

Treatment and Disease Related Factors Affecting Non-adherence among Patients on Long Term Therapy of Antidepressants

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Abstract

Introduction: Depression is a term used to describe a health problem in which mood pattern will be affected. Clinical depression is more severe and the symptoms can continue for weeks, months, and even years in some cases if it is not treated and it does interfere with our ability to function and it also can lead to suicide at its worst. Although clinical guidelines recommend antidepressants be continued for at least 6 months after symptom remission, approximately one third of patients discontinue antidepressants within the first month of treatment, and 44% discontinue them by the third month of treatment. Adherence to antidepressants is a stimulating problem in the management of patients with depression. Various factors such as nature and duration of therapy, disease characteristics, medication side-effects, cost of treatment, characteristics of health service facilities, the relation among the physician and patient, patient characteristics such as socioeconomic factors, patient's perspective about the illness and treatment have been reported to influence adherence.

Aim and Objectives: To study the treatment and disease factors that influence compliance to the treatment of depression.

Materials and Methods: The present Cross sectional study was carried out in the department of General Medicine (IP) of Rajiv Gandhi Institute of Medical Sciences (RIMS), Kadapa, AP, A total of 103 subjects were participated in the study during 6 months).

Results: Among the 103 psychiatric patients 31 patients were adherent and 72 patients were non adherent. In our study non-adherence was more in who had used antidepressants previously (57.28%), Poly pharmacy (52.42%) and repercussion of disease (50.48%).

Conclusion: The overall nonadherence rate is high in the study. The present study clearly suggests that the barriers of non-adherence should be prevented to achieve better outcome for a disease.

Keywords: Depression; Antidepressants; Adherence; Non-adherence; Relapse

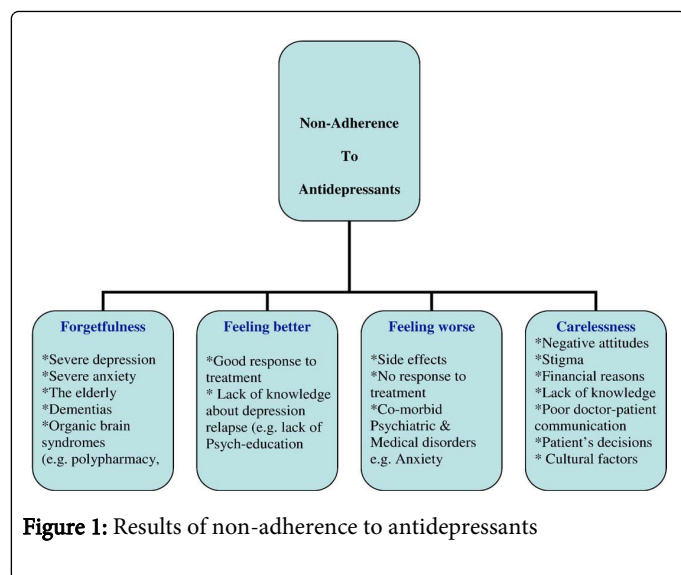
Introduction

Depression is a term used to describe a health problem in which mood pattern will be affected. However when our mood becomes excessively low, remains low for more than a two-week period and interferes with our ability to live our lives then this is called Clinical Depression [1]. Clinical depression is more severe and the symptoms can continue for weeks, months, and even years in some cases if it is not treated and it does interfere with our ability to function and it also can lead to suicide at its worst [1].

Depression inflicts a substantial burden at the population level, with a lifetime prevalence of 13-16%, significantly associated disability, and a liability to relapse [2]. Its negative outcomes include suicide, substantial impairment, lower quality of life, increased health care utilization and cost, and adverse impact on employment productivity [3]. Although clinical guidelines recommend antidepressants be

continued for at least 6 months after symptom remission, approximately one third of patients discontinue antidepressants within the first month of treatment, and 44% discontinue them by the third month of treatment [4]. Compliance or Adherence is defined as "patient's behavior (in terms of taking medication, following diet or life style changes) that coincides with health care provider's recommendations for health and medical recommendation" [5]. Non-adherence to treatment can result from forgetting, negligence, stopping the drug when feeling worse, or stopping the drug when feeling better [6] (Figure 1).

