Non-Compliance Factors among Psychiatric Patients in A Tertiary Hospital-A Cross Sectional Study

Amol P
Assistant Professor Department Of Psychiatry Khaja Banda Nawaz Institute Of Medical Sciences Kalaburgi, Karnataka, India-02

Abstract
Aims:This study was carried out with an objective to assess different reasons of medication non-compliance in a sample of out-door psychiatric patients and to evaluate the correlation between clinical variables and causes of non-compliance to drugs. This study was conducted at Psychiatry department, KhajaBanda NawazInstitute of Medical Sciences,Kalaburgi; from (1st Sept 2015 to 31st Aug 2016) .Data from a non-probability sample of 50 follow-up patients with a definite psychiatric illness was collected. Patients were recruited who were between 18 and 60 years of age and who were treated in the outpatient clinics of the psychiatry department. Information regarding socio-demographic characteristics (e.g., age, gender, level of education, marital status, and income) were recorded on a proforma designed by the author. A questionnaire designed for this purpose was administered to examine the factors that cause non-compliance. Data was analyzed using SPSS for window 20.0 version. Chi- square analysis done for variable of interest. Non-compliance to drug treatment is most common in between 21-30 years of age groups, more in females 72% than males 28%, those who are married(60%) than single(40%),and with low education(28%) & low socio-economic status(54%).Notable reasons for non-compliance were feelings of wellness(26%), paranoia to medication(22%),lack of insight to the illness(14%),medication side effects(10%),hopelessness of cure & poor support (8%) respectively.\,financial problems (6%), no improvement(4%), too much of medication(2%).The commonest psychiatric illnesses leading to non-compliance were schizophrenia (26%), BPAD (18%), MDD (14%), psychosis (10%), epilepsy & OCD (8%) each, GAD (6%), somatization disorder & substance induced psychosis (4%) each, panic attack with agoraphobia (1%).Data analyses explored significant associations between age, income and psychiatric illness with causes of non-compliance to drugs (P<0.01).
Conclusion: Non-compliance is quite common in psychiatric patients. Medical practitioners need to be aware of it and address this problem because compliance is directly related to the prognosis of the illness.
Keywords:Socio-demographic characteristics, non-compliance, psychiatric illness, reasons.

I. Introduction

Non-compliance can be defined as a discontinuation or failure of proper medication intake without prior approval from the treating physicianIn a review article that summarized findings of studies from 1961 to 1975 and commented that failures of patients to compliance with the treatment is a major problem in case of psychiatricpatients.[2]

By its very nature psychiatric illness that impairs judgment, insight and stability places psychiatric patients at increased risk for medication non-compliance.

[3]Non-compliance of patients with prescribed treatment is considered as a barrier to effective health care. Non-compliance with prescribed treatment has implications for the health of the patients; the effective use of resources & assessments of the clinical efficacy of treatment ˙It is seen as an important area of concern for all health care professionals. [4]

Non-compliance contribute to relapse and re-hospitalization [5].The cost of poor compliance to sufferers and also to society is considerable and effective ways of improving compliance are a crucial part of good management [6]

Therefore, improving medication compliance in persons with mentally ill holds the potential for reducing morbidity and suffering of patients and their families, in addition to decreasing the cost of re-hospitalization[7]

Physicians contribute to the non-compliance by failing to prescribe simple regimens, not explaining the benefits and side-effects of medication, not considering patients' lifestyle or medication cost involved and inadequately eliciting and rectifying the myths and beliefs held by patients [8]

One of the ways to improve drug compliance is to know crucial factors responsible for poor drug compliance so that proper management strategies may be planned to improve patients' drug compliance. .

