



An Observational Study On Medication Adherence In Psychiatric Patients

Mehraj Mirza¹, Malyala Sanjana², Dr. Pulluru Manjula*³, Dr. B. Jagadeesh Babu⁴

^{1,2}Department Of Pharmacy Practice, Care College Of Pharmacy, Warangal, Telangana, India

³M. pharm, Ph. D Professor and Head Department Of Pharmacology, Care College Of Pharmacy, Warangal, Telangana, India

⁴MBBS, DPM, FIPS, Psychiatrist & Counselling Specialist Jayakrishna Hospital, Hanamakonda, Telangana, India

***Corresponding Author:**

Dr. Pulluru Manjula

M. Pharm, Ph. D Professor and Head Department Of Pharmacology,
Care College Of Pharmacy, Warangal, Telangana, India

Type of Publication: Original Research Paper

Conflicts of Interest: Nil

Abstract

Medication nonadherence is a significant problem in psychiatric treatment, increasing the likelihood of both continued symptoms and relapse. Meanwhile, only 39.6% patients followed prescribed medications in this prospective six-month study of 310 patients at Jayakrishna Hospital. Nonadherence was correlated with low educational attainment, poor insight, polypharmacy, socioeconomic barriers, side effects and stigma. Overall, the results highlight the importance of adopt patient-centric approaches such as health education, simplified regimens, family support, and regular follow-up for improving adherence that can have an positive impact on clinical outcomes in psychiatric patients.

Keywords: Health literacy, Medication adherence, observational study, Psychiatric disorders, polypharmacy, socioeconomic factors

Introduction

Schizophrenia is a chronic brain disease that affects the way a person thinks, feels and behaves. Schizophrenia involves positive and negative symptoms. Positive symptoms include hallucinations, voices that talk with or about the patient and often paranoid delusions. Negative symptoms are described as flattened affect, anhedonia (loss of a sense of pleasure), avolition or apathy (loss of will or drive), and social withdrawal [1]. Depression (Major depressive disorder or MDD) is a common and serious medical illness that negatively affects how you feel, the way you think and how you act. It leads to feelings of low mood and/or loss of interest in things formerly enjoyed. The stress can cause a range of emotional and physical issues, and undermine a person's ability to function at work and home [2]. Obsessive-Compulsive Disorder (OCD) is a chronic psychiatric condition

characterized by the experience of intrusive thoughts (obsessions) and ritualistic behaviors or mental acts (compulsions), provoked to alleviate the distress associated with obsessions or prevent an undesired event from occurring [3]. Psychosis is a group of psychological symptoms that result in the loss of contact with reality. Psychosis is a feature of many psychiatric, neuropsychiatric, neurologic and medical conditions. It is the defining feature of schizophrenia spectrum and other psychotic disorders, a co-occurring element to many mood and substance use disorders, as well as an arduous symptom to many neurologic and medical conditions [4]. Bipolar disorder (BD) is a chronic and debilitating psychiatric disease. The condition includes periods of mania/hypomania followed by depression. Types of Bipolar Disorder: 1) Bipolar I Disorder – One or more manic episodes,

often alternating with episodes of depression. 2) Bipolar II Disorder – One or more major depressive episodes and at least one hypomanic episode. 3) Cyclothymic Disorder – Chronic fluctuating mood with hypomanic and depressive symptoms not meeting full criteria [5]. Anxiety is a normal reaction to stress or danger, and typically includes feelings of worry, nervousness or fear. It can present physically in the form of symptoms like a racing heart, sweating or trouble sleeping, and mentally in the form of constant worry or difficulty concentrating [6]. Alcohol consumption (alcohol abuse) is a broad public health issue and refers to the harmful and damaging drinking practice that includes the technical use of excessive alcohol among individuals, resulting in numerous health-related problems (psychological and social). Psychologically, alcohol is implicated in exacerbating mental health disorders such as depression and anxiety, and may increase the risk of suicide [7]. Chronic use can result in alcohol use disorder (AUD), characterized by cravings, tolerance, and withdrawal symptoms [8]. Mania is a state of mood characterized by an elevated, expansive or irritable mood that lasts at least one week and causes marked impairment in social or occupational functioning. It's one of the key features of Bipolar I Disorder and is usually associated with signs like an exaggerated feeling of well-being or confidence (3), a reduced need for sleep, again rapid speech, racing thoughts, distractibility and increased goal-directed behavior [9]. Diagnosis is clinical, according to DSM-5 criteria, and treatment usually consists of mood stabilizers (perhaps lithium or valproate), antipsychotics and supportive psychotherapy.

