Original Research Article

Factors influencing medication adherence and quality of life in outpatients attending Department of Psychiatry in a tertiary health care centre

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Abstract

Background: Nearly one third of people who suffer major psychiatric disorders end up with a long-term disability and dependency. They are most likely to be non-adherent to medication due to various reasons including lack of knowledge or insight about their illness and treatment which in turn leads to exacerbation of their illness, reduce treatment effectiveness, or make them less responsive to subsequent treatment, multiple hospitalizations and poor quality of life.

Materials and methods: A cross sectional study was carried out in outpatients attending the Psychiatry OPD using the consecutive sampling technique. Subjects meeting the ICD-10 Diagnostic criteria for psychiatric disorders, age 18 year and above, subjects willing to participate in the study were included. A structured proforma, the Drug attitude inventory and the WHO-QOL-BREF questionnaires were used for assessment.

Results: Mean age of subjects = 38.07 $\pm$ 11.07 years. Mean medication cost = Rs. 917.82 $\pm$ 397.89. 87 subjects participated in the study and of them 48% were adherent to medication and 52% were non-adherent. 56% of males and 43% females were adherent to medication. There was significant association between the occupation and the type of family of the subjects and medication adherence (p<0.05). Majority of patients with medication non-adherence were seen in schizophrenia, delusional disorder, bipolar disorder, generalized anxiety disorder, obsessive-compulsive disorder and substance

related disorder. Majority (44.5%) of them reported fear of side effects, followed by stopping the medication when feeling better (35.5%) as the reasons for non-adherence followed by cost, embarrassment, etc. There was significant association between the psychological and social quality of life and medication adherence (p<0.05).

Conclusions: This study implicates the importance of psycho education about the diagnosis, prognosis, need for medication and the expected adverse effects which should be clearly explained to the patient. The therapeutic alliance is the most effective component in helping the patient maintain medication adherence and subsequently better quality of life.

Key words

Medication adherence, Psychiatric outpatients, Psychiatric disorders, Adherence related factors, Quality of life.

Introduction

Nearly one third (31.7%) of people who suffer major psychiatric disorders land up in long-term disability and dependency [1]. The World Health Organization (WHO) designed a comprehensive mental health action plan (2013–2020) to promote, prevent and provide care and support to the mentally ill to reduce the resulting morbidity, disability, and mortality. Psychiatric disorders are associated with individual factors as well as community, social and other environmental factors. WHO's Mental Health Action Plan recognizes the important role of mental health in achieving health for all people [2]. "Medication adherence is the extent to which patients take medications as prescribed by health care providers. Compliance is the passive act of the patient to follow the providers' orders [3]." According to the WHO, medication non-adherence is defined as "a case in which a person's behavior in taking medication does not correspond with agreed recommendations from a health personnel". It can be either intentional or unintentional, including failing to initially fill or refill a prescription, discontinuing a medication before completing the course of therapy, taking more or less of a medication than prescribed, and taking a dose at the wrong time [4]. WHO defines Quality of Life as a broad complex concept affected by the person's physical health, psychological health, personal beliefs, social relationships and their relationship to the environment [5]. Patients with major psychiatric disorders are most likely to be non-adherent to

medication due to poor reasoning ability and lack of insight about their illness and treatment need [6, 7].

Psychotropic medication non-adherence can lead to exacerbation of the illness, reduce effectiveness of treatment, or make them less responsive to subsequent treatment. Other consequences of non-adherence include multiple hospitalizations, poor quality of life or psycho-social outcomes, relapses, increased co-morbid medical conditions, wastage of health care and patients' financial resources, and increased suicidality leading to care-giver burden [6, 8].

In a systematic review and meta-analysis, the prevalence of medication non-adherence among major psychiatric disorders was 49%. Almost half of patients did not adhere to their psychotropic medication. Patients' behavior, lack or poor social/family support, treatment and illness-related conditions, and the health system barriers are the factors shown to be associated [9]. In an Indian study, the overall prevalence of non-adherence among patients with mental illnesses was found to be 38% [10].

The present study was aimed at determining the medication adherence as well as the various factors influencing the adherence to medication and in-turn the quality of life in the patients attending the outpatient department of Psychiatry.

