

# Subjective experience with psychotropic medications in patients with psychotic and mood disorders

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## Background

Subjective response of psychiatric patients to his/her medications is an important factor determining his/her compliance to treatment and hence the course of illness and prognosis.

## Objectives

To explore the subjective experience of patients with psychotic and mood disorders with respect to their psychotropic medications and to investigate the probable role of different factors in shaping that experience.

## Participants and methods

Eighty patients were selected to participate in this study (40 patients with psychotic disorders and another 40 with mood disorders). They were subjected to full history taking and psychiatric examination after taking their consent. The Drug Attitude Inventory (DAI 30) was then applied to reveal their subjective experiences with psychotropic medications.

## Results

Employment and preserved insight were found to be associated with a positive subjective experience with psychotropic medications. A modest duration of current medication, a favorable side-effect profile of the administered drugs, therapeutic alliance with the treating psychiatrist, and associated psychotherapy with pharmacotherapy were all found to play a role in establishing a positive subjective experience with the prescribed drugs.

## Conclusion

Certain factors are implicated in the determination of the subjective experiences of psychotic and mood disorder patients with respect to their medications. These factors should be carefully considered to increase patient compliance and improve the results and outcome of psychotropic medications.

## Keywords:

mood disorders, psychosis, psychotropic medications, subjective experience

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## Introduction

Patients base their evaluations of a medication not only on its clinical effectiveness but also on how it affects all aspects of their lives. They may even place greater value on nonclinical outcome. Clinical studies have investigated and stressed upon the importance of the experience of taking psychiatric medication from the perspective of the patient (Barbui *et al.*, 2005; Hofer *et al.*, 2007). When a patient takes a medication, an effect is produced at the receptor site and within the cell, which generates an effect on the integrated biological function. The subjective interpretation of these physiological changes that accompany the medicated state is the subjective response that can also give rise to behavioral and psychological response (Awad, 1993). 'Learning to listen carefully to what patients experience when they take psychotherapeutic drugs may have the potential to enrich and expand our knowledge of clinical psychopharmacology' (Mahfouz, 1990).

Moncrieff *et al.* (2009) reported that the clinical importance of the subjective response is based on its ability to predict drug compliance and disease outcome. A patient's experience with an antipsychotic drug is important because unpleasant or dysphoric responses can impair therapeutic relationships and lead to nonadherence to medication. It can also have direct negative effects on the patient's quality of life (Marder, 2005). The clinical field was reported to be the first and last milieu where drugs could be assessed (Rakhawy, 1990).

A study by Rofail *et al.* (2009) reported a wide range of subjective experiences by patients with schizophrenia during their treatment with antipsychotic medications. Insight into their experiences may allow health professionals to target aspects of treatment that distress patients, which may subsequently affect their satisfaction with and adherence to treatment (Rofail *et al.*, 2009).

A review of medication treatment perceptions, concerns, and expectations among depressed individuals with type I bipolar disorder was conducted by Sajatovic *et al.* (2009). They concluded that, although individuals with bipolar depression appreciate the effects of medications, concerns regarding adverse effects and discrepancy between actual and anticipated outcomes can be substantial.

Subjective experiences are quite difficult to elicit from patients with mental health conditions that may involve language and memory problems compared with those with physical conditions (Fleming *et al.*, 1995). However, it has been shown that people with mental health conditions are able to reliably and validly report their experiences (Waring *et al.*, 2003).

### Participants and methods

This study took place at El Minia Psychiatric Hospital (located in Western Beni Ahmad village, 7km to the south of Minia city) and at the Psychiatry Department of Minia, Faculty of Medicine. Patients were selected from those attending the outpatient clinic in both hospitals, which serve both urban and rural areas of Minia Governorate (about 4.5 million habitats). The clinical part of the study was performed from 1 December 2011 to the end of May 2012.