Adherence to antidepressants is a stimulating problem in the management of patients with depression [6]. The early termination of antidepressant medication is statistically associated with a 77% increase in the risk of relapse [4]. Risk factors for Non-adherence are deficient health insurance, access barriers to high-quality care, lower socioeconomic status, less acculturated, therapists relying on interpreters, lower age, stigma towards medication, shorter duration of illness, co-morbid illness, Poor therapeutic alliance, limited family support, less sharing of treatment progress by patient [7].



Various factors such as nature and duration of therapy, disease characteristics, medication side-effects, cost of treatment, characteristics of health service facilities, the relation among the physician and patient, patient characteristics such as socioeconomic factors, patient's perspective about the illness and treatment have been reported to influence adherence [8]. Most established factors have been the patient's attitudes and beliefs about health (including the stigma attached to depression), the patient's and family's attitudes and beliefs about depression and medication, a poor doctor-patient or psychotherapist-patient relationship and previous non-adherence. Other factors mentioned are side effects of the medication, lower education and economic level (especially in the early stages of treatment), not being married, depression itself, forgetfulness, certain personality traits, substance abuse, medical comorbidity and somatoform symptoms [9].

Some of the patient-related factors reported to affect adherence are: forgetfulness; psychosocial stress; anxieties about possible adverse effects; low motivation; inadequate knowledge and skill in managing the disease symptoms and treatment; lack of self-perceived need for treatment; lack of perceived effect of treatment; negative beliefs concerning the efficacy of the treatment; misunderstanding and non-acceptance of the disease; disbelief in the diagnosis; lack of perception of the health risk related to the disease; misunderstanding of treatment instructions; lack of acceptance of monitoring; low treatment expectations; low attendance at follow-up, or at counseling, motivational, behavioral, or psychotherapy classes; hopelessness and negative feelings; frustration with health care providers; fear of dependence; anxiety over the complexity of the medication regimen, and feeling stigmatized by the disease [10].

Negative beliefs about medication and illness are the significant factor for non-adherence. Positive attitudes concerning antidepressants are associated with more active use of mental health services [9]. There are many therapy-related factors that affect adherence. Most notable are those related to the complexity of the medical regimen, duration of treatment, previous treatment failures, frequent variations in treatment, the immediacy of beneficial effects, side-effects, and the availability of medical support to deal with them [10].

Whereas a good patient-provider relationship may improve adherence, there are many reasons that have a negative effect. These include, poorly developed health services with inadequate or non-existent reimbursement by health insurance plans, poor medication distribution systems, lack of knowledge and training for health care providers on managing chronic diseases, overworked health care providers, lack of incentives and feedback on performance, short consultations, weak capacity of the system to educate patients and provide follow-up, inability to establish community support and self-management capacity, lack of knowledge on adherence and of effective interventions for improving it [10].

Effective interactions between patients and health care practitioners have been shown to be important in patients' acceptance of antidepressants and continuation of treatment [11,12]. Patients who have received specific educational messages, such as time to onset of action and to continue taking antidepressants even if feeling better, were more likely to adhere to antidepressant treatment [13,14]. In addition, patients who discussed adverse effects with their physicians were also more likely to continue treatment [12].

Long delays between the referral and referral appointment also decrease the likelihood of adherence [15-17]. Condition-related factors characterize particular illness-related demands faced by the patient. Some strong factors of adherence are those related to the severity of symptoms, level of disability (physical, psychological, social and vocational), rate of progression and severity of the disease, and the availability of effective treatments. Their impact depends on how they influence patients' risk perception, the importance of following treatment, and the priority placed on adherence. Co-morbidities, such as depression (in diabetes or HIV/AIDS), and drug and alcohol abuse, are important modifiers of adherence behaviour [10]. Comorbid medical conditions generally are associated with poor adherence. Similar to findings in adherence studies of other chronic illnesses, such as hypertension or diabetes mellitus, patients with depressive disorders often discontinue their medications.

Aim and Objectives

To study the treatment and disease factors that influence compliance to the treatment of depression. To identify/detect the treatment and disease factors that influence non-adherence.

To assess the attitude of patients towards drug treatment for depression. Patient counseling to improve the patient medication adherence.

Materials and Methods

The present Cross sectional study was carried out in the department of General Medicine (IP) of Rajiv Gandhi Institute of Medical Sciences (RIMS), Kadapa, AP, A total of 103 subjects were participated in the study during 6 months) and the patients were enrolled to the study according to the inclusion and exclusion criteria, after obtaining Informed Consent Form (ICF).

