

## Anxiety Disorders Comorbidity in Iranian Patients with Mood Disorders and Its' Relationship with Suicidal Attempt

Laleh Koochi-Habibi, MD<sup>1</sup>  
 Amir Shabani, MD<sup>2,3</sup>,  
 Marzieh Nojomi, MD<sup>4</sup>

1 Tehran Psychiatric Institute  
 2 Department of Psychiatry, Iran University of Medical sciences  
 3 Mental Health Research Centre, Iran University of Medical Sciences, Tehran, Iran  
 4 Department of Community Medicine, Iran University of Medical Sciences

### Corresponding author:

Laleh Koochi-Habibi, Psychiatrist.  
 Tehran Psychiatric Institute,  
 Sattarkhan Avenue, Niayesh  
 Street, Mansuri Street,  
 Email: habibilk@gmail.com  
 Tel: +98-21-66551658  
 Fax: +98-2166506853

**Objective:** Several studies show co morbidity of anxiety disorders amongst patients with bipolar and unipolar disorders. It is associated with an intensification of symptoms, insufficient treatment response, non recovery, poor functional outcome and suicidality. The aim of this study was to show the frequency of anxiety disorders comorbidity and the relationship between comorbidity and suicide attempt in these patients.

**Method:** In a descriptive study, 152 patients with bipolar and unipolar disorders in a psychiatric center were assessed with SCID. Current and lifetime comorbidity in bipolar and unipolar patients were analyzed.

**Results:** One hundred fifty two subjects aged 18-60 years were included in the study and 102 bipolar I, 11 bipolar II, and 39 unipolar patients were diagnosed. Co morbidity in each group was 21.2%, 11.5%, and 43.5%. Suicide attempt in patients with bipolar disorders and anxiety disorders comorbidity was significantly more than patients with bipolar disorders without co morbidity.

**Conclusions:** Significant proportions of patients with bipolar and unipolar disorder had co morbid anxiety disorders. Moreover, anxiety disorders comorbidity may be associated with more suicide attempt in bipolar patients, highlighting the need for greater clinical attention to anxiety in this population, particularly for enhanced clinical monitoring of suicidality. In addition, it is important to determine whether an effective treatment of anxiety symptoms can reduce suicidality.

### Key Words:

*Anxiety disorders, Comorbidity, Mood disorders, Suicide*

*Iran J Psychiatry 2007; 2: 96-101*

Comorbidity is defined as the co-occurrence of multiple disease entities with distinct etiologies (1, 2). Recent investigations, however, provide compelling evidence that anxiety disorders may be the most prevalent psychiatric comorbidity amongst persons with bipolar disorder (3-7). Moreover, anxiety co morbidity poses a serious hazard to individuals with bipolar disorders. It is associated with an intensification of symptoms, insufficient treatment response, non recovery, poor functional outcome and suicidality (5-8).

Data from both epidemiologic and clinical samples indicate elevated rates of anxiety disorders among patients with bipolar disorder (8-14). Comorbid anxiety disorders have been reported at rates of 10.6%–62.5% for panic disorder (PD), 7.8%–47.2% for social anxiety disorder, 3.2%–35% for obsessive-compulsive disorder (OCD), 7%–38.8% for posttraumatic stress disorder (PTSD), and 7%–32% for generalized anxiety disorder (GAD). The clinical significance of co morbid anxiety has been less well delineated, though greater severity and dysfunction are suggested. High levels of anxiety symptoms have been associated with greater suicidality, substance abuse, and lower lithium responsiveness (14,15). Emerging data support a detrimental role for panic attacks, anxiety, and panic

spectrum symptoms on bipolar disorder outcome (16, 17).

Up to 85% of the depressed subjects experience significant symptoms of anxiety and more than 50% have a lifetime history of diagnosable anxiety disorder either in the community or primary care (18-22).

Conditions that co-occur with bipolar disorder can complicate the course of illness and lead to poorer outcomes. In patients with bipolar disorder, based on epidemiological data, co morbidity is associated with higher numbers of mixed features, depressive episodes, and suicide attempts (23-28).

Age of onset for bipolar disorder is another aspect of the illness that is affected by co morbid anxiety disorders. The average age at onset of bipolar disorders for patients without any lifetime anxiety disorders was found to be 19.4 years. However, patients with any lifetime anxiety disorders experienced the onset of their first affective episode at 15.6 years (27).

