

INFORMASI ARTIKEL

Received: February, 28, 2026

Revised: May, 03, 2026

Available online: May, 04, 2026

at: <https://e-jurnal.iphorr.com/index.php/mhc>

Medication adherence and relapse in patients with schizophrenia: A literature review

Venna Rahmanda Putri, Novita Carolia*, Suryadi Islami, Tendry Septa

Fakultas Kedokteran, Universitas Lampung

Corresponding author: *E-mail: novitacarolia01@gmail.com

Abstract

Background: Schizophrenia is a chronic psychiatric disorder with high relapse rates that significantly affect social functioning, quality of life, and healthcare burden. Medication adherence to antipsychotic treatment plays a critical role in maintaining clinical stability and preventing relapse; however, it remains a major challenge in clinical practice.

Purpose: To examine the relationship between medication adherence and relapse among patients with schizophrenia through a narrative review approach.

Method: Literature searches were conducted in Google Scholar, PubMed, NCBI, ScienceDirect, and Elsevier between January and February 2024 using keywords related to medication adherence, schizophrenia, and relapse. Of the 85 identified articles, 8 studies met the inclusion criteria and were analyzed narratively.

Results: The review findings consistently demonstrated that non-adherence to antipsychotic medication was associated with a significantly higher risk of relapse, rehospitalization, and poorer long-term prognosis. Additionally, considerable variability was observed in the definitions and assessment methods of adherence and relapse across studies.

Conclusion: Medication adherence is a key determinant in relapse prevention among patients with schizophrenia and should be a primary focus of long-term clinical management.

Keywords: Medication Adherence; Relapse; Schizophrenia.

INTRODUCTION

Schizophrenia is a chronic and severe mental disorder characterized by disorders in thinking, perception, emotions, and behavior. The disease produces a variety of symptoms, including hallucinations, delusions, and disorganization of thought, which can contribute to the inability to live daily life effectively (Rubio & Kane, 2022). These disorders often appear in late adolescence or early adulthood and can have a significant long-term impact on the social functioning and quality of life of affected individuals. Schizophrenia greatly affects the patient's social functioning and quality of life. Individuals with schizophrenia often experience social isolation, stigma, and difficulties in interpersonal relationships, all of which can worsen

their mental state (Vázquez Morejón, León Rubio, & Vázquez-Morejón, 2023). Research shows that social support, especially from the family, can mitigate these negative impacts (Alhadidi, Abdullah, Tang, Danaee, & Al Hadid, 2021). Without adequate support, patients may experience a more severe decline in quality of life.

The productivity of patients with schizophrenia is often hampered by severe symptoms and the inability to function optimally in the workplace or in social situations. It also has an impact on the burden on families, where family members are faced with emotional and financial strains (Díaz-Fernández, López-Muñoz, & Fernández-Miranda, 2021). Families often have to take on heavy care roles, which can interfere with their well-being (Fitri &

Rahmandani, 2020). The management of schizophrenic patients contributes to a significant burden on the health system. High rates of recurrence require repeated hospitalizations and long-term care, which increases overall health care costs (Faizi & Stahl, 2025). Regular use of antipsychotics has been shown to reduce the frequency of relapses, but adherence to medication is often a challenge (Paton, Okocha, & Patel, 2022). Relapse in schizophrenia refers to a period in which symptoms worsen after previously being in a stable state. This can be caused by a variety of factors, including stress, non-adherence in medication, and a lack of social support (Cristarella, Castillon, Nepveu, & Moride, 2022). Relapse carries serious clinical consequences, including worsening of symptoms, increased hospitalization, and decreased response to previously effective therapies, leading to a poorer long-term prognosis (Restelli, García-Goñi, Lew-Starowicz, Mierzejewski, Silvola, Mayoral-van Son, & Crespo-Facorro, 2020). Studies show that schizophrenic patients have a high risk of experiencing relapse, which can result in long cycles of ineffective treatment and decreased psychosocial functioning (Horikoshi, Miura, Mui, Hikichi, Aono, Hoshino, & Yabe, 2022). Success in preventing relapse is highly dependent on adherence to treatment in which long-term and progressive antipsychotics play an important role (An, Fang, Pi, Zhang, Li, & Ding, 2025). Antipsychotics, both oral and long-term injections, are the main methods in managing schizophrenia. Research shows that long-term injections can improve medication adherence

