

Comparison of Attitude and Insight Toward Illness Between in Patients with Bipolar I Disorder Manic Episode and Major Depressive Disorder

Ming-Jyun Chang¹ , Si-Sheng Huang^{2,3} 

¹Department of Medical Education, Changhua Christian Hospital, Division of General Practice (PGY), Changhua, Taiwan, Republic of China; ²Department of Psychiatry, Changhua Christian Hospital, Changhua, Taiwan, Republic of China; ³Department of Post-Baccalaureate Medicine, National Chung Hsing University, College of Medicine, Taichung, Taiwan, Republic of China

ABSTRACT

Background: Studies comparing insight toward illness in patients with bipolar I disorder manic episode and in patients with major depressive disorder are scarce. The aim of this study was to investigate the attitudes and insight of patients with bipolar I disorder in manic episode and in patients with major depressive disorder.

Methods: In total, 86 patients were recruited, including 52 inpatients with bipolar I disorder in manic episodes and 34 inpatients with major depressive disorder. Attitudes toward illness were evaluated using the Self-Appraisal of Illness Questionnaire. Higher Self-Appraisal of Illness Questionnaire scores indicate better awareness and positive attitudes toward one's illness. Insights were assessed using the Insight Scale for Affective Disorders. Higher scores indicate poorer insight. To identify group differences, we used Mann-Whitney *U* test for statistical analysis.

Results: In the Self-Appraisal of Illness Questionnaire, items 1, 2, 3, 4, 6, 7, 10, 15, and 17 showed significantly lower scores in patients with bipolar I disorder than those with major depressive disorder ($P < .05$). All 3 subscales (presence/outcome of illness, need for treatment, and worry) of the Self-Appraisal of Illness Questionnaire revealed significantly lower scores in the bipolar I disorder group ($P < .05$). In the Insight Scale for Affective Disorders, items 3, 4, 12, and 16 showed significantly higher scores in the bipolar I disorder group ($P < .05$).

Conclusion: Patients with major depressive disorder had significantly more positive attitudes and greater insight than those with bipolar I disorder. Patients with bipolar I disorder are less aware of their symptoms, including changes in mood, speed of mental functioning, and social relationships. The clinicians may integrate the findings into treatment plans for mood disorders.

ARTICLE HISTORY

Received: March 08, 2023

Accepted: June 19, 2023

Publication Date: October 13, 2023

INTRODUCTION

Current studies generally acknowledge insight as a multidimensional phenomenon.^{1,2} Insight is defined as a patient's degree of awareness of having a disorder, awareness of the efficacy of medication, and awareness of the social consequences of having a disorder.^{2,3} Several scales, such as the Scale to Assess Unawareness of Mental Disorder (SUMD),⁴ Self-Appraisal of Illness Questionnaire (SAIQ),³ and Insight Scale for Affective Disorders (ISAD),² have been developed to estimate the multifaceted attitudes and insight into the illness of patients with schizophrenia and mood disorders.¹

Bipolar I disorder (BD) is a major mental illness that involves disturbances of mood, activity, sleep, energy, and behavior, all of which cause patients to have difficulties

in maintaining employment and appropriate interpersonal relationships.⁵ It is important to recognize the lack of insight in patients with BD, as well as its effect on poorer adherence to treatment.^{6,7} A study from Medina et al⁸ demonstrated that poorer insight was correlated with a negative attitude toward medications. It has been suggested that insight scores are associated with medication adherence at both the index and 1-year follow-up interviews.^{9,10} Furthermore, insight into illness is regarded as state dependent during BD.^{11,12} Greater impairments in insight were observed during pure manic episodes than during mixed episodes, depressive episodes, or euthymia. Depressive symptoms in BD have also been found to be associated with better insight.⁷ Manic symptoms, such as elevated mood, speech,

Corresponding author: Si-Sheng Huang, e-mail: 97278@cch.org.tw

Cite this article as: Chang MJ, Huang SS. Comparison of attitude and insight toward illness between patients with bipolar I disorder and major depressive disorder. *Psychiatry Clin Psychopharmacol.* 2023;33(4):292-298.



Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

and thought disorder, and increased energy, have been observed to be correlated with worsened insight.¹

Major depressive disorder (MDD) is constantly undertreated because of under-acknowledgment, under-prescription, and poor follow-up care.¹³ Yen et al suggested that insight into the awareness of the illness was greater in patients with depression at younger ages and more severe depressive symptoms. The insight domain on the need for treatment was also higher in people with MDD.^{14,15} Severe anxiety symptoms and frequent previous hospitalization for depression were also related to better insight into illness among the inpatients with severe MDD.⁶

Most of the previous studies have investigated group of patients with either BD or MDD. To date, studies focused on comparisons of insight between both patient groups are scarce. Therefore, we aimed to measure and compare the levels of attitude and insight in subjects both with BD and MDD.

MATERIAL AND METHODS

Participants

Eighty-six inpatients diagnosed with BD and MDD were recruited from the acute psychiatric ward of a medical center in Taiwan from December 2017 to November 2019. Among the included patients, 52 (60.5%) patients had a diagnosis of BD and 34 (39.5%) had a diagnosis of MDD. All of the participants with BD were in manic episodes at the time of admission. All diagnoses were ascertained in accordance with the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5)¹⁶ and following a review of the patient's medical records by a senior psychiatrist. The inclusion criteria were as follows: (1) age 18-75 years, (2) primary clinical diagnosis of BD and MDD, and (3) able to cooperate with interviews. Participants who had comorbid substance use disorder, intellectual disabilities, neurological or medical conditions that cause cognitive impairment or organic mental disorder were excluded. During the investigation period, all participants received their usual daily treatment. The

study was approved by Ethics Committee of Changhua Christian Hospital (Approval No: 171108, Date: December 1, 2017). All participants provided written informed consent.

Attitude Assessment

We measured the attitudes toward illness with the Taiwanese version of the SAIQ.^{3,17} This is a 17-item self-report instrument used to measure attitudes toward mental illness and the experience of psychiatric treatment. The SAIQ comprises 3 dimensions, including the presence/outcome of illness, need for treatment, and worry. These three dimensions in the sequence represent awareness of having a disorder (presence/outcome of illness), attitudes toward treatment (need for treatment), and awareness of the social consequences of having a mood disorder (worry). The participants are asked to rate how highly they agree with each statement using a 4-point Likert scale, ranging from 0, "strongly disagreed," to 3, "strongly agreed." Higher SAIQ total scores indicate better awareness and positive attitudes toward one's psychiatric illness. In this study, the internal consistency was acceptable, and Cronbach's alpha was 0.902 for the entire scale, 0.812 for the presence/outcome of illness subscale, 0.702 for the need for treatment subscale, and 0.895 for the worry subscale.

Insight Assessment

We assessed the clinical insight of participants using the ISAD.² The ISAD, which was designed based on the SUMD,⁴ has 17 items using a 6-point scale, as follows: 0 (absence of symptoms or cannot be evaluated), 1 (full awareness), 3 (moderate awareness), to 5 (absence of awareness), with higher scores indicating poorer insight. The ISAD comprises general items (items 1 to 3) to assess awareness of suffering from the disorder, awareness of the efficacy of medications, and awareness of the social consequences of the disorder, respectively. Items 4 to 17 assess the awareness of individual symptoms in either BD or MDD. The ISAD is a reliable and valid rating scale of insight among patients with mood disorders. The internal consistency was good, and Cronbach's alpha was 0.844 for the entire scale.

Clinical Assessment

The overall illness severity and improvement were evaluated by Clinical Global Impressions Scale-Severity (CGI-S) and Clinical Global Impressions Scale-Improvement (CGI-I),¹⁸ respectively, where a higher CGI-S score indicates a more severe illness condition and a lower CGI-I score indicates a better improvement after treatment. We also evaluated subjects using scales of the Young Mania Rating Scale (YMRS)¹⁹ for people with BD, and 17 items of the Hamilton Depression Rating Scale (HAMD-17)²⁰ for people with MDD. The total score of YMRS ranges from 0 to 60.

MAIN POINTS

- Attitude and insight toward illness of patients with a major depressive disorder are significantly greater than those with bipolar I disorder.
- Patients with bipolar I disorder have poorer awareness of the consequences of the illness on work, family, and social life and have rather comparable awareness of being affected by an affective disorder as well as treatment efficacy for symptoms compared to patients with major depressive disorder regarding the insight.
- Patients with bipolar I disorder are less aware of their own symptoms than those with major depressive disorder, including changes in mood, speed of mental functioning, and social relationships.

