Short Communication

Mood disorders insight scale: Validation of Persian version

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Background: Lack of insight in patients with bipolar I disorder has been associated with poor course and clinical outcome and compromised therapeutic compliance. Therefore, it is important to evaluate insight and use more specialized scales such as Mood Disorder Insight Scale (MDIS) in these patients. Our objective in this study was to assess validity and reliability of Persian version of MDIS. **Materials and Methods:** A hundred forty five bipolar patients were selected from Iran Hospital of Psychiatry. They were interviewed by The Persian Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorder, 4th edition's (DSM-IV) axis I disorders (SCID-I) and the Scale to Assess Unawareness of Mental Disorder (SUMD). The translated version of MDIS in Persian was subsequently completed by patients. **Results:** The internal consistency was satisfactory (Cronbach alpha coefficients = 0.8). The test-retest reliability (coefficient alpha) was 0.95 ($p < 0.01$). Construct validity and concurrent validity were supported by factor analysis and Spearman rank correlation between MDIS and SUMD (0.85). Conclusions: Persian version of the MDIS could be a useful instrument for assessing insight in patients with bipolar I disorder.

Key words: Validation Studies, Mood Disorder Insight Scale, Bipolar Disorder, Iran

INTRODUCTION

Insight to a mental disorder has been defined as an awareness of a variety of disorder-related issues such as symptoms, probable cause and source of these symptoms, need of treatment and repercussions of the disorder.[1-3] Insight is not an all-or-none phenomenon; a patient may have insight into some signs and symptoms of the disorder not to others.[3]

Most of the studies regarding insight have given much attention to psychotic disorders especially schizophrenia,[1-13] but some literature has focused on insight in mood disorders particularly bipolar-I-disorder (BID) and according to them in bipolar patients poor insight was associated with poor compliance to medical and psychological treatment and poor course and outcome.[14-21]

A variety of insight scales have been developed but most of them are suitable for psychotic patients and cannot reflect the insight of patients with mood disorders; therefore, it is better to use more specialized scales such as Mood Disorder Insight Scale (MDIS) for assessing insight in these patients. Sturman and Sproule determined test-retest reliability ($r = 0.75$, $n = 45$) and also validity of MDIS using clinician ratings ($r = 0.49$, $n = 69$).[22] The objective of this study was to assess validity and reliability of Persian version of MDIS.

MATERIALS AND METHODS

Preparing the Persian version of MDIS

The original English text of the MDIS[22] was translated into Persian by four bilingual (English/Persian) translators who were all psychiatrist and assistant professor of university.

They reached an agreement on finalized translation of items. Then it was back translated into English by another professional bilingual (English/Persian) translator who had not seen the original items of MDIS. The back-translated version was compared with the original MDIS by primary translators and appropriate modifications were made in the translated text. The process of translation back-translation was repeated until reaching an acceptable equivalence between original MDIS and back-translated version.

Patients

Subjects were selected from Persian speaking outpatients and inpatients with diagnosis of BID disorders. The sampling was nonrandomized referred. to Iran Hospital of Psychiatry, Tehran, Iran, from December 2008 to September 2009. The diagnoses were made based on the Persian Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorder, 4th edition's (DSM-IV) axis I Patient aged 18-65 years and gave informed consent and had

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cognitive, educational and mental ability for reading and responding the items were included. The exclusion criteria were having a severe disorder either in terms of behavior or language that made the interview and responding to the items almost impossible (e.g., moderate to severe mental retardation, severe dementia and severe agitation). All subjects were volunteers and did not receive compensation for their participation. Finally, 145 (61% males) patients were recruited. The method was ethically approved by research committee of mental health research center.

Instruments

The Persian Structured Clinical Interview for DSM-IV axis I disorders (SCID-I)

SCID, a gold standard and widely used clinical tool for diagnosis of psychiatric disorders based on DSM-IV criteria, was used as a diagnostic tool in this study. It has been shown to have reliability and feasibility and have fair to good diagnostic agreements for most diagnostic categories (kappa = 0.55). Its acceptable specificity and sensitivity has been shown on a large sample of Iranian patients.[23]

The Scale to Assess Unawareness of Mental Disorder (SUMD)

This instrument is a semi-structured interview with 9 items, and assesses: 1) Awareness of having a mental disorder or psychiatric symptoms, 2) Awareness of need to and effects of medication, and 3) Awareness of social consequences of mental disorder.[3] Each item includes current and past state and each state is scored on a Likert scale ranging from 1 to 3: 0 (not applicable), 1 (aware), 2 (somewhat aware/unaware), and 3 (severely unaware). The higher score indicates lower insight. In the present study, the SUMD was the gold standard comparator against the MDIS and the inter-rater reliability of the SUMD was determined on 45 patients. Amador et al. indicated that the median inter-rater intra-class correlation coefficients (ICC) for the SUMD was 0.89.[3] In another study, it was reported that there was 100% agreement (ICC = 1.00) between SUMD ratings on several dimensions and the diagnoses which were made according to DSMIV-TR criteria by a psychiatrist.[24]

The Mood Disorder Insight Scale (MDIS)

MDIS is composed of eight items. It is a self-report instrument assessing three basic sections of illness-awareness consisting of 1) awareness of mental disorder, 2) Attribution of symptoms and 3) awareness of need for treatment through both current and past episodes of mood disorder.[22]

Subjects can respond to each item as to whether they agree, disagree, or are unsure. The MDIS takes between 2 and 3 minutes to be administered. Maximum score for each of the sub-scores is 4 and maximum score for the whole scale is 12. The higher scores mean higher insight. In Sturman and Sproule study, the test–retest reliability of the scale was 0.75 ($p < 0.01$) and there were significant correlations between the scores on psychiatrists ratings and the MDIS total score ($r = 0.49$, $p < 0.001$) and subscores.[22]

Procedure

After collecting some demographic and clinical data, SCID and SUMD were performed by two trained resident of psychiatry for all patients. Then, the patients filled out the MDIS. Test-retest reliability was evaluated through a second test three days later, face to face for inpatients and by phone for outpatients.