by reducing the risk of non-adherence that often occurs with oral medications (Cooter, Saluja, Roberts, & Branjerdporn, 2025). Medication adherence is an important factor in preventing recurrence. Non-compliance is a major risk factor that leads to recurrence and worsening of the condition (Farisa, Dineva, & Novitayani, 2024). Some factors that affect adherence include medication side effects, lack of insight into the disease, as well as various cognitive and psychosocial factors such as family support and social stigma (Suliyanti, Adianta, & Negara, 2021).

RESEARCH METHOD

The literature selection process was carried out with a narrative review approach following the PRISMA flow to increase reporting transparency. The search was conducted in January–February 2024 through Google Scholar (n = 30), PubMed (n = 25), NCBI (n = 10), ScienceDirect (n = 12), and Elsevier (n = 8), covering publications in Indonesian and English. The search strategy used a combination of the keywords "medication adherence", "treatment compliance", "schizophrenia", and "relapse" with Boolean operators (AND and OR). The entire process of identifying and selecting articles is done manually without using automated tools. Of the 85 articles identified, duplication was eliminated and title and abstract screening was carried out, followed by full-text assessment, so that 8 articles that met the criteria were obtained and analyzed narratively.

Venna Rahmanda Putri, Novita Carolia*, Suryadi Islami, Tendry Septa

Fakultas Kedokteran, Universitas Lampung
Corresponding author: *E-mail: novitacarolia01@gmail.com