Inclusion criteria: Patients who came to Psychiatry outpatient clinic with diagnosis of depression, Age greater than 18 years.

Exclusion criteria: Ageless than 18 years, HIV patients, pregnant woman, Psychiatric disease other than depression.

Study materials

- The following were the materials which were used during the study:
- Questionnaire format (treatment related, disease related)
- Drug attitude inventory (Hogan et al. 1983; Awad, 1993)
- Informed consent form.

Results

Among the 103 psychiatric patients 31 patients were adherent and 72 patients were non adherent.

Influence of treatment related factors on adherence

Non-affordability showed significant change with adherence to the medication (p=0.017, chi square), and (p=0.007, t-test). Polypharmacy affect adherence significantly (p=0.0, chi square) and (p=0.00, t-test).

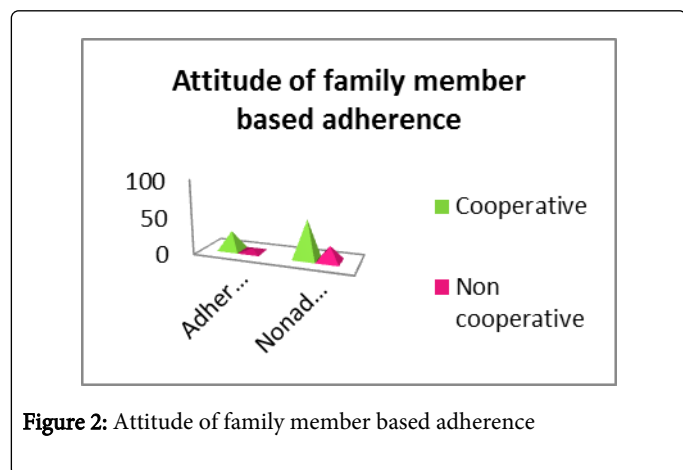


Figure 2: Attitude of family member based adherence

Side effects significantly influence adherence (p=0.007, t-test). Fear regarding taking medication has shown significant effect (p<0.00, t-test) on adherence. Unawareness of nature of depression disorder and adherence to treatment regimen has significantly influenced (p=0.49, t-test) (Table 1).

Factors	Adherence		Nonadherence	
	(No. of patients= 31)		(No. of patients=71)	
	Yes	No	Yes	No
Forgetfulness	12(11.65%)	19(18.44%)	27(26.21%)	45(43.68%)
Non affordability	11(10.67%)	20(19.41%)	44(42.71%)	28(27.18%)
Polypharmacy	17(16.50%)	14(13.59%)	54(52.42%)	18(17.47%)
Addiction of drug	12(11.65%)	19(18.44%)	40(38.83%)	32(31.06%)
Physical side effects	16(15.53%)	15(14.57%)	47(45.63%)	25(24.27%)
Previous use of A.D drugs	24(23.30%)	7(6.79%)	59(57.28%)	13(12.62%)
ECT	4(3.8%)	27(26.21%)	9(8.73%)	63(61.16%)
Fear regarding medication	4(3.8%)	27(26.21%)	22(21.35%)	50(48.54%)
Psychoeducation	22(21.35%)	9(8.73%)	51(49.51%)	21(20.38%)

Psychoeducation following	22(21.35%)	9(8.73%)	39(37.86%)	33(32.03%)
Unfriendly attitude of doctors	7(6.79%)	24(23.3%)	16(15.53%)	56(54.36%)
Repurcussion disease of	24(23.3%)	7(6.79%)	52(50.48%)	20(19.41%)
Unaware of disease	15(14.57%)	16(15.53%)	31(30.09%)	41(39.8%)
Habits(smoking/alcohol)	8(7.76%)	23(22.33%)	11(10.67%)	61(59.22%)

Table 1: Treatment related factors on adherence

Distribution of adherence and non-adherence based on attitude of family member: The non-adherence rate was very high in patients with co-operative and non- cooperative family members with 50.48% and 19.41% respectively (Figure 2).

Distribution of adherence and non-adherence based on accessibility of doctor: Though the accessibility of doctor was easy; non-adherence was found to be high with 65.04%. Adherence rate was 30.09% and no one were adherent (Figure 3).