Medication Adherence

Medication adherence, defined as how closely patients follow prescribed therapies, is critical in achieving clinical goals and improving morbidity and mortality while reducing costs of care. However, improving adherence could have a greater effect on the health of the population than the development of new treatments [10], according to the World Health Organization (WHO). However, 50–60% of patients fail to adhere to prescribed medications [11], especially chronic diseases.

Nonadherence arises from multiple factors. These include patient-related factors such as low health literacy, poor understanding of disease, lack of

motivation (like depression), socioeconomic barriers and insufficient social support [12,13]. Physician related causes entail complex regimens, poor communication and lack of attention to treatment costs [14,15]. Health system-related factors included fragmented care, restricted access, high drug costs and inadequate coordination of health care [16,17].

These issues are complex and may require a combination of strategies like patient education, shared decision-making, and simplification of times to generic regimen, re-organization of health system infrastructure to better coordinate care pathways, effective clinical communication for patient interaction. Multifaceted strategies aimed at patients, and physicians as well as at healthcare systems are crucial for improved adherence and enhanced clinical outcomes [18].

Methodology

This study conducted on six months period from September 2024 to March 2025, was designed as prospective observational study at Jayakrishna Hospital.

Study Population:

Patients of either sex aged at least 18 years with a diagnosis of psychiatric disorders, especially those with recent onset psychiatric illness were included in study. The study excluded patients <18 years old, refusal to participate in the study, or those who failed to complete key questions.

Data Collection: We retrieved data from several repositories, including patient charts, prescriptions and lab reports, in addition to information reported by patients or their caregivers.

Data Collection:

Data were collected by a pre-structured and pre-designed data collection form. Demographic details were obtained from a review of patient prescriptions, and additional factors (previous medical history, drug history, family history, lifestyle aspects, illness duration comorbid conditions and treatment-related complaints) were attained by interviewing the patient and/or caregiver.

The data collection form included sections for demographic information, prescribed medications, review of patient records and laboratory data.

Parameters Evaluated: Various parameters were evaluated, such as age, sex, marital status, education level, previous medication history, family history of the disease(s), comorbid conditions, current treatment and clinical status of the patient.

Ethics approval and consent to participate: Care College of Pharmacy, Hanamkonda approved the study protocol consisting of objectives; methodology;

data collection tools by Institutional Human Ethical Committee.

Results

The present study “medication adherence in psychiatric patients” was conducted in Jayakrishna psychiatric hospital from September to march. Total 310 patients participated in the study.

Age Wise Distribution

Distribution of data according to the age

Table 1: Age wise distribution

Age (Yrs)	No. of patients	Total %
< 20	16	5.16
20-50	250	80.6
>50	44	14.19

Gender Wise Distribution

Table 2: Gender wise distribution

Gender	No. of patients	Total %
F	212	68.3
M	98	31.6

Table 3: Marital status wise distribution

Marital status	No. of patients	Total %
Married	231	74.5
Unmarried	73	23.5
Divorced	6	1.93