### Selection of subjects

This is a cross-sectional semistructured questionnaire-based study. The sample of the study included 98 patients with a dropout rate of 18, leaving a sample population of 80 patients with current psychotic and mood disorders. Patients were diagnosed according to the Tenth Revision of the International Statistical Classification of Disease and Related Health Problems, Diagnostic Criteria for Research (ICD-10) (World Health Organization, 1993).

Patients recruited were between 18 and 60 years of age and included both male and female patients. Those with a current psychotic disorder (including schizophrenia and other psychotic disorders) or a mood disorder (including depressive and bipolar affective disorders) according to the ICD-10 Diagnostic Criteria for Research were chosen. Patients experiencing their first episode as well as those with recurrent disorders were included, provided they were receiving psychotropic medications for at least 6 weeks at the time of assessment.

Agitated and aggressive patients, those receiving concurrent electroconvulsive therapy, and those on medication for medical illness including epilepsy were excluded.

The total number of patients who met the above-mentioned criteria and agreed to take part in the study was 98. Only 80 of these patients completed the study procedure, whereas 18 dropped out. The remaining 80 patients comprised 40 diagnosed as having a psychotic disorder and another 40 with mood disorders. There were 46 (57.5%) male patients and 34 (42.5%) female patients.

### Tools of the study

- (1) Full clinical sheet: a complete psychiatric sheet including full history taking and psychiatric examination was prepared for every patient in this study.
- (2) Drug Attitude Inventory 30 (DAI 30) (Hogan *et al.*, 1983):
  - (a) This is a widely used instrument to measure the subjective experience with and the attitudes toward psychotropic medications (Brook *et al.*, 2003; De Las Cuevas and Sanz, 2007; Townsend *et al.*, 2009). It was also used to measure adherence to psychotropic medications in a number of studies on patients with schizophrenia and depression (Hogan *et al.*, 1983; Gervin *et al.*, 1999; Rossi *et al.*, 2000; Brook *et al.*, 2003). It has also been frequently used in the validation standard in the design of other scales (Jeste *et al.*, 2003; Chen *et al.*, 2005). The DAI psychometric properties are well established. It has been shown to have test-retest reliability, high internal consistency, and discriminative, predictive, and concurrent validity (García Cabeza *et al.*, 2000; Nielsen *et al.*, 2012). There are two versions of the DAI: the DAI 10 and the DAI 30. The DAI 30 was selected to be the main tool of the current study.
  - (b) The DAI 30 is a self-report questionnaire consisting of 30 statements with which the patient either agrees or disagrees. The inventory passed through the following stages before being used in this study:
    - (i) The DAI 30 was carefully and independently translated by each of the researchers.
    - (ii) The separate translations were gathered and discussions were carried out regarding statements with disagreement in translation.
    - (iii) After reaching a consensus, the joint translation was handed to a senior professor of psychiatry, who made a back translation.
    - (iv) Minor readjustment of the translation was made according to the review of back translation.
    - (v) Finally, further readjustment of the translation was made according to the pilot study observations and before the beginning of the study proper.
  - (c) Scoring of the DAI 30:
    - (i) The total score was calculated for each patient according to the original author's instructions to produce a score ranging from -30 to +30. A positive total score means a positive subjective response and a negative total score means a negative subjective response.
- (3) Assessment of insight: this was done using the stages and dimensions described by Sadock and Sadock (2007). They described grades of insight as ranging from complete denial to true emotional insight. This description and the range included fit the previous report of Basil *et al.* (2005) that assessment of insight

should include the patient's degree of acknowledgement of his or her illness, attitudes about having an illness, understanding the effect of the illness on his or her current abilities and future prospects, attribution of the causes of illness, and understanding the need for treatment.

- (a) Patient's level of insight was determined as one of the following 6 grades of insight:
- (i) Complete denial of illness.
  - (ii) Slight awareness of being ill and needing help, but denying it at the same time.
  - (iii) Awareness of being ill but blaming it on others, on external factors, or on organic illness.
  - (iv) Awareness that illness is due to something unknown to him or her.
  - (v) Intellectual insight (admission that he is ill and that symptoms or failure in social adjustment are due to patient's own irrational feelings or disturbances, without applying that knowledge to future experiences).
  - (vi) True emotional insight (emotional awareness of the patient's motives and feelings leading to change in future behavior).

