Eur J Clin Pharmacol (2007) 63:1063–1067
DOI 10.1007/s00228-007-0358-5

PHARMACOEPIDEMIOLOGY AND PRESCRIPTION

Attitudes toward psychiatric drug treatment: the experience of being treated

Carlos De las Cuevas · Emilio J. Sanz

Received: 24 May 2007 / Accepted: 27 July 2007 / Published online: 16 August 2007

Abstract
Background Effectiveness and tolerability of psychiatric medications are not only determined by the drug's pharmacological profile but through the interaction of different factors, including patients' attitudes toward their prescribed medications. Increased knowledge about those attitudes may help prescribers to improve patient concordance and thereby the effectiveness of the pharmacological therapy.
Objective The goal of this study was to assess stable psychiatric outpatients' attitudes toward psychiatric drug treatment and to what extent patients and public opinions on this subject diverge as a consequence of being on this type of medication.
Methods Two anonymous self-reported questionnaires [Drug Attitude Inventory (DAI)-10 and an abridge version of Beliefs about Medicines Questionnaire (BMQ)] were administered to 270 stable psychiatric outpatients under treatment and 292 citizens naïve to psychotropic medication.
Results Psychiatric patients showed a more positive attitude toward medication (DAI score 3.6 vs. −0.7; range −10 to +10; negative to positive). Up to 77% of patients showed positive scores compared with only 36% in the general population. Multiple regression analysis showed that none of the variables in the analysis have a predictive value with regard to the attitude toward psychiatric drugs used.
Conclusion The continuous use of psychotropic medication shapes the opinion of the users toward a more beneficial perception of medications, but the opinion on the general population, where stigmatizing attitudes are born, is more negative toward them. For psychiatrists and their patients, trying to achieve a better understanding of each other's expectations and reaching concordance is mandatory.

Keywords Attitudes · Psychiatric drugs · Outpatients · General population · Concordance

C. De las Cuevas (✉)
Department of Psychiatry, School of Medicine,
University of La Laguna,
Campus de Ofra, Carretera La Cuesta-Taco s/n.,
38071 La Laguna Tenerife, Canary Islands, Spain
e-mail: cdelascuevas@gmail.com

E. J. Sanz
Department of Clinical Pharmacology, School of Medicine,
University of La Laguna,
Tenerife, Canary Islands, Spain
e-mail: ejsanz@gmail.com

Introduction

Efficacy and tolerability of psychiatric medications, and therefore outcome of psychiatric disorders, are not only determined by the drug's pharmacological profile but through the interaction of different factors, including the doctor–patient relationship and the patients' attitudes toward their illnesses and toward their prescribed medications. A patient's attitude to drugs probably reflects a weighing of experienced or anticipated benefits against side effects or risks associated with the medication [1]. Moreover, improvements achieved in the last two decades in mental health care are being reflected in changes in the public's attitudes toward psychiatric drug treatment [2]. Nevertheless, there still appears to be a tendency of the public toward a frequent reliance on helping sources outside the mental health sector and on traditional "alternative" treatment methods [3].

Attitudes are usually defined as a disposition or tendency to respond positively or negatively toward a certain idea, object, person, or situation [4]. They encompass, or are closely related to, opinions and beliefs and are based upon experiences. The

experiences of patients who have taken (or continue to take) psychiatric drugs vary enormously. Many patients find such drugs helpful in dealing with troublesome symptoms, and these patients have probably more positive attitudes and are unlikely to want to discontinue using them. Even if many patients have to tolerate troublesome unwanted effects, they still find the benefits outweigh the negatives. Patients with mental disorders often have different opinions from their doctors and about their psychiatric treatments prescribed.

The goal of this study was to assess stable psychiatric outpatients' attitudes toward psychiatric drug treatment and to what extent patients and public opinions on this subject diverge as a consequence of being on this type of medication.

Methods

This study design compared attitudes toward psychiatric drug treatment of patients and the general public using a self-reported questionnaire.