The scores for the severity of manic symptoms ≤ 6 indicate euthymia, from 7 to 20 indicate a milder manic episode, and >20 indicate an acute manic episode. The HAMD-17 offers a measure of depression severity with a total score ranging from 0 to 52. The cutoff scores for severity ≤ 7 indicate no depression, from 8 to 17 indicate a minor depressive episode, and ≥ 18 indicate major depression. The cognitive function and executive function were assessed for each patient using the Montreal Cognitive Assessment (MoCA)²¹ and the frontal assessment battery (FAB).²² The MoCA scores range from 0 to 30, evaluating 7 cognitive domains, including visuospatial/executive functions, naming, verbal memory registration and learning, attention, abstraction, 5-minute delayed verbal memory, and orientation, with a higher score representing a superior cognitive function. The FAB scores range from 0 to 18, assessing 6 domains of executive function, including conceptualization, mental flexibility, motor programming, sensitivity to interference, inhibitory control, and environmental autonomy, with a higher score representing a superior executive function.

Data Analysis

The demographic data are presented as frequencies, percentages, and median (range). All data were analyzed using the Statistical Package for Social Sciences (SPSS) version 22.0 (IBM SPSS Corp.; Armonk, NY, USA). The assumption of a normal distribution of the variables was verified using the Kolmogorov-Smirnov test, which showed a violation. Therefore, we used the non-parametric test to evaluate the data. We compared the demographics of patients with BD and MDD using the Mann-Whitney *U* test for continuous variables and Pearson's chi-square test for categorical variables. To identify group differences in the individual item and subscales of SAIQ and ISAD, we used Mann-Whitney *U* test in statistical analysis. The differences between groups were considered significant when $P < .05$.

RESULTS

Demographics of the Participants

There were no statistically significant differences in sex, age, educational level, marital status, family history, physical comorbidity, CGI-S, CGI-I, MoCA, and FAB between the 2 groups. The age at onset was significantly younger in patients with BD ($P = .045$). The duration of illness was significantly longer in patients with BD ($P = .021$). The number of hospitalizations was significantly greater in patients with BD than in those with MDD ($P = .001$). The patients' demographics are shown in Table 1.

Comparison of Bipolar I Disorder and Major Depressive Disorder for SAIQ

Table 2 lists the group differences in the individual item and subscales of the SAIQ. Of the 17 items, items 1, 2, 3, 4, 6, 7, 10, 15, and 17 showed significantly lower scores (more

Table 1. Comparison of the Clinical Characteristics of Patients with Bipolar I Disorder and Major Depressive Disorder, Presented by Frequency, Percentage, or Median (Range)

	BD (n=52)	MDD (n=34)	P
Sex, male (%)	26 (50.0%)	15 (44.1%)	.593
Age, years	49 (21-67)	47 (18-66)	.898
Education, years	12 (6-16)	12 (6-18)	.527
Occupation, yes (%)	27 (51.9%)	20 (58.8%)	.530
Marital status, married (%)	28 (53.8%)	13 (38.2%)	.227
Family history, yes (%)	34 (65.4%)	20 (58.8%)	.538
Medical comorbidity, yes (%)	28 (53.8%)	21 (61.8%)	.468
Hypertension	15 (28.8%)	9 (26.5%)	.810
Diabetes mellitus	11 (21.2%)	4 (11.8%)	.262
Hyperlipidemia	8 (15.4%)	7 (20.6%)	.534
Age at onset	27 (14-53)	32 (16-60)	.045*
Duration of illness, years	19 (1-49)	12 (2-43)	.021*
Number of hospitalizations	7.5 (2-25)	5 (2-25)	.001**
Time of the last hospitalization, months	14 (2-185)	20.5 (2-240)	.398
YMRS	12 (0-37)		
HAMD		16 (6-27)	
CGI-S	4 (3-6)	4 (3-6)	.327
CGI-I	3 (1-4)	3 (2-4)	.448
MoCA	22.5 (8-29)	22.5 (12-30)	.436
FAB	13 (4-18)	14 (9-18)	.051

* $P < .05$; ** $P < .01$ using a chi-square test or Mann-Whitney *U* test when appropriate.

