimed to determine the correlation between medication adherence and relapse among patients with schizophrenia in Kudus, Central Java.

**Subjects and Method:** This was a cross-sectional study conducted in Kudus, Central Java, from August to September 2020. A sample of 50 schizophrenic patients was selected by accidental sampling. The dependent variable was relapsed. The independent variable was medication adherence. The data were analyzed using Spearman rank correlation.

**Results:** There was a negative correlation between medication adherence and relapse among patients with schizophrenia, and it was statistically significant ( $r = -0.44$ ;  $p < 0.001$ ).

**Conclusion:** Medication adherence in schizophrenic patients is negatively correlated with relapse in patients with schizophrenia.

**Keywords:** medication adherence, relapse, schizophrenic patients

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## BACKGROUND

Health is a dynamically balanced state, influenced by genetic, environmental and daily lifestyle factors such as eating, drinking, sex, work, rest to manage emotional life. The health status becomes damaged when the state of balance is disturbed, but most of the damage in the early periods is not serious damage if people are willing to realize it (Santoso, 2012). According to the World Health Organization, health is a state of well-being that includes physical, mental and social well-being that is not only free

from disease or disability (WHO, 2015).

Mental health problems are currently increasing; according to WHO, in 2015, the prevalence of mental disorders was 465 million people in the world. Meanwhile, based on the National Institute of Mental Health, the prevalence of mental disorders worldwide is around 1.3% of the population over the age of 8 years, or about 53 million people worldwide suffer from mental disorders. The prevalence of mental disorders in developing and developed countries is relatively the same, around 21% of the total adult population.

The 2018 Basic Health Research results conducted by the Ministry of Health for the proportion of households with schizophrenia/psychotic mental disorders from 2013-2018 from 1.7 per mile rose to 7 per mile. Central Java itself is ranked 5th out of 34 provinces. The 2018 Basic Health Research (RISKESDAS) conducted by the Ministry of Health for mental and emotional disorders, Central Java is ranked 27 out of 34 provinces.

In general, patients who take medication irregularly tend to relapse. The results show that 25% to 50% of schizophrenic patients who return home from mental hospitals do not take medication regularly. Chronic patients, especially schizophrenia, find it difficult to follow medication rules because of reality disturbances and the inability to make decisions. The nurse is responsible for administering or monitoring medication administration at the hospital, while the family replaces the nurse's duties at home. (Keliat, 2009).

Compliance with mental disorders in taking medication is very important; the drug must be used in an effective dose for a sufficient period. The response to therapy and the onset of side effects should be given as soon as possible. Drugs used to treat psychosis have many names, namely antipsychotic and neuroleptic drugs. (Suprayitno, 2010).

Melda Dwi Lestari (2021) found that there was a relationship between medication adherence and relapse rates in schizophrenia outpatients ( $p < 0.001$ ).

Based on the results of a survey conducted by researchers at Dr.

Loekmono Hadi Kudus Hospital, data obtained within 1 year of patients visiting for inpatient and outpatient care totaled 781 patients; the diagnosis that often appears is schizophrenia, more than 500 patients are patients schizophrenia, apart from this diagnosis, there are other diagnoses such as mood disorders and mental retardation. From these data, from October to December 2020, 200 patients were hospitalized. Of the 200 patients, 50 were relapsed and came from Kudus Regency (Medical Record of Kudus Hospital).

This study aims to determine the relationship between medication adherence and recurrence in schizophrenic patients in Kudus, Central Java.

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## SUBJECTS AND METHOD

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### **1. Study Design**

This cross-sectional study was conducted in Kudus, Central Java, from October to November 2020.

### **2. Population and Sample**

The population in this study were people with schizophrenia who were in Loekmono Hadi Kudus Hospital, Central Java. The sample was selected by using an accidental sampling technique. The total subjects in this study were 50 schizophrenic patients.

### **3. Study Variables**

The dependent variable is the recurrence of schizophrenic patients. The independent variable is medication adherence.

### **4. Operational Definition of Variables**

**Relapse** is the return of an illness after it appears to have subsided. Recurrence usually occurs due to bad

events before they relapse and can also be caused by several factors, including internal factors and external factors.

**Compliance with taking medication** is obedience or surrender to a predetermined goal.

### 5. Instruments

The data in this study consisted of primary data and secondary data. Primary data were obtained using a questionnaire filled out directly by the subject. Secondary data were obtained from patients with schizophrenia at Loekmono Hadi Hospital, Kudus, Central Java.

### 6. Data Analysis

Univariate analysis was used to look at the frequency distribution and subject characteristics, while bivariate analysis using Spearman Rank Correlation

was used to determine the relationship between recurred and obedience to medication in schizophrenic patients.