#### Pilot study

The study proper was preceded by a pilot study that took place over 1 month. It aimed at examining tool applicability in the clinical field and determining the size of the sample and the time needed to obtain that size and to verify the presence of and the mode of overcoming difficulties facing research in the field.

Difficulties found included the relative scarcity of patients who fulfilled the inclusion criteria completely and were willing to engage in the study procedure after full explanation. In addition, getting reliable responses entailed the establishment of a trusting relationship with the patients, which took time and effort. Finally, the full procedure needed at least two sessions with most of the patients, with the potential to drop out before completing the full study requirements.

#### The study proper procedures

Patients included in this study were selected from those attending the psychiatry outpatient clinics of Minia Psychiatric Hospital and Minia University Hospital. This took place over a period of 6 months from 1 December 2012 to 31 May 2013. Patients were selected according to the criteria of inclusion and exclusion previously described.

Patients who were included in this study were subjected to the following:

- (1) Full explanation of the study aim and procedure, followed by consent taken formally from him or her.
- (2) Completion of a psychiatric evaluation sheet, including history taking and psychiatric examination. At the end of each psychiatric evaluation, a diagnosis was

made according to the ICD-10 Diagnostic Criteria for Research (World Health Organization, 1993).

- (3) Interview to complete the modified DAI 30 (Arabic translation format), with open-ended questions on patients' treatment experience. This last step usually took 1–2 h to complete, depending on the individual's cooperation, understanding, and state of mind.

#### Statistical analysis

The data of this study were analyzed using statistical programs for social sciences, version 19 (2010; SPSS Inc., Chicago, Illinois, USA). Frequencies and percentages were calculated for categorical variables, whereas means and SDs were calculated for continuous variables. The emerging results of the statistical analysis were then reviewed, arranged, and tabulated.

#### Results

Forty-six patients (57.5%) of our sample were in the age group of 18–30 years; male patients outnumbered female patients (46 and 34, respectively) and more than half of the patients were single (53.4%). About one-third of the patients were unemployed (29 = 36.3%) and 11 were illiterate (13.8%), as shown in Table 1.

The detailed diagnoses of the sample patients according to ICD-10 criteria are shown in Table 2. The most prevalent diagnosis was paranoid schizophrenia (23 patients), whereas the least prevalent was delusional disorder (only one patient).

The only sociodemographic variable that proved to be significant in shaping the patients' subjective experience with their medication was employment ( $P = 0.000$ ), as shown in Table 3.

Family history of psychiatric illness was not a significant factor affecting the patients' subjective experience. In

**Table 1 Sociodemographic characteristics of the study sample**

Variables	N (%)
Age groups (in years)	
18–30	46 (57.5)
31–45	27 (33.7)
46–60	7 (8.8)
Sex	
Male	46 (57.5)
Female	34 (42.5)
Marital state	
Single	43 (53.7)
Married	29 (36.3)
Divorced	5 (6.3)
Widow	3 (3.7)
Residence	
Urban	36 (45.0)
Rural	44 (55.0)
Occupation	
Unemployed	29 (36.3)
Full time worker	37 (46.3)
Part time worker	14 (17.4)
Education level	
Illiterate	11 (13.8)
Read and write	14 (17.4)
Preuniversity education	29 (36.3)
High education	26 (32.5)

contrast, a favorable family experience with psychotropic medications was significantly associated with a positive subjective response from the patients ( $P = 0.017$ ) (Table 4).

Although patients with mood disorders in our study were more represented in the group of patients with positive subjective experience compared with those with psychotic disorders (56 and 44%, respectively), the comparison between the psychotic and mood disorder patients of the study regarding their subjective experience based on their diagnosis was not statistically significant ( $P = 0.25$ ), as shown in Table 5.

