

Noncompliance and its Causes Resulting in Psychiatric Readmissions

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Objective: We aimed to describe psychiatrists' attributions on non-compliance related issues resulting in re-hospitalizations of psychiatric patients.

Method: In a cross sectional study, we included 500 randomly selected psychiatric readmitted patients and registered their demographic data (including age, sex, job, marital status, and educational level), and psychiatric clinical data (including diagnosis, medications, and presence of psychiatric disorders in family members). Possible noncompliance issues by means of type and causes were asked through a structured interview by a psychiatrist.

Results: Non-compliance was reported as a possible cause of admission in 441 (88.2) of the re-hospitalized cases. No insight to disease (n=295; 59%), and feeling of cure (n=138; 27.6%) were the 2 most prevalent causes for non-compliance of the patients.

Conclusion: It seems that non-compliance, as a prevalent factor, possibly causes readmission in psychiatric wards. Providing a better insight to disease and to instruct patients to take their medications even if they have some feeling of cure is important to decrease such problems.

Key Words:

Medication adherence, Patient readmission, Psychiatry

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Findings on psychiatric readmissions vary from study to study, which may be partially due to methodological issues. A number of researches tried to determine the predictors of psychiatric readmissions. Most of the attention of these series of studies, which were conducted by case control or cohort design, has been paid to socio-demographic and clinical data (1-8). In this regard, age (5, 9), gender (1, 2, 4-6, 9), the disability due to primary disease by means of the number of previous admissions (4, 8, 10, 11) and the severity and degree of psychotic symptoms of major illness (3, 11) and also the presence of mental co morbid diseases such as substance abuse (2, 6-8) and secondary diagnosis of personality disorder (4) are the known risk factors of frequently inpatient psychiatric use.

As known from the literature, there are, apart from the above potentially significant predictors, some other factors which could be of importance for readmission to psychiatric inpatient care. These include causes- not risk factors- and are found by the second series of research that used survey design and described readmitted patients by description of perceptions of the cause of readmissions from the view point of patients, caregivers or staffs. Several factors have been attributed to the re-hospitalizations, however, most

studies are noncompliant with medication or treatment (6, 8), and this may be due to denial of illness (6, 12).

Some other factors may include social problems such as work related situations (1-4, 9).

We aimed to describe a sample of re-hospitalized psychiatric patients whose psychiatrists believed that noncompliance was a possible cause for their re-hospitalization. We also asked the cause of noncompliance.

Materials and Method

Design

Our descriptive cross sectional study was carried out between 2006 and 2007, in 4 governmental hospitals in Isfahan, Iran, namely Noor, Alzahra, Farabi and Modarres hospitals. For the study, 500 randomly selected patients aged 18 to 65 who suffered from any type of psychiatric disorder and were re-hospitalized in psychiatric inpatient care, and lived in the city of Isfahan were recruited. Cluster randomization with hospitals as the unit of allocation was used.

Inpatient re-hospitalization was defined as the admission more than 1 time during a 6 month period (13). Homeless people and those with neurological conditions or with two concomitant axis I psychiatric disorders were excluded.

Process

The individuals were examined at the time of their re-hospitalization. Examination was carried out by psychiatrists. The psychiatric diagnosis was assessed by the psychiatrist who admitted the patients, and had treated the patients in the outpatient care.

Re-hospitalization attributions of the psychiatrists

Psychiatrists' perspectives on the non-compliance which may have possibly caused readmission were assessed through a structured interview using a checklist. This checklist included the following items: 1) Noncompliance due to medication complications; 2) Non compliance due to fear of addiction to medication; 3) Noncompliance because of no insight to disease; 4) Noncompliance because of no feeling of cure; 5) Noncompliance due to hopelessness; 6) Noncompliance due to paranoia to medication; 7) Noncompliance due to decreased function and activity of daily life; 8) Noncompliance because of no access to medication, 9) Noncompliance because of medication costs; 10) Noncompliance because of too much medications; 11) Medication decrease because of others' suggestions ; 12) Lack of patient education; 13) Lack of family compliance; and 14) Lack of family education. This categorization was done according to the literature review, mainly those systematic reviews previously published (14, 15).