10.56922/mhc.v5i1.2736

RESEARCH RESULTS

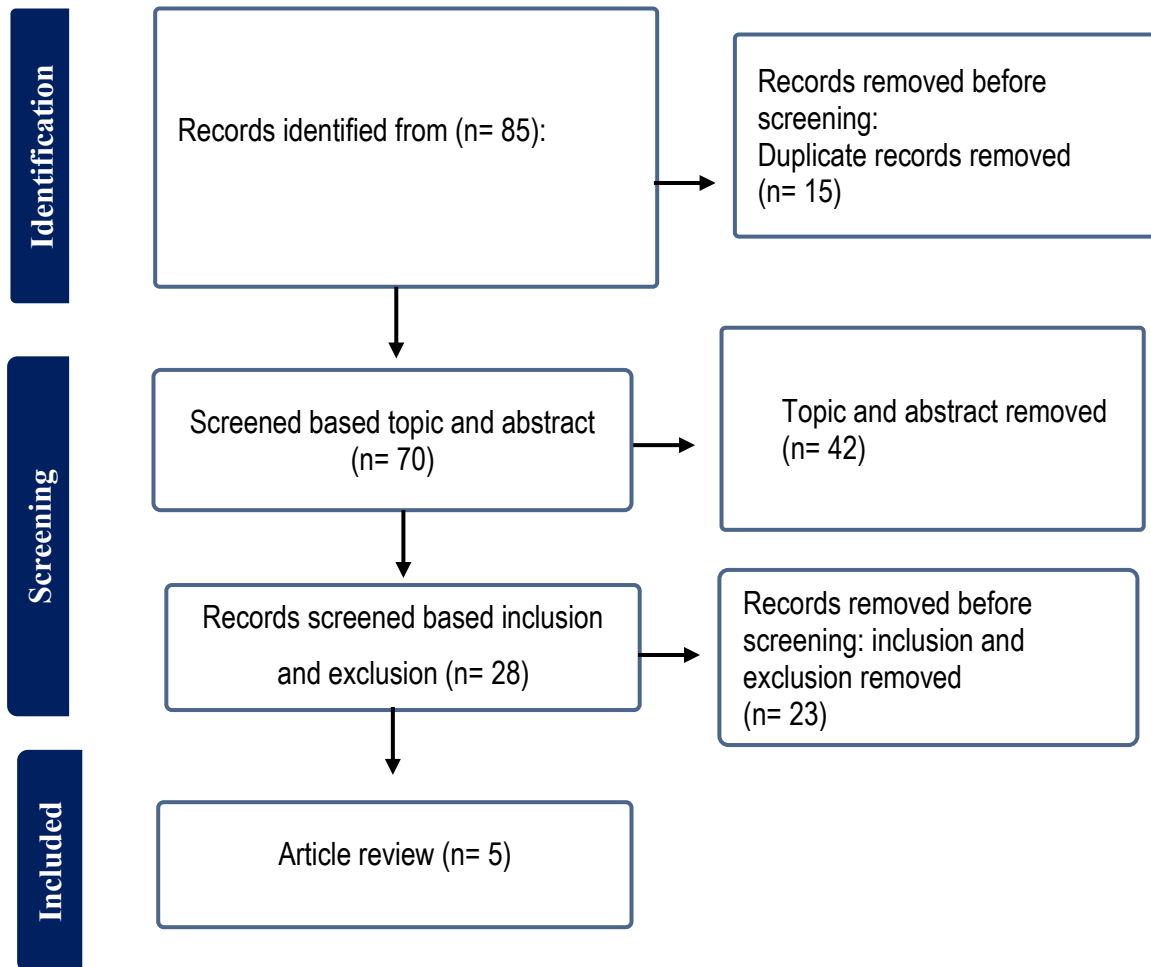


Figure. Diagram Prisma Flow

Venna Rahmanda Putri, Novita Carolia*, Suryadi Islami, Tendry Septa

Fakultas Kedokteran, Universitas Lampung

Corresponding author: *E-mail: novitacarolia01@gmail.com

10.56922/mhc.v5i1.2736

Table. Article Review

(Author & Year) (Country)	Purpose	Method	Results
(Singh et al., 2023) (India)	To sssessing the relationship between medication adherence and relapse in schizophrenic patients	Retrospective observational studies	High adherence to antipsychotics is associated with a significant reduction in recurrence rates and readmission
(Karabulut et al., 2024) (Turkey)	To analyze factors that affect medication adherence in schizophrenic patients	Correlational descriptive studies	Medication adherence was significantly associated with a low incidence of relapse; Stigma and patient attitudes affect adherence
(Sari et al., 2021) (Indonesia)	To knowing the relationship between medication adherence and recurrence incidence	Cross-sectional studies	Patients with low adherence have a higher risk of recurrence than adherence patients
(Lee et al., 2022) (South Korea)	To comparing recurrence rates between oral and injectable long-term antipsychotic users	Observational cohort studies	Long-term use of injectable antipsychotics shows better adherence and lower relapse rate
(Ahmed et al., 2020) (Egypt)	To evaluating the effect of medication non-adherence on schizophrenic relapse	Longitudinal studies	Non-adherence to treatment is a strong predictor of recurrence and worsening of the prognosis