Samples

The study was carried on in "La Gomera" Island (the Canary Islands, Spain) that has 18,000 inhabitants and is closely located to the main Island, Tenerife (45 min by express ferries, several ferries a day) and with a small hospital, several primary care health centers and a community mental health unit serving for the entire Island. The unit is composed of one responsible psychiatrist plus two clinical psychologists, a social worker, a nurse, and shared administrative staff. The unit was taking care, at the time of the study (2006), of 340 psychiatric outpatients. Of those, 285 were considered stable and compliant according to the clinical assessment of the psychiatrist. The demographic and personal characteristics of the people in La Gomera Island are no different from the general population in the Canary Islands and not much from the rest of the country.

Patients

All stable outpatients (285) who were adherent to medication regimens and attending the Community Mental Health Care Centre in 2006 were asked to anonymously complete a self-report questionnaire about their attitudes toward taking psychiatric medications. The questionnaire was administered by a person from the administrative staff not involved in the care of the patient.

General population

A sample of the Canary Islands population (524) aged 18–80 years was selected. The general population sample was drawn from home visits to a random sample of citizens by medical students. The participants were asked to fill in the same questionnaire as the psychiatric patients. The responses were completely anonymous, and none of the respondents could be traced back after completion of the study. This avoided the legal need for an ethics committee approval, which was contacted anyway. Subjects who use or had used psychotropics were eliminated to assess attitudes of citizens without any personal experience with psychiatric drugs. The questionnaire had to be slightly modified, asking the nonusers to respond to the questionnaire as "if they have to use these medications."

Self-report questionnaire

The questionnaire included sociodemographic and clinical variables as well as the short version of the Drug Attitude Inventory (DAI-10) [5]. The DAI-10 scale has been used widely for research purposes. This self-report scale has ten items that the patient scores as True or False. For six of the items (1, 3, 4, 7, 9, 10), a True response is considered positive, whereas for the other four items (2, 5, 6, 8), a False response is considered positive. A positive answer was scored as +1 and a negative answer as −1. The final score was the sum of the ten scores. Positive and negative total scores indicated positive and negative attitudes toward psychiatric drugs, respectively. The DAI-10 is concise and easy to administer, and its psychometric properties are well established. The scale has been shown to have test–retest reliability; high internal consistency; and discriminant, predictive, and concurrent validity [6]. An additional eight items adopted from Beliefs about Medicines Questionnaire (BMQ [7]) assessed attitudes and beliefs about prescription medications and psychiatrists.

Mann–Whitney U test was used to detect differences between the two samples. Two regression analyses were performed on the two settings using the DAI total score as the dependent variable and demographic, diagnostic, and treatment variables as independent variables. Data were computed using the SPSS computer package. The two samples were not statistically different in relation to gender, age groups, or educational level (Table 1).

Results

Psychiatric outpatients

Of the 285 patients who were given the questionnaire, 270 (95%) returned it fulfilled. The respondents' mean ± standard deviation (SD) age was 45.9±15.4 years. Sixty-six percent of the respondents were women. The primary diagnoses of the respondents were neurotic, stress-related,

Table 1 Demographic characteristics of the two samples

	Psychiatric outpatients n=270	General sample n=450
Mean age	45.9±15.4 years	40±15 years
<25 years	7.8%	10%
25–45 years	43.3%	46%
45–65 years	40.4%	38%
>65 years	8.5%	6%
Educational level		
Can read and write	20%	16.6%
Primary studies	40.7%	37.8%
Secondary studies	22.2%	31.1%
University degree	16.1%	14.4%

and somatoform disorders (37.8%); mood (affective) disorders (33.3%); and schizophrenia, schizotypal, and delusional disorders (25.9%). The mean number of psychotropic drug used by the patients was two (mean 1.9; S.D. 0.8, range 1–5). Less than a third of patients (31.9%) were under monotherapy treatments, whereas 44.4% received two, 21.5% received three, and 2.2% received four or more drugs. The most frequent medications used were benzodiazepines (72%), followed by antidepressants (65.5%) (selective serotonin reuptake inhibitors in 32.6%, dual-uptake inhibitors in 31.1%, and tricyclics in 5%), antipsychotics (30.5%; conventional in 9% and atypical in 25.5%), and anticonvulsants (7%). The average duration of mental illness was about 4 years (range 3–360 months).