Insight was significantly better in the group of patients who reported a positive subjective experience with psychotropic medications ( $P = 0.000$ ) (Table 6).

The presence of annoying side effects of medications was significantly higher in patients who reported a negative experience with their medications ( $P = 0.000$ ), whereas a moderate duration of current treatment (6–24 months) and the presence of associated psychotherapy were both

significantly associated with positive experience ( $P = 0.005$  and  $0.033$ , respectively), as shown in Table 7.

Finally, absent feelings of stigma and a good doctor–patient relationship were both significantly associated with a positive subjective experience with psychotropic medications ( $P = 0.000$  and  $0.000$ , respectively) (Table 8).

## Discussion

The current study was based on the hypothesis that patients with psychotic and mood disorders have a wide range of subjective experiences attributed to the use of psychotropic medications. These experiences may be valued as positive or negative by different patients according to different variables and factors. Cipolle *et al.* (2008) stated that a practitioner cannot make sound clinical decisions without a good understanding of the patient's medication experience. They urged practitioners to take responsibility for improving each patient's medication experience. Mahfouz (1990) stressed that the holistic change in the patient as a human being should be taken into account in the process of evaluation of drug effects.

Eighty patients with psychotic and mood disorders were included in the present study. The sample comprised patients with various sociodemographic characteristics, diagnoses and duration of illness, family history, numbers of medications, types of medication (classical and recent or atypical, depot and oral preparations, with different profiles of side effects), in the presence or absence of associated psychotherapy. This study aimed at enriching the emerging data and allowing for comparisons and identification of the factors that might be implicated in

**Table 2 Specific diagnoses of the sample patients according to the ICD-10 Diagnostic Research Criteria**

Variables	N (%)
Diagnosis	
Paranoid schizophrenia	23 (28.7)
Bipolar affective disorder	20 (25.0)
Depressive disorder	20 (25.0)
Schizoaffective disorder	7 (8.8)
Undifferentiated schizophrenia	7 (8.8)
Simple schizophrenia	2 (2.5)
Delusional disorder	1 (1.2)

Patients specific diagnoses are arranged in order of frequency. ICD-10, Tenth Revision of the International Statistical Classification of Disease and Related Health Problems.

**Table 3 The relationship between patients' subjective experience with psychotropic medications and their sociodemographic variables**

Variables	N (%)		P
	Subjective positive group (n=50)	Subjective negative group (n=30)	
Gender			0.163
Male	32 (64)	14 (46.7)	
Female	18 (36)	16 (53.3)	
Age			0.605
First age group	31 (62)	15 (50)	
Second age group	15 (30)	12 (40)	
Third age group	4 (8)	3 (10)	
Residence			0.643
Urban	21 (42)	15 (50)	
Rural	29 (58)	15 (50)	
Education			0.474
Illiterate	5 (10)	6 (20)	
Read and write	10 (20)	4 (13.3)	
Preuniversity	17 (34)	12 (40)	
High education	18 (36)	8 (26.7)	
Marital status			0.411
Single	26 (52)	17 (56.7)	
Married	19 (38)	10 (33.3)	
Divorced	5 (10)	0 (0)	
Widow	0 (0)	3 (10)	
Employment			0.000
Employed	40 (80)	11 (36.7)	
Unemployed	10 (20)	19 (63.3)	

**Table 4 Relationship between patients' subjective experience of their medications and their family history**

Variables	N (%)		P
	Subjective positive group (n=50)	Subjective negative group (n=30)	
Family history of psychiatric conditions			1.000
Positive	23 (46)	14 (46.6)	
Negative	27 (54)	16 (53.4)	
Family history of experiences with psychotropic medications			0.017
Favorable experience	16 (80)	4 (20)	
Unfavorable experience	6 (35.2)	11 (64.8)	
No family experience	28 (65.2)	15 (34.8)	

