STM JOURNALS

International Journal of
Evidence Based Nursing and Practices

ISSN: 3048-9431
Volume 3, Issue 1, 2025
January–June
DOI (Journal): 10.37591/IJEBNP

https://journals.stmjournals.com/ijebnp

Review IJEBNP

Strategies to Improve Drug Compliance Among Patients with Mental Disorders: A Systematic Review

Jakkulin Lilly Priya C.*

Abstract

Background: *Mental disorders constitute a public health concern, accounting for 13% of the global disease burden. Pharmacotherapy along with psycho education is primary line of treatment and maintaining drug compliance is crucial.* ***Aim:*** *The aim of this systematic review was to summarize the strategies to improve drug compliance among patients with mental disorders, identify which tools are most frequently used to measure strategies to improve drug compliance among patients with mental disorders and report on outcomes of strategies to improve drug compliance among patients with mental disorders.* ***Method:*** *In accordance with PRISMA guidelines, we conducted a search for articles indexed in PubMed, PsycINFO, Web of Science, and CINAHL databases using a combination of keywords such as "Strategies" AND "Drug Compliance" OR "Mental Disorders".* ***Results:*** *Five empirical studies were identified as pertinent to our research. Various tools were employed to assess strategies aimed at improving drug compliance in patients with mental disorders. The findings indicated that factors such as gender, education level, marital status, occupation, type of medication prescribed, patient insight, complex medication regimens, delayed onset of effects, and the unavailability of medication played a significant role in influencing drug compliance. The motivational interviewing is to improve drug compliance in incentivizing, motivating and maintaining the change in people's behavior and cognitive-behavioral approach determinants, the lack of compliance like lack of insight and rejection of treatment, and dissatisfaction with medication.* ***Conclusions:*** *This review underlines the strategy to improve drug compliance among mental disorders patients with motivational interviewing and cognitive-behavioral approach. Enhancing medication adherence in individuals with mental illnesses has the potential to reduce both the morbidity and the suffering experienced by patients and their families.*

Keywords: Strategies, drug compliance, mental disorders, medication, psycho education

INTRODUCTION

Mental disorders are frequent, affecting more than 25% of the population at some point in their lives. At least one member of our family is likely to suffer from a behavioral or mental condition. Family members of individuals with mental illnesses often experience significant distress. The family faces financial hardship as a result of medical expenditures and the patient's economic dependency, as well as disruptions in household functioning, a reduction in social activities, and a change in relationships with friends and relatives as a result of the caregiver's unreasonable expectations. Medications can help with a variety of mental illnesses and diseases. They can help to alleviate symptoms and prevent psychiatric relapses [1]. Patient compliance refers to an individual's ability and willingness to follow through on health-care experts' instructions, such as taking the prescribed medication on time, attending clinic

*Author for Correspondence
Jakkulin Lilly Priya C.
E-mail: jakkulinmc@gmail.com

Assistant Professor, College of Nursing, Pondicherry Institute of Medical Sciences, Ganapathychettykulam, Puducherry, India

Received Date: December 29, 2024
Accepted Date: January 28, 2025
Published Date: February 13, 2025

Citation: Jakkulin Lilly Priya C. Strategies to Improve Drug Compliance Among Patients with Mental Disorders: A Systematic Review. International Journal of Evidence Based Nursing and Practices. 2025; 3(1): 74–81p.

appointments on time, and following up on follow-ups [2]. The ratio between observed treatment behaviour and provided treatment criteria is known as compliance [3]. Motivational interviewing and treatment adherence therapy are two interventions that can help with therapeutic adherence [4]. So, psychiatric diseases constitute a public health concern, accounting for 13% of the global disease burden. Schizophrenia and bipolar disorders are severe serious mental diseases that afflict around 23 million people globally and 60 million people worldwide, respectively. Pharmacotherapy, along with psychoeducation, is often the primary line of treatment for these major psychiatric diseases; thus, maintaining drug compliance is crucial.

This review explores to provide a summary of strategies to improve drug compliance among patients with mental disorders. Thus, the main aim of this systematic review was to:

1. Summarize the strategies to improve drug compliance among patients with mental disorders;
2. Identify which tools are most frequently used to measure strategies to improve drug compliance among patients with mental disorders; and
3. Report on outcomes of strategies to improve drug compliance among patients with mental disorders.

