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## Medication Adherence Among Schizophrenic Outpatients in Aceh Besar

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### Abstract

Schizophrenia is a mental disorder that affects cognitive, affective, and human behavior, which makes individuals unable to carry out productive activities such as studying and working. People with schizophrenia must undergo treatment for a long time, even after being treated at home. People with schizophrenia can experience relapse after being discharged from a mental hospital, with a high recurrence rate. Relapse in schizophrenic patients is influenced by medication adherence. This study aims to describe medication adherence among schizophrenic outpatients in Aceh Besar. This descriptive study uses a

purposive sampling technique to select the sample. The number of samples was 79 schizophrenic outpatients in Aceh Besar. Data was collected using a demographic data questionnaire, the Brief Psychiatric Rating Scale (BPRS), and the Medication Adherence Rating Scale (MARS). The result of this study shows that the majority of respondents are at a high level of medication adherence, which is equal to 88.6%. It is hoped that nurses can always provide education related to treatment to schizophrenic patients so they can maintain their health and prevent a recurrence.

**Keywords:** Schizophrenia, Medication Adherence

### Introduction

Schizophrenia is a mental disorder that affects cognitive, affective, and human behavior and results in an inability to carry out productive activities such as studying and working. Schizophrenia has reached 23 million people worldwide and less than 400,000 people per 1000 people in Indonesia (Hidayati, Aprianti & Widiyanti, 2023) <sup>[1]</sup>. Based on data sourced from the Aceh Besar District Health Office in 2018, there were 114 cases of schizophrenia out of 236 cases of mental disorders found in the Darul Imarah sub-district which is one of the sub-districts in Aceh Besar (Yanti & Armiyati, 2020) <sup>[2]</sup>.

People with schizophrenia have an earlier risk of dying, which is 2 to 3 times compared to other people who do not have schizophrenia (Susanti, Paramita & Antaria, 2022) <sup>[3]</sup>. This high risk makes people with schizophrenia must get maximum treatment. However, people with schizophrenia can experience relapse after being discharged from a mental hospital, and this relapse rate is high. One-third of schizophrenic patients can relapse after one year of discharge from a mental hospital (Bratha *et al.*, 2020) <sup>[4]</sup>. Based on the medical records owned by a hospital in Padang, as many as 85% of people with schizophrenia had previously been treated at that hospital, and 51% of these patients experienced a relapse due to medication withdrawal (Irman, Patricia & Srimayenti, 2018) <sup>[5]</sup>.

Psychiatric medications are drugs with psychoactive substances prescribed to change the chemical composition of the brain and nervous system (Rose, 2010) <sup>[6]</sup>. A critical aspect of maintaining adequate care for mental health is strengthening medication adherence (Kirchner *et al.*, 2022) <sup>[7]</sup>. WHO defines compliance as individual behavior in modifying lifestyle and consuming medicines according to recommendations from health workers (Agustine & Welem, 2018) <sup>[8]</sup>.

Medication adherence is one of the problems people living with schizophrenia have (Pothimas, Tungpunkom, Kanungpiarn & Hannes, 2021) <sup>[9]</sup>. According to Cit Hakim (2008, in Adianta & Putra, 2017) <sup>[10]</sup>, a patient is considered medication adherence if the patient takes the drug according to the prescribed dose, the amount of drug taken is appropriate, the duration of the drug, and takes the correct type of drug as prescribed by the doctor.

Based on data from 35 studies related to the estimation of medication non-adherence, the highest rate of medication non-adherence was in schizophrenic patients (56%), followed by major depression (50%) and bipolar disorder (44%) (Semahegn *et al.*, 2020) <sup>[11]</sup>.

Even though adherence to medication in patients taking antipsychotic drugs is essential to prevent relapse and risks that will have an impact on decreasing quality of life (Saba & Muraraiah, 2022) <sup>[12]</sup>. Research conducted by Fillah and Kembaren (2022) <sup>[13]</sup> found that the factors of non-adherence in taking medication that was most commonly found in patients included feeling bored while taking medication and feeling that they had recovered.

Based on the description above, medication adherence in schizophrenic patients is determined by various factors. Therefore, researchers are interested in examining the definition of medication adherence among schizophrenic outpatients in Aceh Besar.

**Methods**

This type of research is a descriptive study using a purposive sampling technique in selecting the sample. The sample criteria include patients diagnosed with schizophrenia by a psychiatrist, independent outpatients who are domiciled in Aceh Besar, aged 17 years old and over, have a score of BPRS ≤ 40, drugs taken are oral drugs, can communicate well, and are willing to be a respondent.