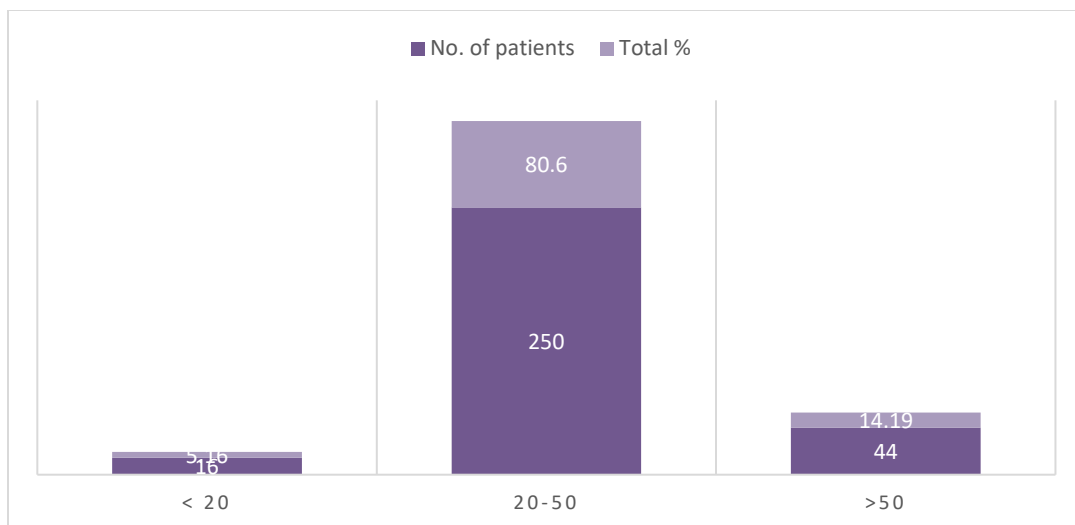


Fig 1: Age wise distribution of patients

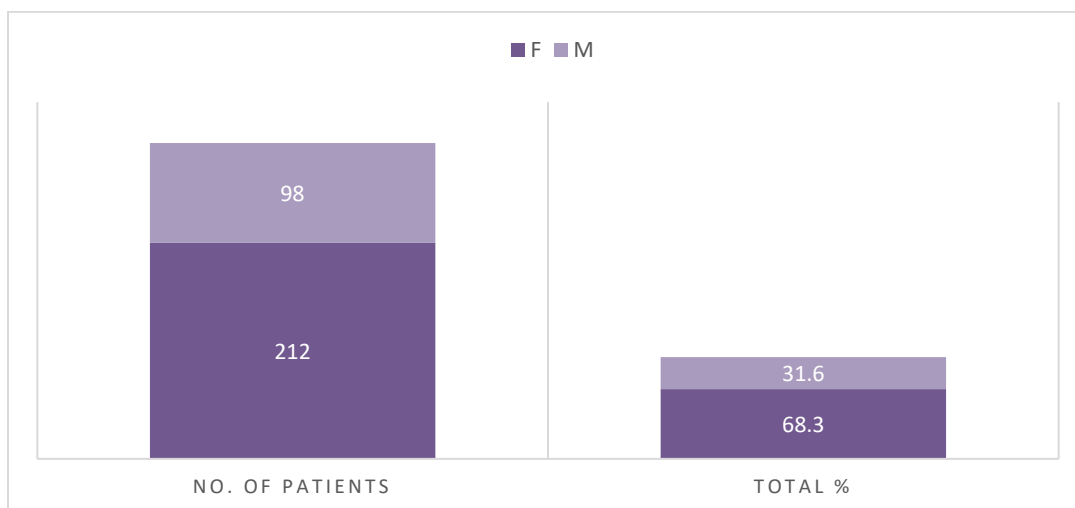


Fig 2: Gender wise distribution of patients

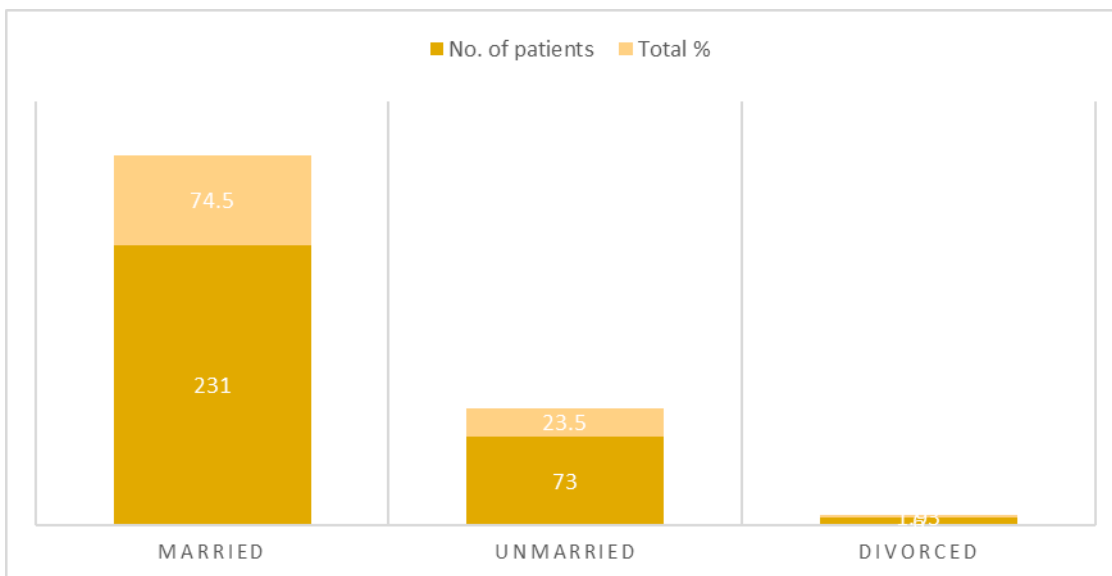


Fig 3: Marital status wise distribution of patients

Table 4: Educational status wise distribution

Educational status	No. of patients	Total %
Educated	93	30