MATERIAL AND METHOD

Study selection and data collection processes

This review was conducted following PRISMA guidelines. A thorough search of electronic databases, including PubMed, PsycINFO, Web of Science, and CINAHL, was carried out as part of a systematic review to evaluate the outcomes of strategies aimed at improving drug compliance in patients with mental disorders. The search involved using a combination of the following free-text terms: "Strategies" AND "Drug Compliance" OR "Mental Disorders". In the initial phase, duplicate records were removed, and reference lists of relevant studies were checked to identify additional articles that met the inclusion criteria. Following this, titles and abstracts were reviewed by the research team to select studies that fulfilled the inclusion requirements.

Eligibility criteria

The studies included in this review adhered to the following criteria:

1. Focused on strategies to enhance drug compliance in patients with mental disorders;
2. Were intervention studies aimed at improving drug compliance among such patients;
3. Employed quantitative research methods, including non-intervention or pre-post comparison groups, to assess strategies for improving drug compliance; and
4. Were published in peer-reviewed journals containing original research articles.

Studies were excluded if they:

1. Did not address drug compliance in mental disorders;
2. Were qualitative studies, review articles, case reports/series, or theses/dissertations; and
3. Were not published in English.

Data Extraction

A data extraction tool was employed to systematically capture information from the included studies, covering the following aspects:

1. Study details, including the author, study design, year, and the country where the data were collected;
2. Characteristics of patients with mental disorders, such as the number of patients and their age;
3. Instruments used to assess drug compliance; and
4. Key findings.

Study Quality Assessment

The quality of the studies was evaluated using quality assessment tools from:

1. The STROBE reporting guidelines for observational studies, and
2. The critical review form for quantitative studies.

Each question was rated as fully answered (score =2), partially answered (score =1), or imprecisely answered (score =0). A total score was calculated for each study, and studies were classified as poor (total score below 12), fair (total score between 13 and 24), good (total score between 25 and 30), or excellent (total score between 30 and 36) based on the scores obtained. The assessments were conducted independently by third-party reviewers.

RESULTS

Our search strategy resulted in the identification of 332 studies (PubMed: n=141, PsycINFO: n=101, Web of Science: n=71, and CINAHL: n=19). After removing duplicates, we were left with 195 potential articles. During the screening phase, the titles and abstracts of these studies were reviewed, leading to the exclusion of 137 studies that were not suitable for inclusion in this review. This left 36 studies for the eligibility phase. Of these, 31 studies were excluded for failing to meet the selection criteria. Ultimately, five empirical studies were found to be relevant to our research (Table 1). The PRISMA flow diagram offers a more detailed overview of the study selection process (Figure 1).

Study Characteristics

Table 1 provides a summary of the key methodological and general characteristics of all the studies reviewed. These of the included studies had been conducted in India and Egypt.

Characteristics of Mental Disorders Patients

In these five studies, the total number of mental disorders patients were 1035 mental disorders patients and year of study were first year (170); second year (199); third year (245); fourth year (331). In these five studies, 524 were mental disorders patients. The ages of mental disorders patients were between 18 to 65 years.

Measuring Scale Used in Mental Disorders Patients

This review of measuring scale used in mental disorders patients showed by Subhashini and Gopal [5] and Devi *et al.* [2] used the structured questionnaire; Boorla and Srinivasa investigated Hogan's drug attitude inventory [6]; Harfush and Gemeay adopted Multidimensional perceived social support scale (MSPSS) and Drug attitude inventory (DAI) [7]; Gopalan and Kumar administered multidimensional scale of perceived social support and unawareness of mental disorder [3].

Outcomes of Strategies to Improve Drug compliance Among Patients with Mental Disorders