The DAI score (mean ± SD) was 3.6±4.1, which means a general positive attitude toward psychotropic drugs in the sample. More than three quarters of the patients (77%) had scores over 0, representing a positive attitude, whereas only 15% of the patients showed a negative attitude with DAI below 0. Table 2 shows the responses of patients to every item included in the DAI.

Multiple regression analysis showed that none of the variables in the analysis have a predictive value with regard to the attitude toward psychiatric drugs used. Neither gender, age, educational level, diagnosis, number of drugs used, type of psychoactive drug, or duration of mental illness predisposed patients' attitudes.

General population

Of the 524 subjects who were given the questionnaire, 450 (86%) returned it completed. Respondents' mean ± SD age was 40±15 years. Fifty -our percent of the respondents were women. Only 29.3% of the sample did not know someone who has used these medications, whereas 41% reported having a relative and 29.7% a friend that used them. Out of the 450 respondents, one third (35.2%) reported previous use of psychotropics, and among them, 13.1% reported current use. However, most respondents (64.8%) reported no experience using these drugs and only those (292) individuals were included in the analysis. The DAI score mean ± SD in this subgroup was −0.7±4.4, with a positive attitude toward psychotropic drugs used only in 36% of patients and negative in 46%. Table 2 shows the responses of patients to every item included in DAI.

Main differences in the questionnaire items

The difference between users and nonusers in DAI scores is clearly significant (Table 3). But a more detailed analysis of the items responsible for this difference is reported in Table 2. In general, stable psychiatric patients and nonusers mainly differed in their perceptions of the balance between good and bad effects of medication, of side-effects, of the

Table 2 Drug Attitude Inventory (DAI) items responses

	Psychiatric outpatients		General population		P value
	True	False	True	False	
1. For me, the good things about medication outweigh the bad	84.4	15.6	64.4	35.6	**
2. I feel strange, "doped up", on medication	35.6	64.4	61.9	38.1	**
3. I take medications of my own free choice	47.4	52.6	22.9	77.1	**
4. Medications make me feel more relaxed	84.4	15.6	65.4	35.6	**
5. Medication makes me feel tired and sluggish	39.3	60.7	48.9	51.1	NS
6. I take medication only when I feel ill	26.7	63.3	64.1	35.9	**
7. I feel more normal on medication	81.5	18.5	35.2	64.8	**
8. It is unnatural for my mind and body to be controlled by medications	67.4	32.6	57.8	42.2	NS
9. My thoughts are clearer on medication	61.5	38.5	32.7	67.3	**
10. Taking medication will prevent me from having a breakdown	87.4	12.6	75.2	24.8	NS

NS no significance
**p<0.001

Table 3 Drug Attitude Inventory (DAI) scores

DAI scores	General population	Psychiatric outpatients	*P* value
Negative scores	46.4%	14.8%	**
Score 0	17.8%	8.1%	
Positive scores	35.8%	77.1%	**
Media ± standard deviation	−0.7±4.4	3.6±4.1	**

**$p<0.01$

medication's relevance in daily life (which are overrepresented in nonusers), and on its effects on thoughts and normality. A very relevant difference appears on the control of medication; whereas psychiatric patients put more value on the maintenance use of medication, only 27% responded that they will take the medication "only when feeling ill" as opposed to "every day"; up to 64% of nonusers expect that they will take the medication only when feeling bad (ill) and not every day, independent of the current mood state. The personal experience with the use of psychotropics and their effects on symptoms cause the patients to be prone toward a more prodrug attitude.