Uneducated	198	63.8
Student	19	6.1

Fig 4: Educational status wise distribution of patients

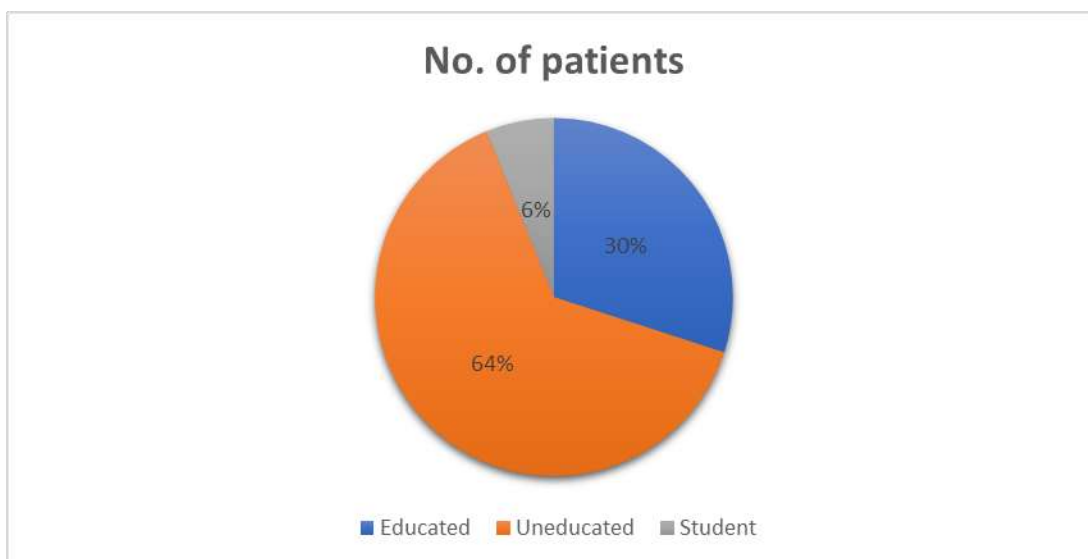


Table 5: Diagnosis wise distribution

Diagnosis	No. of patients	Total%
Anxiety	27	8.7
Schizophrenia	81	26.1
Psychosis	54	17.4
Alcohol abuse	11	3.5
MDD	70	22.5
BPD	25	8.0
OCD	20	6.4
Conversion	9	2.9
Intellectual disorder	6	1.9
Mania	7	2.2

