Original Article

The Persian Bipolar Spectrum Diagnostic Scale and Mood Disorder Questionnaire in Screening the Patients with Bipolar Disorder

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Background: Considering the difficulties in diagnosing bipolar disorder in clinical practice and lack of needed screening instruments in Persian language, the present study aimed at assessing sensitivity, specificity, and predictive values for the Persian Bipolar Spectrum Diagnostic Scale.

Methods: The study was conducted in a university-affiliated hospital in Tehran, Iran, in a sample of 181 consecutive outpatients aged 18 – 65 years. The used instruments were the Structured Clinical Interview for DSM-IV axis I disorders, the Persian Bipolar Spectrum Diagnostic Scale, the Persian Mood Disorder Questionnaire, and the Scale to Assess Unawareness of Mental Disorder.

Results: Most patients were males (58%) and had bipolar I disorder (57%). Other bipolar disorders and major depressive disorder were diagnosed as 5.5% and 21%, respectively. Test-retest of the Persian Bipolar Spectrum Diagnostic Scale and Mood Disorder Questionnaire demonstrated a good reliability for both. The sensitivity, specificity, and positive and negative predictive values of the Persian Bipolar Spectrum Diagnostic Scale at the score of 14, were 0.52, 0.79, 0.81, and 0.49, respectively. The sensitivity and specificity of the parallel application of the Persian Bipolar Spectrum Diagnostic Scale and Mood Disorder Questionnaire were 0.76 and 0.67, respectively.

Conclusion: The Persian Bipolar Spectrum Diagnostic Scale and Mood Disorder Questionnaire are useful in screening patients with bipolar disorder in clinical psychiatric settings. Parallel use of both tests seems more effective than either alone.

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Keywords: Bipolar disorder • Bipolar Spectrum Diagnostic Scale • Mood Disorder Questionnaire • validation

Introduction

Bipolar disorder is of significant burden and economic impact on general population. It is ranked as the eighth leading cause of medical disability worldwide.[1] It has been recently demonstrated that the prevalence of bipolar disorders including the spectrum cases would be more than what was estimated before.[2–6] Diagnosing these disorders is often not convenient for clinicians because: 1) a patient with history of hypomania usually does not express the history, because hypomania does not make significant impairment,[7] 2) having poor insight is a rule rather than exception in these patients during hypomanic/manic episodes,[8,9] 3) diagnosing bipolar disorder as "lifetime" needs a retrospective assessment based on the memory of patient and her/his family, and 4) such patients spend their life in depressive rather than hypomanic/manic episodes,[10,11] and are usually referred to clinicians during a depressive episode.

Considering the difficulties in diagnosing bipolar disorder in clinical practice, and the

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necessity of sparing enough time to interview with patients' family to reach the correct diagnosis, and also considering the poor outcome if the disease is not detected or misdiagnosed as unipolar depressive disorder, which leads to mistreatment with antidepressants, developing and using a screening instrument for bipolar disorder was required. Therefore, Hirschfeld et al.[12] developed the Mood Disorder Questionnaire (MDQ) based on the DSM-IV symptoms to screen the lifetime history of a hypomania/mania syndrome. The original MDQ in English provided good sensitivity and excellent specificity according to the Structured Clinical Interview for DSM-IV (SCID) on an outpatient sample.[12] Also, the MDQ has been validated among a community-based sample against an abbreviated version of the SCID as low sensitivity and excellent specificity.[13] On the other hand, Miller et al.[14] reported that the MDQ had good sensitivity for bipolar I disorder (BD type I) but had lower sensitivity for bipolar type II or not otherwise specified (NOS) disorders. Hence another instrument has been developed by Ronald Pies called as the Bipolar Spectrum Diagnostic Scale (BSDS) to target bipolar type II and NOS to cover more patients with bipolar spectrum disorders. The sensitivity and specificity of the revised version of the BSDS was assessed on 68 outpatients with bipolar spectrum disorder.[15] The sensitivity was 0.76, approximately equal in bipolar I (0.75) and bipolar II/NOS (0.79) cases, and the specificity was 0.85.