Venna Rahmanda Putri, Novita Carolia*, Suryadi Islami, Tendry Septa

Fakultas Kedokteran, Universitas Lampung

Corresponding author: *E-mail: novitacarolia01@gmail.com

10.56922/mhc.v5i1.2736

DISCUSSION

Adherence in treatment is a key factor that is directly related to the clinical stability of patients with schizophrenia. Research shows that patients who adhere to their treatment regimen are more likely to experience better control of schizophrenia symptoms, which in turn contributes to improved overall quality of life (Indriani, Idrus, & Saputri, 2024). The existence of this clinical stability is not only related to the reduction of symptoms, but also to the prevention of more serious conditions due to symptom exacerbations, such as more frequent hospitalizations or decreased social functioning (Zygmunt, Olsson, Boyer, & Mechanic, 2022). Non-adherence to treatment significantly increases the risk of recurrence in schizophrenic patients. Patients who do not regularly take antipsychotic medications have a much higher chance of experiencing a recurrence of symptoms, which can include more severe hallucinations or delusions (Potkin, Kane, Correll, Lindenmayer, Agid, Marder, & Howes, 2020). Studies show that the relapse rate in patients who do not comply with treatment can be as high as 72%, while in those who do, the rate is much lower (Chatterjee & Chatterjee, 2023). Studies have found significant differences in relapse rates between patients who are adherent to treatment and those who are not. On the one hand, patients who adhere to treatment have a relapse rate of about 20-30%, while patients who do not comply can show a much higher relapse rate, even reaching 70% (Yousuf, Eldous, Ikhlef, Chandrappa, & Abdulla, 2025). These data suggest that medication adherence is an important predictor for preventing recurrence in patients with schizophrenia, and non-adherence can have serious consequences for long-term prognosis (Pandey, Pitakpatapee, Saengphatrachai, Chouksey, Tripathi, & Srivanitchapoom, 2023). Discontinuation of antipsychotic use can have a significant impact on the regulation of neurotransmitters in the brain, which plays an important role in controlling schizophrenia symptoms. Antipsychotics function primarily as dopamine receptor antagonists, reducing excessive dopamine activity, which contributes to positive symptoms such as hallucinations and delusions (Liang, Hu, Zhang, & Fu, 2020). When antipsychotic use is stopped, there can be a rapid increase in dopamine activity, which is associated with a "rebound" or recurrence of symptoms. This is

due to a neurotransmitter imbalance that occurs due to the adaptation of the central nervous system to the presence of drugs, where when the opportunity to neutralize this condition is lost, a bad rebound effect can appear (Anwar, Mustafa, Abdou, Rabie, El-Shiekh, & El-Dessouki, 2025).

Non-adherence to the treatment regimen also contributes to the reappearance of symptoms. Patients who do not adhere to the treatment may experience increased activity of psychosis symptoms, which is a consequence of fluctuations in the levels of neurotransmitters such as dopamine and serotonin (Smithnaraseth, Seeherunwong, Panitrat, & Tipayamongkhogul, 2020). A decrease in the concentration of drugs in the body due to non-compliance affects the neurochemical processes that maintain the mental stability of the patient (Sriboonruang, Phonphairin, Phattananarudee, & Chusiri, 2024). This leads to an exacerbation of old symptoms, as well as the onset of new, more severe symptoms, which are described as part of a long-term cycle of recurrence. The duration of non-compliance in treatment has a direct relationship with the severity of the recurrence experienced by the patient. Research shows that the longer the patient does not adhere to treatment, the more severe the recurrence will be (Li, Xiao, Sun, Zheng, Huang, Wei, & Teng, 2025). Data show that relapses that occur after a prolonged period of non-adherence often require more intensive care and a longer duration of recovery compared to patients who adhere to their medication regimen consistently (Ran, Wang, Lu, Weng, Zhang, Deng, & Lu, 2022). For example, patients who are non-compliant for more than six months may experience more serious impacts on social functioning and mental health compared to patients who are compliant in their treatment (Mlay, Naidu, Ramlall, Mhlungu, Zondi, Lessells, & Tomita, 2024).

Antipsychotics are first-line therapies in the management of schizophrenia, with a choice between oral formulations and long-acting injectables (LAIs). Oral antipsychotics have proven effectiveness, but the patient's non-compliance in following the treatment regimen is often the main reason for the recurrence (Wu, Xiao, Yan, Fang, Wang, Zu, & Qian, 2023). In contrast, LAI offers several advantages, such as a reduction in the frequency of administration and the maintenance of