Up to now, there has not been a comprehensive study about anxiety disorders comorbidity in Iran, so in this article, we provide a perspective on the correlates of co morbid anxiety in a sample of bipolar and unipolar disorder patients. We extended previous findings by examining specific current and lifetime anxiety disorders and their link to measures of suicide attempts, number of inpatient, age of first therapy, marital status

and occupation in 152 patients. We also examined bipolar I bipolar II subtypes, and unipolar depression.

**Materials and Methods**

**Participants**

The study was conducted in a university affiliated hospital in Tehran, Iran, named *Iran Hospital of Psychiatry*. This center has no selective admission policy and admits patients from all over the country. Patients with any types of bipolar and unipolar disorder were selected. These patients entered the study if they met the following inclusion criteria. 1) age of 18-65; 2)DSMIV diagnosis of bipolar I (BID) disorder bipolar II disorder (BIID) and unipolar depression or major depressive disorder (MDD) regarding medical records; 3)willingness and ability to participate in the study; 4)provision of informed written consent after the study procedures had been fully explained ; and 5) speaking Farsi. The exclusion criteria were having a severe disorder either in terms of behavior, communication or language that made the interview almost impossible (e.g., moderate to severe mental retardation, severe dementia, severe symptoms of acute psychosis, and severe agitation). The subjects who were consecutively admitted to outpatient service in the hospital (three days per week) during February to June 2007 were recruited. Finally, the sample consisted of 152 individuals; patients were not paid for their participation.

**The Structured Clinical Interview for DSM-IV axis I disorders (SCID-I):** The Persian translation of the SCID-I (the Clinician Version) was utilized in this study (25). The Clinician Version is an adaptation of the SCID-I that introduces the benefits of structured interviewing into clinical settings (24). The administration of this version is usually carried out in one session and takes about 45 to 90 minutes . The Persian version has been normalized and its assessment has showed that diagnostic agreements between test and retest SCID administration are fair to good for most diagnostic categories. Overall weighted kappa was 0.55 for lifetime diagnoses. Specificity values for

most psychiatric disorders were high (over 0.85); the sensitivity values were somewhat lower (26).

**Procedure**

The study was conducted between February 2007 and June 2007. Respondents were selected with regards to their inclusion criteria, the patients were perfectly explained the project , signed the informed consents, and then they were referred to one psychiatrist by a coordinator. The interviews were conducted by a trained psychiatrist. SCID was performed by one psychiatrist who underwent a training procedure by one experienced psychiatrist and one clinical psychologist. Before beginning the study, the trained psychiatrist performed some interviews with psychiatric patients in attendance of trainers to correct their probable mistakes.

The SCID, in this study, was carried out according to Benazzi and Akiskal advice to increase the chance of detecting patients with bipolar disorder (23). According to this advice: 1- if the patient answered the screening question about past hypomanic/manic episodes as negative, the clinician always had to question about all the other DSM-IV non-mood hypomanic/manic symptoms; and 2- the clinician considered two days or more of hypomania to be sufficient for the diagnosis. Also, the clinician could use the past information of the patients on the Hospital notes during the interview.

**Result**

**Demographics**

All statistical analyses were performed with SPSS version 11.5. Categorical variables were compared using chi-square tests. Continuous variables were compared using t- tests. A Bonferroni inequality correction was applied to all the variables significant at the p<0.05 level using chi-square or t-test.Patient characteristics are presented in Table 1.

One hundred fifty two patients with bipolar I (102 patients), bipolar II (11patients), and unipolar disorder (39 patients) completed the SCID and demographic questionnaire. All the subjects were outpatients or in the recovery phase of their disorder and were recruited

**Table 1. Demographic variables in 152 subjects**

Demographic variable	Mean	Standard deviation	Number	%
Age(year)	34.4	10.09		
Male			88	57.9
Female			64	42.1
Age of first therapy(year)	25.9	8.2		
<b>Marital state</b>				
Single			55	36.2
Divorced			11	7.2
<b>Occupation</b>				
Unemployed			42	27.6
Inpatient			132	86.8
<b>Suicide attempt</b>				
Yes			63	41.4
No			37	58.6
Age of first suicide attempt	27.4	7.5		

## Anxiety Disorders Comorbidity With Mood Disorders

from Iran Psychiatry Hospital. Eighty eight (57.9%) of the patients were men, the mean current age was 34.3 years. (SD=10.09), the mean age of the onset of illness was 25.9 years (SD=8.2). Two forth (27.6%) of the patients reported limitation of occupational functioning by their illness. 132(86/8%) reported one or more psychiatric hospitalization, and 63 (41/4%) reported one or more suicide attempt.