II. Materials & method

It was a hospital based cross-sectional study. 50 consecutive drug non-compliant psychiatric patients attending Psychiatry O.P.D,KBNIMS. Subject between age group of 18 to 60 years.Both sexes Patients with cognitive deficit or acute psychosis.Patients presenting for the first time in Psychiatry O.P.D Patients unable to undergo the interview and with no informant. An Informed consent was taken from patients and their legal guardians before conducting the study. A cross sectional study was conducted in those patients attending out-patient services of Psychiatric Department, KBNIMS. Basic socio-demographic information along with psychiatric diagnosis, were recorded in a semi-structured proforma. The different reasons for non-compliance were assessed through a structured interview using a checklist. Data was analyzed using SPSS for Windows 20.0 Version.Chi–square analysis was done for the variables of interest.

II. Results

Mean age of the patients was 31.40 ± 6.59 years ranging from 18-60years. Mean income was 12120.00 ± 5913.11 years & mean illness duration was 32.16 ± 23.82 years ranging from (18-60years). Majority of the subjects (n=29, 58%) were between the age range of 21-30 years. Out of 50 follow-up drug non-compliant patients (n=36, 72%) were females and (n=14, 28%) males. (60%) were married. Most of them were having low education up to primary class (n=14, 28%), and belong to low socio-economic status (n=27, 54%). The commonest psychiatric illnesses leading to non-compliance were schizophrenia (26%) followed by BPAD (18%) and MDD (14%),psychosis(10%),epilepsy & OCD (8%),GAD (6%),panic disorder & substance induced psychosis (4%), somatization disorder (1%). Subjective wellbeing (26%),paranoia to medication (22%)were the two most prevalent causes for non-compliance respectively , no insight into the illness (14%), medication side effects was perceived to be a contributor of non-compliance in (10%) patients and hopelessness of cure & poor support was a cause in (8%) patients. Financial problems was reported by (6%), no improvement in (4%), too much of medication in (2%) of patients. Significant association is found between non-compliance with age, income and psychiatric diagnosis of the patients (p<0.01).

III. Discussion

The observation shows that non-compliance is common in the age group (21-30) years. Similarly, other study has reported young patients under 40 years have a low compliance rate [9, 10] .Younger patients were found to have more level of non compliance, this implies that younger patients may have a more negative perception of medicine, perceiving them to be more harmful and viewing themselves as possessing greater personal control on how to best manage their condition .[11]Among the sex, females (72%) were more non-compliant to medication than males (28%) which is similar with the findings of Selenyegenoglu et al [12] who reported that there were more female than male non-compliant patients (61% and 38.9% respectively)About (60%) of married patients were more non-compliant with medications than unmarried patients. Another study has noted that non compliant were predominantly unmarried (n=19, 63%) [13] .Thisis again in contrast with other studies who reported that married patients were more compliant to medication positively. The help and support from a spouse and this could be the reason why married patients were more compliant to medication positively than unmarried patients.[14, 15]Patients up to primary class education (28%) were more non-compliant to medication similarly other study found that patients with low literacy skills are less likely to be compliant to their medication regimens. [16](44%) of Unemployed were noncompliant to medication. This is consistent with other findings [17, 18]. A study by Bloom *et al* [19] found that 92% (n=35) of the non compliant were unemployed at the time of hospital admission. This suggests that noncompliance could have been attributed to their possible financial constraints as they might find it difficult to afford visiting their healthcare facility on a monthly basis and thus, might not have regular refills on their prescription.Patients having an income of <Rs 10,000 (54%) were more non compliant to medication which is similar with the findings of Berghoferet al[20]

(44%) of patients were having duration of illness between (1-2years) .This corresponds with the finding of Rekha et al [21] who reported that longer duration of the illness may adversely affect drug compliance.

Among different psychiatric illness, patients suffering from schizophrenia (26%,n=13) are the commonest not to comply which correlates with the findings of Victoria Omranifard et al [22] who reported that Schizophrenic patients has the highest non-compliance rate (27.2%).The findings of the present study shows subjective well being (26%, n=13) as the most common reason for non-compliance to medication which is consistent with that reported by previous studies that after resolution of an acute episode ,however, some patients stop medication because they feel well and therefore no longer in need of treatment.[23,24]Paranoia to medication is reported to cause non-compliance in (22%) of patients which is consistent with the studies of Swett C[25] .who reported high levels of paranoid ideation were significantly associated with premature termination of medication.