Another relevant difference in their perceptions is in regard to the way psychiatrists prescribed their medicines. Whereas psychiatric patients saw the role of the psychiatrist as adequate, prescribing the medication needed, and devoting enough time, all of which does essentially more good than harm, nonusers tended to see psychiatrist as overprescribers, with not enough time for the patient—that more time to devote to patients could prevent the prescription of some drugs—and with a more imprecise balance of good and harmful effects on patient management.

In some other items, both groups showed comparable perceptions (see Tables 2 and 4). For example, they had similar points of view about the preventive role of psychiatric drugs and on that the use of these medications does not mean the patient will feel tired and sluggish, although patients and public opinions differ about secondary effects of these drugs. Moreover, they both believed that psychiatrists place too much trust in medicines, which were considered in most cases to be addictive poisons and less safe than natural remedies; and that patients who take psychiatric drugs should stop their treatment for a while every now and then.

Discussion

Few studies have dealt with attitudes on psychotropics comparing stable psychiatric outpatients and nonusers in the general population. These comparisons are difficult because individuals that have not been exposed to this type of drugs would have difficulty in evaluating their positive and negative effects. On the other hand, the general perception of psychotropics in the society is driven both by patients and nonusers, and these perceptions are involved in the shaping of the general acceptance of psychiatric patients and stigmatizing behavior. Some studies have explored the perceptions of the general public and concluded that these persons are often skeptical and negative in their attitudes to psychiatric drugs. They believe the risks of such drugs outweigh the possible benefits [8], and they are negatively stereotyped as being "symptom alleviating" only, simply "masking the actual problems" [9]. On the other hand, other studies have focused on patients' perceptions [10–12]. Very few tried, as we have done, to use the same methodology, questionnaires, and settings to explore perceptions of both patients and the general population.

Table 4 Beliefs about medicines questionnaire items responses

	Psychiatric outpatients			General population			*P* value
	Disagree	Uncertain	Agree	Disagree	Uncertain	Agree	
Psychiatrists use too many medicines	41.5	26.7	31.8	18.7	18.7	62.5	**
People who take psychiatric drugs should stop their treatment for a while every now and then	33.7	25.2	31.1	46	19	35	NS
Most psychiatric drugs are addictive	22.2	24.4	53.3	34.3	27.3	38.4	*
Natural remedies are safer than psychiatric drugs	46.7	34.1	19.2	36.8	32.7	30.5	NS
Psychiatric drugs do more harm than good	65.2	14.8	20	51.4	34.3	14.3	**
All psychiatric drugs are poisons	58.5	20.7	20.7	62.5	27.3	10.2	*
Psychiatrists place too much trust in their medicines	20	18.5	61.4	17.8	17.5	64.7	NS
If psychiatrists had more time with patients, they would prescribe fewer medicines	24.4	23	52.6	15.6	13.7	70.8	**

NS = no significance
*$p<0.01$, **$p<0.001$

There is likely to be a bias in our findings, as the included psychiatric outpatients were drawn from among the more stable and compliant members of patients under care. Respondents' answers could also be biased by social desirability despite its anonymity and distance from the researchers or those responsible for clinical care.

Patients' view of psychiatric care is usually a neglected area of inquiry, partly due to ideological factors as well as structural aspects of public health services. It is acknowledged that patient satisfaction per se cannot be the major goal of the health services, but the path to improved welfare and treatment may be facilitated by an appropriate awareness of patient and general population opinions [13]. Our results also suggest that patients still would benefit from techniques to improve their attitudes toward treatment, and we challenge the prescribing physician to identify the real worries and concerns that may undermine compliance with medication regimens. Psychiatrists need to be fully aware of potential emerging problems when their own expectations and attitudes toward medication are not the same as those of patients. In an area in which patients and their significant others gather information from a range of additional sources, it must be realized that patient attitudes will be shaped considerably by these alternative sources [14]. Pursuing compliance with medication is no longer enough; negotiation directed to reach concordance [15, 16] with the patient, and detailed knowledge of patients' expectations and needs, are unavoidable in order to accomplish effective and sensible treatment; even if the patient is a minor [17]. Concordance recognizes that the health beliefs of the patient, although different from those of the doctor, are no less cogent or important when making decisions about the best approach to the treatment of the individual [18].

