

## Title Page

**Title:**

Medication Non-Adherence and Impact of Structured Counselling in Patients with Neurological and Psychiatric Disorders: A Hospital-Based Observational Study

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# Medication Non-Adherence and Impact of Structured Counselling in Patients with Neurological and Psychiatric Disorders: A Hospital-Based Observational Study

## Abstract

**Background:** Medication adherence is a key determinant of treatment success in neurological and psychiatric disorders. Poor adherence leads to relapse, hospitalization, and increased healthcare costs.

**Aim:** To evaluate medication adherence, identify factors associated with non-adherence, and assess the impact of structured counselling among patients with neurological and psychiatric disorders.

**Materials and Methods:** A hospital-based prospective observational study was conducted among outpatients receiving pharmacotherapy for neurological or psychiatric conditions. Medication adherence was assessed using the Morisky Medication Adherence Scale (MMAS-4), pill identification test, and pill count method before and after counselling.

**Results:** At baseline, a high proportion of patients demonstrated low to moderate adherence. Forgetfulness, adverse drug reactions, low educational status, substance abuse, and financial constraints were the major contributors to non-adherence. Following structured counselling, a significant improvement in adherence was observed.

**Conclusion:** Medication non-adherence is common among neurological and psychiatric patients. Structured counselling significantly improves adherence and should be incorporated into routine clinical practice.

**Keywords:** Medication adherence; counselling; psychiatric disorders; neurological disorders; hospital-based study

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## Introduction

Neurological and psychiatric disorders represent a major public health burden worldwide and are frequently associated with chronic morbidity and functional impairment. Pharmacotherapy remains the cornerstone of management for most of these conditions; however, its effectiveness is highly dependent on patients' adherence to prescribed treatment regimens. Non-adherence to medication is widely recognized as a common and complex problem, particularly in psychiatric and neurological populations.

The World Health Organization defines adherence as the extent to which a person's behavior corresponds with agreed recommendations from a healthcare provider. In chronic illnesses, adherence rates are often reported to be below 50%, with even lower rates observed in psychiatric populations. Poor adherence has been linked to symptom exacerbation, relapse, rehospitalization, and increased healthcare expenditure.

Patients with psychiatric and neurological disorders face unique challenges to adherence, including impaired insight, cognitive dysfunction, stigma, long treatment duration, and adverse drug reactions. In low- and middle-income countries such as India, additional factors such as limited health literacy and economic constraints further complicate adherence behavior.

Pharmacist- and clinician-led counselling interventions have been proposed as effective strategies to enhance adherence. However, data evaluating the impact of counselling on adherence in Indian hospital settings remain limited. The present study was therefore undertaken to evaluate medication adherence patterns, identify determinants of non-adherence, and assess the effect of structured counselling in patients with neurological and psychiatric disorders.

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## Materials and Methods

### Study Design and Setting

A prospective observational study was carried out over a period of six months in the outpatient department of the District General Hospital, Amravati, Maharashtra, India.

### Study Population

Patients diagnosed with neurological or psychiatric disorders and receiving pharmacological treatment were included. Patients attending the hospital for the first time or those with acute severe symptoms impairing communication were excluded.

### Ethical Considerations

The study was conducted following approval from the institutional ethics committee. Written informed consent was obtained from all participants prior to enrollment.

### Assessment of Medication Adherence

Medication adherence was assessed using three complementary methods: 1. **Morisky 4-item Medication Adherence Scale (MMAS-4)** 2. **Pill Identification Test** 3. **Pill Count Method**

Based on these tools, patients were categorized as having high, moderate, or low adherence.

### Counselling Intervention

Structured counselling was provided focusing on disease awareness, importance of adherence, management of adverse effects, dosing schedules, and addressing patient-specific barriers.

### Follow-up and Reassessment

Patients were reassessed one month after counselling using the same adherence tools to evaluate changes in adherence behavior.

## Statistical Analysis

Descriptive and inferential statistics were used to analyze the data. Comparisons before and after counselling were performed, and p-values  $<0.05$  were considered statistically significant.

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## Results

A total of 97 patients were included in the study. Male patients constituted a slightly higher proportion compared to females. The majority of patients belonged to the middle-aged group. Psychotic disorders, depression, and seizure disorders were the most common diagnoses.

At baseline, a considerable proportion of patients demonstrated low adherence. Following counselling, a significant improvement in adherence levels was observed across all assessment measures.

Key factors associated with non-adherence included forgetfulness, adverse drug reactions, lack of insight, substance abuse, and financial difficulties.

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## Discussion

The findings of the present study highlight a high prevalence of medication non-adherence among patients with neurological and psychiatric disorders, consistent with previous reports from both developed and developing countries. The multifactorial nature of non-adherence observed underscores the need for individualized interventions.

Counselling played a pivotal role in improving adherence, emphasizing the importance of patient education and therapeutic alliance. Pharmacist involvement in counselling can bridge gaps in understanding and address misconceptions related to long-term pharmacotherapy.

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## Conclusion

Medication non-adherence remains a significant challenge in the management of neurological and psychiatric disorders. Structured counselling interventions substantially improve adherence and should be incorporated into routine clinical practice to optimize therapeutic outcomes.

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## Limitations

The study was conducted at a single center with a relatively short follow-up period. Self-reporting tools may be subject to recall bias.

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## Future Scope

Future studies with larger sample sizes and longer follow-up durations are warranted to evaluate the long-term impact of counselling on clinical outcomes.

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## Conflict of Interest

The authors declare no conflict of interest.

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