No insight to the illness attributed to non-compliance in (14%) of the patients. McEvoy et al [26] reported similar studies showing that psychotic patients; especially the first episodes of psychiatric conditions have little insight and this is shown to increase the risk of discontinuing medication.

(10%) of the patients were non-compliant due to the side effects of medication mainly sedation and weight gain. Similarly patients who discontinue prescribed neuroleptic medicine cite side effects as their primary reason for non-compliance [23]. Selen et al [12] also reported occurrence of physical side effects as the most frequent reasons for discontinuing medication(8%) reported hopelessness of cure as a cause of noncompliance to medication .Similarly Victoria Omranifard et al [22] found hopelessness as a cause of non compliance to medication in (12.8%) of patients.Poor support cause non compliance in 8% of patients. Two studies also reported lack of emotional support and help from family members and friends as the causes of poor drug compliance in the patients [27, 21]6% are not compliant to medication due to financial problems. This is in accordance with that reported by other study.[21]4% were non compliant to medication due to no improvement in the medication. Similarly 7% reported no improvement as a cause of non compliant to medication.[21]
2% of the non compliant were due to too much of medication. Similarly (1.2%) were not compliant due to too much of medication as reported by Victoria Omranifard et al. [22]

In this study, age is significantly associated with non compliance (P<0.01).Similarly, age is found to have significant association with low compliance which is similar with the finding reported by previous study[28]. Marital status is found to have significant association with non compliance (P<0.05). Similarly, Zito et al [29] reported unmarried   having significant association with poor compliance.An association is present between income and causes of non-compliance .This corresponds to the findings of Hoge*et al* [30] who found that in their urban-based hospital there is a strong relationship between non compliance and social class with those coming from the lower socio-economic class.A correlation is present between non compliance and psychiatric diagnosis (P<0.01).Two studies found that non compliance to medication were likely to be diagnosed with bipolar disorder and schizoaffective disorder, while majority of consenting patients had a diagnosis of schizophrenia. [29, 31]These findings are however supported by other studies who found the most common diagnosis among non compliance of medication was schizophrenia.[32, 33]

IV.   Conclusion

In this study it is found that the factors contributing to noncompliance in psychiatric patients are age 21-30 years, female sex, married, having low level of education, unemployed, income <Rs 10,000,with 1-2 years illness duration. Schizophrenia was the commonest psychiatric illness leading to noncompliance. The commonest reasons for noncompliance are feeling of subjective wellbeing, paranoia to medication, no insight into the illness, medication side effects, hopelessness of cure, lack of care giver/poor support, financial problems, no improvement, too much of medication etc.

This study stresses the critical need for taking necessary steps toward minimizing poor outcomes related to lack of compliance in drug therapy.There were some limitations in this study. Sample size is small. Study is confined to a tertiary hospital, which may not necessarily represent the general population of the country. Recall bias associated with self reporting. And, treatment variables such as medication and its doses or poly-pharmacy were not assessed.

There is a need to provide proper counseling to patients and their caregivers regarding nature of illness better explanation of duration of use of medication , associated side-effects as well as   elaborately discussing consequences of non –compliance. Studies on socio demographic and clinical correlates of drug non-compliance will add more information into our understanding of non compliance by psychiatric patients.It is recommended that further research is needed in this field to know more about it and to understand it better. Medical practitioners need to be aware of it and address this problem because compliance is directly related to the prognosis of the illness.