Venna Rahmanda Putri, Novita Carolia*, Suryadi Islami, Tendry Septa

Fakultas Kedokteran, Universitas Lampung
Corresponding author: *E-mail: novitacarolia01@gmail.com

stable levels of the drug in the blood, which are able to improve adherence and reduce relapse rates (Brasso, Cisotto, Ghirardini, Pennazio, Villari, & Rocca, 2021). Research shows that patients who use LAI tend to experience better clinical outcomes compared to those who use only oral antipsychotics, especially in the context of maintaining steadiness and symptom control (Day, Ehde, Burns, Ward, Friedly, Thorn, & Jensen, 2020). Effective management of schizophrenia often requires a combination approach between pharmacological and psychosocial therapies. This combination can include cognitive behavioral therapy, education for patients and families, and integrated social support to improve adherence and clinical outcomes (Luo, Liu, Lu, Cheng, Xu, He, & Wang, 2024). Psychosocial therapy serves to improve patients' understanding of their illness, address stigma, and support family involvement in the recovery process, thereby reducing the risk of recurrence (Mlay, Naidu, Ramlall, Patankar, Israel, Esquivel, & Manuel, 2025). Research shows that patients who engage in community support programs or family-based interventions show higher levels of adherence and better clinical outcomes.

Patient and family education has a crucial role to play in improving medication adherence and reducing recurrence rates. By providing adequate information about mental health conditions, the importance of adherence, and the consequences of non-compliance, patients and caregivers can improve their attitudes toward treatment. Research shows that educational programs that involve home visits by health workers or group counseling can improve understanding and reduce stigma related to schizophrenia, thereby contributing to increased compliance. This suggests that effective education-based interventions may be a pillar in minimizing the risk of recurrence among schizophrenic patients. Medication adherence refers to the extent to which patients follow the recommendations given by their healthcare provider regarding their treatment, particularly in the context of mental illnesses such as schizophrenia. However, the definition of compliance varies depending on the measurement method used and the context of the study.

Compliance measurement methods include several approaches. Self-report is a method that relies on patients' own reports regarding how often

they take medication according to the prescription; although it is easy and practical, this method may not always be accurate due to bias that can affect patients' honesty in reporting. Medical records involve the use of documented data on patients' medication use; this method is more objective than self-reporting, but it has limitations in terms of continuity of recording and data accessibility. In addition, some studies use standardized scales to measure adherence, such as the Medication Adherence Report Scale (MARS) and the Morisky Medication Adherence Scale (MMAS); these scales provide quantitative values that facilitate statistical analysis, although they may still be influenced by subjective responses.

Relapse can also be defined in various ways depending on the context. Indicators of relapse in patients with schizophrenia often include hospitalization due to exacerbation of psychotic symptoms, the use of symptom measurement tools such as the Positive and Negative Syndrome Scale (PANSS) to identify changes or worsening symptoms, and perceptions of relapse based on patients or their families, which can influence attitudes toward treatment and adherence (Sharif, Ghasemzadeh, Mohebbi, & Ghasemzadeh, 2025).

The clinical implications of literature findings indicate that long-term monitoring of medication adherence is essential in managing patients with schizophrenia and other mental disorders, particularly to prevent relapse. Regular monitoring can help identify high-risk patients and support the implementation of appropriate preventive strategies. Identifying patients at high risk of relapse is an important first step in maintaining clinical stability, with several contributing factors including a history of previous relapse, poor medication adherence, and limited social support from family or the surrounding environment. Systematic monitoring of adherence, along with evaluation of risk factors, is an effective approach to supporting long-term interventions for this patient group.

In the management of patients with schizophrenia, several strategies can be applied to prevent relapse. Education and support-based interventions, such as integrated family education and support programs, have been shown to be effective in improving adherence. The use of technology, including digital tools and health

Venna Rahmanda Putri, Novita Carolia*, Suryadi Islami, Tendry Septa

Fakultas Kedokteran, Universitas Lampung
Corresponding author: *E-mail: novitacarolia01@gmail.com

applications, can provide treatment reminders, assist patients in managing symptoms, and facilitate communication between patients and healthcare providers. An integrated approach that combines pharmacological therapy with psychosocial interventions can strengthen adherence and reduce the risk of relapse; approaches such as group therapy, counseling, and support from healthcare professionals are important to ensure ongoing adherence and monitoring (Balikai, Rentala, Mudakavi, & Nayak, 2022).

