European Psychiatry 27 (2012) 612–618

Available online at ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com/en

Original article

Comparison of insight among schizophrenia and bipolar disorder patients in remission of affective and positive symptoms: Analysis and critique

Y. Braw [a,b], R. Sitman [b], T. Sela [c], G. Erez [b], Y. Bloch [b,d], Y. Levkovitz [b,*,d]

[a] Department of Behavioral Sciences, Ariel University Center of Samaria, Ariel, Israel
[b] The Emotion-Cognition Research Center, Shalvata Mental Health Care Center (affiliated with the Sackler Faculty of Medicine, Tel-Aviv University), Hod-Hasharon, Israel
[c] Department of Psychology and the Gonda (Goldschmied) Multidisciplinary Brain Research Center, Bar-Ilan University, Ramat-Gan, Israel
[d] Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel

ARTICLE INFO

Article history:
Received 19 September 2010
Accepted 6 February 2011
Available online 11 May 2011

Keywords:
Schizophrenia and psychosis
Bipolar disorder and mania
Epidemiology
Insight
Illness awareness

ABSTRACT

Background. – Schizophrenia and bipolar disorder are associated with impairments in insight, leading to a poorer clinical outcome and functioning. Earlier studies comparing the two disorders on the basis of insight included inpatients or patients who were clinically symptomatic. The current study therefore assessed patients in remission of affective symptoms and positive symptoms of schizophrenia.
Methods. – Schizophrenia and bipolar disorder patients ($n = 32$, $n = 34$; respectively) underwent clinical and functional evaluations. Insight was assessed using the Scale to assess Unawareness of Mental Disorder (SUMD) and the Positive and Negative Syndrome Scale (PANSS). Attention was assessed using a continuous performance task (CANTAB's Rapid Visual Information Processing).
Results. – Schizophrenia patients displayed poorer insight into having a mental disorder and into the social consequences thereof compared to the bipolar disorder patients. They were also less aware of their anhedonia-asociality. Age, however, was significantly correlated with insight and differences in insight between the patient groups became nonsignificant when age was used as a covariate in the statistical analyses. Age was not a moderating variable of the relationship between diagnosis and insight.
Conclusions. – Significant differences in insight held by the two patient groups might be related to age disparities between patient groups. Earlier studies did not adequately address these age differences, their cause and their potential effects on findings. These issues are explored with regard to the findings of the current study, as well as earlier studies, emphasizing the need for further research of the relationship between age and insight.

1. Introduction

Insight is defined as the recognition that one has a mental disorder, the ability to identify its symptoms, and cognizance of the need for treatment [12,4]. Lack of insight into having a mental disorder is found to be associated with a poorer clinical outcome, treatment noncompliance, and a more severe cognitive impairment [25,2,41]. Schizophrenia and bipolar disorder share several key aspects [e.g., biological, developmental and social factors that increase the risk for both disorders; 6]. Despite this overlap, only a limited number of studies compared schizophrenia and bipolar disorder patients on the basis of their insight into their disorder. While some studies found that patients with schizophrenia had poorer insight than bipolar disorder patients [41,8,28,43], other studies found no differences between the two [37,6]. These inconsistencies may have resulted from the inclusion of inpatients, patients in the throes of an acute episode, or patients who were still in recovery following an acute episode [as commented by; 12]. The acute stages of these disorders are characterized by functional abnormalities in prefrontal neural networks and corresponding severe impairments in insight [evident in the association between insight and the severity of symptoms and the fact that insight improves during hospitalization; 10,13]. Since differences in insight between patients with the two disorders may have been masked during the acute stages, the current study compared the insight of schizophrenia and bipolar disorder patients who were in symptomatic remission, a period during which these patients faced increasing functional challenges (e.g., in the vocational and relational domains). The study utilized recent criteria proposed for remission of depressive, manic and positive symptoms [35,5]. Because a pretest conducted by our research team indicated that only a small percentage of schizophrenia patients fulfilled the full symptomatic remission criteria proposed by Andreasen et al., [5], patients with negative symptoms were also included. The inclusion of said patients was in line with studies indicating a significant correlation between poor insight and severity of

* Corresponding author. Tel.: +972 9 7478644; fax: +972 9 7478643.
E-mail address: ylevk@clalit.org.il (Y. Levkovitz).

0924-9338/$ – see front matter © 2011 Published by Elsevier Masson SAS.
doi:10.1016/j.eurpsy.2011.02.002

positive symptoms and an uncertain relationship between insight and negative symptoms [1]. We hypothesized that schizophrenia patients would have poorer insight than bipolar disorder patients. No specific hypotheses were made regarding awareness and attribution of specific symptoms (due to the fact that patients were in remission, thereby reducing the number of patients who were experiencing clinical symptoms).