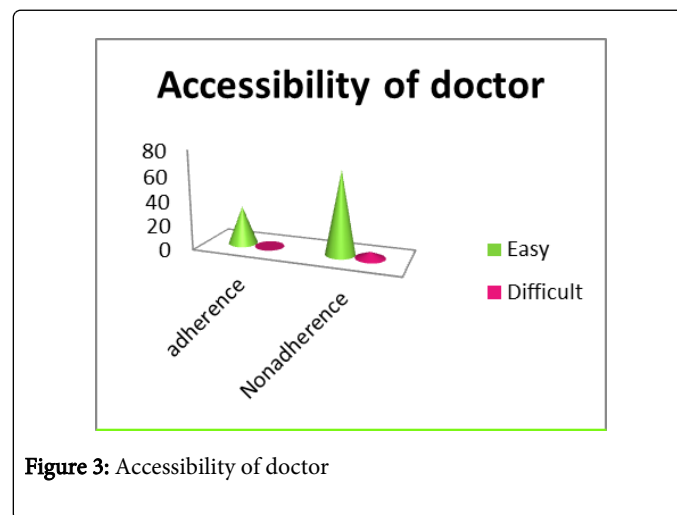


Figure 3: Accessibility of doctor

Distribution of adherence and non-adherence based on level of satisfaction with doctor: All 103 patients were satisfied with doctor with 30.09% adherence and 69.9% non-adherence (Figure 4).

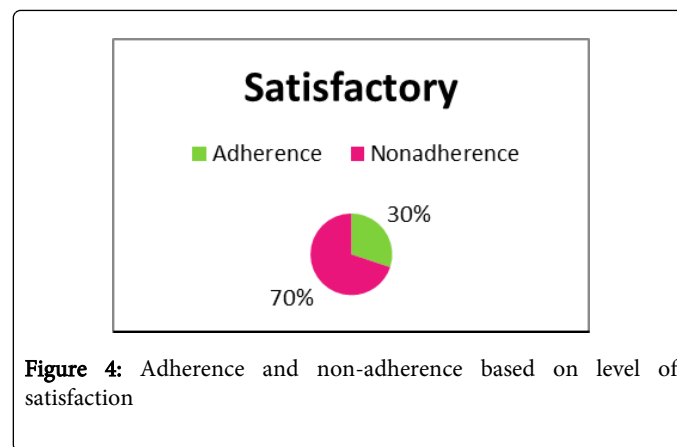


Figure 4: Adherence and non-adherence based on level of satisfaction

Distribution of adherence and non-adherence based on infrequent clinical visits: Among 31 adherent patients 19(18.44%) were found to visit frequently and 41(39.8%) were non-adherent with frequent visits. Out of 72 non-adherent patients 2(1.94%) were due to fear over transport facilities (Figure 5).

Influence of disease related factors on adherence

When coming to duration of illness that adherence and non-adherence were found to be high for patients with more than a year illness with 22.33% and 51.46% respectively. Low rates of adherence were 2.91% and non-adherence was 0.97% for patients with 1 month illness. Out of 103 patients 13(12.62%) were adherent and 38(36.89%) were non-adherent without treatment for depression. Out of 31 adherent patients 14(13.59%) were with no relapse and 1(0.97%) was with more than two relapses.

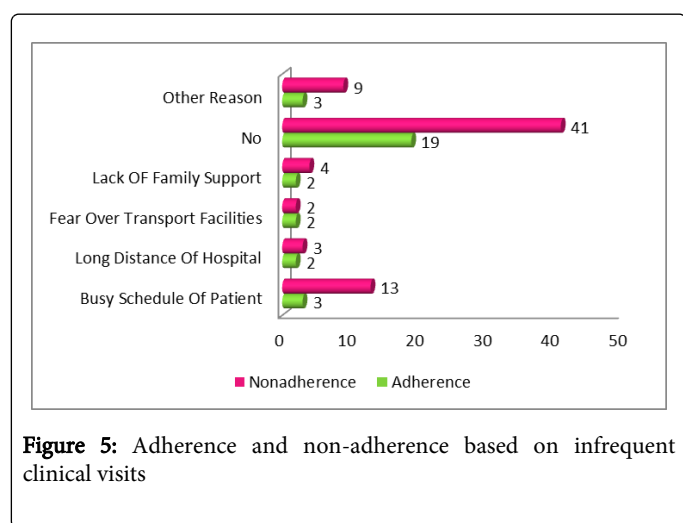


Figure 5: Adherence and non-adherence based on infrequent clinical visits

Among 72 non-adherent patients 31(30.09%) were with no relapse and 6(5.82%) with two relapses. Adherence as well as non-adherence rates were high in patients without inpatient treatment with 23.3% and 50.48% respectively along with inpatient admissions we also seen number of times patient has admitted in the hospital that high rate of adherence (23.3%) and non-adherence (50.48%) were observed in patients who had not admitted in the hospital.

