

Psychiatric Patients' Attitudes About Medication and Factors Affecting Noncompliance

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Objective: Attitudes about medication and factors affecting medication compliance were investigated in a sample of 148 psychiatric patients. **Methods:** Structured interviews assessed attitudes about medication, history of compliance, and other relevant clinical and psychosocial variables. **Results:** Eighty-seven subjects expressed positive attitudes about medication in general. Forty believed that their illness was biologically or chemically based. A large proportion attributed their illness to situational factors, including stress (36 subjects) and family problems (18 subjects). Fifty-one subjects said that they required medications to get better. Approximately half of the subjects previously either changed their medication regimen or discontinued their medication. Opposition to the idea of taking medication, belief that the medication did not work, and physical side effects were the most frequent reasons for stopping. Previous patient-initiated changes in the medication regimen, education level, and inpatient or outpatient status were the only variables associated with noncompliance. **Conclusions:** The findings suggest that several relevant clinical, demographic, and attitudinal variables may not be associated with medication compliance. (*Psychiatric Services* 48:82–85, 1997)

Compliance with the prescribed medication regimen is considered essential to control symptoms, shorten or prevent episodes of illness, and improve the long-term prognosis of many psychiatric disorders (1). Noncompliance often necessitates hospital readmission (2), which can be devastating for the patient and frustrating for the clinician. In addition, the cost incurred by unnecessary rehospitalizations cannot be ignored in the current economic climate (3).

Rates of compliance with medication among persons with mental disorders decrease over time, from 50

percent in the first year of outpatient treatment to 15 percent in the second year (4,5). Some of the factors associated with medication compliance include the formulation of the medication (6), the complexity of the drug regimen (7), the presence of overt side effects (8) and subtle side effects (9), secondary benefits (10), resistance to the idea of needing medication (11), the relationship with the prescriber (12,13), social support (14), and the patient's active involvement in medication management (15).

As mental health services become more community based (16) with fewer hospital beds available, medication

compliance will become even more important. Some writers have suggested that greater attention should be paid to medication use from the patients' point of view (17–19). Such an approach might suggest ways to improve adherence.

The study reported here examined patients' knowledge about and satisfaction with their medication, as well as self-reported positive and negative medication effects. We also examined patients' concept of their illness and what they believed they needed to get better. Finally, patients' previous noncompliance and the relationships between noncompliance and relevant attitudinal, demographic, and clinical variables were assessed.

Methods

Subjects

Subjects consisted of 148 patients receiving treatment at a psychiatric hospital operated by the province of Ontario. Eight additional subjects were approached to participate but declined. Potential subjects' names had been submitted by each hospital unit. Suitable participants were not acutely psychotic, aggressive, or brain damaged and were judged able to sit through a 30- to 60-minute interview.

Eighty-four of the 148 subjects (56.8 percent) were inpatients, and 64 (43.2 percent) were outpatients. Seventy-five subjects (50.7 percent) were male, and 73 (49.3 percent) were female. Subjects' mean \pm SD age was 36.6 ± 10.5 years. The mean \pm SD number of previous hospital admissions was 4.1 ± 4.3 , and subjects had

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spent a mean of 99.1 ± 170.7 days in the hospital at the time of the interview.

The majority, 103 subjects (69.6 percent), were single, 32 (21.6 percent) were married, and 13 (8.8 percent) were divorced or widowed. Twelve subjects (8.1 percent) had an elementary school education, 101 (68.2 percent) had completed secondary education, and 32 (21.6 percent) had some postsecondary education. Information on educational background was not available for three subjects.

According to the classification system used by the hospital, *International Classification of Diseases, Version 9* (20), 39 subjects (26.4 percent) had an affective psychosis, 71 (48 percent) had schizophrenia, 12 (8.1 percent) had a personality disorder, and 26 (17.6 percent) had various other diagnoses. Demographic and diagnostic information was obtained from the hospital records, as was information about current medications. Comparisons with overall hospital statistics indicated that this sample was representative of the patient population in this facility.

Measures and procedures

A structured interview, the Attitudes About Medications Questionnaire, was developed for this study to assess psychiatric patients' perceptions about their symptoms and medications. (It is available from the third author). It includes 41 open-ended questions and 29 items that use ordinal rating scales. Patients are asked to list the names and functions of their medications, rate their satisfaction with their medications on a 10-point scale, and list the positive and negative effects of their medications. Patients are also asked how they feel about medication in general, what they believe to be the major causes of their illness, and what they believe they need in order to get better. Information about previous noncompliance is also obtained.

Subjects were interviewed by one of five trained research assistants. Responses were recorded verbatim and later categorized and tabulated. Subjects were given a consent form describing the study before being inter-

viewed and a debriefing statement after completing the interview.

In cases in which more than one medication was cited by the patient, analyses were restricted to the first-mentioned (primary) medication. Because we anticipated conducting a large number of analyses, we set a conservative alpha level ($p < .01$) to reduce Type I error.