Fig 5: Diagnosis wise distribution of patients

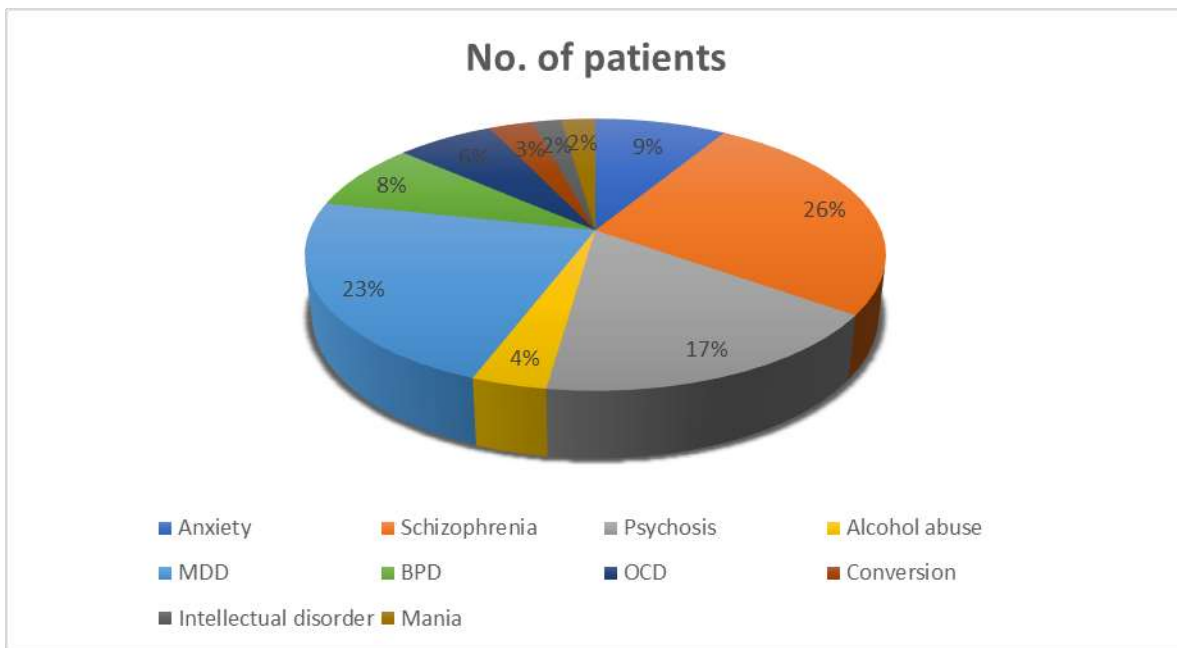


Table 6: No. of medication wise distribution

No. of medication	No. of patients	Total%
Medication<3	51	16.4
Medication<5	164	52.9
Medication<10	95	30.6

Fig 6: No. of medication wise distribution of patients

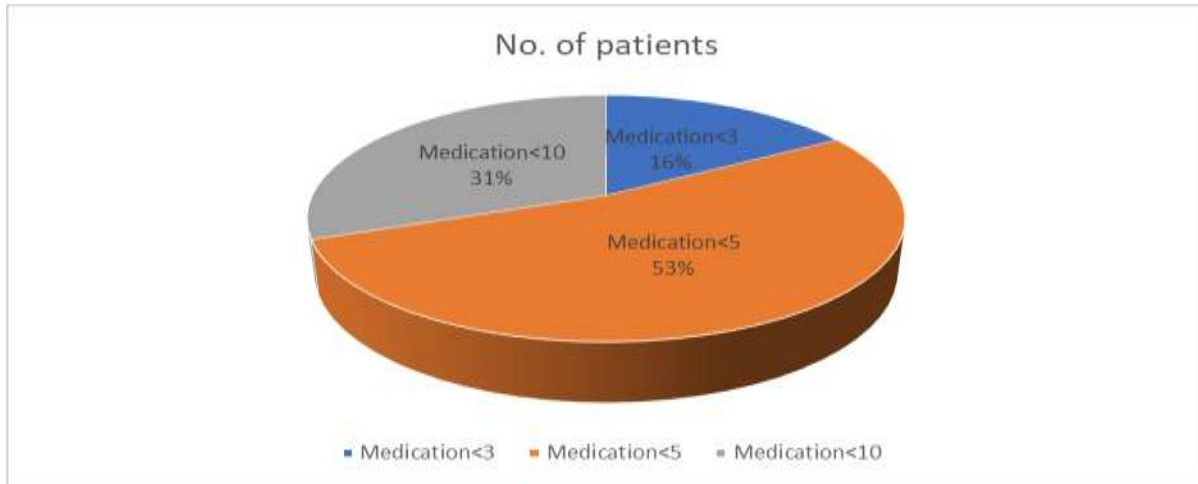


Table 7: Medication adherence of patients

	No. of patients	Total%
Compliant	123	39.6
Non-compliant	187	60.3

Fig 7: Medication adherence of patients



Discussion

The discussed study reveals a massive issue of medication adherence in psychiatric patients, with just 39.6% of participants regularly using their prescribed medications. The low adherence rates found in our study are consistent with earlier studies of psychiatric populations where documented adherence rates range from 30 to 50% [19,20]. Factors that affect nonadherence include negative attitude toward

medications, a lack of insight, polypharmacy, side effects and socioeconomic barriers [21,22].