Statistical analysis:

The code list for entering the structured data in the computer program was prepared. Statistical Package for Social Sciences, i.e. SPSS-13 software, was used for the statistical analyses. The distribution of attributions in the sample was shown with frequency tables.

Result

Participants

Most prevalent diagnosis was BMD I: mania (n=160; 32%), followed by Schizophrenia (n=136; 27.2%). Of the total subjects, 87 (17.4%) had no income, 243 (48.6%) used others' income (spouse, family), 46 (9.2%) received financial help from welfare organizations and 68 (13.6%) reported to have a job. Except for 69 subjects (13.8%), all were literate enough to read and write; 231 (46.2%) were married. Most patients were female, had no child, and lived in the City. Table 1 presents the baseline data of these 500 re-hospitalized psychiatric patients.

Re-hospitalizations attributions

Noncompliance was reported as a possible cause in 441 (88.2) of the cases of readmissions. No insight to disease (n=295; 59%) and feeling of cure (n=138; 27.6%) were the 2 most prevalent causes for noncompliance respectively (Table 2).

Table 1: Baseline data of 500 rehospitalized psychiatric patients

	Frequency	Percent
Diagnosis		
Schizophrenia	136	27.2
Schizoaffective	67	13.4
BMD I: mania	160	32
BMD I: Depressive	55	11
BMD I: Mixed	23	4.6
BMD II: Hypomania	8	1.6
BMD II: Depressive	11	2.2
MDD	38	7.6
OCD	1	0.2
Others	1	0.2
Sex		
Female	283	56.6
Marital state		
Single	209	41.8
Married	231	46.2
Spouse death	13	2.6
Divorced	43	8.6
Separated	4	0.8
Having Children		
No	266	53.2
Residential place		
City	436	87.2
Education Level		
Illiterate	69	13.8
Primary school	126	25.2
Guidance school	123	24.6
Diploma	142	28.4
Diplome and upper	40	8
Occupation State		
Unemployed after illness	132	26.4
Unemployed before illness	33	6.6
Retired	29	2.2
Home keeper	226	45.2
Student (academic)	4	0.8
Student (school)	8	1.6
Employed	68	13.6
Family member with disorder		
Yes	245	49
Income		
No income	87	17.4
Welfare organizations	46	9.2
Others income (spouse, family)	243	48.6
Less than 100000	52	10.4
100-200000	52	10.4
>200000	20	4

Need for patient and family education

Lack of patient education was perceived to be a contributor of non-adherence in 158 patients (31.6%), and lack of family education was a cause in 134 patients. Lack of family compliance was reported by 125 (25%).

Discussion

The aim of this study was to identify the possible noncompliance exactly prior to re-hospitalizations. Our study showed that noncompliance was reported in 88% of the readmissions by the view of psychiatrists.

Table 2: Noncompliance and its causes which may have caused rehospitalization among 500 rehospitalized psychiatric patients

Noncompliance	441	88.2
Medication complications	49	9.8
Non compliance because of fear of addiction to medication	36	7.2
Non compliance because of no insight to disease	295	59
Non compliance because of feeling of cure	138	27.6
Non compliance because of Hoplessless of cure	64	12.8
Non compliance because of Paranoia to medication	127	25.4
Non compliance because of Decreased function and activity of daily life	36	7.2
Non compliance because of no acces to medication	21	4.2
Non compliance because of high medication costs	54	10.8
Non compliance because of much medications	6	1.2
Medication decrease because of others suggestions	29	5.8

No insight to disease, and feeling of cure were the most prevalent causes for noncompliance.

