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RESEARCH ARTICLE

Assessment of adherence to psychotropic medications in a psychiatric unit of district hospital

H. N. Nagesh, M. S. Kishore, B. N. Raveesh

Department of Pharmacology, Mysore Medical College and Research Institute, Mysore, Karnataka, India

Correspondence to: H. N. Nagesh, E-mail: nagu728@gmail.com

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ABSTRACT

Background: In mental health care, uncertainty about compliance is a challenging source of variation in the effectiveness of treatment. **Aims and Objectives:** The main aim of this study to assess the level of patients' adherence to psychotropic drugs and also to explore factors associated with non-adherence to medication. **Materials and Methods:** A cross-sectional, questionnaire-based study was conducted in 156 patients over a period of 3-month at the Psychiatric Department, Tertiary Care Hospital, Mysore. A questionnaire designed for the adherence of treatment was administered to the psychiatric patients, those who were on treatment for ≥3 months. **Results:** Adherence varied from low adherence (24.4%) through medium (34%) to high adherence (41.7%) among participants. No statistically significant associations were observed between non-adherence and the socio-demographic characteristics of subjects. Recovery from their illness (21.9%), forgetfulness (19.8%), frequency of drug regimen (17.6%), and adverse effects (16.5%) are major reasons for poor adherence. **Conclusion:** More than half of the psychiatric outpatients were non-adherent to prescribed medications. Strategies to improve adherence are crucial in psychiatric care.

KEY WORDS: Mental Health; Adherence; Psychotropic Medications

INTRODUCTION

In mental health care, uncertainty about adherence is a challenging source of variation in the effectiveness of treatment. Adherence to a medication regimen is generally defined as the extent to which patients take medications as prescribed by their health-care providers. It is clear that the full benefit of the many effective medications that are available will be achieved only if patients follow prescribed treatment regimens reasonably.[1]

Estimates from the World Health Organization indicate that only about 50% of patients with chronic diseases living in developed countries follow recommended treatment.[2] In psychiatry, poor medication adherence rates reported for patients with psychosis ranged from 10% to 76% while those treated for depression ranged between 10% and 60%.[1] Non-adherent patients are over 10 times more likely to have a psychotic relapse and four times more likely to be hospitalized than adherent patients.[3]

Non-adherence to psychotropic medication is known to be associated with poorer treatment outcomes, significant risk and cost to the medical system in the management of psychiatric illness. For providers, partial compliance or discontinuation of medications represents the difficulty of maintaining treatment successes over time.

Assessing medication adherence might lead to a better understanding of reasons for non-adherence in psychiatric patients and lay the groundwork for interventions aimed at increasing adherence.[4] In addition, understanding the extent of the problem is half of the solution, and the result of the

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study can help as a baseline for further study on psychiatric patient's adherence and open the door to determining various adherence and non-adherence issues.

MATERIALS AND METHODS

The study was conducted after obtaining Institutional Ethical Committee clearance. Confidentiality of respondents was granted by keeping the privacy while filling the questionnaire.

Study Design

A cross-sectional study.

Patient Selection Criteria

All patients who visited the psychiatry department during the study period and fulfilled the inclusion criteria were recruited.

Inclusion criteria

- Subjects who were diagnosed with psychiatric illness
- Those who volunteered to give informed consent
- Mini-mental state examination score >24
- Those who took antipsychotic medications for ≥3 months.

Exclusion criteria

- Subjects with associated diseases such as diabetic mellitus and epilepsy
- Subjects taking other medications.

Sample Size Determination

The study was conducted over 3-month period from September 2015 to November 2015 in the Psychiatric Department, K.R. Hospital, Mysore Medical College & Research Institute, Mysore, which is 1330 bedded tertiary care hospital. A total number of 156 outpatients who fulfilled the inclusion criteria were recruited during the study period.

Data Collection Tool

An interviewer-assisted questionnaire was prepared and Medication Adherence Rating Scale (MARS)[5] was used for assessment of adherence in psychiatric patients. Apart from MARS questionnaire, a section of questions regarding socio-demographic characteristics, psychiatric illness, treatment duration, insight about their medications, and the different reasons for non-adherence were administered.

Data Analysis and Interpretation

Data entry and analyses were done using the Statistical Package for Social Sciences (SPSS) for Windows software (version 20.0; SPSS Inc., Chicago). Descriptive statistics such as mean and standard deviation (SD) for continuous variables and frequency and percentage for categorical variables were determined. Chi-Square test and Fisher's test (when appropriate) were used to analyze the association between non-compliance and bio-social variables. The level of significance was set at 0.05.