Age, sex, marital status and education level seemed to affect adherence. Younger to middle-aged adults, who represent the majority of our sample, may have competing demands in life that compound psychiatric symptoms and create barriers to adherence to a regular medication schedule [23,24]. One possible explanation for the female predominance could be that they read about health more and are emotionally

literate. Low education levels was another reason as it is known to correlate with low health literacy, poor knowledge of treatment leading to nonadherence [25,26].

The findings highlight the challenge of achieving adherence through singular or isolated strategies and emphasize the importance of personalized, multi-factorial approaches to improving adherence. Patient education, simple treatment regimens, family involvement and regular follow-up can help increase engagement improve relapse and outcomes [27,28,29]. Polypharmacy and treatment burden may be alleviated together with psychosocial and socioeconomic barriers to achieve a longer-term management strategy for psychiatric disorders that is - on an individual basis - sustainable and safe.

Conclusion

One key area of concern was medication nonadherence, with 39.6% of participants not adhering to prescribed treatment for chronic psychological disorders. All these lead to inadequate treatment adherence due to low education, lack of knowledge about illness, polypharmacy, medical side effects and stigma. To improve adherence, patient-centered strategies such as health education, simplified medication regimens, family support and follow-up on a regular basis are very important. These barriers when addressed can help improve symptom control, decrease relapse rates and improve quality of life in patients with psychiatric disorders.

References:

1. Schultz SH, North SW, Shields CG. Schizophrenia: a review. *Am Fam Physician*. 2007 Jun 15;75(12):1821-9. PMID: 17619525.
2. Monroe SM, Slavich GM. Psychological stressors, immune dysfunction, and the pathogenesis of depression: an integrative review. *Psychol Rev*. 2022;129(3):361–389.
3. Ruscio AM, Stein DJ, Chiu WT, Kessler RC. The epidemiology of obsessive-compulsive disorder in the National Comorbidity Survey Replication. *Mol Psychiatry*. 2010 Jan;15(1):53-63. doi: 10.1038/mp.2008.94. Epub 2008 Aug 26. PMID: 18725912; PMCID: PMC2797569.

4. Calabrese J, Al Khalili Y. Psychosis. [Updated 2023 May 1]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2026 Jan-.
5. Piccirilli L, Capuzzi E, Legnani F, Di Paolo M, Pan A, Ceresa A, Esposito CM, Cirella L, Surace T, Tagliabue I, Clerici M, Buoli M. Gender Differences in Clinical and Biochemical Variables of Patients Affected by Bipolar Disorder. *Brain Sci*. 2025 Feb 19;15(2):214. doi: 10.3390/brainsci15020214. PMID: 40002546; PMCID: PMC11853631.
6. Zamani M, Alizadeh-Tabari S, Chan WW, Talley NJ. Association between anxiety/depression and gastroesophageal reflux: a systematic review and meta-analysis. *Am J Gastroenterol*. 2023 Dec 1;118(12):2133–2143.
7. Grant BF, Goldstein RB, Saha TD, Chou SP, Jung J, Zhang H, Pickering RP, Ruan WJ, Smith SM, Huang B, Hasin DS. Epidemiology of DSM-5 Alcohol Use Disorder: Results From the National Epidemiologic Survey on Alcohol and Related Conditions III. *JAMA Psychiatry*. 2015 Aug;72(8):757-66. doi: 10.1001/jamapsychiatry.2015.0584. PMID: 26039070; PMCID: PMC5240584.
8. Volkow ND, Koob GF, McLellan AT. Neurobiologic Advances from the Brain Disease Model of Addiction. *N Engl J Med*. 2016 Jan 28;374(4):363-71. doi: 10.1056/NEJMra1511480. PMID: 26816013; PMCID: PMC6135257.
9. Grande I, Berk M, Birmaher B, Vieta E. Bipolar disorder. *Lancet*. 2016;387(10027):1561–72.
10. Lam WY, Fresco P. Medication Adherence Measures: An Overview. *Biomed Res Int*. 2021;2015:217047.
11. Lavsa SM, Holzworth A, Ansani NT. Selection of a validated scale for measuring medication adherence. *J Am Pharm Assoc* (2003). 2011 Jan-Feb;51(1):90-4. doi: 10.1331/JAPhA.2011.09154. PMID: 21247831.
12. Haynes RB, McDonald H, Garg AX, Montague P. Interventions for helping patients to follow prescriptions for medications. *Cochrane Database Syst Rev*. 2002;(2):CD000011. doi: 10.1002/14651858.CD000011. Update in: *Cochrane Database Syst Rev*. 2005 Oct