2. Subjects and methods

Subjects were schizophrenia ($n = 32$) and bipolar disorder patients ($n = 34$) between the ages of 18 and 60, recruited consecutively from the outpatient clinics. Diagnosis was made by two senior psychiatrists using the Structured Clinical Interview for DSM-4-TR [SCID; 18]. All subjects were in remission of affective symptoms (Hamilton Depression Rating Scale (HAMD-17) ≤ 7; Young Mania Rating Scale [YMRS] < 8) and positive symptoms of schizophrenia (≤ 3 score on all the following Positive and Negative Syndrome Scale [PANSS] items; P1 [delusions], P2 [conceptual disorganization] and P3 [hallucinations]; G5 [mannerisms/posturing]; G9 [unusual thought content]). Subjects were excluded if they had any other axis-I psychopathology, neurological disorder, current drug/alcohol abuse or if they had undergone ECT ≤ 6 months prior to study entry. Subjects were also excluded if they had mental retardation or borderline intelligence (< 80 full scale I.Q.; according to the patients' medical records or attendance in special education programs). Subjects signed a written informed consent form and underwent an assessment of clinical symptoms (Scale for Assessment of Negative Symptoms [SANS]), psychopathology (Clinical Global Impression [CGI]) and functional status (Global Assessment of Functioning Scale [GAF]; Social and Occupational Functioning Assessment Scale [SOFAS]). Insight was assessed using a semi-structured interview scale, the Scale to assess Unawareness of Mental Disorder [SUMD; 19]. Three domains of insight were scored on a Likert scale from 1 (full awareness) to 5 (complete unawareness): (a) awareness of having a mental disorder, (b) awareness of the need for psychiatric medications, and (c) awareness of the social consequences of having a mental disorder. In addition, each subject was scored on awareness and attribution of symptoms relevant for both schizophrenia and bipolar disorder (1–5 Likert scale): (a) anhedonia-asociality, (b) blunted affect, and (c) attentional deficits. Only symptomatic patients were rated for insight with regard to specific symptoms: insight to anhedonia-asociality was rated if the PANNS item #N4 was ≥ 3, insight to blunted affect was rated if the PANNS item #N1 was ≥ 3, and insight to attentional deficits was rated if the PANSS #G11 was ≥ 3 or if the patient received a score of $z < -1.5$ in the continuous performance task [Rapid Visual Information Processing (RVIP); 20] of the Cambridge Neuropsychological Test Automated Battery (CANTAB). General insight was also assessed using PANSS #G12 item (lack of judgment & insight). While both the SUMD and PANSS #G12 insight items assess general illness awareness, PANSS #G12 item also includes a judgment component ["*. . .. decisions characterized by poor anticipation of the consequences, and unrealistic short-term and long-range planning.*"; PANSS manual, italics added] [22]. These two methods may therefore be viewed as complementary, promising converging validity if findings are replicated using both methods. Each of the raters co-rated five videotaped interviews of schizophrenia and bipolar disorder patients as part of their training. Relatively high inter-rater reliability for the SUMD was found using a similar training procedure; for example, intraclass correlations (ICC) for the three general items ranged from 0.78 to 0.90 in a study by Dell'Osso et al. [13]. All raters were blind to the hypotheses of the study.

Multivariate analyses of variance (MANOVA) were used to compare schizophrenia and bipolar disorder patients in the SUMD (three main domains of insight), PANSS (three subscales) and SANS (five subscales). For all other measures, the groups were compared using ANOVAs and chi-square analyses (for parametric and nonparametric variables, respectively). In order to keep the total chance of erroneously reporting a difference below $\alpha = .05$, a Bonferroni correction was employed for each measure of awareness and attribution of specific symptoms in the SUMD ($\alpha = .016$). Pearson product-moment correlations were conducted between insight and clinical symptoms and between insight and functioning. Insight and depressive symptoms were tentatively correlated using PANSS #G6 depression item (since HAMD-17 and YMRS data was collected as part of the ongoing treatment at the outpatient clinics and was not available for analysis). Power analysis using G*Power 3.1.2. software indicated a medium strength effect size (Cohen's $f^2 = 0.208$) in the comparisons of the main insight domains of the SUMD [10]. Based on this effect size estimation (Tables 1 and 2 for additional effect sizes in analyses of insight), the power to detect the observed differences at the .05 and .01 α levels was 96 and 86%, respectively.

The research was approved by the institutional review board committee and is in accordance with the Declaration of Helsinki guidelines.

3. Results

3.1. General

Analyses of demographic and clinical variables are presented in Table 3. SUMD main insight item (awareness of having a mental disorder) was strongly correlated with PANSS #G12 (Pearson $r = .53$, $P < .001$). Correlations between PANSS #G12 item (i.e., general assessment of insight) and more specific insight domains were generally lower, mostly in the medium effect range (i.e., ranged from $r = .17$ for awareness of cognitive impairment to $r = .48$ for awareness of blunted affect). Note that lower correlations can be expected when general insight is correlated with specific domains of insight. Also, the sample size for specific insight domains was smaller (awareness of a specific symptom was assessed only if the patient was symptomatic).

3.2. Comparisons of insight between schizophrenia and bipolar disorder patients

Significant differences between the groups were found in the main domains of insight assessed using the SUMD [$F(3,62) = 5.4$, $P < .01$]; follow-up ANOVAs indicated that the schizophrenia patients were less aware of having a mental disorder and of the social consequences of having a mental disorder than the bipolar disorder patients ($P < .01$ for both analyses). The schizophrenia patients were also less aware of their anhedonia-asociality (assessed using the SUMD) compared to the bipolar disorder patients ($P < .01$). Similar differences were also found when comparing the two patient groups in PANSS #G12 insight item ($P < .05$). Effect sizes for the significant comparison ranged from medium to large (i.e., SUMD awareness of anhedonia-asociality), according to the criteria set by Cohen [11]. No other significant differences were found in the awareness of symptoms and their attribution.

3.3. Assessing the effects of demographic differences among schizophrenia patients and bipolar disorder patients

Since the patient groups differed in age and education level (Table 3), we correlated the variables with measures of insight (using the combined sample of patients). Age was significantly correlated with SUMD awareness of having a mental disorder ($r = -.36$, $P < .01$), SUMD awareness of the social consequences of