BD, bipolar I disorder; CGI-I, clinical global impressions scale-improvement; CGI-S, clinical global impressions scale-severity; FAB, frontal assessment battery; HAMD, Hamilton Depression Rating Scale; MDD, major depressive disorder; MoCA, Montreal Cognitive Assessment; YMRS, Young Mania Rating Scale.

negative attitude) in patients with BD than in those with MDD. All 3 subscales in the SAIQ revealed a significantly lower score (more negative attitude) in patients with BD than in those with MDD.

Comparison of Bipolar I Disorder and Major Depressive Disorder for ISAD

Table 3 lists the group differences in the individual item and subscales of the ISAD. Of the 17 items, items 3, 4, 12, and 16 showed significantly higher scores (indicated poorer insight) in patients with BD than in those with MDD. Both subscales (general and awareness items) in the ISAD showed significantly higher scores (poorer insight) in patients with BD than in those with MDD.

DISCUSSION

The main finding of this study was that either global attitude toward illness or global insight of patients with BD was significantly worse than in those with MDD. Some

Table 2. Comparison of Item Score in the Self-Appraisal of Illness Questionnaire in Patients with Bipolar I Disorder and Major Depressive Disorder, Median (Range)

Item in SAIQ	BD	MDD	P
1. Other person's first recommendation for present treatment** (factor 2)	2 (0-3)	2 (0-3)	.006
2. How much you tend to worry?* (factor 3)	1 (0-3)	2 (0-3)	.031
3. Worried about your condition** (factor 3)	1 (0-3)	2 (0-3)	.003
4. Worried about getting into trouble*** (factor 3)	1 (0-3)	2 (0-3)	<.001
5. Worried about losing friends (factor 3)	1 (0-3)	1 (0-3)	.056
6. Worried about being unable to work** (factor 3)	1 (0-3)	2 (0-3)	.004
7. Worried about not recovering* (factor 3)	1.5 (0-3)	2.5 (0-3)	.037
8. Condition will go away by itself (factor 1)	2 (0-3)	2 (0-3)	.092
9. No doubt that I will be better someday (factor 1)	2 (0-3)	2 (0-3)	.473
10. Believe that current treatment is necessary* (factor 2)	3 (0-3)	3 (0-3)	.043
11. If you had never experienced treatment, how do you think you would be right now? (factor 2)	2 (1-3)	2.5 (0-3)	.142
12. Gain a lot from treatment (factor 2)	2 (0-3)	2 (2-3)	.244
13. I will do fine if I discontinue treatment today (factor 1)	2 (0-3)	2 (0-3)	.197
14. Your thoughts interfere with getting things done (factor 3)	1 (0-3)	2 (0-3)	.102
15. My conditions require psychiatric treatment** (factor 2)	2 (0-3)	3 (2-3)	.007
16. Experience symptoms of illness (factor 1)	2 (1-3)	2 (0-3)	.054
17. How ill do you think you are?*** (factor 1)	1 (0-3)	2 (0-3)	<.001
Subscale/factor			
1. Presence/outcome of illness*	9 (4-14)	11 (0-15)	.019
2. Need for treatment**	10 (4-15)	12 (7-15)	.003
3. Worry**	8 (0-21)	14.5 (0-21)	.002
Total SAIQ score**	28.5 (10-49)	39 (9-49)	.001

* $P < 0.05$; ** $P < 0.01$; *** $P < .001$; P -values refer to the Mann-Whitney U test; a higher score indicates a more positive attitude toward illness; the presence/outcome of the illness subscale includes items 8, 9, 13, 16, and 17; the need for treatment subscale includes items 1, 10, 11, 12, and 15; and the worry subscale includes items 2, 3, 4, 5, 6, 7, and 14 of the SAIQ.

BD, bipolar I disorder; MDD, major depressive disorder; SAIQ, Self-Appraisal of Illness Questionnaire.

differences have existed in the subscale analysis between the 2 major psychiatric disorders.

Self-Appraisal of Illness Questionnaire (Attitudes, Self-Reported)

In the SAIQ scale, items 1, 2, 3, 4, 6, 7, 10, 15, and 17 showed significantly lower scores (more negative attitude) in patients with BD than in those with MDD. Additionally, in the subscale comparison, all 3 subscales in the SAIQ revealed significantly lower scores (more negative attitude) in patients with BD than in those with MDD.