Materials and methods

Study setting: Department of Psychiatry, Mediciti Institute of Medical Sciences.

Period of study: A period of six months, from July 2022 to December 2022.

Study subjects: Outpatients attending the Psychiatry OPD.

Study Design: Cross Sectional Study.

Sampling technique: Consecutive sampling.

Sample size: All the subjects reporting to the OPD fulfilling the inclusion criteria in the period of study and given consent were included in the study.

Inclusion criteria

- Subjects meeting the ICD-10 Diagnostic criteria [16] for psychiatric disorders,
- Age 18 years and above
- Subjects willing to participate in the study.

Exclusion criteria

- Persons with Mental Retardation
- Persons with Chronic Debilitating Illness (malignancy, CKD, heart disease, etc.)
- Persons with Organic Brain disease.

Study Instruments:

- Structured proforma for socio demographic data and clinical characteristics.
- Drug Attitude Inventory (DAI) [19]
- World Health Organization Quality of Life (WHO QOL) –BREF [20]

Results

A total of 87 subjects participated in the study (**Table – 1**). The mean age of the study subjects was 38.07 ± 11.07 years. The mean medication cost was Rs. 917.82 ± 397.89.

48% were adherent to medication and 52% were non-adherent. Most of the subjects (56%) in the 31-40 years age group and 60% in 41-50 years of age group were non-adherent. Majority (57%) of females were non-adherent.

There was no significant association between the adherence status and the age group, gender, geographic region, religion, socioeconomic status and education status.

A statistically significant association was seen in adherence status and the occupational status and the type of family the patient belongs to (p<0.05).

There was no significant association between the substance usage, presence or absence or the number of care takers, the living status of the parents and the presence of comorbid health conditions of the patient with the medication adherence status (**Table – 2**).

22% of the patients had schizophrenia as diagnosis and among them, 58% were non-adherent to medication. 15% patients were diagnosed with bipolar disorder, of whom 54% were non-adherent (**Figure – 1**). In 9% patients with generalised anxiety disorder, 62.5% patients were non- adherent. In 8% of patients diagnosed with obsessive compulsive disorder, majority of them (71.5%) were non-adherent. 2% patients with delusional disorder were non- adherent. In 5% of the patients with substance disorder, 75% were non- adherent to medication.

In 22% of patients with major depressive disorder, 63% were adherent. In 13% of patients diagnosed with panic disorder, 54.5% were adherent to medication. 3% patients with illness-anxiety disorder showed 100% adherence and 1% of schizophreniform disorder showed 100% adherence.

Among the patients who were non- adherent to medication, 44.5% reported fear of side effects as the reason for non- adherence (**Figure – 2**). 35.5% stopped the medication when feeling better themselves. 11.2% reported medication cost as the reason for non-adherence. 4.4% reported they were non-adherent to avoid addiction. 2.2% each reported feeling embarrassed to use the medication and believed that the medication was ineffective.

Table - 1: Socio-demographic characteristics of study subjects.

Variable	Medication Adherence (n=42) (48%)	Medication non-adherence (n=45) (52%)	Fisher extract X^2 , p value
Mean Age of subjects = 38.07 $\pm$ 11.07 yrs			
Mean medication cost = Rs. 917.82 $\pm$ 397.89			
Age group			
21-30	13 (52)	12 (48)	Not significant.
31-40	15 (44)	19 (56)	
41-50	6 (40)	9 (60)	
51-60	4 (50)	4 (50)	
>61	4 (80)	1 (20)	
Gender			
Male	19 (56)	15 (44)	Not significant.
Female	23 (43)	30 (57)	
Geographic region			
Rural	22 (48)	24 (52)	Not significant.
Urban	20 (49)	21 (51)	
Religion			
Hindu	33 (46)	38 (54)	Not significant.
Muslim	2 (50)	2 (50)	
Christian	7 (58)	5 (42)	
SES (revised B.G.Prasad SES classification, Jan,2022)			
Upper class	6 (46)	7 (54)	Not significant.
Upper middle class	13 (57)	10 (43)	
Middle class	14 (45)	17 (55)	
Lower middle class	9 (45)	11 (55)	
Lower class	0 (0)	0 (0)	
Education			
Illiterate	2 (67)	1 (33)	Not significant.
Literate	5 (45)	6 (55)	
Middle school	5 (38)	8 (62)	
High school	13 (45)	16 (55)	
Higher secondary	9 (56)	7 (44)	
Graduate	8 (53)	7 (47)	
Occupation			
Employed	22 (47)	25 (53)	12.557, p = 0.0057
Unemployed	6 (37.5)	10 (62.5)	
Student	11 (100)	0 (0)	
House wife	3 (23)	10 (77)	
Type of family			
Nuclear	22 (38)	36 (62)	7.4571 , p = 0.006319
Joint	20 (69)	9 (31)	

Table - 2: Clinical characteristics of study subjects.