The selected studies reported the strategies to improve drug compliance among patients with mental disorders. Subhashini and Gopal found that 57% were women, 40% were in the 20–40 years age group, and 36% had a lower level of education [5]. All participants were using multiple medications. Of the sample, 26% were diagnosed with depression, while 20% had Bipolar Affective Disorder (BPAD). This study found that all patients had complained about medication. All participants (100%) believed that drug prescribing complexity, delayed onset of action, and drug unavailability were major contributors to psychotropic drug noncompliance. In cross-sectional study, Devi *et al.* showed that non-compliance was more common among men (55.3%), coolies/day laborers (33.1%) and the unemployed (31.6%) [2]. The major pharmacological factors affecting compliance with intake of psychotropic drugs were found to be: Adverse drug reactions due to drug (33.7%), longer treatment duration (18.1%), and unpalatability (25.6%). Boorla and Srinivasa reported that patients with schizophrenia had a compliance rate of 36%, while bipolar patients had a compliance rate of 82% [6]. In schizophrenia patients, marital status (66.6%) (p=0.0086), urban domicile (65%) (p=0.011), diagnosis, fear of relapse of illness (71.43%) (p=0.035224), presence of stigma (57.5%) (p=0.017), insight (81.81%) (p=0.000699), family history of mental illness (80%) (p=0.0307), and comorbid chronic medical conditions (93.33%) were found. Compliance was connected with disease-related characteristics such as fear of relapse (97%) (p=0.000), insight (70.73%) (p=0.0342), illness duration less than 5 years (72.41%) (p=0.005), and in patients over 45 years of age (p=0.01977) (45%). Harfush and Gemeay found that 74.3% of patients had poor social support and only 21.5% of them had good medication compliance [7]. There was a

statistically significant correlation between perceived social support and medication use. Gopalan and Kumar showed that gender, education, marital status, occupation, and medications administered were significantly related to compliance ($p<0.001$) [3].

Therefore, interventions to improve drug compliance were needed. Motivational interviewing are a psychotherapeutic approach that aims to help people identify and deal with their potential and current problems [8]. The way of dealing with the patient is based on a number of essential principles: building a cooperative relationship between patient and doctor, evoking the subject's inner motivations and respecting his autonomy.

Therefore, the use of motivational interviewing as an intervention is to improve drug compliance in patients with schizophrenia rests on its effectiveness in stimulating, motivating, and sustaining people's behavior change. Drug compliance therapy is an individual intervention with a cognitive-behavioral approach [9]. It is based on an empirical model that classifies the determinants of non-compliance into three categories which are: lack of insight into and rejection of treatment, dissatisfaction with medication, and lack of cognitive skills required to correctly administer pharmacological treatment; and it includes an intervention module for each of them which are motivational talks, medication adjustment and behavioral training techniques [10].

Table 1. Participant characteristics.

Authors (year)	Type of study design (Nation)	Number of mental disorders patients (n)	Age of mental disorders patients	Measuring scale	Findings
Subhashini and Gopal (2020) [5]	Cross-sectional study (India)	30	20–>60	Structured Questionnaire Scale	About 26% suffered from depression and 20% from BPAD. All patients complained about the drug.
Devi *et al. (2020)* [2]	Cross-sectional study (India)	200	18–60	Structured Questionnaire Scale	The major pharmacological factors affecting compliance with intake of psychotropic drugs are un-palatability (25.6%), adverse drug reactions due to drug (33.7%), longer treatment duration (18.1%).
Boorla and Srinivasa (2018) [6]	Cross-sectional study (India)	100	18–>45	Hogan's drug attitude inventory scale	In schizophrenia patients, compliance was significantly associated with presence of stigma (57.5%), insight (81.81%), comorbid chronic medical conditions (93.33%) and presence of substance abuse (83.33%).
Harfush and Gemeay (2017) [7]	Cross-sectional study (Egypt)	144	18–60	Multidimensional perceived social support scale (MSPSS) and Drug attitude inventory (DAI) scale	About 74.3% had a poor social support and 21.5% had good medication compliance.
Gopalan and Kumar (2016) [3]	Cross-sectional study (India)	50	18–65	Multidimensional scale of perceived social support and Unawareness of Mental Disorder	Gender, education, marital status, occupation, and medications administered were significantly related to compliance ($p<0.001$).