References

[1]. Ghaziuddin N, King CA, Hovey JD, Zaccagni J, Ghaziuddin M. Medication Non compliance in adolescents with psychiatric disorders, Child Psychiatry. Hum. Dev 1999; 30,103-110.
[2]. Blackwell, B. Treatment adherence. British Journal of Psychiatry 1976; 126,512-31.
[3]. Kane, J.M.Compliance issues in outpatient treatment .Journal of clinical   psychopharmacology 1985; 5:22-27.
[4]. Non-compliance and professional power. John F.Playle RN Bsc (Hons) Msc Dip counseling CPN & Philip Keeley RN MA BA CPN CortRNT.Journal of Advanced Nursing, 1998,27,304-311.
[5]. Adams, S.G.Jr, & Howe, J.T.Predicting medication compliance in a psychotic population. Journal of Nervous and Mental Disease 1993; 181:558-560.
[6]. Bebbington, P.E. The content and context of compliance. International Clinical Psychopharmacology, 1995; 9 (5): 41-50.
[7]. Nageotte C, Sulliman G, Duans N, & Camp P.L. (1997). Medication compliance among the seriously mentally ill in a public health system. Social Psychiatry and Psychiatric Epidemiology, 32, 49-56,
[8]. Golin CE, Liu H, Hays RD, Miller LG, Beck CK, Lekovics J, et al. A prospective study of predictors of adherence to combination antiretroviral medication .JGen Intern Med 2002, 17; 756-65.

[9]. Leggat JE, Jr, Orzol SM, Hulbert-shearon TE, et al.Noncompliance in hemodialysis: predictors and survival analysis .Am J Kidney Dis.1998; 32:139-465

[10]. Loong TW. Primary non-compliance in a Singapore polyclinic. Singapore Med J.1999; 40:691-3

[11]. Hou R, Cleak V, Peveler R. Do treatment and illness beliefs influence   adherence to medication in patients with bipolar affective disorder? A preliminary cross-sectional study. Eur. Psychiatry 2009; 25(4): 216-219.

[12]. SelenYegenoglu, Albert L.Wertheimer, William   R. Dublin. Demographical factors affecting patient compliance to medications in an outpatient psychiatric clinic: A preliminary study. FABAD J.Pharm.Sci. 2003; 28:77-84.

[13]. Zito, J.M., Routt, W.W., Mitchell, J.E., and Roering, J.L. Clinical characteristics of hospitalised psychotic patients who refuse antipsychotic drug therapy. Am J Psychiatry, 1985; 142:822-826.

[14]. Frazier PA, Davis-Ali SH, Dahl KE. Correlates of non-compliance among renal transplant recipients. Clin Transplant.1994; 8:550-7

[15]. Cooper C, Carpenter I, Katona C, et al. The AdHOC study of older adults' adherence to medication in 11 countries. Am J Geriatr Psychiatry.2005; 13:1067-76

[16]. Nichols-English G, Poirier S. Optimizing adherence to pharmaceutical care plans. J Am Pharm Assoc.2000; 40:475-85

[17]. Sanele M, ThandincebaM,SiyabongaN,FarzanaNM,Londeka N, Justine P, Olivia S.Frasia O. Medication adherence of psychiatric patients in an outpatient setting. African Journal of Pharmacy and Pharmacology 2012; 6(9):608-612.

[18]. Marco DiBonaventura, Susan Gabriel, Leon Dupclay, Shaloo Gupta and Edward Kim.A patient perspective of the impact of medication side effects on adherence: results of a cross-sectional nationwide survey of patients with schizophrenia.BMC Psychiatry 2012; 12:20.

[19]. Bloom, J.D., Faulkner, L.R., Holm, V.M., and Rawlinson, R.A. An imperial view of patients exercising their right to refuse treatment. Int J Law Psychiatry1984; 7:315-328

[20]. Berghofer G, Schmidl F, Rudas S, et al. Predictors of treatment discontinuity in outpatient mental health care. Soc Psychiatry PsychiatrEpidemiol. 2002; 37:276–82.

[21]. Rekha R, Masroor J, Sushma K, Prashant KC. Reasons for drug non-compliance of psychiatric patients: A centre based study. Journal of the Indian Academy of Applied Psychology. 2005; 31:24-28

[22]. Victoria Omranifard, Mohsen Yazdani, Mohammad Yaghoubi, MahshidNamdari. Noncompliance and its causes resulting in psychiatric readmissions. Iran J Psychiatry 2008; 3:37-42

[23]. Reilly, E.L.; Wilson, W.P.; and McClinton, H.K. Clinical characteristics and medication history of schizophrenics readmitted to the hospital. International Journal ofNeuropsychiatry, 1967; 39:85-90.