To analyze data, we used SPSS version 11.5 (Chicago, IL, USA). Descriptive methods, intra-class correlation, factor analysis and Spearman correlation was used.

RESULTS

Demographic and clinical data and their relationship with MDIS and SUMD scores were shown in table 1. The test-retest reliability (coefficient alpha) of the MDIS was 0.95 ($p < 0.01$) Inter-rater reliability of SUMD was 0.95 ($p < 0.01$). Internal consistency analysis of Persian MDIS showed Cronbach alpha coefficients as 0.83 and intra-class correlation coefficients as 0.82.

Table 1. Relationship between demographic characteristics and MDIS and SUMD scores

Variable	n(%)	P-value (MDIS)	P-value (SUMD)
Gender			
Male	88(61)	N.S.	N.S.
Female	57(39)		
Occupational status			
Unemployed	65(44.8)		
Self- employed	11(7.8)		
Worker	5(3.4)	N.S.	N.S.
Clerk	9(6.2)		
House-keeper	55(38)		
Educational status			
Primary school	7(4.8)		
Secondary school	5(3.4)		
High school	35(20.7)	N.S.	N.S.
Diploma	45(31)		
> Diploma	6(4.1)		
MARITAL STATUS			
Married	55(38)		
Single	65(44.8)	N.S.	N.S.
Divorced	20(13.8)		
Widow/widower	5(3.4)		
Age(year) (mean ± SD)	36.3 ± 11.2	N.S.	N.S.
Number of hospitalizations (mean ± SD)	3.9 ± 2.6	N.S.	N.S.
Hospitalization status			
Inpatients	126(86.9)	S.	S.
outpatients	19(13.1)		

S.: Statistically significant

N.S.: Not significant

Table 2 shows correlation coefficients between items of MDIS. Spearman rank correlation between MDIS and SUMD was 0.85 and this result supported the concurrent validity of MDIS. The mean scores of SUMD in patients were 18.25 ± 6.82 (MAX = 27, MIN = 6). The mean scores of MDIS in patients were 6.07 ± 3.43 (MAX = 10, MIN = 1).
Factor analyses revealed that Eigen value of the first and second question was over 1, accounting for 67.6% of the variance in MDIS scores. Scoring of the first item was opposite of other items and because of that, MDIS had 2 factors, "poor insight" and "good insight". The result confirmed the construct validity (Table 3).

Table 2. Correlation between items of MDIS

	Awareness of mental disorder	Attribution of symptoms	Awareness of need for treatment
Awareness of mental disorder	1	0.582	0.604
Attribution of symptoms	0.582	1	0.775
Awareness of need for treatment	0.6	0.77	1

Table 3. Factor Analysis of MDIS items

	Good insight factor	Poor insight factor
Q1*	.004	-.803
Q1_a**	.051	-.616
Q2***	.779	.069
Q2_a	.690	.415
Q3	.535	.627
Q4	.707	.464
Q5	.192	.165
Q5_a	.022	.108
Q6	.667	.599
Q6_a	.750	.502
Q7	.684	.555
Q7_a	.727	.452
Q8	.399	.037
Q8_a	.832	.204

Principal Components Analysis, Varimax Rotation with Kaiser Normalization, table entries are rotated components

*Eigen value 7.12, factor explains 47.51% of variance

**Eigen value 1.67, factor explains 11.18% of variance

*** Eigen value 1.34, factor explains 8.95% of variance

DISCUSSION

Test–retest reliability and the internal consistency showed the reliability of Persian version of the MDIS. There are limitations associated with the use of SUMD as the gold standard for validating MDIS. SUMD was designed for psychotic patients and some of its items asked the patients awareness about psychotic symptoms. Although bipolar patients may experience psychosis, these items are not suitable for those bipolar patients who did not experience psychotic symptoms. In Sturman and Sproule study, the psychiatrists rated the patients insight on 10-cm visual analogue scales and MDIS scores were compared with these psychiatrist ratings of insight.[22] Considering that MDIS also have two items about psychotic experiences, we thought that using a standard scale would be better and visual analogue scales does not seem to be reliable. Accordingly, we used SUMD.
In our study, the mean scores of MDIS in BID patients were lower than participants of Sturman and Sproule study. In opposition to that study, most of our participants were inpatients and as it was seen in both studies, insight in outpatients was significantly higher than inpatients.[22] Like other studies, there were no significant differences in MDIS and SUMD scores based on different demographic characteristics.[10,12,24]
The limitation of the present study was that we did not evaluate severity of symptoms, duration of treatment and type of episodes and these characteristics were related to insight scores in some studies but not in others.[11,14,15,17-19,22,25-27] We recommend that MDIS could be used for assessing insight in other mood disorders. Furthermore, it has advantages in predicting the clinical course and the compliance in Iranian patients suffering BID.

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