Research article
Ερευνητική εργασία

Clinical and cognitive factors affecting psychosocial functioning in remitted patients with bipolar disorder*

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Psychiatriki 2016, 27:182–191

Impaired interpersonal, social, and occupational functioning is very often observed in patients with bipolar disorder, not only at the acute stages of the illness but in remission as well. This finding raises the question of multiple factors that might affect psychosocial functioning in bipolar patients, such as residual subsyndromal symptoms and neuropsychological deficits. Social cognition impairment, especially impaired Theory of Mind (ToM), might also play an important role in bipolar patients' every-day functioning, similarly to what was found in patients with schizophrenia. The present study aimed to investigate the potential effect of clinical and cognitive factors on the psychosocial functioning of patients with bipolar disorder during remission, assessing ToM along with a broad range of basic cognitive functions. Forty-nine patients with bipolar disorder type I in remission and 53 healthy participants were assessed in general intelligence, working memory, attention, speed processing, verbal learning and memory, and executive functions using a comprehensive battery of neuropsychological tests. The Faux Pas Recognition Test was used to assess ToM. The two groups were matched for gender, age and education level. The Hamilton Rating Scale for Depression (HDRS), the Young Mania Rating Scale (YMRS), and the Brief Psychiatric Rating Scale (BPRS) were also administered to the patients. Every-day functioning was assessed with the Global Assessment of Functioning (GAF). In order to examine the contribution of many factors in psychosocial functioning, we used hierarchical multiple regression analysis. Bipolar patients presented significant impairment compared to healthy participants in all the basic cognitive functions tested with the exception of verbal memory. Moreover, patients had significant poorer performance than healthy controls in overall

** Award from Hellenic Psychiatric Association "in memory of Maria Zaousi". 22nd Hellenic Congress of Psychiatry, 10–13 April 2014, Ioannina*

and cognitive ToM but not in affective ToM as measured by Faux Pas. Psychosocial functioning in patient group was significantly correlated to symptom severity–especially depressive ($p<0.001$) and psychotic symptoms ($p=0.001$), history of psychotic episodes ($p=0.031$) and ToM, overall ($p=0.001$) as well as its cognitive ($p=0.023$) and affective ($p=0.004$) components. Only the contribution of ToM in psychosocial functioning remained significant in the final multiple regression model. The findings of the current study indicate that residual symptoms and cognitive dysfunctions, especially deficits in social cognition, negatively affect psychosocial functioning of remitted patients with bipolar disorder. Moreover, our results suggest that ToM may play a central role in these patients' functioning. ToM is a mediator of the relationship between other clinical or cognitive variables and functioning, while it has also significant effect on social skills independently of other factors. Therefore, specific therapeutic interventions targeting social cognitive dysfunction might improve functional outcome in bipolar disorder. Putative contribution of other clinical characteristics (comorbid personality disorders, substance abuse, anxiety) and psychosocial factors (stigma, self-stigma, lack of social network) in bipolar patients' functioning should be examined in future studies.

Key words: Social functioning, cognitive dysfunction, Theory of Mind, social cognition, bipolar disorder, remission.

Introduction

Despite its episodic course, bipolar disorder (BD) causes persistent impairment of psychosocial and occupational functioning. Many studies have shown that patients with bipolar disorder exhibit significant deficits in functioning even during remission.[1,2] A literature review of previous studies on therapeutic outcomes revealed that after recovery of the first manic or mixed episode of the disease, 57–65% of patients remained unemployed and 80% had at least partial vocational disability.[3] Despite the chronicity and high frequency of social dysfunction in patients with BD the causes of dysfunction remain largely unknown so far.

Previous studies suggest that during the long course of the disease, persistent, residual or subsyndromal symptoms have a negative impact on patients' functioning even if they remain in remission.[4–7] However, the frequency of social dysfunction in fully remitted patients, i.e. in sustaining long-term euthymia, indicates that other factors, in addition to clinical symptoms, have also significant impact on functioning. Previous studies and a recent meta-analysis have revealed a negative effect of cognitive dysfunction on psychosocial functioning of BD patients.[8] Moreover, this effect has been also found in euthymic or chronic patients.[9] As it has already been shown by many studies, deficits in a wide range of cognitive domains are a key feature of BD and they also persist in remission.[10–12]