Medication concordance may require a radical change in consulting styles and a deeper understanding of patients' health beliefs. It is important to recognize that the attitudes of stable psychiatric outpatients, and those of the public, toward psychiatric drug treatment may be diverging. And for that reason, it is crucial for successful therapy that patients, especially in their first contacts with mental health care professionals, are well informed by the prescribing physician and that they are also given comprehensive and appropriate information.

Conflict of interest statement This study received no funding. We have no conflicts of interest.

References

1. Freudenreich O, Cather C, Evins AE, Henderson DC, Goff DC (2004) Attitudes of schizophrenia outpatients toward psychiatric medications: relationship to clinical variables and insight. J Clin Psychiatry 65(10):1372–1376
2. Angermeyer MC, Matschinger H (2005) Have there been any changes in the public's attitudes towards psychiatric treatment? Results from representative population surveys in Germany in the years 1990 and 2001. Acta Psychiatr Scand 111(1):68–73
3. Angermeyer MC, Breier P, Dietrich S, Kenzine D, Matschinger H (2005) Public attitudes toward psychiatric treatment. An international comparison. Soc Psychiatry Psychiatr Epidemiol 40 (11):855–864
4. Triandis HC (1971) Attitude and attitude change. Wiley, New York
5. Hogan TP, Awad AG, Eastwood R (1983) A self-report scale predictive of drug compliance in schizophrenics: reliability and discriminative validity. Psychol Med 13(1):177–183
6. Hogan TP, Awad AG (1992) Subjective response to neuroleptics and outcome in schizophrenia: a re-examination comparing two measures. Psychol Med 22(2):347–352
7. Horne, Weinman J, Hankins M (1996) The beliefs about medicines questionnaire: the development and evaluation of a new method for assessing the cognitive representation of medication. Psychol Health 14:1–24
8. Angermeyer MC, Daumer R, Matschinger H (1993) Benefits and risks of psychotropic medication in the eyes of the general public: results of a survey in the Federal Republic of Germany. Pharmacopsychiatry 26(4):114–120
9. Benkert O, Graf-Morgenstern M, Hillert A, Sandmann J, Ehmig SC, Weissbecker H et al (1997) Public opinion on psychotropic drugs: an analysis of the factors influencing acceptance or rejection. J Nerv Ment Dis 185(3):151–158
10. Jorm AF, Korten AE, Jacomb PA, Rodgers B, Pollitt P, Christensen H et al (1997) Helpfulness of interventions for mental disorders: beliefs of health professionals compared with the general public. Br J Psychiatry 171:233–237
11. Sajatovic M, Rosch DS, Sivec HJ, Sultana D, Smith DA, Alamir S et al (2002) Insight into illness and attitudes toward medications among inpatients with schizophrenia. Psychiatr Serv 53 (10):1319–1321
12. Hoencamp E, Stevens A, Haffmans J (2002) Patients' attitudes toward antidepressants. Psychiatr Serv 53(9):1180–1181
13. Gordon D, Alexander DA, Dietzan J (1979) The psychiatric patient: a voice to be heard. Br J Psychiatry 135:115–121
14. Hofer A, Fleischhacker WW (2006) Attitudes towards medication in patients with schizophrenia. Acta Psychiatr Scand 113 (3):161–162
15. Blenkinsopp A, Bond C, Britten N, Feely M, George C, Green P et al (1997) From compliance to concordance. Achieving shared goals in medicine taking. A working party report. Royal Pharmaceutical Society of Great Britain and Merck Sharp and Dohme, London
16. Sanz E (2005) Patient adherence to medical treatment regimens. Bridging the gap between behavioural science and biomedicine (Book Review). BMJ 330(7500):1155
17. Sanz EJ (2003) Concordance and children's use of medicines. BMJ 327(7419):858–860
18. Dickinson D, Wilkie P, Harris M (1999) Taking medicines: concordance is not compliance. BMJ 319(7212):787