**Table 5 Relationship between patients' subjective experience with their medications and their diagnosis**

Variables	N (%)		P
	Subjective positive group (n=50)	Subjective negative group (n=30)	
Diagnosis			0.25
Psychotic disorders	22 (44)	18 (60)	
Mood disorders	28 (56)	12 (40)	

**Table 6 The relationship between patients' subjective experience with their medications and their insight**

Variables	N (%)		P
	Subjective positive group (n=50)	Subjective negative group (n=30)	
Degree of insight			0.000
1	0 (0)	13 (43.3)	
2	0 (0)	11 (36.7)	
3	3 (6)	5 (16.7)	
4	21 (42)	1 (3.3)	
5	26 (52)	0 (0)	
6	0 (0)	0 (0)	

**Table 7 The effect of medication variables and associated psychotherapy on patients' subjective experience with their medications**

Variables	N (%)		P
	Subjective positive group (n=50)	Subjective negative group (n=30)	
Duration of whole illness			1.000
< 1 year	36 (72)	22 (73.3)	
1–10 years	12 (24)	7 (23.3)	
> 10 years	2 (4)	1 (3.4)	
Number of medications			1.000
Single	22 (44)	14 (46.7)	
Multiple	28 (56)	16 (53.3)	
Duration of current medication			0.005
< 6 months	7 (14)	14 (46.7)	
6–24 months	26 (52)	11 (36.6)	
> 24 months	17 (34)	5 (16.7)	
Annoying side effects			0.000
Present	23 (46)	27 (90)	
Absent	27 (54)	3 (10)	
Drug preparation			0.600
Oral	43 (86)	27 (90)	
Depot	7 (14)	3 (10)	
Associated psychotherapy			0.033
Yes	15 (30)	3 (10)	
No	35 (70)	27 (90)	

the shaping of patients' subjective experience with their psychotropic medications.

Fifty patients of our sample (62.5%) reported a positive subjective experience with their psychotropic medications. This rate seems to be in agreement with the figures reported in previous studies (Hofer *et al.*, 2002; Freudenreich *et al.*, 2004; Adewuya *et al.*, 2006).

There was no statistically significant difference between the 'subjective positive' and the 'subjective negative' groups regarding age, sex, marital status, and place of residence. This seems to be compatible with the results of García Cabeza *et al.* (2000).

Our results revealed a significant association between employment and positive subjective experience toward

**Table 8 The effect of feelings of stigma and therapeutic alliance on the patients' subjective experience with their medications**

Variables	N (%)		P
	Subjective positive group (n=50)	Subjective negative group (n=30)	
Feelings of stigma			0.000
Present	9 (18)	22 (73.3)	
Absent	41 (92)	8 (26.7)	
Therapeutic alliance			0.000
Good doctor–patient relation	34 (68)	2 (6.7)	
Fair doctor–patient relation	12 (24)	11 (36.7)	
Bad doctor–patient relation	4 (8)	17 (56.6)	

psychotropic medications ( $P = 0.000$ ). This could be explained on the grounds that patients who work tend to feel better and psychotropic medications may help them in their functioning (Adewuya *et al.*, 2006). However, our results seem to contradict those reported by Hofer *et al.* (2006). Their employed patients reported more negative subjective responses to their medications and were more troubled with having to take medication regularly. In addition, they experienced more difficulty in tolerating the side effects of drugs. It should be mentioned that the sample in the study by Hofer *et al.* (2006) comprised only psychotic patients, whereas our sample was mixed, comprising both psychotic and mood disorder patients. Thus, the described response of their sample was confined to antipsychotic drugs only, with their particular profile of side effects.

Although patients with psychotic disorders were less likely to report a positive experience with their medications compared with mood disorder patients, the difference between the two groups was not statistically significant ( $P = 0.25$ ). This may seem unexpected, especially as patients with psychotic disorders are known to complain from the side effects of their medications more frequently (Hofer *et al.* 2006). However, our results are in agreement with those of Ng *et al.* (2012) who found no significant differences between the mood disorder and psychotic patients of their sample with regard to experience with their medications.