### Comorbid Anxiety disorders

The prevalence of any lifetime anxiety disorder for the entire sample was 35.5%. Greater lifetime anxiety comorbidity was seen among patients with unipolar depression and then bipolar disorder (43.5%, 32.7 %). Table 2 displays the rates of specific co morbid lifetime and current axis I anxiety disorders in the entire

unipolar patients and by bipolar subtype. Table 3 and 4 demonstrate the relationship between the presence and absence of at least one lifetime anxiety disorder and selected demographic and historical illness variables. Rate of lifetime suicide attempts were significantly elevated for bipolar patients with at least one lifetime anxiety disorder. (Pearson Chi-Square=5.402, p=0.02, OR=2.29 CI=1.2-4.3).

This odds ratio was adjusted with logistic regression model for age and gender and we found OR= 1.2, CI=1.1-4. Obsessive compulsive disorder, Panic disorder with or without agoraphobia, and Post Traumatic Stress Disorder were the most common co morbid lifetime anxiety disorders.

**Table 2. Comorbid anxiety disorders in patients with bipolar and unipolar disorders**

Anxiety Disorders	Current Diagnosis										Lifetime Diagnosis										
	BID N=102		BIID N=11		BID&BIID N=113		MDD N=39		Total N=152		BID N=102		BIID N=11		BID&BIID N=113		MDD N=39		Total N=152		
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Panic±A <sup>†</sup>	3	2.9	3	27.3	6	5.3	3	7.7	9	5.9	3	2.9	4	36.3	7	6.2	4	10.2	11	14.4	
SP <sup>‡</sup>	1	1			1	0.9	2	5.1	3	2	1	1			1	0.9			5.1	3	2
OCD <sup>§</sup>	9	8.9	7	63.7	16	14.1	5	12.9	21	13.8	10	9.8	7	63.6	17	15	6	15.3	23	15.1	
PTSD <sup>¶</sup>	7	6.9	1	9.1	8	7	3	7.7	11	14.5	7	6.9	1	9.1	8	7	3	7.6	11	14.4	
GAD <sup>¥</sup>	3	2.9	1	9.1	4	3.5	2	5.1	6	3.9	3	2.9	1	9.1	4	3.5	2	5.1	6	3.9	
			BID & BIID N=113										BID & BIID N=113								
			N	%								N	%								
Total Anx. Disorder comorb <sup>#</sup>	35		30.9		15	38.4	50	32.8	37		32.7		1	43.5	54	35.5					

<sup>†</sup> Panic disorder with or without Agoraphobia, <sup>‡</sup> Social Phobia, <sup>§</sup> Obsessive-Compulsive Disorder, <sup>¶</sup> Posttraumatic Stress Disorder, <sup>¥</sup> Generalised Anxiety Disorder, <sup>#</sup> Total Anxiety Disorder Comorbidity

**Table 3. Comparison of Bipolar disorders with or without anxiety disorders comorbidity**

Variable	BID&BIID without comorbidity%	BID&BIID with comorbidity%	Test	Pvalue	df
Divorce	12.3	5.7	χ <sup>2</sup>	NS	2
Unemployment	25	24.3	χ <sup>2</sup>	NS	1
Number of inpatients	3.11	3.11	T-test	NS	111
Age of first therapy	25	24.5	T-test	NS	108
Suicide attempt	28.9	51.4	χ <sup>2</sup>	0.02	1

**Table 4. Comparison of Unipolar depression with or without anxiety disorders comorbidity**

Variable	MDD without comorbidity	MDD with comorbidity	Test	Pvalue	df
Divorce	9.8	0	χ <sup>2</sup>	NS	1
Unemployment	26.1	50	χ <sup>2</sup>	NS	1
Number of inpatients	1.6	2.5	T-test	NS	37
Age of first therapy	29	28	T-test	NS	36
Suicide attempt	52.2	56.4	χ <sup>2</sup>	NS	1

Table 3 and 4 demonstrate the relationship between the presence and absence of at least one lifetime anxiety disorder and selected demographic and historical illness variables. Rate of lifetime suicide attempts were significantly elevated for bipolar patients with at least one lifetime anxiety disorder. (Pearson Chi-Square=5.402,  $p=0.02$ , OR=2.29 CI=1.2-4.3)

This odds ratio was adjusted with logistic regression model for age and gender and we found OR= 1.2, CI=1.1-4.