Many studies in schizophrenia have also shown the impact of cognitive dysfunction on psychosocial functioning to the same or even greater degree than what was found in BD.[13,9] Research findings also support that social cognition, i.e. cognitive functions associated with interpersonal interaction, mediates between basic cognitive skills and global functioning in schizophrenia. More precisely, it has been found that deficits in Theory of Mind (ToM), the ability to perceive mental states of other people (such as beliefs, intentions and emotions), have a significant contribution in impaired social functioning of these patients probably to a greater extent than any other concurrent cognitive deficit.[14] ToM deficits were also found in BD that may persist even in remission.[15,16] However, few studies examined the potential impact of ToM on psychosocial functioning in BD[17–21] and there is only one study so far that examined the effect of ToM along with other cognitive factors (attention and executive functions).[22]

The purpose of the present study was to examine the effect of clinical and cognitive factors –including ToM– on psychosocial functioning in remitted patients with BD. To our knowledge, this is the first study examining the specific effect of ToM on psy-

chosocial functioning taking also into account the effect of a broad range of basic cognitive functions.

Material and Methods

Participants and procedures

Forty-nine patients (31 female and 18 male) aged 22–65 years meeting the DSM-IV-TR criteria for BD type-I[23] were recruited along with 53 healthy participants (31 female and 22 male). All the patients participated in the study were in symptomatic remission (see below for remission criteria). Patient and control groups were matched for gender, age and education level. The clinical sample was recruited from the outpatient services of the General Hospital "G. Gennimatas" and the Eginition Hospital in Athens. Healthy participants were recruited from the local communities.

All patients were receiving medication at the time of assessment. In particular, all of them were receiving mood stabilizers (lithium, divalproex sodium etc.) and some of them were additionally on antipsychotics (59.2%), antidepressants (36.7%) and benzodiazepines (28.6%). Antipsychotic medication dosage was converted into chlorpromazine equivalents.[24,25]

The exclusion criteria for all participants were: age beyond 65 years old, mental retardation, history of head injury or any neurological disorder, history of perinatal events, history of CNS infections, alcohol or substance abuse in the preceding 6 months and receiving electroconvulsive therapy within last year. Inclusion criteria for the control subjects were no personal history of psychiatric disorder or family history (first degree relatives) of psychosis or bipolar disorder. All participants were Greek native speakers. All participants had been informed about the research procedures and given written informed consent as approved by the local Ethics Committee. Additional information for patients was obtained from their medical records and treating physicians.

Clinical assessment

Patients' psychosocial functioning was assessed by Global Assessment of Functioning (GAF).[26] Symptom severity in patients with BD was evaluated by valid and widely used clinical scales: (a) the Brief Psychiatric Rating Scale (BPRS),[27] which assesses psychotic symptoms, (b) the Hamilton Depression Rating Scale (HDRS),[28] which assesses depressive symptomatology, and (c) the Young Mania Rating Scale (YMRS),[29] which assesses manic symptomatology. All the patients were euthymic (i.e. a score ≤7 on the HDRS and <8 on the YMRS), in symptomatic or syndromic remission according to the criteria recommended by the International Society for Bipolar Disorders (ISBD).[30]

Neuropsychological assessment

A neuropsychological battery assessing a wide range of cognitive functions was administered to all participants. The Vocabulary subscale (WAIS-Vocabulary) from Wechsler Adult Intelligence Scale (WAIS)[31] was used to estimate general intellectual ability, because it is considered as the scale with the highest correlation with individual's general intelligence. The Block Design (WAIS-Block design) and Digit Span (WAIS-Digit span) subscales were used to assess visuospatial and verbal working memory, respectively. Executive functions were examined using three different tasks: the Stroop Color-Word test (Stroop),[32] the Wisconsin Card Sorting Test-64 version (WCST),[33] and the Trail Making Test, part A & B (Trails).[34] The Stroop-Interference, WCST-Categories, WCST-Perseverative errors and Trails-B were used as indicators of executive functioning. Moreover, the Stroop-Word and Trails-A scores were used in this study as measures of sustained attention and processing speed. Verbal memory was assessed by the Babcock Story Recall Test (Babcock)[35] – immediate and delayed recall scores.