Variable	Medication Adherence (n) (%)	Medication non-adherence (n) (%)	Fisher extract X^2 , p value
Substance use			
Yes	15 (58)	11 (42)	Not significant.
No	27 (44)	34 (56)	
No. of care takers			
0	1 (20)	4 (80)	Not significant.
1	29 (49)	30 (51)	
2	9 (50)	9 (50)	
>2	3 (60)	2 (40)	
Parents' living status			
Both alive	19 (54)	16 (46)	Not significant.
Both dead	14 (52)	13 (48)	
Father died	9 (36)	16 (64)	
Co-morbid medical illness			
Yes	9 (39)	14 (61)	Not significant.
No	33 (52)	31 (48)	

Table – 3: QOL in the study subjects based on adherence status.

QOL	Medication adherence (Mean +_ SD)	Medication non-adherence (Mean +_ SD)	T-test
Physical QOL	66.31+_ 14.14	61.22 +_ 14.79	Not significant.
Psychological QOL	64.43 +_ 14.60	53.98 +_ 21.23	P = 0.0097
Social QOL	67.45 +_ 13.40	59.33 +_ 15.69	P = 0.0114
Environmental QOL	69.86 +_ 12.00	67.82 +_ 11.47	Not significant.

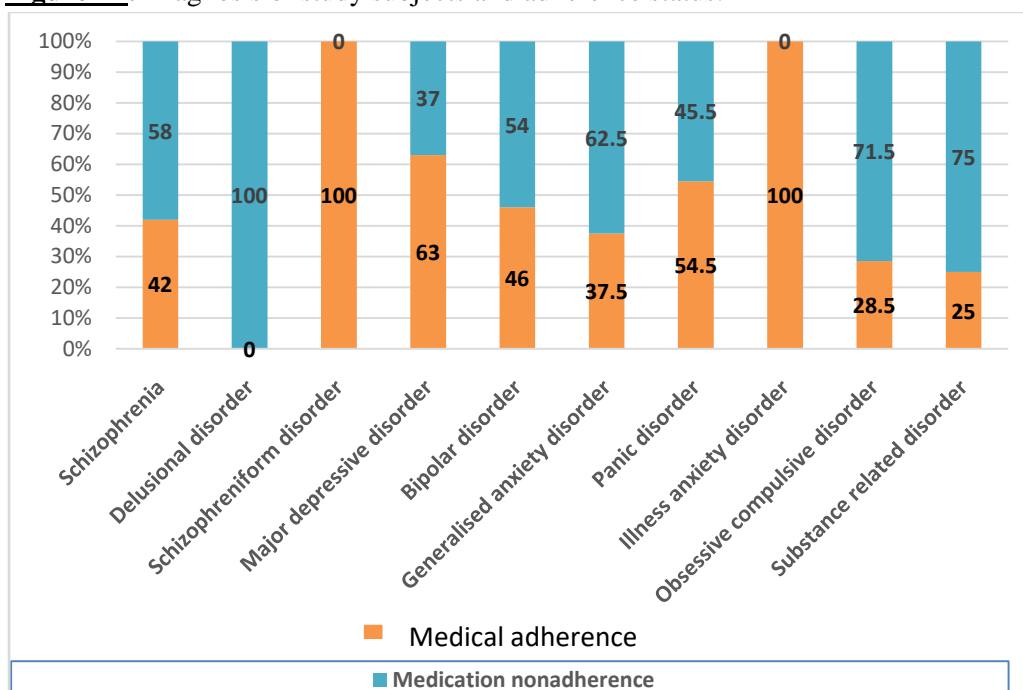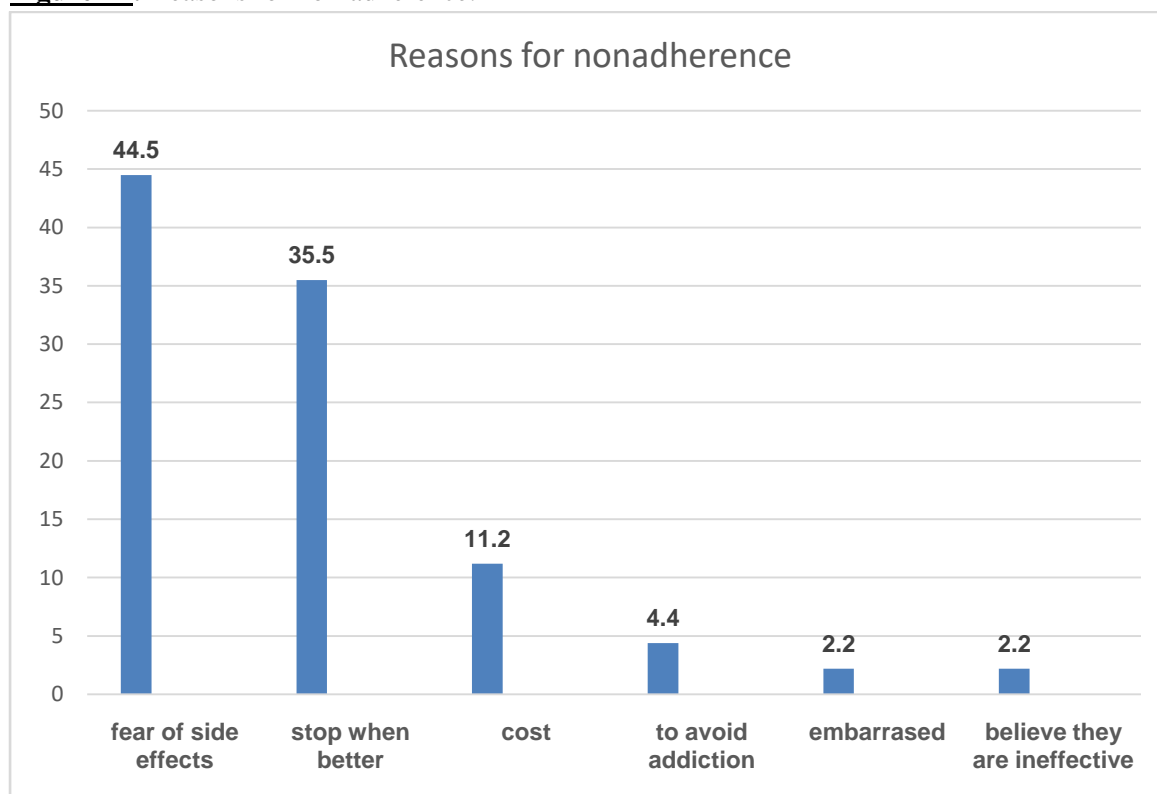**Figure - 1:** Diagnosis of study subjects and adherence status.

Figure - 2: Reasons for non-adherence.

The mean of the quality of life was more in those patients with medication adherence in all the domains of the quality of life compared to those patients with non-adherence (**Table – 3**). A statistically significant association was noted in the medication adherence status and the psychological and social quality of life (p<0.05).

Discussion

In a study in Indian population by Sharma, et al., the prevalence of non-adherence was 38% among patients with mental disorders. 50% of them were suffering from schizophrenia. Younger patients with good social support had good adherence whereas those with more severe illnesses were associated with non-adherence [10]. The present study showed the prevalence of non-adherence as 52% and among those with schizophrenia, 58% were non-adherent to medication.

In an Ethiopian study, it was found that being illiterate and older age, chewing khat, treatment attitudes, side effects, relapsed symptoms and awareness of the illness were the most important risk factors for non-adherence [11]. However, the present study showed no significant association in the adherence status and the socio-demographic and clinical characteristics of the patients, except with the occupational status and the type of the family the individual was residing. This may be because the occupation provides the financial support and the family type, the social support needed for the patient to help themselves get better.