Duration of illness	Adherence	Nonadherence
1 month	3(2.91%)	1(0.97%)
2-6 months	3(2.91%)	7(6.79%)
6 months-1 year	2(1.94%)	11(10.67%)
More than one year	23(22.33%)	53(51.46%)
Duration of untreated depression		
No	13(12.62%)	38(36.89%)
1 month	0(0%)	5(4.85%)
2 months	2(1.94%)	4(3.8%)

3 months-6 months	4(3.8%)	5(4.85%)
1 year	3(2.91%)	7(6.79%)
More than one year	9(8.73%)	13(12.62%)
Relapses		
No	14(13.59%)	31(30.09%)
1	9(8.73%)	21(20.38%)
2	7(6.79%)	6(5.82%)
More than two	1(0.97%)	14(13.59%)
Inpatient treatment		
Yes	7(6.79%)	20(19.41%)
No	24(23.30%)	52(50.48%)
No. of inpatient admissions		
0 time	24(23.3%)	52(50.48%)
1 time	5(4.85%)	13(12.62%)
2 times	2(1.94%)	5(4.85%)
5 times	0(0%)	1(0.97%)
20 times	0(0%)	1(0.97%)
Comorbid diseases		
HTN	2(1.94%)	8(7.76%)
DM	2(1.94%)	7(6.79%)
Endocrine disorders	1(0.97%)	2(1.94%)
No	23(22.33%)	53(51.45%)
HTN&DM	3(2.91%)	2(1.94%)

Table 2: Disease related factors on adherence.

The low rate of adherence (0%) and non-adherence (0.97%) were observed in patients who had admitted 5 times and 20 times into inpatient ward. Patients without any comorbidities had 22.33% adherence rate and 51.45% non-adherence rate. Patients with endocrine disorders had lowest adherence rate of 0.97% and non-adherence rate of 1.94% (Table 2).

Distribution of adherence and non-adherence based on family and past histories: Non-adherence was found to be high in 18 patients (17.47%) than 9(8.73%) adherent patients with family history of depression. Patients who had past history of Depression were with 27.18% adherence and 54.36% non-adherence (Table 3).

Distribution of adherence and non-adherence based on thoughts and attempts of suicide: Among 72 non-adherent patients 37(35.92%) were found to have thoughts of suicide. Out of 31 adherent patients only 8(7.76%) patients were attempted suicide and out of 72 non-adherent patients only 18(17.47%) were attempted suicide (Table 4).

Factors	Adherence (No. of patients)	Non-adherence (No. of patients)
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	Yes	No	Yes	No
Family history	9(8.73%)	22(21.35%)	18(17.47%)	54(52.42%)
Past history	28(27.18%)	3(2.91%)	56(54.36%)	16(15.53%)

Table 3: Distribution of adherence and non-adherence based on family and past histories

Distribution of adherence and non-adherence based on no. of suicide attempts: Patients who didn't attempt suicide had 22.33% adherence rate and 52.42% non-adherence rate.

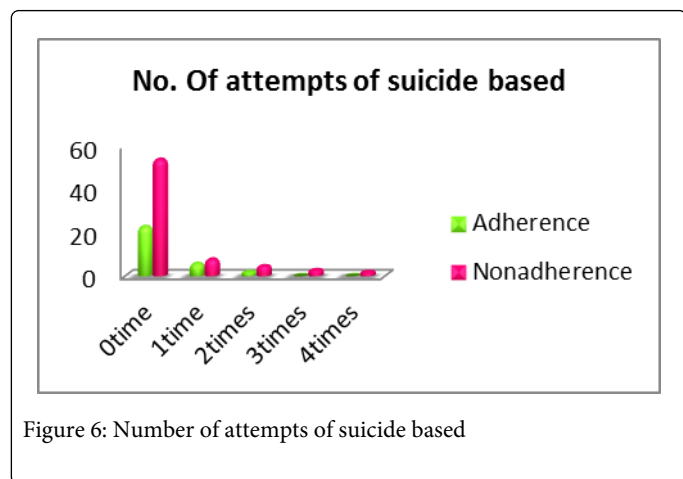


Figure 6: Number of attempts of suicide based

The lowest rates of adherence and non-adherence were 0% and 1.94% respectively with 4 attempts of suicide (Figure 6).