The present study aimed at finding the sensitivity and specificity of the Persian version of the BSDS on a clinical Iranian sample at a university-affiliated hospital in Tehran.

Patients and Methods

Providing the Persian version of the BSDS

The original English text of the BSDS was translated into Persian by three bilingual (English/Persian) translators. They reached consensual agreement on the translation of items. All the translators were psychiatrist and assistant professor of university. Necessary revisions for each translated item were made leading to consensual agreement on the finalized phrases to ensure a cross-culturally equivalent translation.

The BSDS was then self-administered on eight Persian-speaking individuals with unknown mental health situation, different educational levels, and different socioeconomic status. The ambiguities or difficulties were asked from probands and necessary revisions were made by the translators.

Corrected translation was back-translated into English by a bilingual (English/Persian) independent translator who was blind to the original English version. Then, the back-translated version was compared with the original BSDS by primary translators (expert psychiatrists) to identify the discrepancies and errors, and modifications were made in the translated text. The above-mentioned procedures were repeated to ensure a satisfactory equivalence of the translated version with the original one. Afterwards, the Persian version of the BSDS was finalized by the aforementioned experts.

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. The subjects consecutively admitted to outpatient service in the hospital (three days per week) during February through June 2007 were recruited. The inclusion criteria were age of 18 – 65 years, giving informed consent to participate in the study, and being Persian speaking. 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). Finally the sample was consisted of 181 individuals.

Instruments

The Structured Clinical Interview for DSM-IV axis I disorders (SCID-I) [16,17]

The Persian translation of the SCID-I (the clinician version: SCID-CV) was utilized in this study.[18] The Persian version has been normalized and its assessment has shown 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) and the sensitivity values were somewhat lower.[19]

The Bipolar Spectrum Diagnostic Scale (BSDS)

The BSDS is a self-report narrative-based scale developed by Ronald Pies, which was revised and

validated by Ghaemi et al.[15] It is a one-page story in the first part—containing 19 positively valenced sentences as third person included some typical mood swing experiences—and one simple multiple-choice question in the second part—to rate how well the story describes the individual.

The score on the first part can range from 0 to 19, and on the second part from 0 to 6. Therefore, the total score of the BSDS ranges from 0 to 25. According to a clinical assessment, its sensitivity for screening the bipolar spectrum disorders was 0.76.[15] The sensitivity was approximately equal in patients with bipolar I (0.75) and bipolar II/NOS (0.79) disorders, and the specificity was 85%.

The Mood Disorder Questionnaire (MDQ)

The MDQ is a brief, self-report, and easy to use inventory, which screen the lifetime history of a hypomanic/manic syndrome.[12] The questionnaire consists of three sections. The first one includes 13 yes/no questions to quickly screen the DSM-IV symptoms of mania/hypomania. The second part is a yes/no question regarding the symptoms which occurred simultaneously. In the final section, the level of functional impairment secondary to these symptoms is queried to rate the degree of dysfunction.

If a patient fulfills enough criteria of the first section (the score of cutoff point or higher), the answer to the second section is *yes,* and the rating for the third section is moderate or severe, then a likely diagnosis of bipolar disorder will be suggested. However, it is a frequently used instrument with good sensitivity and excellent specificity for screening and detecting bipolar disorder[12,20-23]—especially BD type I[14]—in clinical settings. According to another study, the MDQ has been translated to Persian and back translated to English, and the experts' consensual agreement has been made.[24]

The Scale to Assess Unawareness of Mental Disorder (SUMD)

This instrument is utilized by a clinician through a semi-structured interview, and its basic section assesses: 1) awareness of mental disorder, 2) awareness of achieved effects of medication, and 3) awareness of social consequences of mental disorder.[25] Each item includes two states—current and past—and each state is scored on a Likert scale ranging from 1 to 5. Therefore, the total score is ranged from 6 to 30. The higher scores mean lower insight.