The finding of this study that showed "no insight to disease" as the most common cause for non-compliance by the view of psychiatrists can be considered in line with the literature showing psychotic patients ; especially the first episodes of psychiatric conditions have little insight and this is shown to increase the risk of discontinuing medication (16). Patients who use antipsychotics may have different perceptions of the safety and utility of medications ranging from "poison" to "cure" (17).

Adherence to a drug regime is a significant issue in the clinical management of schizophrenia. Early treatment discontinuation on the part of patients with schizophrenia or schizophrenia-like disorders is strikingly common with estimates of its prevalence in antipsychotic drug trials which permits unrestricted use, distribution, and reproduction in any medium provided that the original work is properly cited. The rates of non-adherence appear to be even higher in natural, uncontrolled settings (18-21). The consequences of early termination of the treatment are significant, making adherence to medication a critical determinant of a generally good prognosis. Discontinuing a prescribed antipsychotic drug is associated with symptom exacerbation (22), relapse (22, 23), increased hospitalization(22, 23), poor long-term course of illness (24), and higher economic costs of treatment (25). Seventy-five per cent of the patients who stopped taking their antipsychotic medications experienced significant worsening of symptoms over the course of a year compared with only 25% of those who consistently took their medications (22, 23).

As stopping antipsychotic treatment can interrupt improvement and exacerbate the illness, a study

investigated the reasons for discontinuing treatment during controlled clinical trials to explore this phenomenon. A post-hoc, pooled analysis was made of 4 randomized, double-blind clinical trials, 24–28 weeks in duration, involving 1627 patients with schizophrenia or a related disorder. Analyses combined all the atypical antipsychotic treatment groups in the studies. The majority of the patients (53%) stopped their treatment at an early stage. Poor psychiatric response along with worsening symptoms was the most frequently given reason for discontinuing the course (36%), which was substantially more common than discontinuation due to poor tolerability of the medication (12%). This phenomenon was corroborated by less improvement in patients who discontinued treatment compared with those who completed it. Discontinuation due to poor response was, apparently, more predominantly linked to patient perception than to physicians' conclusions alone (80% vs. 20%). Discontinuation due to patient perception of poor response appeared to occur particularly early in the course of treatment. Patients who discontinued their treatment due to poor toleration of the medication responded in a more comparable manner with completers(26).

However, there is few published research on the readmission of psychiatric patients in the country. According to one study with the aim of describing the cases of psychiatric readmissions of 2 tertiary hospitals in Tehran which included 669 psychiatric readmissions during 2000-2001, 67%, 50% and 43% of the re-hospitalizations had occurred due to poor compliance, sense of improvement, and side effects. No access to medications and no access to physicians were causes of stopping the medication in 5%, and 2% of the subjects in that study (27).

To decrease the impact of noncompliance on hospitalizations, close follow up of the patients, outpatient visits with short time intervals and

improved instructions for the patients in routine discharges and visits may help. In order to achieve a better patient perception of the disorder and importance of using the medications, expression and description may be used. To decrease the family related factors, enhancing family support may probably decrease the rate of psychiatric re-hospitalizations. Unfortunately, research findings about psychiatric re-hospitalization of the mentally ill have provided few insights into its meaning for the staff (28).

The interest in predictors for hospital admissions had been carried out since the 1970s. Re-hospitalized patients account for high health care costs through their high utilization of inpatient services. It has been unclear whether such service utilization of these patients is essential or if it would be avoidable under certain conditions (29).