Discussion

Depression is a common mental disorder that presents with down mood, loss of interest or desire, reduced energy, feelings of guilt or low self-worth, disturbed sleep or appetite and poor concentration.

Depression is a substantial contributor to the global burden of disease and affects people in all communities throughout the world. Today, depression is predicted to affect 350 million people [18]. Medication compliance is a well-established issue in the care of depression. There is evidence that more than 50% of depressed patients withdraw treatment prematurely [19].

In our study non-adherence was more in who had used antidepressants previously (57.28%), Poly pharmacy (52.42%) and repercussion of disease (50.48%). Non-affordability is the significant factor affecting adherence to treatment ($p=0.017$, chi square) and non-affordability to buy drugs significantly influenced mean drug attitude inventory scores ($p=0.007$, t-test). Polypharmacy was found to affect adherence significantly ($p=0.0$, chi square) and poly pharmacy significantly influenced mean drug attitude inventory scores ($p=0.00$, t-test) with greater number of subjects becoming noncompliant to multiple drug regimen. Less significance was seen in other therapy related factors. This evidence suggests that non-affordability and poly pharmacy contribute to non-adherence significantly.

Factors	Adherence (No. of patients)		Nonadherence (No. of patients)	
	Yes	No	Yes	No
Thoughts of suicide	13(12.62%)	18(17.47%)	37(35.92%)	35(33.98%)
Attempts of suicide	8(7.76%)	23(22.33%)	18(17.47%)	54(52.42%)

Table 4: Distribution of adherence and non-adherence based on thoughts and attempts of suicide.

An interesting study by Albaz in Saudi Arabia concluded that organizational variables (time spent with the doctor, continuity of care by the doctor, communication style of the doctor and interpersonal style of the doctor) are far more important than socio-demographic variables (gender, marital status, age, educational level and health status) in affecting patients' adherence [20]. Finally, physician satisfaction is believed to improve treatment adherence. Van Os et al note that factors influencing the quality of the therapist-patient relationship in psychotherapy have been shown to account for up to 30% of the patient outcome [20].

In one study reported that adherent subjects had a higher level of satisfaction with their physicians, with 87% indicating "excellent" or "very good," while only 60% of the nonadherent subjects indicated this level of satisfaction [21,22]. Unawareness of nature of depression disorder and adherence to treatment regimen has significantly influenced ($p=0.49$, t-test) mean drug attitude inventory scores in our study. Most of the study subjects were found to be nonadherent due to

fear related to myths about medication use in the present study. Fear regarding taking medication has shown significant effect ($p<0.00$, t-test) on mean drug attitude inventory scores.

Non-adherence was found to be more in patients with past history of depressive illness (52.42%); with more than 1 year duration of illness (51.46%). Patients with suicide ideation were more non-adherent (35.92%). Relapses contribute 39.79% of non-adherence rate when compared to non-adherence rate without relapse (30.09%). In our study, mean drug attitude inventory score was significantly greater ($p=0.006$, t-test) in those who were not on adjuvant antipsychotic medication when compared to those with adjuvant medication.

Medication side effects significantly influenced mean drug attitude inventory scores ($p=0.007$, t-test) where more number of subjects became non-adherent due to it. As the ADR's were not assessed by causality assessment scales, it can't be proved whether the observed ADR's were due to drug regimen or symptoms of disease.

Conclusion

The overall nonadherence rate is high in the study. The present study clearly suggests that the barriers of non-adherence should be prevented to achieve better outcome for a disease. Depression is a chronic mental disorder. As there is no complete cure for depression, it requires long term management. It is very difficult to maintain adherence to the therapy for a long period of time. As the condition may tend to worsen, relapse and requires hospitalization. Subjects who are unable to buy the drugs and patients prescribed with more than 2 drugs having more rate nonadherence. The overall nonadherence rate is high in this study. Total relapse rate is more in this study when compared to the subjects who don't have relapse. Hence the present study clearly suggests that the barriers of non-adherence should be prevented to achieve better outcome for a disease.

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