Procedure

At first, a coordinator explained the project for referred patients and after obtaining informed consent referred them to a psychiatrist. All the patients were visited, and the SCID and SUMD were performed by one psychiatrist. She had been trained to perform these interviews by two experienced psychiatrist and clinical psychologist. Before starting the study, the trained psychiatrist performed some interviews with psychiatric patients in attendance of trainers for correcting the probable mistakes.

After registering the demographic data, the patients were explained how to fill out the MDQ and BSDS, and the questionnaires were filled out. The psychiatrist was blind to the result of mentioned questionnaires and performed the interview as the SCID and SUMD, respectively. The SCID in this study was carried out according to Benazzi and Akiskal advice to increase the chance of detecting patients with bipolar disorder.[26] According to this advice: 1) if the patient answered to the screening question about past hypomanic/manic episodes as negative, the clinician must have always questioned about all the other DSM-IV noneuphoric 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.

After completion of the interviews, the patients were referred to the coordinator who registered the results of the MDQ and BSDS. He telephoned the patients in three to five days after the interview in order to fill out the MDQ and BSDS for the second time (retest). The retests were carried out for about one-third of the patients.

In this study, there was no intervention. Entering the patients into the study and continuation of their cooperation in the retests were arbitrary. The text of the written informed consent had been approved by the Ethics Committee of Tehran Psychiatric Institute and Mental Health Research Center, Tehran, Iran.

Results

One hundred and eighty-one individuals [76 (42%) females and 105 (58%) males)] with a mean age of 33.9 (±10) years were assessed. The rate of single, married (once), married (more), and divorced individuals was 39.5%, 8.1%, 3.8%, and

8.2%, respectively.

The education level of most of the patients was under high school diploma. Of the patients, 16.6% had graduated from elementary school, 40.3% had middle/high school education, 29.4% had high school diploma, and 12.7% had a college degree. Forty-one point one percent of the patients were employed, 29.4% were unemployed, 24.4 % were housewife, and 5% were retired.

They had been hospitalized (at psychiatric ward) 2.7 times in life on average. Most of the patients had BD type I (103, 56.91%). Other diagnoses were major depressive disorder (38, 20.99%), psychotic disorders (25, 13.81%), other bipolar disorders (10, 5.52%), other depressive disorders (three, 1.66%), and other mood disorders (two, 1.10%). One hundred and seventy-four of the patients (98%) had been under treatment during the last month. Seventy-one patients (39.4%) had the history of at least one attempted suicide.

A Cronbach's alpha coefficient of 0.86 and 0.82 was calculated for the Persian BSDS and MDQ, respectively. Test-retest of the Persian BSDS and MDQ based on the Pearson's correlation test demonstrated a good reliability for both of them (r=0.84, P<0.01, n=90; r=0.79, P<0.01, n=90, respectively).

Spearman's correlations of each item with total score on the Persian BSDS ranged from 0.31 (item 19) to 0.69 (item 16); P<0.01.

Spearman's correlations of each item with total score on the Persian MDQ ranged from 0.34 (question 3) to 0.67 (question 1/item 5); P<0.01.

The sensitivity and specificity of the Persian BSDS for various threshold cutoffs of the total score according to the SCID-CV diagnoses is presented in Figure 1. The cutoff screening score of 14 was selected. The sensitivity and specificity for the bipolar patients at this cutoff score, was 0.52 (95%CI: 0.42 – 0.62) and 0.79 (95%CI: 0.67 –0.88), respectively. As the cutoff point was increased from 14 to 15, specificity almost did not change, but sensitivity was decreased to 0.44. On the other hand, decreasing the cutoff point from 14 to 13 led to increasing the sensitivity as 0.05 and decreasing the specificity as 0.07 (Figure 1). Therefore, the score of 14 was accepted as the best. Positive and negative predictive values for the BSDS at the cutoff point of 14 were 0.81(95%CI: 0.69 – 0.89) and 0.49 (95%CI: 0.39 – 0.59), respectively.