In a study by Demoz, et al., females were adherent to medication than males, and patients with tertiary education were adherent. The same study showed adherence was lower in patients with mood disorder or schizophrenia. Feeling better after illness and forgetting were the main reasons reported. According to the type of disorder, 53.1%, 68.6%, 69%, and 78.3% of patients with mood disorder, drug addiction, schizophrenia, and autism, respectively, were adherent to their medications. Female gender, tertiary education, living with family, and shorter treatment duration were associated with good adherence [12].

In the present study, there was 57% non-adherence in the females and 44% in the males. The reason may be due to the burden of the family responsibilities, females may be spending less time on their health, as evident by 77% of the housewives being non-adherent to medication. The non-adherence was more in the schizophrenia (58%), bipolar disorder (54%), generalized anxiety disorder (62.5%), obsessive-compulsive disorder (71.5%), delusional disorder (100%) and substance related disorder (75%).The non-adherence to medication may be attributed to the long duration of the medication in schizophrenia, the feeling better in the intermittent period in the bipolar disorder and to the less improvement in symptoms observed in the obsessive-compulsive disorder. The fear of side effects (44.5%) and the feeling better (35.5%) leading to stopping of medication on their own were reported as the most common causes for non-adherence in this study.

In a study by Agarwal, et al., younger patients were particularly non-compliant [13]. The present study showed majority (60%) of patients who were non-adherent in the 41-50 years of age followed by 31-40 years of age (56%). The increased burden of the living cost in this age group due to spending on their children's education or health issues of the family members may be the contributing factor for decreased spending on one's health leading to non-adherence.

In a study on medication adherence in the patients with first episode of schizophrenia, both current alcohol abuse and drug misuse within the preceding month were significant predictors of non-adherence [14]. The present study showed no significant association of the substance use and the medication adherence.

In a study done in Egypt on schizophrenic and bipolar affective groups, older age at onset of illness, previous non-compliance, higher doses of antipsychotics, medication side effects, and cost burden of drugs were associated with non-compliance in both groups. In schizophrenic patients, female gender, being employed, frequent hospitalization, sense of boredom from treatment and substance abuse were significantly correlated with non-compliance [15]. The present study however didn't show any significant association between the gender and substance use and adherence status.

In a study done in Nigeria, it showed employed patients may view the side effects of their medication as affecting functioning at work. Also, working patients were likely to be free of symptoms and may stop their medication as they feel better [16]. The present study also showed significant association between the occupation status and medication adherence.

In a study done in Brazil, demographic variables were not found to be correlated with compliance. 36% of the patients reported that the side effects were the main reason for noncompliance [17].

The present study also showed that the side effects and cost of the medication led to the non-adherence.

In a study done by Boorla, et al., it has been found that higher percentage of noncompliance in schizophrenic group (64%) compared to bipolar group (18%) [18]. The present study showed the non – adherence was not much different in schizophrenia (58%) and bipolar (54%) groups.

In the systematic review and meta-analysis study, it was determined that medication non-adherence is influenced by various factors such as patients' behavior, social or family support, illness and treatment-related, and health care system-related factors. Medication adherence was mainly affected by patients' negative attitude towards their medication, lack of insight, negative health belief, and perceived stigma. Similarly, medication non-adherence was associated with patients' behavioral practices (e.g., substance abuse) and also patients' socio-demographic characteristics (such as educational status, age, gender, and employment) [19].

The present study showed that the negative attitude of the patients towards medication developed due to various reasons affects their medication adherence.

In a study done by Adelufosi, et al., medication non-adherence was significantly associated with lower scores on all domains of quality of life [20].

The present study also showed that medication non-adherent patients had less score on domains of the quality of life compared to that of the medication adherent patients.

Conclusion

This study implicates the importance of psycho education about the need for medication, course and the expected adverse effects which should be clearly explained to the patient. The involvement of the patients and their family members in the management plan by explaining the various options available for the treatment of the patient's condition and clarifying their hesitations regarding the same, help in better rapport and subsequent follow ups by them. The therapeutic alliance is the most effective component in helping the patient maintain medication adherence and subsequently better quality of life.

Limitations

The sample size of the study was moderate due to time constraints. The study was a cross-sectional study and hence the causality couldn't be inferred.

Acknowledgements

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