Regarding the Presence/Outcome of Illness subscale and its items (Table 2), the patients with BD felt significantly less ill compared to those with MDD (item 17). This may be due to more impaired awareness of the disease severity among manic patients themselves, in that acute manic patients usually underestimate the severity of their condition. However, both patient groups showed similar attitudes with “believing that the condition will go away by itself” (item 8), “believing there is no doubt that they will be better someday” (item 9), and “they would do fine if they discontinued treatment today” (item 13). All the above 3

item scores rated close to 2 (disagree). We speculated that the attitude regarding the presence/outcome of illness in patients with BD was improved after the conditions had stabilized during the hospitalization, bringing the results closer to those of patients with MDD.

In the need for treatment domain and its individual items (Table 2), patients with BD showed significant differences and tended to disagree with “other person's first recommendation for the present treatment” (item 1), tended to disbelieve that current treatment is necessary (item 10), and tended to disagree that they required psychiatric treatment (item 15). These phenomena may be due to the manic patient's inflated self-esteem and grandiosity. Most patients with BD have an exaggerated sense of well-being and self-confidence, which may extend to grandiosity.²⁴ Thus, the patient may consider that their life is satisfying and successful and refused to take medication. On the other hand, it has been proven that a significant connection between improved symptoms and better insight after treatment was received in the BD.^{11,12,15} Thus, after treatment, increased insight might lead patients to really experience symptoms of illness

Table 3. Comparison of Item Score in the Insight Scale for Affective Disorders in Patients with Bipolar I Disorder and Major Depressive Disorder, Median (Range)

Item in ISAD	BD	MDD	P
1. Awareness of suffering from an affective disorder	2.5 (1-5)	2 (1-4)	.071
2. Awareness of treatment efficacy for current symptoms or preventing relapses	3 (1-5)	3 (1-4)	.720
3. Awareness of consequences of the illness on work, family, and social life**	3 (0-4)	2 (1-4)	.001
4. Awareness of suffering from a depressed/expansive or irritable mood*	2 (0-4)	1 (0-3)	.011
5. Awareness of suffering from a marked increase/reduction in pleasurable activities	2 (0-4)	2 (0-3)	.493
6. Awareness of suffering from a significant increase/loss of weight	0 (0-2)	0 (0-3)	.643
7. Awareness of suffering from insomnia or hypersomnia	1 (0-4)	1 (0-3)	.414
8. Awareness of suffering from sluggishness or psychomotor agitation	2.5 (0-4)	2 (0-4)	.185
9. Awareness of suffering from fatigue or an excess of energy	2 (0-4)	1 (0-4)	.177
10. Awareness of suffering from feelings of uselessness or guilt, or exaggerated self-esteem or grandiosity	0 (0-5)	1 (0-5)	.304
11. Awareness of suffering from slowed speech or verbosity/garrulousness	2 (0-5)	1 (0-4)	.074
12. Awareness of suffering from bradypsychia/idea flight*	3 (0-4)	1 (0-4)	.024
13. Awareness of having a short attention span/showing distractibility	1 (0-5)	1 (0-3)	.254
14. Awareness of having an untidy appearance	0 (0-4)	0 (0-3)	0.172
15. Awareness of having symptoms of confusion-disorientation	0 (0-4)	0 (0-3)	0.360
16. Awareness of having poor social relationships**	3 (0-5)	2 (0-5)	0.007
17. Awareness of suffering from delusions and hallucinations	0 (0-5)	0 (0-5)	0.221
Subscale/factor			
General items**	8 (4-14)	6 (4-11)	0.008
Awareness items*	23.5 (3-47)	15.5 (5-32)	0.023
Total ISAD score*	31 (10-56)	22 (11-41)	0.012

* $P < .05$; ** $P < .01$; P -values refer to the Mann-Whitney U test; ISAD includes 2 domains, and the general domain includes items 1 to 3; the awareness domain includes items 4 to 17 of the ISAD.

BD, bipolar I disorder; ISAD, Insight Scale for Affective Disorders; MDD, major depressive disorder.

more and believe to get benefits from treatment. This phenomenon has been shown from the results that there was no significant difference between both groups in “experiencing symptoms of illness” (item 16), and “gaining a lot from treatment” (item 12) in the participants with relatively stable conditions ($YMRS = 12.90 \pm 9.77$) of this study. The anxiety symptoms of MDD include worrying, rumination, health anxieties, and panic attacks, which may lead to a higher need for seeking and agreeing to requiring treatment in patients (items 1, 10, 15).²⁵ Meanwhile, the common feelings of despair may make these patients believe that they gained no obvious benefit from the treatment. Thus, they would tend to think that they did not gain a lot from treatment (item 12). This possible reason narrowed the differences in the questionnaire responses of both groups.