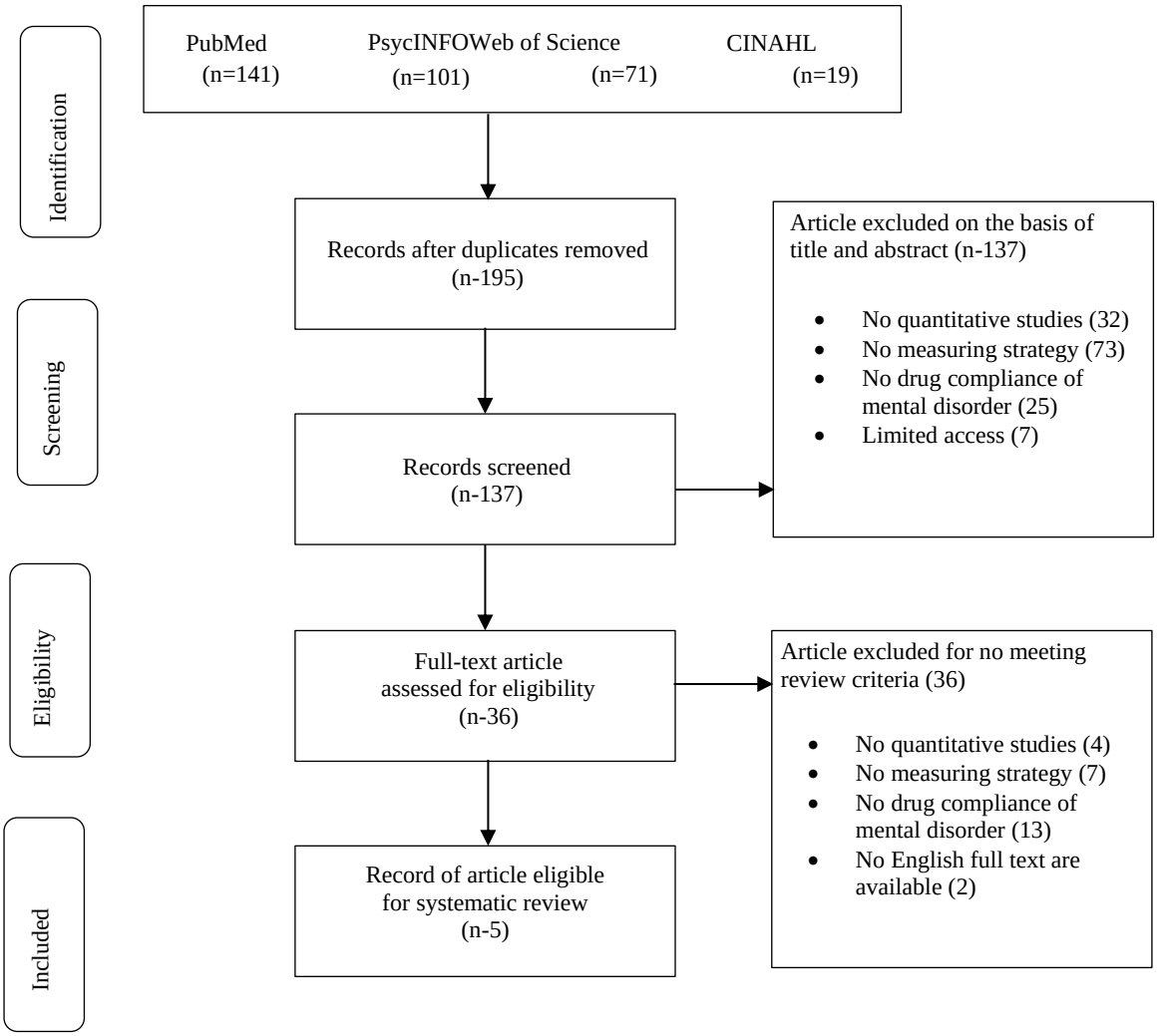

Figure 1. PRISMA flow diagram.

DISCUSSION

The primary goal of this review was to examine strategies for improving drug compliance in patients with mental disorders. The quality assessment of the reviewed studies indicated that they met most of the necessary criteria, including topic relevance, methodological rigor, and the analysis of results, with the impact being deemed positive. The articles reviewed highlighted various strategies aimed at enhancing drug compliance among patients with mental disorders [11–17].

All were taking more than one medication. About 26% suffered from depression and 20% from BPAD. All patients complained about the drug. All participants (100%) believed that drug prescribing complexity, delayed onset of action, and drug unavailability were major contributors to psychotropic drug noncompliance. Improving medication compliance in the mentally ill has the potential to reduce morbidity and suffering for patients and their families [5]. Supportively, non-adherence (MEMS 0.08) was observed in 26.4% of patients at 4 weeks and 37.7% at 24 weeks. There was a negative correlation between medication adherence, assessed 4 weeks after discharge, and the difference score of the Contour Drawing Rating Scale ($r=-0.282$, $p<0.05$). A positive correlation was found between medication adherence assessed 24 weeks after discharge and the Drug Attitude Inventory ($r=0.383$, $p<0.01$). About 34.1% of the patients did not adhere to the medication. In addition, cross-sectional study showed that males (55.3%), coolies/daily wage laborers (33.1%), and the jobless were the groups with the highest levels of noncompliance (31.6%). The most important pharmacological factors influencing psychotropic drug compliance: Adverse medication reactions (33.7%), unpalatability (25.6%), and