Our findings suggest that insight plays a significant role in determining the subjective experience of psychotic and mood disorder patients with psychotropic medications. The degree of insight that patients had toward their illness was significantly higher in the 'positive experience group' in comparison with the 'negative experience group'. The same finding was previously reported by Freudenreich *et al.* (2004). The patients' belief of having a mental illness and his or her awareness of the benefits of treatment would probably increase the likelihood not only of coping better with the potential side effects of the medications but also of better subjective feelings toward the treatment (García Cabeza *et al.*, 2000). The level of adaptation to reality and the range and depth of conscious awareness and insight were all stressed as important variables in studying patients' subjective experience with psychotropic medications (Mahfouz, 1990). Poor insight was previously reported among the variables most consistently associated with negative attitudes toward medication (Draine and

Solomon, 1994) and with poor medication adherence (Day *et al.*, 2005).

Duration of illness was not a significant factor in determining the type of subjective experience of the patients. This seems to be contradictory to the results reported by Gerlach and Peacock (1995). They stated that acute patients were more negative toward their medications compared with chronic ones. However, their sample comprised only schizophrenic patients, whereas ours comprised both psychotic and mood disorder patients. In addition, the psychotic patients of our sample were not only schizophrenic but there were also a few patients with a schizoaffective disorder (seven patients) and one patient with a delusional disorder.

Patients of the current study showed a statistically significant association between complaining from the side effects of psychotropic medications and developing an unpleasant experience with these agents ( $P = 0.000$ ). This goes in agreement with the results previously reported by Hogan and Awad (1992) and Haslam *et al.* (2004). It seems reasonable to postulate that patients who present highly incapacitating adverse events will have a more negative response toward their medications (Adewuya *et al.*, 2006).

The results of the present study suggest no significant effect for the duration of the illness, for the number of prescribed drugs, or for family history of mental illness on patients' subjective experiences with their psychotropic medications. These results are comparable to those recently reported by Haluk *et al.* (2011).

Patients' feelings of stigma were significantly associated with having a negative experience with the prescribed medications ( $P = 0.000$ ). Stigma was considered by Sartorius (1998) to be 'a chief enemy'. It was also put at the forefront of mental health concerns by the US Public Health Service in 1999. Our results seem to be in agreement with those of Sanders (2011), who reported lower perceived stigma to be associated with better adherence to the prescribed drugs. In addition, among those diagnosed with schizophrenia in his sample, those who perceived stigma had less optimistic treatment outcomes.

A statistically significant association was found in our results between patients' subjective experiences with their medications and the therapeutic alliance they had with their psychiatrist. In the same context we found that integrated psychotherapy and pharmacotherapy was

significantly associated with patients' positive medication experiences ( $P = 0.000$ ). These results seem to be compatible with the expectations of Mahfouz (1990) and were similar to those reported by Chue (2006).

## Conclusion

The results of this study stress the importance of the employment and insight of psychotic and mood disorder patients in shaping their subjective experience with their psychotropic medications. The duration of current medication and the side-effect profile of the administered drugs in addition to patients' feelings of stigma are highly important factors. The therapeutic alliance with the treating psychiatrist and the associated psychotherapy play a role in establishing a positive subjective experience with the prescribed drugs.

## Recommendations

- (1) Social efforts should be encouraged to sustain psychiatric patients in employment.
- (2) Handling the issue of stigma of psychiatric illness should be taken seriously at the level of the individual patient and the community.
- (3) Drugs with a favorable side-effect profile should be carefully chosen for each psychiatric patient.
- (4) Strategies should be developed and young psychiatrists should be taught on how to initiate and maintain a strong alliance with their patients.
- (5) Stressing the importance of integrated therapy in teaching and implementing psychiatric clinical programs.