CONCLUSION

Schizophrenia is a chronic mental disorder with a high recurrence rate and has a major impact on the quality of life of patients, families, and the health system. The literature shows that adherence to antipsychotic treatment plays an important role in maintaining clinical stability and lowering the risk of recurrence. Medication nonadherence is consistently associated with increased rates of relapse, readmission, as well as worsening of the long-term prognosis. A variety of factors affect adherence, including patient characteristics, medication side effects, social support, and access to health services. In addition, differences in the definitions and methods of assessing compliance and recurrence between studies indicate methodological heterogeneity that can affect the interpretation of results. These findings confirm the importance of continuous monitoring of adherence, the use of appropriate therapeutic strategies, and an integrated approach in efforts to prevent recurrence in schizophrenia patients.

REFERENCES

- Alhadidi, M., Abdullah, K. L., Tang, L. Y., Danaee, M., & Al Hadid, L. A. R. (2021). Knowledge about schizophrenia, insight into illness, and internalized stigma and their associated factors among people diagnosed with schizophrenia in a long-term care facility. *Perspectives in psychiatric care*, 57(1).
- An, Y., Fang, G., Pi, Z., Zhang, Y., Li, W., & Ding, J. (2025). Cost-utility of aripiprazole once-monthly versus paliperidone palmitate once-monthly injectable for schizophrenia in China. *Plos one*, 20(6), e0317393.
- Anwar, A., Mustafa, A. M., Abdou, K., A. Rabie, M., El-Shiekh, R. A., & El-Dessouki, A. M. (2025). A comprehensive review on schizophrenia: epidemiology, pathogenesis, diagnosis, conventional treatments, and proposed natural compounds used for management. *Naunyn-Schmiedeberg's Archives of Pharmacology*, 1-25.
- Balikai, S. I., Rentala, S., Mudakavi, I. B., & Nayak, R. B. (2022). Impact of nurse-led medication adherence therapy on bipolar affective disorder: A randomized controlled trial. *Perspectives in Psychiatric Care*, 58(4), 2676-2686.
- Brasso, C., Cisotto, M., Ghirardini, C., Pennazio, F., Villari, V., & Rocca, P. (2021). Accuracy of self-reported adherence and therapeutic drug monitoring in a psychiatric emergency ward. *Psychiatry Research*, 305, 114214.
- Chatterjee, I., & Chatterjee, S. (2023). Investigating the symptomatic and morphological changes in the brain based on pre and post-treatment: A critical review from clinical to neuroimaging studies on schizophrenia. *IBRO Neuroscience Reports*, 14, 366-374.
- Cooter, A., Saluja, S., Roberts, S., & Branjerdporn, G. (2025). Pharmacotherapy profile for mothers with schizophrenia and bipolar affective disorder in a psychiatric mother-baby unit. *Journal of Pharmacy Practice and Research*, 55(1), 36-45.
- Cristarella, T., Castillon, G., Nepveu, J. F., & Moride, Y. (2022). Impact of schizophrenia relapse definition on the comparative effectiveness of oral versus injectable antipsychotics: A systematic review and meta-analysis of observational studies. *Pharmacology Research & Perspectives*, 10(1), e00915.

Venna Rahmanda Putri, Novita Carolia*, Suryadi Islami, Tendry Septa

Fakultas Kedokteran, Universitas Lampung
Corresponding author: *E-mail: novitacarolia01@gmail.com

10.56922/mhc.v5i1.2736

Medication adherence and relapse in patients with schizophrenia: A literature review