Ethical Approval

The study was conducted after getting letter of permission from Institutional Ethical Committee. Confidentiality of respondents was granted by keeping the privacy while filling the questionnaire.

RESULTS

The study results showed that adherence varied from low adherence (24.4%) through medium (34%) to high adherence (41.7%) among 156 participants using MARS-4 scale. No significant associations were observed between non-adherence and the socio-demographic characteristics of subjects. The most common reason for non-adherence was recovery from the illness (21.9%), followed by forgetfulness (19.8%) as shown in Table 3. The results also showed that people suffering from major depressive disorder (34.1%) are most likely to be non-compliant to the treatment given followed by bipolar affective disorder (35.2%) and schizophrenia (26.4%) as shown in Table 4.

DISCUSSION

Quality health-care outcomes depend on patients' adherence to recommended treatment regimens. In the management of psychotic disorders, the maximum benefit that a patient derives from these medications is highly dependent on their adherence to treatment. Because of the difficulties in measuring adherence, no estimate of adherence or non-adherence can be generalized, but poor adherence is to be expected in 30-50% of all patients, irrespective of disease, prognosis, or setting.[6]

In the study, out of 156 respondents, 65 (41.7%) were found to be adherent, and 91 (58.3%) were non-adherent to the psychotropic medications. This was consistent with Gurmu et al.[7] study, which showed 50.2% of respondents were non-adherent.

In the present study, patients in younger age group, educated, married, and from rural areas showed high non-adherence

Table 1: Adherence and non-adherence among respondents

Participants (*n*=156)	*n* (%)
Adherence with the therapy	65 (41.7)
Non-adherence with the therapy	91 (58.3)

Table 2: Adherence and non-adherence in association with socio-demographic characteristics of study subjects

Parameters	Characteristics	Adherence *n*=65 (%)	Non-adherence *n*=91 (%)	*P* value
Age (years)	18-35 (*n*=67)	27 (41.5)	40 (44.0)	0.574
	36-54 (*n*=58)	27 (41.5)	31 (34.1)	
	≥55 (*n*=31)	11 (16.4)	20 (22.0)	
Sex	Female (*n*=63)	24 (36.9)	39 (42.9)	0.456
	Male (*n*=93)	41 (63.1)	52 (57.1)	
Education	Illiterate (*n*=33)	17 (25.4)	16 (17.6)	0.250
	Primary school (*n*=32)	15 (22.4)	17 (18.7)	
	Secondary and more (*n*=91)	33 (50.8)	58 (63.7)	
Occupation	Employed (*n*=151)	64 (98.5)	87 (95.6)	0.317
	Unemployed (*n*=5)	1 (1.5)	4 (4.4)	
Domicile	Rural (*n*=83)	31 (47.7)	52 (57.1)	0.504
	Sub urban (*n*=24)	11 (16.9)	13 (14.3)	
	Urban (*n*=49)	23 (35.4)	26 (28.6)	
Marital status	Divorced (*n*=5)	5 (7.7)	-	0.053
	Married (*n*=119)	46 (70.8)	73 (80.2)	
	Single (*n*=29)	13 (20.0)	16 (17.6)	
	Widowed (*n*=3)	1 (1.5)	2 (2.2)	

Table 3: Adherence and non-adherence in association with psychotic illness and duration of therapy among study subjects

Parameters	Adherence *n* (%)	Non-adherence *n* (%)	*P* value
Psychotic illness			
ATPD (*n*=2)	0 (0.0)	2 (2.20)	0.001
BPD (*n*=53)	21 (32.3)	32 (35.2)	
MDD (*n*=39)	8 (12.3)	31 (34.1)	
Mania (*n*=3)	1 (1.5)	2 (2.2)	
Schizophrenia (*n*=59)	35 (53.8)	24 (26.4)	
Duration of therapy			
3-12 months (*n*=65)	30 (46.2)	35 (38.5)	0.624
1-5 years (*n*=76)	29 (44.6)	47 (51.7)	
>5 years (*n*=15)	6 (9.2)	9 (9.9)	

ATPD: Acute and transient psychotic disorder, BPD: Borderline personality disorder, MDD: Major depressive disorder

Table 4: Factors leading to non-adherence among study participants

Reasons for non-adherence	Frequency (%)
Laziness	11 (12.1)
Adverse effects	15 (16.5)
Forgetfulness	18 (19.8)
Frequency of drug regimen	16 (17.6)
Recovery from their illness	20 (21.9)
Unavailability of drugs	7 (7.7)
Others	3 (3.3)

rate, but it was not statistically significant. This finding was consistent with Oslin et al.[8] study, which reported that patients who are younger were more likely to have adherence problems than older patients.