### Discussion:

The focus of the present study was on the prevalence of the lifetime comorbidity between anxiety disorders in separate subgroup of patients with a lifetime history of Bipolar I, II and unipolar patients in a sample of Iranian patients.

Obsessive compulsive disorder (15%) and Panic disorder with or without agoraphobia (6.1%) were found to be the most common anxiety disorders in patients with bipolar and unipolar disorders.

In the clinical sample of patients with bipolar I and bipolar II disorders and unipolar disorders, we found relatively high levels of anxiety comorbidity, consistent with the growing literature from epidemiologic and outcome studies. In this survey, we found elevated anxiety comorbidity in bipolar disorders, 32.7% as did McElroy and colleagues, 52.8% and 46.1% and Simon and colleagues 42%, 45% in bipolar I and II disorders (8, 27).

Based on an epidemiological study in Hungary, comorbidity of anxiety disorders in bipolar I,II and unipolar was 32%. In our study, we found overall 35.5% of the patients with co morbidity and 32.7% for bipolar patients so our findings could be consistent with the finding of the study in Hungary (29).

In our study, we found 15% comorbidity for OCD in bipolar disorders, (9.8% for bipolar I disorder) which is consistent with the previous reports in Iran that found 15% and 23 % (30, 31) and is also consistent with other researches who found comorbidity of OCD 8% and 9% for BID (8, 27).

We found the co morbidity of OCD in MDD and BID 15% and 9.8 % (MDD>BID) which is consistent with the previous reports that found the co morbidity of OCD in patients with depressive episodes more than manic episodes (32).

In particular, there was a significant prediction of past suicide attempts in patients with bipolar disorders by the presence of a lifetime anxiety disorder ( $p=0.02$ , OR=2.29, (95%) CI=1.2-4.3df=1). Thus, lifetime anxiety comorbidity appears to be a significant marker of a risk for a reported history of suicide attempts. This finding was consistent with previous studies that found such a relationship (odds ratio 2.45) (27). Based on a study in Massachusetts' General Hospital, a lifetime suicide attempt was reported significantly more in bipolar patients with a lifetime anxiety disorder (46.7%) than those without such disorder (24.4%) (33).

In our study there was not a significant relationship between the presence of lifetime anxiety disorders and the history of suicide attempt in unipolar patients.

### Limitations

Although we observed noticeable numbers of comorbidity of anxiety disorders in patients with bipolar and unipolar disorders, and a significant relationship between anxiety comorbidity and suicide attempts, our findings could be influenced by some confounding factors such as gender, age or substance abuse, etc. In addition, our sample size was smaller than the previous studies especially for unipolar patients. Based on our cross sectional study, we are unable to determine the direction of the association between anxiety comorbidity, bipolar severity and suicide attempts. Therefore, for further studies, we suggest more comprehensive questionnaires for suicidal behaviors and larger sample size.

### Conclusion:

Anxiety disorder co morbidity is prevalent and appears to be an independent marker of suicide attempts. The presence of anxiety comorbidity should signal a need for enhanced clinical monitoring of suicidality and a greater understanding of this connection is critical. Little is known about whether effective treatment of anxiety symptoms could reduce suicidality. Further research is required. These efforts may further elucidate the impact of anxiety on bipolar disorder and the need for additional or alternate intervention for patients with bipolar disorder and anxiety comorbidity. Comorbid anxiety disorders may play a role in certain characteristics of bipolar disorder that then elevate a risk of suicide ideations or suicide attempts. Alternatively, anxiety disorder comorbidity may be phenotypic expressions of a more severe form of bipolar disorder that presents in individuals with early bipolar onset, and may bring it with an enhanced risk of suicidal attempts. Indeed, the precise nature of the relationship between anxiety and bipolar disorder remains to be fully explained. It is possible that anxiety-bipolar disorder comorbidity represents a more severe subtype with a different associated biology or with a shared genetic risk.