prolonged treatment duration were all factors (18.1%) [18–24]. Adherence to medicine is a typical issue among psychiatric patients. The most common pharmacological factor impacting drug compliance is adverse drug responses [2]. Similarly, Barkhof *et al*. [25]; Schulze *et al*. [22]; El-Mallakh P. al., [26] and Steinkamp *et al.* [27] described as participants in the intervention group were significantly more likely to be medication-adherent than participants in the control group at 6 months (odds ratio =4.11, p=0.007). The superiority of the intervention was demonstrated in months 4 to 6. In the study, Boorla and Srinivasa reported that the percentage of compliance was 36% in patients with schizophrenia and 82% in bipolar patients [6]. In schizophrenia patients, compliance was significant with marital status (66.6%) (p=0.0086), urban location (65%) (p=0.011), diagnosis, fear of disease recurrence (71.43%) (p=0.035224) and attendance associated stigma (57.5%) (p=0.017), insight (81.81%) (p=0.000699), family history of mental illness (80%) (p=0.0307), comorbid chronic diseases (93.33%) (p=0.004), and presence of substance abuse (83.33%) (p=0.00001). In bipolar patients, compliance was significant with disease-related factors such as fear of recurrence (97%) (p=0.000), insight (70.73%) (p=0.0342), disease duration less than 5 years (72.41%) (p=0.005) and in patients in the age group over 45 years (45%) (p=0.01977) [28]. The factors affecting compliance in schizophrenia and bipolar disorder have been determined. The study emphasizes the need for psychological education about the nature of the disease and the length of treatment, and improving community services for the patient. Supportively, Mathan *et al*. [29] showed the greater awareness of illness (insight), positive attitude toward medication, previous history of medication adherence, less severe psychotic symptoms, and social support, types of atypical antipsychotics, as well as self-efficacy, general health status, gender men, lower socioeconomic status, living alone, length of illness, drug abuse, education level, severity of illness (for example, being in the acute phase), participation in mental health services, health facilities, and marital status. Psychoeducation of patients and their families by expanding their awareness of illness and treatment has implications for clinical practice.

In the study, Harfush and Gemeay reported that 74.3% of patients had poor social support and only 21.5% of them had good medication compliance [7]. There was a statistically significant correlation between perceived social support and medication use. Developing a social skills training program for patients with psychiatric disorders aimed at teaching them how to get help and support from family, friends and significant others. Supportively, Stentzel *et al*. [12]; Abdisa *et al*. [13]; El-Mallakh and Findlay [26]; Deng *et al*. [21]; and Zygmunt *et al*. [30] showed that Older age (OR 1.02, 95% CI 1.011–1.024, p<0.0001), employment (OR 2.46, 95% CI 1.893–3.206, p<0.0001), higher global functioning (overall measure of how patients are doing) (OR 1.02, 95% CI 1.012–1.028, p<0.0001), having social support (OR 1.02, 95% CI 1.013–1.026, p 0.0001), and intake of typical antipsychotics (female) was a negative factor (OR 0.73, 95% CI 0. 625–0.859, p=0.0001). Intervention options for mental health consumers with schizophrenia must be adapted to their specific requirements. Gopalan and Kumar showed that sex, education status, marital status, occupation, and drugs administered had significant relationships with compliance [3]. Supportively, some studies showed that female sex (adjusted odds ratio (AOR) 2.34; 95% confidence interval (CI) 1,453.74), tertiary education (AOR 2.69; 95% CI 1, 464.85), living in family (AOR 2.57; 95% CI 1, 664.58) and shorter treatment duration (AOR 1.82; 95% CI 1, 212.84) were among the variables associated with better adherence to therapy.

Finally, our study reveals the scarcity of published studies on drug compliance techniques for individuals with mental illnesses. Additional research in this area would be valuable to assess the effectiveness of efforts aimed at improving drug compliance among individuals with mental health issues. There is also a lack of data on follow-up assessments and the transferability and generalizability of drug compliance strategies for patients with mental illnesses. Although qualitative studies offer important insights in this field, they were excluded from this review, as their findings cannot be generalized to larger populations with the same level of reliability as quantitative research [30, 31].