Sensitivity and specificity of the Persian MDQ for various threshold cutoffs of the total score according to the SCID-CV diagnoses are presented in Figure 2. According to this figure, the best cutoff scores to screen bipolar disorders could be 4 and 5. Given the little difference between the values of the two scores, the score of 5 was chosen because its sum of false positive and false negative was lower. The sensitivity and specificity for the bipolar cases at the cutoff score of 5, were 0.63 (95%CI: 0.53 – 0.72) and 0.71 (95%CI: 0.58 – 0.81), respectively. Positive and negative predictive values for the MDQ at this cutoff point were 0.78 (95%CI: 0.69 – 0.86) and 0.53 (95%CI: 0.42 – 0.64), respectively. Pearson's correlation test showed a significant positive relationship between the BSDS and MDQ scores (r=0.63, P<0.01, n=181).

To reach a higher sensitivity for screening the patients with bipolar disorders, the sensitivity and specificity of the parallel application of the BSDS and MDQ (BSDS+MDQ) were calculated using their preferable cutoff points as mentioned above. The parallel application means using one tool when the other tool is the cutoff point. The sensitivity and specificity were 0.76 (95%CI: 0.67 – 0.84) and 0.67 (95%CI: 0.54 – 0.79), respectively.

The mean total score on the SUMD among all

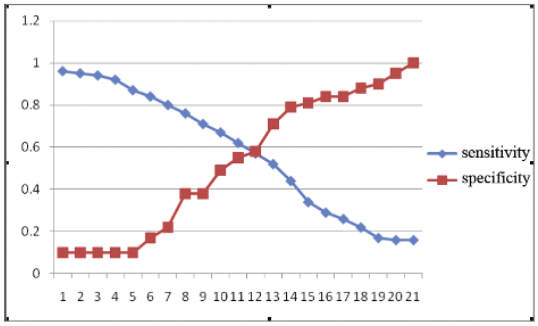

Figure 1. Sensitivity and specificity of the Persian BSDS for various threshold scores.

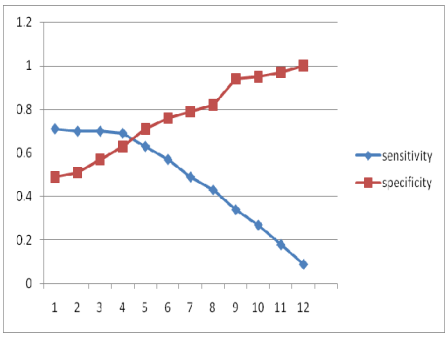

Figure 2. Sensitivity and specificity of the Persian MDQ for various threshold scores.

probands was 10.71±4.35, which is good. In patients with bipolar disorders the correlation between the SUMD and BSDS scores and between the SUMD and MDQ scores were "weakly and negatively significant" and "nonsignificant," respectively (Table 1).

Discussion

We found that the Persian BSDS was not as sensitive and specific as the original English version. We also found that its use in our center was associated with better positive predictive values than in the original reports, probably due to higher validity in tertiary-care psychiatric centers as opposed to community settings. We further found that the combined use of the BSDS and the MDQ was more effective in screening bipolar disorder than either tool alone.

The sensitivity and specificity of the Persian BSDS (0.52 and 0.79 at the cutoff point of 14) were lower than those of the original BSDS (0.75 and 0.93 at the cutoff point of 13). The samples at both the above studies consisted of adult outpatients, but the sample size was larger at the present study (181 vs. 93).