### 7. Research Ethics

The Council issues this research ethics test for International Organizations of Medical Sciences (CIOMS) and the National Guidelines for Health Research Ethics (KNEPK) number 03/Z-5/KEPK/UMKU/I/2022.

## RESULTS

### 1. Univariate Analysis

Based on table 1. It can be seen that the number of male subjects was more than 29 patients (58.0%), while female patients were 21 (42.0%).

**Table 1. Characteristics of the subject (dichotomous data) by gender**

Characteristic	Category	Total (n)	Percentage (%)
Gender	Male	29	58.0
	Female	21	42.0

**Table 2. Frequency distribution based on medication adherence and recurrence of schizophrenic patients in Loekmono Hadi Kudus Hospital.**

Variables	Category	Total (n)	Percentage (%)
<b>Obedience</b>	Not obey	29	58.0
	Obey	21	42.0
<b>Recurrence</b>	Frequently	21	42.0
	Infrequently	29	58.0

Table 2 shows that the average number of subjects who do not adhere to medication is 29 (58.0%), and subjects who adhere to medication are only 21 (42.0%). In addition, recurrence was found more rare (58.0%)

### 2. Bivariate Analysis

There was a relationship between medication adherence and relapse in patients with mental disorders ( $r = -0.44$ ;  $p < 0.001$ ), and it was statistically significant (table 3).

**Table 3. The relationship between medication adherence and relapse in patients with mental disorders**

Obedience	Recurrence				r	p		
	Frequently		Infrequently					
	n	%	n	%				
Not obey	21	72.4	8	27.6	-	<0.001		
Obey	0	0	21	100	0.44			

## DISCUSSION

Compliance with taking medication in patients with mental disorders in Kudus Regency. The univariate analysis showed that adherence to taking medication was in the category of non-adherence to taking medication as many as 29 respondents (58.0%). In the adherence to taking medication category, as many as 21 respondents (42.0%). People with a mental health condition do not comply with taking medication due to several factors, namely understanding of instructions, quality of interaction, social and family isolation, and beliefs and attitudes (Neil, 2009).

The results of previous study support the results of this study by Melda (2021) that of the 32 respondents studied there were, 17 respondents (53.12%) did not adhere to taking medication. From Baiq Septi (2014) that of the 84 subjects studied, the densest 63 respondents (78.8%) were non-adherent to taking medication.

On external factors, recurrence can be caused by several factors, including family support, adherence to medication, support from health workers. The sufferer feels isolated and inferior due to the family's lack of support and attention, so he often feels isolated and reflects more. Hence, the sufferer returns to thinking about subconscious things. Then there will be repeated recurrences in people with mental disorders (Suprayitno, 2010).

The results of this study are in line with Meldi (2021) regarding the relationship between medication adherence and recurrence in patients with mental disorders in the

recurrence category; there were 23 subjects (71.87%) who relapsed from a total of 32 respondents. Baiq's study (2014) supported that the highest recurrence frequency in the infrequent relapse category was 40 subjects (50%).

Relationship between drug adherence and recurrence in patients with mental disorders in Kudus Regency in 2021. Based on the results of research using cross-tabulation in Table 4, the analysis of the relationship between adherence to taking medication and recurrence in patients with disorders From 50 respondents, it was found that with the category of non-adherent adherence to the category of recurrence that often relapses as many as 21 respondents (72.40%) and from the category of non-adherent adherence to the category of The percentage of relapses that rarely relapse was 8 subjects (27.60%). In contrast, from the adherence category, there were no subjects who were obedient in the category of frequent relapses (0%), and those who adhered to the category of infrequent relapse as many as 21 subjects with a percentage (100%).

The results of the statistical test of Spearman Rho correlation obtained a value ( $r = -0.44$ ;  $p < 0.001$ ). This indicates a significant relationship between medication adherence and recurrence in people with a mental health condition in Kudus Regency.

From the research data above, the researcher concludes that the higher the respondent's medication adherence level, the lower the patient's relapse rate and conversely, the higher the respondent's medication non-

adherence rate, the higher the respondent's relapse rate.

The results of this study are in line with Melda (2021), which stated that there was a significant relationship between medication adherence and recurrence. From the results of the chi-square statistical test,  $p < 0.001$  ( $p < 0.05$ ), which means that there is a significant relationship between medication adherence and the rate of relapse in schizophrenia outpatients and is supported by research from Mohammad (2021) showed that there was a significant relationship between medication adherence and patient recurrence ( $p = 0.022$ ), with an inverse relationship meaning that the more obedient the patient was to taking medication, the lower the patient's recurrence.

#### **AUTHOR CONTRIBUTION**

Anny Rosiana Masithoh, Responsible for research. Yuli Setia-ningrum, the process of data analysis from the beginning of the study. Moh. Aris Prasetyianto is editing the article until it's finished.

#### **CONFLICT OF INTEREST**

There is no conflict of interest in compiling this article.

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