Results

Attitudes about medication

All 148 subjects reported that medication was currently being prescribed for them. All but one subject (99.3 percent) reported that they were taking their medication. Excluding the ten subjects whose medication was dispensed in the community, for whom reliable medication information was not available, the number of different medications the subjects were taking at the time of the interview ranged from one to ten ($\text{mean} \pm \text{SD} = 3.17 \pm 1.88$).

Subjects appeared to be well informed about the reason for taking the primary medication. Most subjects (115, or 77.7 percent) provided reasons judged "accurate" by a pharmacist, 18 (12.2 percent) provided reasons judged "inaccurate," and nine (6.1 percent) provided responses judged "uncertain." When asked how they felt about medication in general, 87 subjects (58.8 percent) expressed positive attitudes, 44 (29.7 percent) expressed negative attitudes, and 14 (9.5 percent) expressed neutral attitudes.

Primary medications included antipsychotics (65 subjects, or 43.9 percent), antimanic agents (33 subjects, or 22.3 percent), antidepressants (19 subjects, or 12.8 percent), anticholinergics (16 subjects, or 10.8 percent), and nonpsychotropic medications (six subjects, or 4.1 percent). Nine subjects (6.1 percent) could not name their primary medication.

Satisfaction ratings for subjects' primary medication ranged from 1, not at all satisfied, to 10, very satisfied indeed ($\text{mean} \pm \text{SD} = 6.70 \pm 2.71$). Satisfaction ratings were not significantly associated with clinical variables (current medication, diagnosis, inpatient or outpatient status, number of admissions, and length of hospitaliza-

tion) or demographic variables (sex, age, marital status, and education).

Information about perceived positive and negative effects of subjects' primary medication was elicited by an open-ended question, and the results are shown in Table 1. Most of the reported positive effects related to plausible target symptoms for which the medication may have been prescribed. A large proportion of subjects (36.5 percent) reported no negative effects from the medication.

Subjects' responses about the perceived causes of their illness, also elicited by an open-ended question, are shown in Table 2. Forty subjects (27 percent) reported believing that their illness was biologically or chemically based. Many subjects attributed their illness to situational factors, including stress (36 subjects, or 24.3 percent) and family problems (18 subjects, or 12.2 percent). When asked what they would need in order to get better, 51 subjects (34.5 percent) identified medications, while 42 (28.4 percent) said therapy or personal support. Eleven subjects (7.4 percent) reported that they needed to take better care of themselves, eight (5.4 percent) reported requiring some environmental change (such as a move to a different location or a new job), and 28 (18.9 percent) responded with "I don't know."

Noncompliance with medication

Previous noncompliance with medication was measured in two ways—changes in medication during the past six months and discontinuations of medication since the subject began taking medications. Two-thirds of the subjects (96 subjects, or 65.8 percent) had changed the way they took their medication (such as the dosage or timing) without discussing this change with their psychiatrist. Almost half of the subjects (70 subjects, or 47.3 percent) reported that at some time in the past they had stopped taking their medication without talking with their psychiatrist. Subjects who had previously changed their medication regimen were more likely to have also stopped their medication ($\chi^2 = 11.31$, $df = 1$, $p < .001$).

Many analyses were conducted exploring subjects' general attitudes

about medication and their beliefs about the cause of their illness and what they needed to get better, as well as relevant clinical variables (current medication, diagnosis, inpatient or outpatient status, number of previous inpatient admissions, and length of hospitalization) and demographic variables (sex, age, marital status, and education). Only two of the 27 analyses produced statistically significant results.

Whether or not subjects had previously changed their medication regimen was significantly associated with education level ($\chi^2=14.5$, $df=2$, $p<.01$). Fewer subjects with elementary education changed their medication compared with those who had secondary or postsecondary education (16.7 percent versus 72 percent and 65.6 percent). Previous patient-initiated discontinuation of medication was significantly associated with current hospital status (58.3 percent of inpatients versus 33.3 percent of outpatients; $\chi^2=9.02$, $df=1$, $p<.01$).

Subjects cited opposition to the idea of taking medication as the most common reason for discontinuing their medication (19 subjects, or 30.6 percent). Sixteen subjects (25.8 percent) stated that the medication did not work; another 16 subjects cited physical effects such as dry mouth; and 11 subjects (17.8 percent) cited psychological effects such as mood changes ("I felt down when I took the medication.")

Thirty-four subjects (23 percent) identified the idea of taking medication as the main reason other patients discontinue their medication. Some thought that others discontinue because medication does not work (61 subjects, or 41.2 percent), has negative physical effects (28 subjects, or 18.9 percent), or has psychological effects (13 subjects, or 8.8 percent).