## Limitations

- (1) There was no control group of patients who were given placebo in this study with which to perform a comparison.
- (2) The number of patients was not large enough for generalization of the results.
- (3) The number of patients on associated psychotherapy was relatively small, and there was no group of patients on psychotherapy alone for making useful comparisons and conclusions.

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### Conflicts of interest

There are no conflicts of interest.

## References

- Adeyuya AO, Ola BA, Mosaku SK, Fatoye FO, Egunranti AB (2006). Attitude towards antipsychotics among out-patients with schizophrenia in Nigeria. *Acta Psychiatr Scand* 113:207–211.
- Awad AG (1993). Subjective response to neuroleptics in schizophrenia. *Schizophr Bull* 19:609–618.
- Barbui C, Nosè M, Bindman J, Schene A, Becker T, Mazzi MA, *et al.* (2005). Sex differences in the subjective tolerability of antipsychotic drugs. *J Clin Psychopharmacol* 25:521–526.
- Basil B, Mathews M, Sudak D, Adetunji B (2005). The concept of insight in mental illness. *Prim Psychiatry* 12:58–61.
- Brook O, Van Hout H, Nieuwenhuysse H, Heerdink E (2003). Impact of coaching by community pharmacists on drug attitude of depressive primary care patients and acceptability to patients; a randomized controlled trial. *Eur Neuropsychopharmacol* 13:1–9.
- Chen EYH, Tam DKP, Wong JWS, Law CW, Chiu CPY (2005). Self-administered instrument to measure the patient's experience of recovery after first-episode psychosis: development and validation of the Psychosis Recovery Inventory. *Aust N Z J Psychiatry* 39:493–499.
- Chue P (2006). The relationship between patient satisfaction and treatment outcomes in schizophrenia. *J Psychopharmacol* 20 (Suppl):38–56.
- Cipolle RJ, Strand LM, Morley PC (2008). *Pharmaceutical care practice: the clinician's guide*. 2nd ed. New York: McGraw-Hill.
- Day JC, Bentall RP, Roberts C, Randall F, Rogers A, Cattell D, *et al.* (2005). Attitudes toward antipsychotic medication: the impact of clinical variables and relationships with health professionals. *Arch Gen Psychiatry* 62:717–724.
- De Las Cuevas C, Sanz EJ (2007). Attitudes toward psychiatric drug treatment: the experience of being treated. *Eur J Clin Pharmacol* 63:1063–1067.
- Draine J, Solomon P (1994). Explaining attitudes toward medication compliance among a seriously mentally ill population. *J Nerv Ment Dis* 182:50–54.
- Fleming K, Goldberg TE, Gold JM, Weinberger DR (1995). Verbal working-memory dysfunction in schizophrenia-use of a Brown-Peterson paradigm. *Psychiatry Res* 56:155–161.
- 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* 65:1372–1376.
- García Cabeza I, Sanz Amador M, Arango López C, González De Chávez M (2000). Subjective response to antipsychotics in schizophrenic patients: clinical implications and related factors. *Schizophr Res* 41:349–355.
- Gerlach J, Peacock L (1995). Intolerance to neuroleptic drugs: the art of avoiding extrapyramidal syndromes. *Eur Psychiatry* 10 (Suppl 1):27S–31S.
- Gervin M, Browne S, Garavan J, Roe M, Larkin C, O'Callaghan E (1999). Dysphoric subjective response to neuroleptics in schizophrenia: relationship to extrapyramidal side effects and symptomatology. *Eur Psychiatry* 14:405–409.
- Haluk AS, Unal A, Virit O (2011). Treatment adherence in bipolar disorder. *J Mood Disord* 1:95–102.
- Haslam C, Brown S, Atkinson S, Haslam R (2004). Patients' experiences of medication for anxiety and depression: effects on working life. *Fam Pract* 21:204–212.