Comorbidity of anxiety symptoms in bipolar disorders challenges the assumption that bipolar disorders and anxiety disorders are neurobiological distinct disorders. It could be hypothesized that some bipolar disorder presentations may originate from a baseline of neurosis (versus psychosis).

Taken together, a compelling basis emerges for prioritizing that identification and management of anxiety symptomatology is important and needs more consideration in the bipolar population.

### Acknowledgement

This project was supported by a grant from Mental Health Research Centre and Tehran Psychiatric

Institute, Tehran, Iran. We thank all the patients and their families who kindly helped us.

### References

1. Kruger S, Cooke RG, Hasey GM, Jorna T, Persad E. Comorbidity of obsessive compulsive disorder in bipolar disorder. *J Affect Disord* 1995; 34: 117-120.
2. Strakowski SM, Sax KW, McElroy SL, Keck PE, Hawkins JM, West SA. Course of psychiatric and substance abuse syndromes co-occurring with bipolar disorder after a first psychiatric hospitalization. *J Clin Psychiatry* 1998; 59: 465-471.
3. Bauer MS, Altshuler L, Evans DR, Beresford T, Williford WO, Hauger R. Prevalence and distinct correlates of anxiety, substance, and combined comorbidity in a multi-site public sector sample with bipolar disorder. *J Affect Disord* 2005; 85: 301-315.
4. Boylan KR, Bieling PJ, Marriott M, Begin H, Young LT, MacQueen GM. Impact of comorbid anxiety disorders on outcome in a cohort of patients with bipolar disorder. *J Clin Psychiatry* 2004; 65: 1106-1113.
5. Brady KT, Sonne SC. The relationship between substance abuse and bipolar disorder. *J Clin Psychiatry* 1995; 56 Suppl 3: 19-24.
6. Grant BF, Stinson FS, Hasin DS, Dawson DA, Chou SP, Ruan WJ, et al. Prevalence, correlates, and comorbidity of bipolar I disorder and axis I and II disorders: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *J Clin Psychiatry* 2005; 66: 1205-1215.
7. Keller MB. Prevalence and impact of comorbid anxiety and bipolar disorder. *J Clin Psychiatry* 2006; 67 Suppl 1: 5-7.
8. McElroy SL, Altshuler LL, Suppes T, Keck PE, Frye MA, Denicoff KD, et al. Axis I psychiatric comorbidity and its relationship to historical illness variables in 288 patients with bipolar disorder. *Am J Psychiatry* 2001; 158: 420-426.
9. Chen YW, Dilsaver SC. Comorbidity of panic disorder in bipolar illness: evidence from the Epidemiologic Catchment Area Survey. *Am J Psychiatry* 1995; 152: 280-282.
10. Dilsaver SC, Chen YW, Swann AC, Shoaib AM, Tsai-Dilsaver Y, Krajewski KJ. Suicidality, panic disorder and psychosis in bipolar depression, depressive-mania and pure-mania. *Psychiatry Res* 1997; 73: 47-56.
11. Kessler RC, McGonagle KA, Zhao S, Nelson CB, Hughes M, Eshleman S, et al. Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. *Arch Gen Psychiatry* 1994; 51: 8-19.
12. Kessler RC, Rubinow DR, Holmes C, Abelson JM, Zhao S. The epidemiology of DSM-III-R bipolar I disorder in a general population survey. *Psychol Med* 1997; 27: 1079-1089.
13. Pini S, Dell'Osso L, Mastrocinque C, Marcacci G, Papasogli A, Vignoli S, et al. Axis I comorbidity in bipolar disorder with psychotic features. *Br J Psychiatry* 1999; 175: 467-471.
14. Young LT, Cooke RG, Robb JC, Levitt AJ, Joffe RT. Anxious and non-anxious bipolar disorder. *J Affect Disord* 1993; 29: 49-52.
15. Cassano GB, Pini S, Sacttoni M, Dell'Osso L. Multiple anxiety disorder comorbidity in patients with mood spectrum disorders with psychotic features. *Am J Psychiatry* 1999; 156: 474-476.
16. Feske U, Frank E, Mallinger AG, Houck PR, Fagiolini A, Shear MK, et al. Anxiety as a correlate of response to the acute treatment of bipolar I disorder. *Am J Psychiatry* 2000; 157: 956-962.
17. Frank E, Cyranowski JM, Rucci P, Shear MK, Fagiolini A, Thase ME, et al. Clinical significance of lifetime panic spectrum symptoms in the treatment of patients with bipolar I disorder. *Arch Gen Psychiatry* 2002; 59: 905-911.
18. Gorman JM. Comorbid depression and anxiety spectrum disorders. *Depress Anxiety* 1996; 4: 160-168.
19. Kessler RC, Nelson CB, McGonagle KA, Liu J, Swartz M, Blazer DG. Comorbidity of DSM-III-R major depressive disorder in the general population: results from the US National Comorbidity Survey. *Br J Psychiatry Suppl* 1996; 17-30.
20. Lenze EJ, Mulsant BH, Shear MK, Schulberg HC, Dew MA, Begley AE, et al. Comorbid anxiety disorders in depressed elderly patients. *Am J Psychiatry* 2000; 157: 722-728.
21. Sartorius N, Ustun TB, Lecrubier Y, Wittchen HU. Depression comorbid with anxiety: results from the WHO study on psychological disorders in primary health care. *Br J Psychiatry Suppl* 1996; 38-43.
22. Sherbourne CD, Wells KB. Course of depression in patients with comorbid anxiety disorders. *J Affect Disord* 1997; 43: 245-250.
23. Benazzi F, Akiskal HS. Refining the evaluation of bipolar II: beyond the strict SCID-CV guidelines for hypomania. *J Affect Disord* 2003; 73: 33-38.
24. First M, Spitzer R, Gibbon M, Williams JB. *User's Guide for the Structured Clinical Interview for DSM-IV Axis I Disorders: SCID-1 Clinician Version*. Washington, DC: American Psychiatric Association; 1996.
25. Sharifi V, Assadi SM, Mohammadi MR, Amini H, Kaviani H, Semnani Y, et al. [Reliability and feasibility of the Persian version of the structured diagnostic interview for DSM-IV (SCID)]. *Advances in Cognitive Science* 2004; 6: 10-22.
26. Sharifi V, Assadi SM, Mohammadi MR, Amini H, Kaviani H, Semnani Y, et al. Structured clinical interview for DSM-IV (SCID). Persian Translation and cultural adaptation. *Iran J Psychiatry* 2007; 1: 47-49.
27. Simon NM, Otto MW, Wisniewski SR, Fossey M, Sagduyu K, Frank E, et al. Anxiety disorder comorbidity in bipolar disorder patients: data