Discussion

Attitudes about medication

Most patients in the study were knowledgeable about the reasons for taking their medication. This finding could be due to the fact that informed consent and patient education are now the norms in North American institutional psychiatric practice (21, 22). Such education has been found to

Table 1

Psychiatric patients' perceptions of the effects of their primary medication, by diagnosis

Effect	Schizophrenia (N=71)		Affective psychosis (N=39)		Other (N=38)		Total (N=148)	
	N	%	N	%	N	%	N	%
Positive effects								
Reduces anxiety	16	22.5	3	7.7	9	23.7	28	18.9
Controls psychosis	16	22.5	6	15.4	3	7.9	25	16.9
Increases energy	13	18.3	3	7.7	6	15.8	22	14.9
Controls mood swings	3	4.2	7	18.0	4	10.5	14	9.5
Controls depression	4	5.6	2	5.1	6	15.8	12	8.1
Helps with physical problems	5	7.0	4	10.3	3	7.9	12	8.1
Other positive effects	6	8.5	2	5.1	1	2.6	9	6.1
None	8	11.3	12	30.8	6	15.8	26	17.6
Negative effects								
Slows patient down	13	18.3	6	15.4	6	15.8	25	16.9
Affects muscles	10	14.1	3	7.7	2	5.3	15	10.1
Causes dry mouth	8	11.3	3	7.7	3	7.9	14	9.5
Bothers stomach	4	5.6	4	10.3	0	—	8	5.4
Makes patient tense	2	2.8	1	2.6	4	10.5	7	4.7
Patient opposes idea of taking medication	3	4.2	1	2.6	3	7.9	7	4.7
Undifferentiated side effects	3	4.2	1	2.6	2	5.3	6	4.1
Other negative effects	1	1.4	4	10.3	7	18.4	12	8.1
None	27	38.0	16	41.0	11	28.9	54	36.5

increase compliance (23,24). Most patients were satisfied with their current medication. A large proportion (60 percent) expressed positive attitudes toward medication in general, and the majority (82.4 percent) perceived that their medication had positive effects on their disorder. Self-reported negative effects from medication included somatic problems, feeling slowed down, increased tension, and opposition to the idea of taking medication. However, a surprisingly

large proportion of patients (36.5 percent) reported no negative medication effects.

When asked to list the reasons for or causes of their illness, only 27 percent of patients identified biological or chemical factors. Environmental or situational factors such as stress and family problems were more often reported. When asked what they needed in order to get better, many patients identified medications, but just as many felt that therapy and support

Table 2

Major reasons or causes reported by 148 patients for their psychiatric illness, by diagnosis

Cause ¹	Schizophrenia (N=71)		Affective psychosis (N=39)		Other (N=38)		Total (N=148)	
	N	%	N	%	N	%	N	%
Biological or chemical	18	25.3	12	30.8	10	26.3	40	27
Stress	13	18.3	15	38.5	8	21.1	36	24.3
Family problems	10	14.1	6	15.4	7	18.4	18	12.2
Use of street drugs	10	14.1	0	—	0	—	10	6.8
Other	0	—	0	—	4	10.5	4	2.7
Unsure	25	35.2	6	15.4	9	23.7	40	27.0

¹ Because only 18 subjects (12.2 percent) cited more than one cause, analyses were limited to the first response given.

or other environmental changes were necessary. Thus, although attitudes toward medications were generally favorable, many subjects did not believe that their illness was biologically based or that they required medication to get better.

Noncompliance with medications

At some time in the past, approximately half of the patients had discontinued their medication, and two-thirds had changed the way they took their medication in the last six months without first discussing the change with their physician. Patients who had stopped their medication were more likely to have changed their medication regimen. Level of education was the only variable associated with patient-initiated medication changes. Patients with only elementary education were less likely to have ever changed their medication regimen than those with more education. Patients with more education may be more interested in or feel more confident about exercising control over their medication regimen.

Hospital status was the only variable associated with previous patient-initiated discontinuation of medication. More inpatients than outpatients had discontinued their medication. Of course, this finding may reflect the possibility that many of the inpatients were readmitted because they were noncompliant with medications. Reasons for discontinuing medication most often included opposition to the idea of taking medication ("I don't like the idea of taking drugs").

Patients' opinions of why other patients discontinue their medication most often centered on the idea that medications do not work. This finding supports the view that clinicians may sometimes be too quick to blame noncompliance rather than noneffectiveness when drugs do not help a psychiatric patient (25).

Conclusions

Although a majority of psychiatric patients in this study were knowledgeable about and expressed favorable attitudes toward medications, many did not believe that their illness was biologically based. Previous patient-initiated changes in medication, edu-

cation level, and hospital status were the only variables associated with noncompliance. Although similar discrepancies between attitude and behavior have been noted (26), such findings are surprising in that one would intuitively expect attitudes and behavior in this area to be closely related. Perhaps our retrospective design was not sensitive enough to detect the expected associations. Objective measures of compliance might also improve the validity and sensitivity of studies such as this. A prospective study examining these variables is now under way. ♦

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