In the worry subscale, as revealed in the findings of the individual items (Table 2), the patients with BD were significantly less worried about their conditions (item 3), getting into trouble (item 4), being unable to work (item 6), and not recovering (item 7). We speculated that these findings might be due to the fact that the patients with bipolar in the present study were in manic states, although they had been in relatively stable conditions.

However, if their symptoms had not remised, they would still overestimate themselves and believe that they can handle all kinds of situations and not worry about troubles in their daily lives. In contrast, for patients with MDD, anxiety might increase the level of worry over many conditions, leading to greater differences between the 2 patient groups.

Insight Scale for Affective Disorders (Insight, Clinician-Administered)

Patients with BD showed significantly less awareness of the consequences of their illness in terms of work, family, and social life (item 3) (Table 3). This finding is similar to the results of the worry subscale in the self-administered scale (SAIQ). The manifestation of less awareness of social consequences may be explained by those BD patients less worried about the impact of illness on their psychosocial and occupational situations. The advantage of the self-administered scale is that patients can express their inner thoughts during the process of filling in the answers. This finding was also comparable to those of the study by Silva et al,²⁶ which suggested that patients with depressive temperament showed better insight, demonstrating a significant correlation between depressive temperament

and item 3 of the ISAD. Both groups of patients revealed no significant difference in awareness of suffering from affective disorders and treatment efficacy for current symptoms (items 1 and 2). This finding was comparable with the result of the SAIQ scale, which showed no significant difference between groups in terms of experiencing symptoms of illness (item 16 of SAIQ) and gaining a lot from treatment (item 12 of SAIQ). We speculated that the attitudes of patients with BD regarding whether they need treatment have changed from being almost refusing at the beginning of hospitalization to gradually accepting and agreeing with the treatment efficacy following a period of treatment. Therefore, the attitudes toward psychiatric treatment of both patient groups were becoming closer.

In the awareness subgroup, including items 4 to 17 of the ISAD (Table 3), the patients with BD showed significantly less awareness of suffering from an expansive or irritable mood (item 4), flight of idea (item 12), and having poor social relationships (item 16). These findings were similar to those of the study by Silva et al.²⁷ According to the present study, compared to patients with MDD, those with BD are less aware of their own symptoms, including changes in mood, speed of mental functioning, and social relationships. Moreover, patients with BD tend to ignore clinical symptoms, while those with MDD tend to interpret experiences in a negative fashion,²⁸ which increases the differences between them. The difference in the insight into illness between the 2 groups of patients was further formed as a result of the lack of awareness of their own symptoms. The advantage of using ISAD to assess the insight is that items 4-17 of the scale assess the patient's awareness of their own symptoms. This part is less explored in other studies. Using this scale allowed us to perform an evaluation of the insight into specific symptoms of mood disorder.

Several limitations of the current study should be noted. First, the relatively small sample size and the fact that only inpatients were recruited may have limited the analysis and restricted the representativeness. Second, recruitment bias may have influenced the results of the study because patients with less insight were considered to be less willing to participate. Third, the possible effects mediated by different medical treatments were not considered in the analyses. Fourth, patients were only assessed once at a certain time point. The lack of data on evolution over time had been the weakness of this study. Fifth, no information regarding family observation was obtained. Finally, we did not categorize people with mood disorders with or without psychotic symptoms. According to previous studies, a statistically significant correlation may exist between the severity of psychotic symptoms and insight.¹

We considered that the advantage of this study was that it used both a self-reported questionnaire and a researcher-administered scale to assess the patient's insight, which

provided an opportunity for clinicians to understand the inner thoughts of the participants. Because a self-reported scale, especially to measure a patient's attitudes and views, is often affected by the timing and environment of the assessment. The research environment of this study was in the acute ward, and the participants had been treated for a period of time. Therefore, the patients might tend to reply to the answers that the researcher wants to receive because he or she wanted to be discharged earlier. At this time, the information with the researcher-administered scale can further strengthen the reliability of the research results. Moreover, there are few studies comparing the differences in the insight into illness between patients with BD and MDD. The research results should provide important reference materials on the attitude and insight of these 2 major mood disorders. Moreover, there were no significant differences in disease severity or cognitive function between the 2 groups of patients in this study. This improved the value and representativeness of the comparison between the 2 groups of patients.