CONCLUSION

Our review shows that strategies to improve drug compliance among mental disorders patients with motivational interviewing and cognitive-behavioral approach. Enhancing medication adherence in

individuals with mental illnesses has the potential to decrease both the morbidity and distress experienced by patients and their families.

REFERENCES

1. Nalini S, Lisy Joseph, Santhi V. Medication Adherence among Patients with Mental Illness Attending Psychiatric OPD & Ward in a Tertiary Hospital at South India. Indian J Public Health Res Dev. 2020; 11(11): 188–194.
2. Devi MR, Prakash M, Ramya JE. Pharmacological factors influencing drug compliance among patients taking psychotropic drugs – A cross-sectional study. Natl J Physiol Pharm Pharmacol. 2020; 10(11): 966–969.
3. 8Gopalan MR, Vidhu Kumar K. Study of factors affecting drug compliance in schizophrenia-cross sectional survey. Int J Med Res Rev. 2016; 4(9): 1520–1530.
4. Marcel Gratacós Torras, Esther Pousa Tomàs. Interventions to improve therapeutic adherence in subjects with schizophrenia. Psychologist Papers. 2018; 39(1): 31–39.
5. Subhashini KR, Sindhu Gopal. Drug compliance and factors affecting it among patients treated with oral psychotropic drugs in psychiatric OPD of a selected tertiary care hospital. J Med Sci Clin Res. 2020; 8(9): 98–102.
6. Boorla V, Srinivasa S, A study to assess factors affecting drug-compliance in patients with schizophrenia and bipolar disorder. Telangana J Psychiatry 2018; 4(1): 16–21.
7. Souzan Abd El-Menem Abd El-Ghafar Harfush, Essmat Mohamed Gemeay. Perceived Social Support and Medication Compliance among Patients with Psychiatric Disorders. Int J Novel Res Healthc Nurs. 2017; 4(3): 157–169.
8. Blease C, Dong Z, Torous J, Walker J, Hägglund M, DesRoches CM. Association of Patients Reading Clinical Notes with Perception of Medication Adherence among Persons with Serious Mental Illness. JAMA Netw Open. 2021 Mar 1; 4(3): e212823.
9. Lama A, Baruah A. Medication adherence and its association with subjective well-being among persons with schizophrenia. Indian J Psychitr Nursing. 2019; 16(2): 61–6.
10. Demoz Z, Legesse B, Teklay G, Demeke B, Eyob T, Shewamene Z, Abera M. Medication adherence and its determinants among psychiatric patients in an Ethiopian referral hospital. Patient Prefer Adherence. 2014 Sep 25; 8: 1329–35.
11. Dou L, Hu L, Zhang N, Cutler H, Wang Y, Li S. Factors Associated with Medication Adherence Among Patients with Severe Mental Disorders in China: A Propensity Score Matching Study. Patient Prefer Adherence. 2020 Jul 31; 14: 1329–1339.
12. Stentzel U, van den Berg N, Schulze LN, Schwaneberg T, Radicke F, Langosch JM, Freyberger HJ, Hoffmann W, Grabe HJ. Predictors of medication adherence among patients with severe psychiatric disorders: findings from the baseline assessment of a randomized controlled trial (Tecla). BMC Psychiatry. 2018 May 29; 18(1): 155.
13. Abdisa E, Fekadu G, Girma S, *et al*. Self-stigma and medication adherence among patients with mental illness treated at Jimma University Medical Center, Southwest Ethiopia. Int J Ment Health Syst. 2020; 14: 56.
14. Yu W, Tong J, Sun X, Chen F, Zhang J, Pei Y, Zhang T, Zhang J, Zhu B. Analysis of Medication Adherence and Its Influencing Factors in Patients with Schizophrenia in the Chinese Institutional Environment. Int J Environ Res Public Health. 2021 Apr 29; 18(9): 4746.
15. MacEwan JP, Silverstein AR, Shafrin J, Lakdawalla DN, Hatch A, Forma FM. Medication Adherence Patterns Among Patients with Multiple Serious Mental and Physical Illnesses. Adv Ther. 2018 May; 35(5): 671–685.
16. Lee Y, Lee MS, Jeong HG, Youn HC, Kim SH. Medication Adherence Using Electronic Monitoring in Severe Psychiatric Illness: 4 and 24 Weeks after Discharge. Clin Psychopharmacol Neurosci. 2019 May 31; 17(2): 288–296.
17. Eticha T, Teklu A, Ali D, Solomon G, Alemayehu A. Factors associated with medication adherence among patients with schizophrenia in Mekelle, Northern Ethiopia. PLoS One. 2015 Mar 27; 10(3): e0120560.