Regarding psycho-pharmaceutical data, researchers directly checked the drugs consumed by patients. Other data were collected using a questionnaire including a demographic data questionnaire, the Brief Psychiatric Rating Scale (BPRS), and the Medication Adherence Rating Scale (MARS).

The BPRS questionnaire is an instrument for screening the condition of patients with mental disorders according to their psychotic symptoms developed by Leucht, Kissling, Hamann, Etschel, and Engel (2005) [14]. BPRS consists of 18 statement items with 7 Likert scales (1=none, 2=very mild, 3=mild, 4= moderate, 5= moderately severe, 6=severe, 7=very severe).

The MARS questionnaire is a questionnaire to measure patient behavior in terms of adherence to taking drugs developed by Thompson, Kulkarni, and Sergejew (2000). MARS has 10 question items with a Likert scale of "Yes" and "No." MARS scores ranged from 1-10 with two categories: low medication adherence with a total score of less than five and high medication adherence with a total score of ≥6 (Thompson, Kulkarni, & Sergejew, 2000) [15]. The results of the reliability test with a sample of 30 people showed a reliable MARS questionnaire with a Cronbach alpha value of 0.75.

**Results**

**Demographic Data**

Based on data analysis, the majority of respondents were in the adult category (49.3%), including early adulthood (21.5%) and late adulthood (27.8%), male (68.4%), educational background in high school (77.2%), single status (65.8%), and owning a motorcycle as transportation for medical treatment (92.4%).

**Table 1:** Schizophrenic Outpatient’s Demographic Data Distribution (n=79)

Demographic Characteristics	n	%
Age (years old)		
Late Adolescent (17–25)	11	13,9
Early Adulthood (26–35)	17	21,5
Late Adulthood (36–45)	22	27,8
Early Elderly (46–55)	11	13,9
Late Elderly (56–65)	18	22,9
Gender		
Male	54	68,4
Female	25	31,6
Educational Background		
Not attending school	4	5,1
Elementary School	11	13,9
High School	61	77,2
University	3	3,8

Marital Status		
Single	52	65,8
Married	20	25,3
Widow/Widower	7	8,9
Transportation		
Motorcycle	73	92,4
Car	2	2,5
Motorcycle and Car	4	5,1

**Clinical Data**

Data analysis shows that the majority of respondents were treated at the Aceh Mental Hospital once (60.8%), received information about their mental illness from nurses (74.7%), consumed haloperidol (58.2%), and experienced side effects of psycho-pharmaceutical in the form of weakness (62.1%).

**Table 2:** Schizophrenic Outpatient’s Clinical Data Distribution (n=79)

Clinical Data	n	%
Hospitalization		
One time	48	60,8
Two times	20	35,3
Three times	9	11,4
Four times	2	2,5
Sources of Schizophrenia Information		
Psychiatrist	2	2,5
Nurse	59	74,7
Family	48	60,8
Relation	8	10,1
Friend	4	5,1
Neighbor	4	5,1
Internet	4	5,1
Television	3	3,8
Book	1	1,3
Psycho-pharmaceutical		
Clozapine	10	12,7
Risperidone	8	10,1
Chlorpromazine	15	19,0
Haloperidol	46	58,2
Diazepam	39	49,4
Trihexiphenidil	31	39,2
Medication Side Effect		
Drowsiness	21	26,6
Stiffness	29	36,7
Weakness	48	62,1
Headache	8	10,1
Nauseous	5	6,3

**Medication Adherence**

Based on data analysis, the majority of respondents are at a high level of drug adherence, namely 88.6%.

**Table 3:** Schizophrenic Outpatient’s Medication Adherence Data Distribution (n=79)

Medication Adherence	n	%
Low	9	11,4
High	70	88,6

**Discussion**

Medication adherence is a condition where the patient carries out all treatment recommendations, such as changing behavior, using drugs properly, and completing treatment. Based on the research results related to medication adherence among schizophrenic outpatients in Aceh Besar, it is known that medication adherence in patients is in the high category, namely 88.6%. Increased adherence to taking

medication was also found in schizophrenic patients in a sub-district in Aceh Besar, with a percentage of adherence of 67.9% (Yanti & Armiyadi, 2020) <sup>[2]</sup>. Research conducted by Putra, Widiyono, and Sukmonowati (2021) <sup>[16]</sup> also showed that most patients were medication adherents, namely 66.7%. This result is inversely proportional to the study of Kaur and Mhaske (2022) <sup>[17]</sup>, which found that as many as 50 percent of psychiatric patients with major mental disorders did not adhere to treatment.

