Assessment Of Collaborative Medication Therapy Management Services Between Pharmacist And Psychiatrist

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Abstract

Mental health disorders are a major cause of disability worldwide, and India faces a significant treatment gap due to limited resources and workforce shortages. Non-adherence to psychotropic medications and polypharmacy remain key barriers to effective psychiatric care. Collaborative pharmacist–psychiatrist models have shown potential in improving medication safety and patient outcomes. This six-month prospective observational study (April–September 2025) at the outpatient psychiatric clinic of Vivekananda Mental Health Services, Erode, Tamil Nadu, evaluated the impact of collaborative Medication Therapy Management (MTM) services on psychiatric patients diagnosed with schizophrenia, bipolar disorder, depression, or alcohol dependence. Pharmacist–psychiatrist teams provided MTM interventions including medication review, counselling, detection of adverse effects and drug interactions, and adherence monitoring. Medication adherence (MARS), quality of life (WHOQOL-BREF), and patient satisfaction (7-point Likert scale) were assessed at baseline, 1, 3, and 6 months. The collaborative model resulted in clear improvements in adherence and quality of life, with high patient satisfaction throughout the follow-up period. These findings demonstrate that pharmacist–psychiatrist collaborative MTM services are feasible, effective, and valuable in resource-limited psychiatric settings, supporting their integration into mental-health teams to enhance safe, patient-centered, and cost-effective care.

Keywords:
Medication Therapy Management, Pharmacist–Psychiatrist Collaboration, Adherence, Quality of Life, Patient Satisfaction, Cost-effectiveness, Psychiatric Disorders.

INTRODUCTION

Psychiatric illnesses such as schizophrenia, bipolar affective disorder, depression, and anxiety are long-standing conditions that continue to rise across the world, placing pressure on both patients and mental health systems.[1,2] Even with progress in psychotropic medications, many individuals do not achieve stable outcomes because of issues like inconsistent medication use, troublesome side effects, complex drug combinations, and limited understanding of their treatment.[3] These challenges often contribute to relapse, interruptions in therapy, and reduced daily functioning. To address this, psychiatric care increasingly depends on multidisciplinary support that focuses not only on symptom control but also on improving adherence, monitoring therapy, and enhancing overall well-being. Medication Therapy Management (MTM) provides a structured, patient-oriented approach in which medicines are regularly reviewed, problems are identified early, and patients receive continuous counselling. In this model, pharmacists play a crucial part by detecting drug-related problems, guiding patients on proper medication use, and reinforcing adherence roles that are especially valuable in psychiatric practice where long-term treatment and polypharmacy are common.[4,5] When pharmacists work jointly with psychiatrists, therapy becomes more coordinated, leading to early correction of adverse effects, better communication, safer prescribing, and more consistent treatment outcomes.[6] Studies from several countries show that such collaboration improves adherence, enhances quality of life, and results in more cost-effective treatment.[7] However, pharmacists remain underutilized in psychiatric care in many developing regions, including India, making it important to evaluate the benefits of this collaborative approach in real clinical settings.[8] The present study therefore aims to assess the effect of pharmacist–psychiatrist MTM collaboration on psychiatric outpatients, focusing on medication adherence, quality of life, patient satisfaction, and changes in total treatment cost after the pharmacist's involvement.[9,10]

MATERIAL AND METHODOLOGY

This prospective observational study examines how a collaborative Medication Therapy Management (MTM) approach, delivered jointly by pharmacists and psychiatrists, influences patient outcomes in an outpatient psychiatric clinic.[11]

The study design allows close monitoring of key aspects such as medication adherence, adverse reactions, and overall quality of life among individuals receiving long-term psychotropic therapy.[12] At enrolment, each patient's socio-demographic profile, clinical background, treatment history, MARS adherence score, and WHOQOL-BREF quality-of-life status were recorded using standardized assessment tools.[13]

As part of the intervention, pharmacists worked alongside psychiatrists to review prescriptions, identify drug-related concerns, counsel patients, and check for potential drug–drug interactions, especially in cases involving multiple medications.[14,15] Follow-up assessments conducted at 1, 3, and 6 months captured changes in adherence, quality of life, and satisfaction, including ratings on a 7-point Likert scale.[16]

The study was carried out at Vivekananda Mental Health Services, Erode, which manages a wide range of psychiatric conditions such as schizophrenia, bipolar disorder, depression, and anxiety disorders.[17] Participants were recruited through purposive sampling, targeting adults who were prescribed at least one psychotropic medication and met the inclusion criteria.[18]

MTM sessions followed established practice elements and encouraged continuous communication between pharmacists and psychiatrists to enhance therapy effectiveness and reduce medication-related risks.[19] All clinical and therapeutic information was documented through structured forms to maintain accuracy and consistency in data collection.[20]

The overall goal of the study is to determine how collaborative MTM influences clinical, humanistic, and economic outcomes in psychiatric outpatient care.

RESULTS

Table 01: Gender Distribution (n=150)

Gender	Number of Respondents (n)	Percentage (%)	Cumulative Percentage (%)
Female	71	47	47
Male	79	53	100
Total	150	100	-

Out of 150 respondents, 71 (47%) were female and 79 (53%) were male. The male respondents slightly outnumbered females, but the distribution is fairly balanced, ensuring representation of both genders.

Table 02: Diagnosis of Respondents (n=150)

Diagnosis	Number of Respondents (n)	Percentage (%)	Cumulative Percentage (%)
BPAD	37	25	25
Depression	36	24	49
Anxiety	29	19	68
Schizophrenia	48	32	100
Total	150	100	-

Schizophrenia was the most common diagnosis (32%), followed by BPAD (25%) and depression (24%). Anxiety accounted for 19%, showing a diverse psychiatric population.