- Day, M. A., Ehde, D. M., Burns, J., Ward, L. C., Friedly, J. L., Thorn, B. E., & Jensen, M. P. (2020). A randomized trial to examine the mechanisms of cognitive, behavioral and mindfulness-based psychosocial treatments for chronic pain: study protocol. *Contemporary Clinical Trials*, 93, 106000.
- Díaz-Fernández, S., López-Muñoz, F., & Fernández-Miranda, J. J. (2021). Psychosocial and pharmacological approaches for improving treatment adherence and outcomes in people with severe schizophrenia: a 10-year follow-up. *Journal of Psychiatric Practice*, 27(6), 417-426.
- Faizi, A., & Stahl, S. M. (2025). Medications for psychosis in people with schizophrenia: what happens if you take them and what happens if you don't?. *CNS spectrums*, 30(1), e81.
- Farisa, A., Dineva, F., & Novitayani, S. (2024). Korelasi Antara Kepatuhan Minum Obat Dan Kualitas Hidup Pada Pasien Skizofrenia Rawat Jalan. *Indonesian Journal of Professional Nursing*, 5(1), 55-62.
- Fitri, A., & Rahmandani, A. (2020). Pengalaman Keterlibatan Ayah Dalam Merawat Anak Dengan Skizofrenia: Interpretative Phenomenological Analysis. *Jurnal Empati*, 9(3), 204-211.
- Horikoshi, S., Miura, I., Mui, A., Hikichi, T., Aono, T., Hoshino, K. Y., & Yabe, H. (2022). Second-Generation Antipsychotic Long-Acting Injection Reduced the Time of Restrictive Interventions in Patients With Schizophrenia: Retrospective, A 4-Year Mirror-Image Study. *Journal of Clinical Psychopharmacology*, 42(6), 526-529.
- Indriani, C., Idrus, M., & Saputri, A. (2024). Faktor-Faktor Yang Berhubungan Dengan Penatalaksanaan Patuh Minum Obat Pasien Skizofrenia Di Rumah Sakit Jiwa Kota Kendari. *Jurnal Anoa Keperawatan Mandala Waluya*, 3(1), 26-34.
- Li, X., Xiao, S., Sun, Y., Zheng, Y., Huang, J., Wei, N., & Teng, Y. (2025). Medication adherence and needs among patients with schizophrenia in China: a qualitative study. *BMJ open*, 15(1), e092073.
- Liang, X., Hu, X., Zhang, X., & Fu, H. (2020). ASF (a Compound of Traditional Chinese Medicine) in the treatment of patients with alcohol dependence: Study protocol of a randomized, double-blinded, placebo-controlled clinical trial. *Medicine*, 99(52), e23899.
- Luo, X., Liu, F., Lu, J., Cheng, Y., Xu, X., He, X., & Wang, J. (2024). Health economics study of paliperidone palmitate in the treatment of schizophrenia: a 12-month cohort study. *BMC psychiatry*, 24(1), 439.
- Mlay, J. P., Naidu, T., Ramlall, S., Mhlungu, S. S., Zondi, M., Lessells, R., & Tomita, A. (2024). Risk factors and strategies for relapse prevention among individuals living with serious mental illness in South Africa: Qualitative inquiry from patients' and caregivers' perspectives. *PLoS One*, 19(8), e0309238.
- Mlay, J. P., Naidu, T., Ramlall, S., Patankar, K., Israel, K., Esquivel, L., & Manuel, J. I. (2025). Strategies for relapse prevention among people with schizophrenia in KwaZulu-Natal Province, South Africa: Healthcare providers' perspectives. *Plos one*, 20(3), e0316313.
- Pandey, S., Pitakpatapee, Y., Saengphatrachai, W., Chouksey, A., Tripathi, M., & Srivanitchapoom, P. (2023). Drug-induced movement disorders. In *Seminars in Neurology* (Vol. 43, No. 01, pp. 035-047). Thieme Medical Publishers, Inc.
- Paton, C., Okocha, C. I., & Patel, M. X. (2022). Can the use of long-acting injectable antipsychotic preparations be increased in routine clinical practice and the benefits realised?. *Therapeutic Advances in Psychopharmacology*, 12, 20451253211072347.