High non-adherence to the therapy was seen in participants with major depression followed by bipolar disorder and schizophrenia. A study done by Elixhauser et al.[9] showed more non-adherence among schizophrenics than bipolar disorder.

In the current study, recovery from their illness was found to be the most common reason for non-adherence, which follows forgetfulness, frequency of drug regimen, and adverse effects. The study also showed that increased duration of therapy (>1 year) leads to increased non-adherence. The study done in Jimma University, Ethiopia, and it reported the following reasons for non-adherence among psychiatry patients: Forgetfulness (36.2%), being busy (21.0%), and lack of sufficient information about the medication (10.0%).[10]

In a study conducted by Osterberg et al.,[1] typical reasons cited by patients for not taking their medications included forgetfulness (30%), other priorities (16%), decision to omit doses (11%), lack of information (9%), and emotional factors (7%).

Assessment of patients' insight about psychotropic medication was done, which showed most of the patients (96.2%) believed that they need medication. In spite of that 30% were not following the doctor advice, 41.7% of

Table 5: Study subjects insight about psychotropic medications

Medication-related questions	Yes *n* (%)	No *n* (%)
Do you feel you need medication?	150 (96.2)	6 (3.8)
Do you take medications on your own?	133 (85.3)	23 (14.7)
Does anyone in your family supervise the medication administration?	47 (30.1)	109 (69.9)
Are you taking medication in prescribed time as per doctor's advice?	147 (94.2)	9 (5.8)
Are you feeling comfortable with taking multiple drugs?	94 (63.1)	55 (36.9)
Does size of the medication matter to you?	53 (34)	103 (66)
Does taste of the medication matter to you?	14 (9)	142 (91)
Was there any benefit from the therapy?	141 (90.4)	15 (9.6)
Will you take more tablets than prescribed on days when you feel more diseased?	14 (9)	142 (91)
Are you satisfied with the duration of the treatment?	113 (72.4)	43 (27.6)
Has the doctor explained to you the anticipated benefits from the drugs that have been prescribed?	98 (62.8)	58 (37.2)
Have you taken medications regularly as advised by doctor?	109 (69.9)	47 (30.1)
Do you think you can skip doses without problem?	12 (7.7)	144 (92.3)
Do you think can skip doses occasionally without problem?	35 (22.4)	121 (77.6)
Had you stopped taking treatment previously?	91 (58.3)	65 (41.7)
Do you have any side effects that you believe are due to the medication?	102 (65.4)	54 (34.6)
Have medication side effects interfered with your day to day functions?	69 (44.2)	87 (55.8)
Was there any reappearance of symptoms after discontinuation?	64 (70.3)	27 (29.7)
Have you restarted the same medications without doctor consultation?	23 (14.7)	133 (85.3)
Are the medications affordable to you?	45 (28.8)	111 (71.2)

patients discontinued their medication without consulting their prescriber, and 22.4% of participants thought that they could skip the doses without a problem. Considering the above problems, the lack of insight or comprehension about medications is one of the major causes for non-adherence.

Patients were not compliant when they had to take multiple drugs (36.9%) and when the duration of therapy (27.6%) was longer. 71% of patients felt that medications were not affordable **(**in this study since the medications were supplied by the government free of cost, this was not under a major cause for non-adherence). 37.2% of respondents reported that they were not explained about the benefits of the drugs by the doctor. Medical practitioners need to be aware of all these problems and act upon it because adherence is directly related to the prognosis of the illness. Higher rate of adherence can be achieved when medication intake is supervised in the family.

Limitations of the Study

Being a cross-sectional design conducted at a single hospital, our study findings cannot be generalized.

CONCLUSION

The observed rate of psychotropic medication non-adherence in this study was high. Recovery from their illness, forgetfulness, frequency of drug regimen, and adverse effects were found to be the major reasons for non-adherence. Psychiatric illness, duration of therapy, and lack of insight of patients about medications would also affect the patients' adherence rate. Realistic assessment of patients' knowledge and understanding of the regimen, and their belief in it will enable a more effective targeting of the potential for adherence problems.

Furthermore to prevent psychiatric patients from non-complying to treatment, doctors should be aware of the drugs, cost, and education of patient regarding the benefits of treatment.

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