Differences exist in the attitude and insight into illness between patients with BD and those with MDD. Patients with MDD had significantly more positive attitudes and greater insight than those with BD. Regarding the attitudes toward illness, patients with BD generally have weaker awareness of having a disorder, attitudes toward treatment, and awareness of the social consequences of having a mood disorder although there is some heterogeneity among the individual item. Regarding the insight measured by the ISAD, patients with BD have poorer awareness of the consequences of the illness on work, family, and social life and rather comparable awareness of being affected by an affective disorder and treatment efficacy for symptoms compared to patients with MDD. Regarding symptom awareness, patients with BD are less aware of their own symptoms, including changes in mood, speed of mental functioning, and social relationships. It will be important to investigate the interactions between individual symptoms and the evolution of insight, as well as to explore the relationship between insight and cognitive performance using more comprehensive measurements.

Ethics Committee Approval: This study was approved by Ethics Committee of Changhua Christian Hospital (Approval No: 171108, Date: December 1, 2017).

Informed Consent: Written informed consent was obtained from the patients who agreed to take part in the study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept - S.S.H.; Design - M.J.C., S.S.H.; Supervision - S.S.H.; Resources - N/A; Materials - S.S.H.; Data Collection and/or Processing - M.J.C., S.S.H.; Analysis and/or Interpretation - M.J.C., S.S.H.; Literature Search - M.J.C.; Writing - M.J.C., S.S.H.; Critical Review - S.S.H.

Declaration of Interests: The authors have no conflict of interest to declare.

Funding: The authors declared that this study has received no financial support.