- 19;(4):CD000011. doi: 10.1002/14651858.CD000011.pub2. PMID: 12076376.
13. Kronish IM, Rieckmann N, Halm EA, Shimbo D, Vorchheimer D, Haas DC, Davidson KW. Persistent depression affects adherence to secondary prevention behaviors after acute coronary syndromes. *J Gen Intern Med.* 2006 Nov;21(11):1178-83. doi: 10.1111/j.1525-1497.2006.00586.x.Epub 2006 Aug 9. PMID: 16899061; PMCID: PMC1831650.
14. Kripalani S, Henderson LE, Jacobson TA, Vaccarino V. Medication use among inner-city patients after hospital discharge: patient-reported barriers and solutions. *Mayo Clin Proc.* 2008 May;83(5):529-35. doi: 10.4065/83.5.529. PMID: 18452681.
15. Winterstein AG, Sauer BC, Hepler CD, Poole C. Preventable drug-related hospital admissions. *Ann Pharmacother.* 2002 Jul-Aug;36(7-8):1238-48. doi: 10.1345/aph.1A225. PMID: 12086559.
16. Melloni C, Alexander KP, Ou FS, LaPointe NM, Roe MT, Newby LK, Baloch K, Ho PM, Rumsfeld JS, Peterson ED. Predictors of early discontinuation of evidence-based medicine after acute coronary syndrome. *Am J Cardiol.* 2009 Jul 15;104(2):175-81. doi: 10.1016/j.amjcard.2009.03.013. Epub 2009 Jun 3. PMID: 19576342.
17. Kennedy J, Morgan S. A cross-national study of prescription nonadherence due to cost: data from the Joint Canada-United States Survey of Health. *Clin Ther.* 2006 Aug;28(8):1217-1224. doi: 10.1016/j.clinthera.2006.07.009. PMID: 16982299.
18. Kini V, Ho PM. Interventions to Improve Medication Adherence: A Review. *JAMA.* 2018 Dec 18;320(23):2461-2473. doi: 10.1001/jama.2018.19271. PMID: 30561486.
19. Velligan DI, Weiden PJ, Sajatovic M, et al. Strategies for addressing adherence problems in patients with serious and persistent mental illness: Recommendations from the expert consensus guidelines. *J Psychiatr Pract.* 2017;23(5):338–358.
20. Joseph J, Mathew A, Paul J. Factors affecting adherence to psychiatric medications: A hospital-based study. *Kerala J Psychiatry.* 2020;33(2):85–90.
21. Iqbal N, Siddiqui AA, Shaikh A. Insight and medication adherence in schizophrenia: A cross-sectional study. *J Pak Med Assoc.* 2020;70(8):1389–1393.
22. Patel V, Shah P, Doshi R. Polypharmacy in psychiatric practice: Challenges and solutions. *Indian J Psychiatry.* 2021;63(4):309–314.
23. Chaudhary R, Mishra BP, Singh A. Prevalence and determinants of psychiatric disorders in adults: A cross-sectional study. *Indian J Psychiatry.* 2022;64(1):34–40.
24. Khan AM, Farooqui M, Rizvi MA. Age-specific distribution of psychiatric disorders in a tertiary care setting. *J Clin Diagn Res.* 2021;15(5):VC01–VC04.
25. Ahmed A, Khan MM, Malik S. Health literacy and psychiatric medication adherence: A rural perspective. *Int J Health Sci (Qassim).* 2020;14(2):19–24.
26. Karthikeyan R, Viswanathan R, Babu S. Educational status and psychiatric treatment adherence. *J Clin Psychiatry.* 2018;79(6):18m12345.
27. Rajkumar RP, Thomas J, George A. Enhancing medication adherence in psychiatric patients: Patient-centered approaches. *Indian J Psychiatry.* 2023;65(2):152–159.
28. Mehta R, Das A, Banerjee S. Treatment adherence in psychiatric patients: A study in an urban tertiary hospital. *J Assoc Physicians India.* 2019;67(7):44–48.
29. Reddy MS, Thirunavukarasu M, Rajkumar RP. Polypharmacy in psychiatry: An Indian perspective. *Indian J Psychol Med.* 2022;44(3):203–208.