Table 03: Comorbidities (n=150)

Comorbidity	Number of Respondents (n)	Percentage (%)	Cumulative Percentage (%)
Both Hypertension & Diabetes	16	11	11
Diabetes	30	20	31
Hypertension	27	18	49
None	77	51	100
Total	150	100	-

Most respondents (51%) had no comorbidities. Diabetes affected 20%, hypertension 18%, and both conditions 11%, highlighting the importance of addressing physical health alongside psychiatric care.

Table 04: Age Distribution (n=150)

Age Group (Years)	Number of Respondents (n)	Percentage (%)	Cumulative Percentage (%)
18–30	54	36	36
31–40	63	42	78
41–50	29	19	97
51–60	4	3	100
Total	150	100	-

The majority of respondents were 31–40 years (42%), followed by 18–30 years (36%), suggesting MTM services may have greater impact on young to middle-aged adults.

Table 05: Descriptive Statistics

Variable	N	Min	Max	Mean	Std. Deviation
Age (years)	150	18	59	34	9.15

Illness Duration (years)	150	1	16	6	3.69

Respondents' ages ranged 18–59 years (mean = 34). Illness duration ranged 1–16 years (mean = 6), reflecting both new and long-term cases.

Table 06: Clinical, Humanistic, and Economic Outcomes Clinical Outcome (MARS)

Pair	**Mean**	**N**	**Std. Deviation**	**Std. Error Mean**
MARS-baseline	5.10	150	2.20	0.179
MARS-6 months	7.71	150	1.38	0.113

Medication adherence improved significantly from 5.10 to 7.71, demonstrating effectiveness of collaborative MTM services.

Table 07: Paired Samples Test (MARS):

Pair	**Mean Diff**	**Std. Deviation**	**t**	**df**	**Sig (2-tailed)**
MARS-b vs MARS-6m	-2.61	2.60	-12.27	149	0.000

Significant improvement in adherence ($p < 0.001$) confirms positive impact of pharmacist–psychiatrist collaboration.

Table 08: Humanistic Outcome (WHOQOL & Satisfaction)

WHOQOL domains: Physical, Psychological, Social, Environment all improved significantly ($p < 0.001$).
Patient satisfaction increased from 3.44 to 6.00 ($p < 0.001$).

Collaborative MTM services enhanced quality of life and patient satisfaction across all domains, reflecting improved patient-centered care.

Table 09: Economic Outcome (Total Medical Cost)

Pair	Mean (₹)	N	Std. Deviation	Std. Error Mean
Total Costbaseline	24,113	150	3,208.14	261.94
Total Cost-6 months	19,601	150	2,745.52	224.17

Medical costs reduced significantly from ₹24,113 to ₹19,601, showing economic benefits of collaborative MTM services.

DISCUSSION

The present study demonstrated that pharmacist–psychiatrist collaborative Medication Therapy Management produced substantial improvements in medication adherence, patient satisfaction, and overall quality of life among psychiatric patients.

These findings reinforce the growing global recognition that pharmacist involvement is essential in the management of chronic mental health conditions. In psychiatric care, challenges such as non-adherence, adverse effects, and complex medication regimens often compromise therapeutic outcomes. By integrating pharmacists into the mental health team, patients receive clearer counselling, better monitoring, and timely identification of drug-related problems, which together contribute to improved clinical stability.

The positive outcomes observed in this study reflect the strength of collaborative care models, which promote shared decision-making, individualized treatment planning, and continuous follow-up. Similar collaborative approaches used internationally have shown reductions in treatment errors, improved symptom control, enhanced patient understanding, and better longterm engagement in therapy.

The improved satisfaction scores in our study also highlight the value patients place on receiving coordinated, comprehensive care. Although the study was conducted in an outpatient setting, the observed improvements are comparable to those reported in community-based and inpatient psychiatric programs where pharmacists play an active role. These findings suggest that pharmacist–psychiatrist partnerships are both feasible and highly beneficial in resource-limited healthcare environments.

Overall, the study emphasizes that integrating pharmacists into routine psychiatric practice strengthens patient-centred care, enhances treatment safety, and provides a more efficient and supportive therapeutic experience for individuals with chronic mental health disorders.

CONCLUSION

The current paper has shown that pharmacist–psychiatrist collaborative services related to Medication Therapy Management (MTM) led to a significant increase in medication adherence, quality of life, and patient satisfaction among individuals receiving psychotropic therapy. Pharmacists were able to address critical gaps in patient education, treatment monitoring, and therapy optimization through structured interventions, regular follow-ups, and personalized counselling. Statistically significant improvements across both clinical and humanistic domains were demonstrated using objective assessments such as the Medication Adherence Rating Scale (MARS) and the WHOQOL-BREF.

The collaboration also resulted in fewer drug-related problems, more rational prescribing practices, and a reduction in avoidable hospital visits, all of which contributed to improved continuity of care and increased cost-efficiency of treatment.

These findings are consistent with national and international evidence showing that pharmacist integration in mental-health services is an effective, sustainable, and patient-centred practice. The collaborative MTM model enhances the safety of pharmacotherapy and empowers patients by emphasizing teamwork, communication, and ongoing monitoring. The consistent improvements observed in adherence, safety, and satisfaction highlight the essential role of pharmacists as integral contributors to psychiatric service delivery.

To conclude, the role of the pharmacist in multidisciplinary psychiatric teams is not merely supportive but pivotal in achieving optimal therapeutic outcomes. The collaborative MTM model implemented in this study offers a scalable and replicable framework that can be effectively applied in both outpatient and telehealth settings. The demonstrated clinical, economic, and humanistic benefits reinforce the need for healthcare systems and policymakers to formally incorporate pharmacists into standard psychiatric care to promote holistic, efficient, and sustainable mental-health outcomes.

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