Venna Rahmanda Putri, Novita Carolia*, Suryadi Islami, Tendry Septa

Fakultas Kedokteran, Universitas Lampung
Corresponding author: *E-mail: novitacarolia01@gmail.com

10.56922/mhc.v5i1.2736

Medication adherence and relapse in patients with schizophrenia: A literature review

- Potkin, S. G., Kane, J. M., Correll, C. U., Lindenmayer, J. P., Agid, O., Marder, S. R., & Howes, O. D. (2020). The neurobiology of treatment-resistant schizophrenia: paths to antipsychotic resistance and a roadmap for future research. *NPJ schizophrenia*, 6(1), 1.
- Ran, M. S., Wang, Y. Z., Lu, P. Y., Weng, X., Zhang, T. M., Deng, S. Y., & Lu, L. (2022). Effectiveness of enhancing contact model on reducing stigma of mental illness among family caregivers of persons with schizophrenia in rural China: A cluster randomized controlled trial. *The Lancet Regional Health–Western Pacific*, 22.
- Restelli, U., García-Goñi, M., Lew-Starowicz, M., Mierzejewski, P., Silvola, S., Mayoral-van Son, J., & Crespo-Facorro, B. (2020). Cost of relapse management in patients with schizophrenia in Italy and Spain: comparison between lurasidone and quetiapine XR. *Clinical drug investigation*, 40(9), 861-871.
- Rubio, J. M., & Kane, J. M. (2022). The pharmacological treatment of schizophrenia: How far have we come?. *Psychiatry and Clinical Neurosciences Reports*, 1(2), e13.
- Sharif, N. V., Ghasemzadeh, P., Mohebbi, N., & Ghasemzadeh, S. (2025). Improved medication adherence and health literacy in parents of children with ADHD: Effects of a targeted educational program. *Exploratory Research in Clinical and Social Pharmacy*, 100634.
- Smithnaraseth, A., Seeherunwong, A., Panitrat, R., & Tipayamongkhogul, M. (2020). Hospital and patient factors influencing the health status among patients with schizophrenia, thirty days after hospital discharge: multi-level analysis. *BMC psychiatry*, 20(1), 592.
- Sriboonruang, T., Phonphairin, W., Phattananudee, S., & Chusiri, S. (2024). Effectiveness of pharmaceutical care for improving medication-related quality of life and adherence to treatment among people living with schizophrenia: a randomised controlled trial. *Journal of Pharmacy Practice and Research*, 54(3), 217-227.
- Suliyanti, N. W., Adianta, I. K. A., & Negara, I. G. N. M. K. (2021). Hubungan Dukungan Keluarga dengan Kepatuhan Kunjungan Kontrol Rawat Jalan pada Pasien Skizofrenia. *Jurnal Riset Kesehatan Nasional*, 5(1), 59-65.
- Vázquez Morejón, A. J., León Rubio, J. M., & Vázquez-Morejón, R. (2023). Sources of social support and clinical and functional evolution of people with schizophrenia. *International Journal of Social Psychiatry*, 69(6), 1377-1387.
- Wu, T., Xiao, X., Yan, S., Fang, Y., Wang, M., Zu, F., & Qian, R. (2023). Digital health interventions to improve adherence to oral antipsychotics among patients with schizophrenia: a scoping review. *BMJ open*, 13(11), e071984.
- Yousuf, S. M., Eldous, A. Z. K., Ikhlef, F. W., Chandrappa, N. S. K., & Abdulla, M. A. Y. A. (2025). Low-Dose Clozapine Reduces Aggression in Violent Substance Use Disorder Patients at a Secure Rehabilitation Center. *Case Reports in Psychiatry*, 2025(1), 9578923.
- Zygmunt, A., Olfson, M., Boyer, C. A., & Mechanic, D. (2022). Interventions to improve medication adherence in schizophrenia. *American journal of Psychiatry*, 159(10), 1653-1664.

Venna Rahmanda Putri, Novita Carolia*, Suryadi Islami, Tendry Septa

Fakultas Kedokteran, Universitas Lampung
Corresponding author: *E-mail: novitacarolia01@gmail.com

10.56922/mhc.v5i1.2736