Research conducted by Deng, Zhai, Ouyang, Liu, and Ross (2022) <sup>[18]</sup> in China found that the factors that affect medication adherence in patients with severe mental disorders are related to the patient's attitude towards treatment or illness, inadequate outpatient care, and lack of resources, such as financial shortages, lack of government support for people with a mental health condition in the community and insufficient mental health personnel. Research by Yanti and Armiyadi (2020) <sup>[2]</sup> showed that high medication adherence among people with schizophrenia in Aceh Besar is influenced by family support factors for patients undergoing treatment.

Most of the respondents in this study were in the age range of 36-45 years old. Schizophrenia usually begins to be experienced by sufferers at the age of 21, when sufferers face many stressors at this age phase. However, the family usually recognizes the patient's condition too late, so patients under treatment are often older (Fillah & Kembaren, 2022) <sup>[13]</sup>.

The results of this study indicate that most respondents are male (77.1%). Another study conducted by Putra, Widiyono, and Sukmonowati (2021) <sup>[16]</sup> also found that most respondents were male. This is inversely proportional to other studies which found that men tend to be non-adherent in undergoing treatment (Bratha *et al.*, 2020) <sup>[4]</sup>. Antipsychotic drugs work more efficiently in males than in females, and physiological differences between the gender also affect drug action. However, several studies state that there is no significant effect between gender and medication adherence (Refnandes & Almaya, 2021) <sup>[19]</sup>.

Most respondents involved in this study had a high school educational background (77.2%). According to Irman, Patricia, and Srimayenti (2018) <sup>[5]</sup>, education is one-factor influencing patient knowledge of their treatment. When someone has a high educational background, he will know and make efforts to maintain health and avoid relapse (Gustina, Novitayani & Fikriyanti, 2021) <sup>[20]</sup>. The relatively high educational background makes the patient understand the treatment being undertaken and causes an increased sense of adherence to the patient.

Based on the results obtained by this study, most schizophrenic patients received information related to their illness from nurses. Research by Susanti, Paramita, and Antaria (2022) <sup>[3]</sup> stated that health workers, especially in community health care services, have a significant role in patient medication adherence where it is easy for patients to reach health facilities so that patients can meet health workers who act as motivators, counselors and educators for them. Nurses can use several strategies to improve drug adherence to patients, such as providing psychoeducation, showing sincerity and a sense of security, and building trust with patients. The most important strategy is to maintain the relationship built with the patient (Lin, Yen, Hao, Liao & Lin, 2022) <sup>[21]</sup>.

Schizophrenic patients are taking antipsychotics. Most of

the respondents in this study (58.2%) received Haloperidol in their treatment. Haloperidol is one of the typical antipsychotic drugs that can overcome the positive symptoms of schizophrenia. Treatment with typical antipsychotics is more prone to experiencing drug side effects than atypical antipsychotics (Videbeck, 2020) <sup>[22]</sup>.

Drug side effects have a negative relationship with medication adherence (Yu *et al.*, 2021) <sup>[23]</sup>. All respondents in this study experienced side effects from the drug, but each respondent experienced one to two drug side effects. The most common side effect of the drug experienced by respondents was weakness (62.1%). Even so, most respondents had drug adherence in the high category. This shows that mild side effects that many patients do not experience cause patients to adhere to their medicines. In addition, respondents may have received information about the side effects of the antipsychotics they are experiencing because health education regarding drug side effects and how to handle them is critical to increasing medication adherence (Refnandes & Almaya, 2021) <sup>[19]</sup>.

Medication adherence can help reduce the incidence of relapse in schizophrenic patients (Pealealu, Bidjuni & Wowiling, 2018) <sup>[24]</sup>. Schizophrenics will adhere to medication if they feel the benefits of it (Pothimas, Tungpunkom, Kanungpiarn & Hannes, 2021) <sup>[9]</sup>.

## Conclusion

This study showed that 66.7% of schizophrenic outpatients in Aceh Besar were in the high medication adherence category. A high educational background also supports medication adherence in schizophrenic outpatients. Someone with higher education will be more prepared to receive information related to treatment and be able to maintain their health. Therefore, nurses need to provide education related to treatment to patients.

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