REFERENCES

- Silva A, Mograbi DC, Bifano J, Santana CM, Cheniaux E. Insight in bipolar mania: Evaluation of its heterogeneity and correlation with clinical symptoms. *J Affect Disord*. 2016;199:95-98. [\[CrossRef\]](#)
- Olaya B, Marsà F, Ochoa S, et al. Development of the insight scale for affective disorders (ISAD): Modification from the scale to assess unawareness of mental disorder. *J Affect Disord*. 2012;142(1-3):65-71. [\[CrossRef\]](#)
- Marks KA, Fastenau PS, Lysaker PH, Bond GR. Self-Appraisal of Illness Questionnaire (SAIQ): Relationship to researcher-rated insight and neuropsychological function in schizophrenia. *Schizophr Res*. 2000;45(3):203-211. [\[CrossRef\]](#)
- Amador XF, Strauss DH, Yale SA, Flaum MM, Endicott J, Gorman JM. Assessment of insight in psychosis. *Am J Psychiatry*. 1993;150(6):873-879. [\[CrossRef\]](#)
- Goldberg JF, Harrow M, Grossman LS. Course and outcome in bipolar affective disorder: A longitudinal follow-up study. *Am J Psychiatry*. 1995;152(3):379-384. [\[CrossRef\]](#)
- He H, Chang Q, Ma Y. The association of insight and change in insight with clinical symptoms in depressed inpatients. *Shanghai Arch Psychiatry*. 2018;30(2):110-118. [\[CrossRef\]](#)
- Cassidy F. Insight in bipolar disorder: Relationship to episode subtypes and symptom dimensions. *Neuropsychiatr Dis Treat*. 2010;6:627-631. [\[CrossRef\]](#)
- Medina E, Salvà J, Ampudia R, Maurino J, Larumbe J. Short-term clinical stability and lack of insight are associated with a negative attitude towards antipsychotic treatment at discharge in patients with schizophrenia and bipolar disorder. *Patient Prefer Adherence*. 2012;6:623-629. [\[CrossRef\]](#)
- Bressi C, Porcellana M, Marinaccio PM, et al. The association between insight and symptoms in bipolar inpatients: An Italian prospective study. *Eur Psychiatry*. 2012;27(8):619-624. [\[CrossRef\]](#)
- Yen CF, Chen CS, Ko CH, et al. Relationships between insight and medication adherence in outpatients with schizophrenia and bipolar disorder: Prospective study. *Psychiatry Clin Neurosci*. 2005;59(4):403-409. [\[CrossRef\]](#)
- Weiler MA, Fleisher MH, McArthur-Campbell D. Insight and symptom change in schizophrenia and other disorders. *Schizophr Res*. 2000;45(1-2):29-36. [\[CrossRef\]](#)
- Michalakeas A, Skoutas C, Charalambous A, et al. Insight in schizophrenia and mood disorders and its relation to psychopathology. *Acta Psychiatr Scand*. 1994;90(1):46-49. [\[CrossRef\]](#)
- Sirey JA, Bruce ML, Alexopoulos GS, Perlick DA, Friedman SJ, Meyers BS. Stigma as a barrier to recovery: Perceived stigma and patient-rated severity of illness as predictors of antidepressant drug adherence. *Psychiatr Serv*. 2001;52(12):1615-1620. [\[CrossRef\]](#)
- Yen CF, Chen CC, Lee Y, Tang TC, Ko CH, Yen JY. Insight and correlates among outpatients with depressive disorders. *Compr Psychiatry*. 2005;46(5):384-389. [\[CrossRef\]](#)
- Fennig S, Everett E, Bromet EJ, et al. Insight in first-admission psychotic patients. *Schizophr Res*. 1996;22(3):257-263. [\[CrossRef\]](#)
- American Psychiatric Association. *The Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. Arlington, VA: American Psychiatric Publishing; 2013.
- Kao YC, Liu YP. The clinical applicability of the self-appraisal of illness questionnaire (SAIQ) to chronic schizophrenic patients in Taiwan. *Psychiatr Q*. 2010;81(3):215-225. [\[CrossRef\]](#)
- Guy W. *Clinical Global Impressions, ECDEU Assessment Manual for Psychopharmacology*. Rockville, MD: National Institute of Mental Health; 1976.
- Young RC, Biggs JT, Ziegler VE, Meyer DA. A rating scale for mania: Reliability, validity and sensitivity. *Br J Psychiatry*. 1978;133:429-435. [\[CrossRef\]](#)
- Hamilton M. A rating scale for depression. *J Neurol Neurosurg Psychiatry*. 1960;23(1):56-62. [\[CrossRef\]](#)
- Tsai CF, Lee WJ, Wang SJ, Shia BC, Nasreddine Z, Fuh JL. Psychometrics of the Montreal cognitive assessment (MoCA) and its subscales: Validation of the Taiwanese version of the MoCA and an item response theory analysis. *Int Psychogeriatr*. 2012;24(4):651-658. [\[CrossRef\]](#)
- Wang TL, Hung YH, Yang CC. Psychometric properties of the Taiwanese (Traditional Chinese) version of the frontal assessment battery: A preliminary study. *Appl Neuropsychol Adult*. 2016;23(1):11-20. [\[CrossRef\]](#)
- Khammar A, Yarahmadi M, Madadzadeh F. What is analysis of covariance (ANCOVA) and how to correctly report its results in medical research? *Iran J Public Health*. 2020;49(5):1016-1017. [\[CrossRef\]](#)
- Carragher N, Weinstock LM, Strong D. Psychometric evaluation of the DSM-IV criterion B mania symptoms in an Australian national sample. *Psychol Med*. 2013;43(2):433-443. [\[CrossRef\]](#)
- Rakofsky JJ, Schettler PJ, Kinkead BL, et al. The prevalence and severity of depressive symptoms along the spectrum of unipolar depressive disorders: A post hoc analysis. *J Clin Psychiatry*. 2013;74(11):1084-1091. [\[CrossRef\]](#)
- Silva RAD, Mograbi DC, Camelo EVM, et al. The relationship between insight and affective temperament in bipolar disorder: An exploratory study. *Trends Psychiatry Psychother*. 2018;40(3):210-215. [\[CrossRef\]](#)
- da Silva A, Mograbi DC, Camelo EV, et al. Insight in bipolar disorder: A comparison between mania, depression and Euthymia using the Insight Scale for Affective Disorders. *Trends Psychiatry Psychother*. 2015;37(3):152-156. [\[CrossRef\]](#)
- Kube T, Schwarting R, Rozenkrantz L, Glombiewski JA, Rief W. Distorted cognitive processes in major depression: A predictive processing perspective. *Biol Psychiatry*. 2020;87(5):388-398. [\[CrossRef\]](#)