- Hofer A, Kemmler G, Eder U, Honeder M, Hummer M, Fleischhacker WW (2002). Attitudes toward antipsychotics among outpatient clinic attendees with schizophrenia. *J Clin Psychiatry* 63:49–53.
- Hofer A, Wolfgang Fleischhacker W, Munk-Jørgensen P (2006). Attitudes towards medication in patients with schizophrenia. *Acta Psychiatr Scand* 113:161–162.
- Hofer A, Rettenbacher MA, Edlinger M, Kemmler G, Widschwendter CG, Fleischhacker WW (2007). Subjective response and attitudes toward antipsychotic drug therapy during the initial treatment period: a prospective follow-up study in patients with schizophrenia. *Acta Psychiatr Scand* 116:354–361.
- Hogan TP, Awad AG (1992). Subjective response to neuroleptics and outcome in schizophrenia: a re-examination comparing two measures. *Psychol Med* 22:347–352.
- Hogan TP, Awad AG, Eastwood R (1983). A self-report scale predictive of drug compliance in schizophrenics: reliability and discriminative validity. *Psychol Med* 13:177–183.
- Jeste SD, Patterson TL, Palmer BW, Dolder CR, Goldman S, Jeste DV (2003). Cognitive predictors of medication adherence among middle-aged and older outpatients with schizophrenia. *Schizophr Res* 63 (1–2):49–58.
- Mahfouz R (1990). Patients' subjective experiences of psychotropic drugs: can these help gaining insights into pharmacotherapy? *Egypt J Psychiatry* 13:61–67.
- Marder SR (2005). Subjective experiences on antipsychotic medications: synthesis and conclusions. *Acta Psychiatr Scand* 427 (Suppl 111):43–46.
- Moncrieff J, Cohen D, Mason JP (2009). The subjective experience of taking antipsychotic medication: a content analysis of Internet data. *Acta Psychiatr Scand* 120:102–111.
- Ng CH, Smith DJ, King J, Ong S, Schweitzer I (2012). Medication attitudes and beliefs in patients with psychotic and affective disorders on maintenance treatment. *Hum Psychopharmacol* 27:57–62.
- Nielsen RE, Lindström E, Nielsen J, Levander S (2012). DAI-10 is as good as DAI-30 in schizophrenia. *Eur Neuropsychopharmacol* 22:747–750.
- Rakhawy YT (1990). Drugs as repatterning organizer. *Egypt J Psychiatry* 13:5–9.
- Rofail D, Heelis R, Gournay K (2009). Results of a thematic analysis to explore the experiences of patients with schizophrenia taking antipsychotic medication. *Clin Ther* 31 (Suppl 1):1488–1496.
- Rossi A, Arduini L, Stratta P, Pallanti S (2000). Subjective experience and subjective response to neuroleptics in schizophrenia. *Compr Psychiatry* 41:446–449.

- Sadock BJ, Sadock VA (2007). *Kaplan and Sadock's Synopsis of Psychiatry*. 10th ed. New York, NY: Lippincott Williams and Wilkins.
- Sajatovic M, Jenkins JH, Cassidy KA, Muzina DJ (2009). Medication treatment perceptions, concerns and expectations among depressed individuals with type I bipolar disorder. *J Affect Disord* 115:360–366.
- Sanders BZ (2011). The effect of attitudes and stigma on the willingness to seek treatment for mental problems. Presented to the Honors Committee of Texas State, University San Marcos; in partial fulfillment of the requirements for graduation in the University Honors Program.
- Sartorius N (1998). Stigma: what can psychiatrists do about it? *Lancet* 352:1058–1059.
- Townsend L, Floersch J, Findling RL (2009). Adolescent attitudes toward psychiatric medication: the utility of the Drug attitude inventory. *J Child Psychol Psychiatry* 50:1523–1531.
- Waring EM, Neufeld RWJ, Schaefer B (2003). The thought disorder questionnaire. *Can J Psychiatry* 48:45–51.
- World Health Organization (1993). *ICD-10 classification of mental and behavioral disorders: clinical description and diagnostic guidelines*. Geneva.