The lower psychometric properties of the Persian BSDS might be related to the cultural differences between Iranians and western people regarding the style of transferring psychologic meanings and concepts. The findings of eastern countries where depression is presented as somatic complaints more than mental complaints, has been replicated in Iranian population.[27] Having a questionnaire derived from Iranian cultural features and adapted with the Persian language characteristics could have more benefits to screen bipolar disorder.

The determinants for the ability of screening tools to diagnose and treat disorders accurately in clinical practice are predictive values (PVs). The Persian BSDS had a positive PV (which is the likelihood that a positive result on a test is a true positive) and a negative PV (which is the likelihood that a negative result on a test is a true negative) of 0.81 and 0.49, respectively. The positive and negative PVs of the original BSDS have been 0.36 and 0.97, respectively.[15] Being high in positive PV and being low in negative PV in the present study not only is in contrast with the results of the original BSDS study,[15] but also is not consistent with the findings on the MDQ in the studies of Hirschfeld et al.[12,13] The latter were conducted in a community sample, where the *prior probability* (or primary clinical suspicion) of bipolar disorder was low; in contrast, our study was conducted in a tertiary-care referral center for many patients with bipolar disorders.[28] This may indicate that scales such as the BSDS are most effectively used in such settings. Also, the interviewer administered the SCID according to the method of Benazzi and Akiskal (as mentioned in the Methods),[26] which may also have improved positive PV.

The sensitivity and specificity of the Persian MDQ at the cutoff score of 5 were 0.63 and 0.71, respectively, which are acceptable and in the range of the findings of other studies on clinical samples. The sensitivity of various versions of the questionnaire in English (original version),[12] Finnish,[20] French,[21] Italian,[22] and Turkish,[23] has been between 0.58 and 0.90 on clinical samples. Also, their specificity has been from 0.58 to 0.91. Similar to the Persian BSDS, the Persian MDQ had

Table 1. Nonparametric correlations (Spearman's) between the scores of the Scale to Assess Unawareness of Mental Disorder (SUMD) and screening tests for bipolar disorder.

SUMD score		BSDS score	MDQ score
Awareness of mental disorder*	Correlation coefficient	-0.209	-0.157
	Sig. (2-tailed)	0.007	0.039
Awareness of mental disorder**	Correlation coefficient	-0.114	-0.036
	Sig. (2-tailed)	0.144	0.634
Awareness of achieved effects of medication*	Correlation coefficient	0.015	-0.031
	Sig. (2-tailed)	0.848	0.685
Awareness of achieved effects of medication**	Correlation coefficient	0.002	-0.059
	Sig. (2-tailed)	0.976	0.445
Awareness of social consequences of mental disorder*	Correlation coefficient	-0.117	-0.100
	Sig. (2-tailed)	0.133	0.193
Awareness of social consequences of mental disorder**	Correlation coefficient	-0.135	-0.112
	Sig. (2-tailed)	0.084	0.141
Total SUMD	Correlation coefficient	-0.196	-0.126
	Sig. (2-tailed)	0.047	0.190

BSDS=Bipolar Spectrum Diagnostic Scale; MDQ=Mood Disorder Questionnaire; *=current; **=past.

a higher positive PV (0.78) and a lower negative PV (0.53) (at the selected cutoff score) in comparison with the MDQs in other languages.[29]

High correlation of the BSDS with the MDQ scores suggests good concordance and nearly the same function of both screening tools. Assessing test-retest reliability and internal consistency demonstrated good reliability as well.

To increase the sensitivity of the screening tools to detect bipolar disorder, psychometric properties of parallel application of the BSDS and MDQ (BSDS+MDQ) were assessed—as it has been suggested by Ghaemi and colleagues.[15] To assess the sensitivity and specificity of the BSDS+MDQ, the cutoff scores of 14 for the BSDS and 5 for the MDQ were used. The sensitivity and specificity of the new instrument were 0.76 and 0.67, respectively. The sum of false positive and false negative for the BSDS, the MDQ, and the BSDS+MDQ can help compare the three instruments. The result for the three mentioned tools was 0.69, 0.66, and 0.57, respectively, which shows a better condition for the "BSDS+MDQ" in comparison with the BSDS or MDQ.