18. Priebe S, Yeeles K, Bremner S, Lauber C, Eldridge S, Ashby D et al. Effectiveness of financial incentives to improve adherence to maintenance treatment with antipsychotics: cluster randomised controlled trial. BMJ. 2013; 347: f5847.
19. Ibrahim AW, Yahya S, Pindar SK, Wakil MA, Garkuwa A, Sale S. Prevalence and predictors of sub-optimal medication adherence among patients with severe mental illnesses in a tertiary psychiatric facility in Maiduguri, North-eastern Nigeria. Pan Afr Med J. 2015 May 21; 21: 39.
20. Qureshi ZP, Khandker R, Shepherd J, Samant S, Chekani F, Bailey HML. Assessment of Real-Life Outcomes in Schizophrenia Patients according to Compliance. Psychiatry J. 2020 Aug 31; 2020: 5848601.
21. Deng M, Zhai S, Ouyang X, Liu Z, Ross B. Factors influencing medication adherence among patients with severe mental disorders from the perspective of mental health professionals. BMC Psychiatry. 2022 Jan 7; 22(1): 22.
22. Schulze LN, Stentzel U, Leipert J, Schulte J, Langosch J, Freyberger HJ, Hoffmann W, Grabe HJ, van den Berg N. Improving Medication Adherence With Telemedicine for Adults With Severe Mental Illness. Psychiatr Serv. 2019 Mar 1; 70(3): 225–228.
23. Sharma S, Kumar N, Chakraborti S, Sinha S, Kumari S, Gajendragad JM. Prevalence and factors associated with medication compliance in Indian patients suffering from mental disorders. Trop Doct. 2012 Jan; 42(1): 28–31.
24. Serobatse MB, Du Plessis E, Koen MP. Interventions to promote psychiatric patients' compliance to mental health treatment: A systematic review. Health SA Gesondheid. 2014; 19(1): 799.
25. Barkhof E, Meijer CJ, de Sonneville LM, Linszen DH, de Haan L. Interventions to improve adherence to antipsychotic medication in patients with schizophrenia--a review of the past decade. Eur Psychiatry. 2012 Jan; 27(1): 9–18.
26. El-Mallakh P, Findlay J. Strategies to improve medication adherence in patients with schizophrenia: the role of support services. Neuropsychiatr Dis Treat. 2015 Apr 16; 11: 1077–90.
27. Steinkamp JM, Goldblatt N, Borodovsky JT, LaVertu A, Kronish IM, Marsch LA, Schuman-Olivier Z. Technological Interventions for Medication Adherence in Adult Mental Health and Substance Use Disorders: A Systematic Review. JMIR Ment Health. 2019 Mar 12; 6(3): e12493.
28. Tham XC, Xie H, Chng CM, Seah XY, Lopez V, Klainin-Yobas P. Factors Affecting Medication Adherence Among Adults with Schizophrenia: A Literature Review. Arch Psychiatr Nurs. 2016 Dec; 30(6): 797–809.
29. Mathan K, Sarkar S, Kattimani S, Vivek AK, Muthukrishnan V, Venkatlakshmi P. How to Improve Adherence to Medication and Follow-up in Chronic Mental Illnesses: Stakeholder Views. J Neurosci Rural Pract. 2017 Jul–Sep; 8(3): 496–498.
30. Zygmunt A, Olfson M, Boyer CA, Mechanic D. Interventions to improve medication adherence in schizophrenia. Am J Psychiatry. 2002 Oct; 159(10): 1653–64.
31. Loots E, Goossens E, Vanwesemael T, Morrens M, Van Rompaey B, Dilles T. Interventions to Improve Medication Adherence in Patients with Schizophrenia or Bipolar Disorders: A Systematic Review and Meta-Analysis. Int J Environ Res Public Health. 2021 Sep 28; 18(19): 10213.