ToM was evaluated by the Faux Pas Recognition Test (Faux Pas).[36] A Faux Pas occurs when someone says something without thinking that the person who hears it, may not want to hear it or be offended or hurt by it. The test consists of 20 stories arranged in random order–half of which contained a social faux pas and half of which did not (control stories). In the present study, the sum of correct faux pas detections and correct rejections in control stories (non-Faux Pas stories) were measured (Faux Pas-detection score) as an index of overall ToM ability. Two specific dimensions of ToM were also assessed through the scores in related, particular questions of the task. Understanding intentions and beliefs of the character that made the faux pas (Faux Pas-cognitive un-

derstanding) was used as a cognitive component of ToM (understanding intentions, thoughts, beliefs of others), while understanding the emotional impact of faux pas on the "victim" of each story (Faux Pas-affective understanding) was used as an affective component of ToM (understanding the emotional state of others).

Statistical analysis of the data

The normality of distribution was examined by the means of Kolmogorov-Smirnov tests and parametric or non-parametric tests were used as appropriate. For the comparisons between BD patients and healthy controls in demographic characteristics t-test and Mann-Whitney U test were used for quantitative variables and x^2 test for categorical variables. Patients scores on different neuropsychological tests (except ToM) were converted to z-scores using control's means and standard deviations and then averaged within domains to yield a domain composite score. The bivariate associations between variables were examined with Spearman rho correlation coefficients. Hierarchical multiple regression analysis was also used to explore the independent contribution of several variables on psychosocial functioning. Level of significance for all tests was set at p=0.05. Statistical analyses were performed using SPSS version 15.0.

Results

Demographic and clinical characteristics of the sample are presented in table 1. As expected, there were no significant differences between patients and controls with respect to gender, age or years of education (x^2=0.24, p=0.622). Table 1 also displays the patients' values regarding the severity of symptoms, psychosocial functioning and other clinical variables. Moreover, 34 patients (69.4%) were in symptomatic remission (euthymia for at least 8 weeks) and the rest of them in syndromic remission (only subclinical symptoms during the last 8 weeks). Twenty-eight patients (57.1%) had a history of episodes with psychotic symptoms.

The comparisons between BD patients and healthy participants regarding to their performance in neuropsychological tests are presented in table 2. BD patients showed significant deficits in general intellectual ability, attention, speed processing, working memory, visuospatial abilities and executive functions compared to healthy controls. However, there was no significant difference in verbal memory score between patients and healthy controls. Regarding ToM assessment, patients had significantly poorer performance than healthy controls in overall ToM (Faux Pas detection score) and in cognitive ToM but showed no deficit in affective ToM.

Table 1. Demographic and clinical characteristics of patients with bipolar disorder (BD) and healthy participants.

	Healthy controls (n=53) Mean (SD)		BD-Patients (n=49) Mean (SD)		Statistics	p
Age (years)	43.0	(11.6)	43.4	(12.1)	–0.17	0.868
Education (years)	13.3	(3.5)	13.1	(3.3)	0.26	0.798
Age of onset (years)	–	–	27.8	(7.7)		
Duration of illness (years)	–	–	14.9	(9.6)		
Number of hospitalizations	–	–	3.4	(3.1)		
Antipsychotic daily dosage (mg)[a]	–	–	209.4	(229.1)		
BPRS	–	–	27.2	(6.0)		
HDRS	–	–	4.6	(4.4)		
YMRS	–	–	3.6	(3.2)		
GAF	–	–	68.9	(10.6)		

[a]Chlorpromazine equivalents, *HDRS*=Hamilton Depression Rating Scale, *YMRS*=Young Mania Rating Scale, *BPRS*=Brief Psychiatric Rating Scale, *GAF*=Global Assessment of Functioning

Table 2. Cognitive performance of patients with bipolar disorder (BD) in comparison to healthy controls.

Cognitive Functions	Healthy controls (n=53) Raw Score Mean (SD)		BD Patients (n=49) Raw Score Mean (SD)		Z Score Mean (SD)		t/z[a]	p
General intelligence	11.9	(1.6)	10.9	(2.9)	–0.61	(1.80)	–2.01	0.048
Attention & Speed processing					–0.54	(1.18)	–3.22	0.001
Stroop-word	97.3	(15.9)	85.5	(24.8)				
Trails A	42.0	(26.1)	50.8	(31.7)				
Working memory	4.7	(1.4)	4.0	(1.2)	–0.50	(0.85)	–2.55	0.011
Visuospatial ability	10.9	(1.8)	8.7	(2.1)	–1.21	(1.15)	–4.61	<0.001
Verbal memory					–0.08	(1.07)	–0.38	0.708
Babcock-Immediate recall	14.3	(3.7)	14.8	(4.5)				
Babcock-Delay recall	14.4	(3.7)	13.2	(4.0)				
Executive functions					–0.69	(0.88)	–4.40	<0.001
Stroop-Interference	–0.2	(9.8)	–2.4	(9.4)				
WCST-Categories	3.1	(1.2)	2.2	(1.6)				
WCST-Perseverative errors	9.8	(7.8)	14.5	(9.2)				
Trails B	98.2	(70.9)	145.2	(84.9)				
Theory of mind								
Faux Pas-Detection	25.9	(4.3)	24.0	(4.8)			–2.06	0.042
Faux Pas-Cognitive understanding	6.3	(2.2)	4.8	(2.2)			–3.39	0.001
Faux Pas-Affective understanding	7.0	(2.3)	6.3	(2.6)			–1.48	0.142