Lack of insight to the illness could be one of the factors that reduced the efficacy of self-report instruments for screening bipolar disorder.[30] Nevertheless, Ghaemi et al.[15] did not confirm a significant relationship between the scores of the total SUMD and BSDS. At the present study, the same version of SUMD of the latter study was used. There was a weak but significant correlation between the SUMD and BSDS scores, suggesting that while lack of insight may lead to some false-negative scores, this matter does not seem to be a problem in general for most patients screened by the BSDS.

Another factor may be the fact that most patients had intact insight in this study. Psychometric evaluation of these instruments in patients with poor insight is needed. Also, using more detailed insight measuring instruments that would be more specific for bipolar disorders are required to assess the relationship between insight level and efficacy of screening tools successfully.

To sum up, in spite of some limitations, the Persian BSDS and MDQ are useful in screening patients with bipolar disorder in psychiatric settings, and parallel application of both tests could raise their efficacy. Nevertheless, cultural differences may exist in their utility. Also, given that most studied probands with bipolar disorder had BD type I, using the instruments for screening BD type II and other bipolar disorders needs further studies.

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References

1 Murray C, Lopez A. Evidence-based health policy–lessons from the Global Burden of Disease Study. *Science*. 1996; **274:** 740 – 743.

2 Ghaemi SN, Ko JY, Goodwin FK. "Cade's disease" and beyond: misdiagnosis, antidepressant use, and a proposed definition for bipolar spectrum disorder. *Can J Psychiatry*. 2002; **47:** 125 – 134.

3 Allilaire JF, Hantouche EG, Sechter D, Bourgeois ML, Azorin JM, Lancrenon S, et al. Frequency and clinical aspects of bipolar II disorder in a French multicenter study: EPIDEP. *Encephale*. 2001; **27:** 149 – 158.

4 Angst J, Gamma A. A new bipolar spectrum concept: a brief review. *Bipolar Disord*. 2002; **4 (suppl 1):** 11 – 14.

5 Ghaemi SN, Sachs GS, Chiou AM, Pandurangi AK, Goodwin FK. Is bipolar disorder still underdiagnosed? Are antidepressants overutilized? *J Affect Disord*. 1999; **52:** 135 – 144.

6 Angst J. Do many patients with depression suffer from bipolar disorder? *Can J Psychiatry*. 2006; **51:** 3 – 5.

7 Akiskal HS, Bourgeois ML, Angst J, Post R, Moller HJ, Hirschfeld R. Re-evaluating the prevalence and diagnostic composition within the broad clinical spectrum of bipolar disorders. *J Affect Disord*. 2000; **59 (suppl 1):** S5 – S30.

8 Cuesta M, Peralta V, Zarzuela A. Reappraising insight in psychosis. Multiscale longitudinal study. *Br J Psychiatry*. 2000; **177:** 233 – 240.

9 Katzow JJ, Hsu DJ, Ghaemi SN. The bipolar spectrum: a clinical perspective. *Bipolar Disord*. 2003; **5:** 436 – 442.

10 Judd LL, Akiskal HS, Schettler PJ, Endicott J, Maser J, Solomon DA, et al. The long-term natural history of the weekly symptomatic status of bipolar I disorder. *Arch Gen Psychiatry*. 2002; **59:** 530 – 537.

11 Judd LL, Akiskal HS, Schettler PJ, Coryell W, Endicott J, Maser JD, et al. A prospective investigation of the natural history of the long-term weekly symptomatic status of bipolar II disorder. *Arch Gen Psychiatry*. 2003; **60:** 261 – 269.