- from the first 500 participants in the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). *Am J Psychiatry* 2004; 161: 2222-2229.
28. Vieta E, Colom F, Corbella B, Martinez-Aran A, Reinares M, Benabarre A, et al. Clinical correlates of psychiatric comorbidity in bipolar I patients. *Bipolar Disord* 2001; 3: 253-258.
  29. Rihmer Z, Szadoczky E, Furedi J, Kiss K, Papp Z. Anxiety disorders comorbidity in bipolar I, bipolar II and unipolar major depression: results from a population-based study in Hungary. *J Affect Disord* 2001; 67: 175-179.
  30. Maroufi A, GoraishiZadeh SMA. [Obsessive-compulsive disorder in patients with bipolar I disorder and Schizophrenia]. *Quarterly Journal of Andeesheh Va Raftar* 2004; 10: 37-43.
  31. Shabani A, Sharifi V, Alaghebanderad J, Shahrivar Z, Amini H, Kaviani H, et al. [Is the comorbidity of Obsessive-Compulsive disorder with Bipolar I disorder less than major depressive disorder?] *Quarterly Journal of Andeesheh Va Raftar* 2006; 45: 117-123.
  32. Keck PE, Lipinski JF, White K. An inverse relationship between mania and obsessive-compulsive disorder: a case report. *J Clin Psychopharmacol* 1986; 6: 123-124.
  33. Simon NM, Zalta AK, Otto MW, Ostacher MJ, Fischmann D, Chow CW, et al. The association of comorbid anxiety disorders with suicide attempts and suicidal ideation in outpatients with bipolar disorder. *J Psychiatr Res* 2007; 41: 255-264.