One point is the fact that most studies have not found a standardized definition of how many hospital admissions per period are necessary in order to speak of re-hospitalization (1, 2, 4-8). This is not surprising since it is very difficult to give reasons why, for example, admission more than 1 time during a 6 month period (13) are considered re-hospitalization whereas two admissions over 7 months are not readmission. Such definitions might be causally related to the findings of previous research on re-hospitalizations which, until now, have been relatively inhomogeneous. Another fact is that characteristics of re-hospitalizations might differ depending on the examined mental illnesses. Analyses for specific disease groups are, therefore, necessary in order to specify the findings on hand. The last point is the fact that according to the attributions theory, attributions for re-hospitalizations may be different for patients and psychiatrists. Psychiatrists may attribute the problem to something internal to the patient. However, they were likely to see the cause as the patient's effort which is under patient's control. Psychiatric patients, on the other hand, may tend to give internal attributions for their readmission and believe that the cause is not under their control (28). For example, one study has shown that staff tend to overestimate the risk of re-hospitalization in patients with a poor therapeutic alliance, low global function, or initial involuntary admission and to underestimate the risk in patients with alcohol use disorders or those who had a history of four or more previous psychiatric hospitalizations (30). Recently, a systematic review of papers published in Medline, Healthstar, and PsycInfo electronic databases for articles published since 1980 on interventions to improve medication adherence in psychotic patients showed that educational, behavioral, affective, or a combination of these approaches may improve adherence. Interventions of a purely educational nature were the least successful at improving antipsychotic adherence. The greatest improvement in adherence was seen with interventions employing combinations of educational, behavioral, and affective strategies with which improvements in adherence were noted in 8 out

of 12 studies with additional secondary gains such as: reduced relapse, decreased hospitalization, decreased psychopathology, improved social function, gains in medication knowledge, and improved insight into the need for treatment. Longer interventions and an alliance with therapists also appeared important for successful outcomes. The continuing development and study of successful interventions to improve medication adherence are necessary to maximize the usefulness of pharmacologic treatment of schizophrenia (14). Another review in mood disorders showed that the psycho-educational intervention model alone has shown little improvement in adherence. The collaborative managed care model for improving outcomes in depression in primary care is of limited benefit in increasing patients' adherence or outcomes. Psychological approaches have been most successful when concentrating on the patient-clinician alliance when attitudes and experiences are explored, recognizing the importance of the patient's opinion in treatment decisions. Psycho-pharmaceutical interventions such as changing medication preparations have potential efficacy (15).

Newly different approaches namely tele-monitoring was introduced and compared with other approaches namely self-report and pill counting. In comparison to the other two groups, patients using tele-monitoring showed better outcomes (31). According to one study, in the psychiatrists' view, a positive attitude towards treatment, insight into illness, and accurate perception of the symptoms, strongly correlate with compliance whereas the association between socio-demographic characteristics and compliance was seen as moderate. A majority of experts considered there were changes in compliance over time (32).

A limitation of the present analysis is that the reasons for discontinuation on the checklist used to categorize discontinuation here may have not optimally captured the primary reason for discontinuation in all the cases, and may have some differences with other studies. We only evaluated the cause of discontinuation by the psychiatrist's view not the patient or caregivers'. Symptom worsening and psychiatric adverse events were not assessed. An additional limitation of the present study is that it is based on different psychiatric conditions containing a heterogeneous sample. However, patients with 2 axis 1 diagnoses were excluded and this may have caused much more homogeneity in the enrolling patients than the patient population seen in routine clinical care, therefore, the results may not be easily generalizable to typical outpatient settings. In addition, we did not register the treatment variables such as medication and its doses, or polypharmacy. An interesting point which should be focused is that most information on non-adherence has been derived from trials. Clinical trials enroll patients who are highly motivated for treatment; this different motivation may affect the cause of non-adherence. As a consequence, the rates of and reasons for discontinuation reported here may have some

Noncompliance and its Causes Resulting in Psychiatric

differences with the reports of trials. With these caveats, the systematic investigation of reasons for early discontinuation in the present study may still help to develop strategies to improve patient engagement in long-term therapies.

To conclude based on psychiatrists' opinion, treatment discontinuation is strikingly common. No insight to disease and feeling of cure seem to be the 2 most prevalent causes of non-compliance of the patients, and they should be focused if we wish for better therapeutic engagement of the patients. Remembering the literature that reports non-adherence increases the risk of relapse, its morbid consequences, and decreases functioning of patients may be of help to improve treatment adherence.

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