12 Hirschfeld RM, Williams JBW, Spitzer RL, Calabrese JR, Flynn L, Keck PE, et al. Development and validation of a screening instrument for bipolar spectrum disorder: the Mood Disorder Questionnaire. *Am J Psychiatry*. 2000; **157:** 1873 – 1875.

13 Hirschfeld RMA, Holzer C, Calabrese JR. Validity of the Mood Disorder Questionnaire: a general population

study. *Am J Psychiatry*. 2003; **160:** 178 – 180.
14 Miller CJ, Klugman J, Berv DA, Rosenquist KJ, Ghaemi SN. Sensitivity and specificity of the Mood Disorder Questionnaire for detecting bipolar disorder. *J Affect Disord*. 2004; **81:** 167 – 171.
15 Ghaemi SN, Miller CJ, Berv DA, Klugman J, Rosenquist KJ, Pies RW. Sensitivity and specificity of the Bipolar Spectrum Diagnostic Scale for detecting bipolar disorder. *J Affect Disord*. 2005; **84:** 273 – 277.
16 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). *Adv Cogn Sci.* 2004; **6:** 10 – 22.
17 First M, Spitzer R, Gibbon M, Williams JB. *Structured Clinical Interview for DSM-IV AXIS I Disorders (Clinical Version) SCID-I Administration Booklet*. Washington, DC: American Psychiatric Association; 1997.
18 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; 1997.
19 Sharifi V, Assadi SM, Mohammadi MR. Structured Clinical Interview for DSM-IV (SCID): Persian translation and cultural adaptation. *Iran J Psychiatry.* 2007; **2:** 47 – 49.
20 Isometsä E, Suominen K, Mantere O, Valtonen H, Leppämäki S, Pippingsköld M, et al. The mood disorder questionnaire improves recognition of bipolar disorder in psychiatric care. *BMC Psychiatry*. 2003; **3:** 8.
21 Rouget BW, Gervasoni N, Dubuis V, Gex-Fabry M, Bondolfi G, Aubry J. Screening for bipolar disorders using a French version of the Mood Disorder Questionnaire (MDQ). *J Affect Disord*. 2005; **88:** 103 – 108.
22 Hardoy MC, Cadeddu M, Murru A, Dell'Osso B, Carpiniello B, Morosini PL, et al. Validation of the Italian version of the "Mood Disorder Questionnaire" for the screening of bipolar disorders. *Clin Pract Epidemiol Ment Health*. 2005; **1:** 8.
23 Konuk N, Kiran S, Tamam L, Karaahmet E, Aydin H, Atik L. Validation of the Turkish version of the Mood Disorder Questionnaire for screening bipolar disorders. *Turk Psikiyatri Derg*. 2007; **18:** 1 – 7.
24 Hormozi MR. The assessment of reliability and validity of the Persian MDQ. Dissertation, Iran University of Medical Sciences, Tehran, Iran; 2007.
25 Amador XA, Strauss DH, Yale SA, Flaum MM, Endicott JE, Gorman JM. Assessment of insight in psychosis. *Am J Psychiatry*. 1993; **150:** 873 – 879.
26 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.
27 Hakim- Shooshtari M, Alaghband-rad J, Sharifi V. Profile of major depressive disorder symptoms among patients in Tehran. *Iran J Psychiatry*. 2007; **2:** 35 – 41.
28 Shabani A. Confusion in diagnosing bipolar disorders: underdiagnosed or overdiagnosed? ISBD Global: The Official Newsletter of the International Society for Bipolar Disorders 2007; **8:** 6 – 7.
29 Phelps JR, Ghaemi SN. Improving the diagnosis of bipolar disorder: predictive value of screening tests. *J Affect Disord*. 2006; **92:** 141 – 148.
30 Ghaemi SN, Pope HG. Lack of insight in psychotic and affective disorders: a review of empirical studies. *Har Rev Psychiatr*. 1994; **2:** 22 – 33.