[24]. Hoffman, R.P.; Moore, W.E.; and O'Dea, L.F. A potential role for the pharmacist: Medication problems confronted by the schizophrenic outpatient. Journal of the AmericanPharmaceutical Association, NS 1974; 14(5): 25 2-265

[25]. Swett CJr, NoonesJ.Factors associated with premature termination from outpatient treatment. Hosp Community Psychiatry. 1989; 40(9):947-51.

[26]. McEvoy JP, Apperson L J, Appelbaum PS, et al: Insight in schizophrenia: Its relation to acute psychopathology. Journal of Nervous and Mental Diseases 1989; 177:43-47

[27]. Nose, M., Barbui, C. &Tansella, M. How often do patients with psychosis fail to adhere to treatment programmes? A systematic review. Psychological Medicine 2003; 33, 1149–1160.

[28]. Jing Jin, Grant Edward Sklar,Vernon Min Sen Oh, and ShuChuenLi.Factors affecting therapeutic compliance: A review from the patient's perspective2008 ; 4(1): 269–286.

[29]. Zito, J.M., Routt, W.W., Mitchell, J.E., and Roering, J.L. Clinical characteristics of hospitalised psychotic patients who refuse antipsychotic drug therapy. Am J Psychiatry, 1985; 142:822-826.

[30]. Hoge, S.K., Appelbaum, P.S., Lawlor, T., Beck, J.C., Litman, R., Greer, A., Gutheil, T.G., and Kaplna, E.. A prospective, multicenter study of patients' refusal of antipsychotic medication. Arch Gen Psychiatry, 1990; 47:949-956

[31]. Zito, J.M., Hendel, D.D., Mitchell, J.E., and Routt, W.W. Drug treatment refusal, diagnosis, and length of hospitalisation in involuntary psychiatric patients. BehavSci Law, 1986; 4:327-337.

[32]. Rodenhausser, P., Schwenker, C.E., and Khamis, H.J. Factors related to drug treatment refusal in a forensic hospital. Hospital Community Psychiatry1987; 38:631-637.

[33]. Smith, L.D. Medication refusal and the rehospitalised mentally ill inmate. Hospital and Community Psychiatry, 1989; 40(5):491-496.

[34].

Table 1: Demographic features of the patients

Socio-demographic Factor	Mean ± S.D.		
Age (in years)	31.40 ± 6.59		
Income (in Rs)	12120.00 ± 5913.11		
Illness duration	32.16 ± 23.82		
Age groups		Age groups No .of cases (%) 10-20years 4(8%) 21-30years 29(58%) 31 & above 17(34%)	
Sex		Sex No. of Cases (%) Male 14(28%) Female 36(72%)	

Marital status	-	Status No. of Cases (%) Single 14(28%) Married 36(72%) Spouse death 1(2%) Divorce 5(10%)	
Educational status	-	Status No. of Cases(%) Illiterate 6(12%) Literate 44(88%) Primary 14(28%) Class X 9(18%) Class XII 11(22%) Graduate 10(20%)	
Occupation		Unemployed 22(44%) Employed 7(14%) Students 4(8%)	
Duration of illness		Less than 1year 8(16%) 1-2years 22(44%) 3-4years 12(24%) 5-7years 8(16%)	

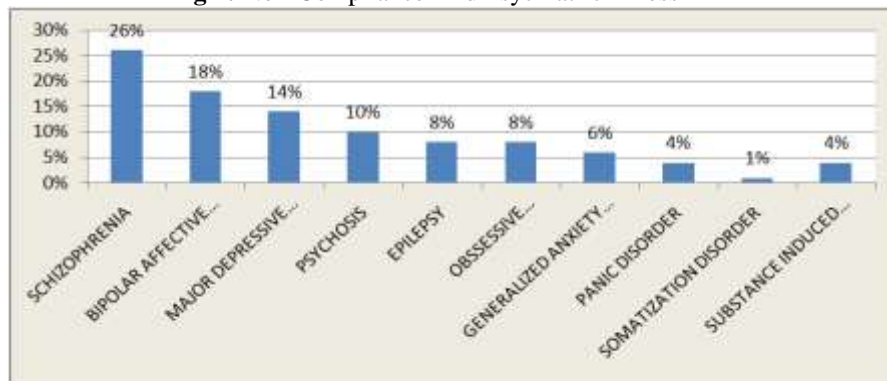**Fig 1:** Non-Compliance And Psychiatric Illness

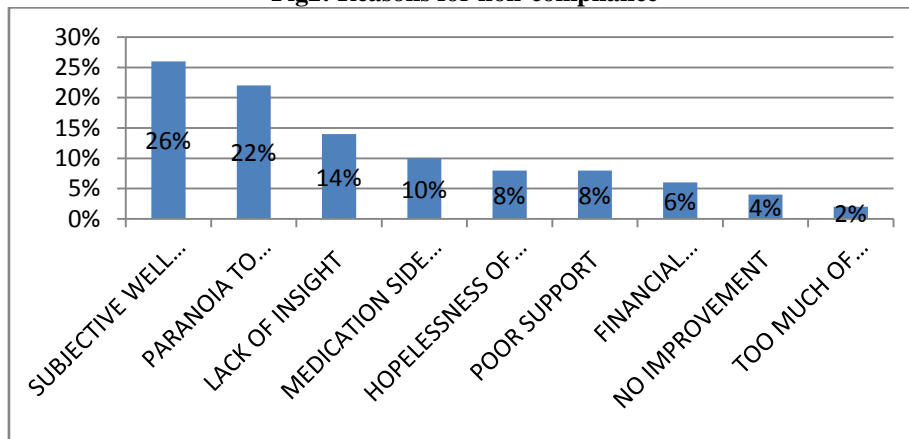**Fig2: Reasons for non-compliance**

Table 2: Age of the patients and the causes of non-compliance

H_o: There is independence of age and non-compliance of the patients.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-	P-value

	Value	df		Asymp.Sig .(2-sided)	P-value
Pearson Chi-Square	185.343	136		0.003**	P<0.01
No. of Valid Cases	50				

*Significant at 0.05 probability level.
** Significant at 0.01 probability level.

Since P<0.01, the null hypothesis H_o is rejected at 0.01 probability level of significance and hence non-compliance is associated with age of patients.

Table 3.Marital status of the patients and causes of non-compliance.
H0: There is independence of marital status and non-compliance of the patients.

Chi-Square Tests

	Value	df	Asymp.Sig .(2-sided)	P-value
Pearson Chi-Square	39.982	24	0.021*	P<0.05
No. of Valid Cases	50			

*Significant at 0.05 probability level.
** Significant at 0.01 probability level
Since P<0.05, the null hypothesis H0 is rejected at 0.05 probability level of significance and hence non-compliance is associated with marital status of the patients.

Table 4: Income of the patients and the causes of non-compliance
H_o: There is independence of income and non-compliance of the patients.

Chi-square tests

	Value	df	Asymp. Sig. (2-sided)	P-value
Pearson Chi-Square	175.243	128	0.004**	P<0.01
No. of Valid Cases	50			

Significant at 0.05 probability level.
*** Significant at 0.01 probability level.*

Since P<0.01, the null hypothesis H_o is rejected at 0.01 probability level of significance and hence non-compliance is associated with income of patients.

Table 5: Psychiatric diagnosis and causes of non-compliance.
H0: There is independence of psychiatric diagnosis and non-compliance of the patient.

Chi-square tests

	Value	df	Asymp.Sig.(2-sided)	P-value
Pearson Chi-Square	132.167	72	0.000**	P<0.01
No. of Valid cases	50			

*Significant at 0.05 probability level
**Significant at 0.01 probability level
Since P<0.01, the null hypothesis HO is rejected at 0.01 probability level of significance & hence non-compliance is associated with psychiatric diagnosis of the patients.