[a]T test (t scores) for Verbal Memory, Executive Functions and Theory of Mind, Mann-Whitney test (z scores) for the rest variables. *WAIS*=Wechsler Adult Intelligence Scale, *WCST*=Wisconsin Card Sorting Test

Table 3 displays correlations of psychosocial functioning (as measured with GAF) with demographic, clinical, and cognitive variables within the patient group. Significant correlations were found with severity of symptoms, particular depressive (HDRS) and psychotic (BPRS) symptoms, and with ToM, both overall ToM ability as well as cognitive and affective component. In addition, no significant difference was found between genders in functioning (males 65.8±13.6, females 69.3±0.3, t=1.44, p=0.155). On the contrary, patients with a history of psychotic episode (66.1±11.3) were significantly impaired in functioning compared to those without psychotic history (72.5± 8.4, t=–2.22, p=0.031).

The independent effect of certain clinical or cognitive factors on psychosocial functioning and the possible mediating effect of ToM on these relationships were explored by means of multiple regression analysis. As ToM is the factor that probably is associated with both symptoms and basic cognitive functions, hierarchical method was used in the regression analysis, in which other variables were entered in the first step, and ToM in the second step, as predictors of the GAF score, which was the dependent variable (table 4). In the first analysis, HDRS and BPRS scores were entered in the first step. In this step only the BPRS score was significant. In the final model, which explains 30% of the psychosocial functioning variance, only the variance accounted for by ToM was significant. In the second analysis, the effect of a history of psychotic episodes was initially entered, which was statistically significant at first but became non-significant after ToM was entered in the equation. In the third analysis, the effect of basic cognitive functions through a total performance score (average z scores of all cognitive functions except ToM) was entered in

Table 3. Correlations of psychosocial functioning in patients with bipolar disorder.

	GAF	
	rho	p
Age (years)	0.01	0.941
Education (years)	0.02	0.892
Age of onset (years)	0.10	0.512
Duration of illness (years)	-0.04	0.771
Number of hospitalizations	–0.10	0.521
Antipsychotic daily dosage (mg/d)[a]	–0.22	0.120
BPRS	–0.47	0.001
HDRS	–0.72	<0.001
YMRS	–0.34	0.100
General intelligence	0.12	0.428
Attention & Speed processing	0.13	0.369
Working memory	0.15	0.308
Visuospatial ability	0.07	0.638
Verbal memory	0.13	0.377
Executive functions	0.02	0.899
Theory of mind		
Overall	0.45	0.001
Cognitive	0.33	0.023
Affective	0.41	0.004

[a]Chlorpromazine equivalents, *HDRS*=Hamilton Depression Rating Scale, *YMRS*=Young Mania Rating Scale, *BPRS*=Brief Psychiatric Rating Scale, *GAF*=Global Assessment of Functioning

the first step. This effect was not found significant, while in the second step, which explained 22% of the psychosocial functioning variance, the effect of ToM was significant.

Discussion

The findings of the present study indicate that both subclinical symptoms and cognitive dysfunction, particularly dysfunction in social cognition, have a negative effect on remitted BD patients' psychosocial functioning. In addition, current findings highlight the central role of ToM in these patients' functioning. ToM is the factor that mediates the relationship between other clinical and cognitive variables and functioning. In addition, ToM has a significant impact on social skills independently of other factors.

Previous studies also found a significant correlation between ToM and functioning in BD,[20–22] although there have also been contrary findings.[17–19] Different measures of both functioning and ToM in these studies may be largely responsible for the contradictory results. However, only one study[22] evaluated the effect of ToM along with the effect of other cognitive functions (sustained attention and executive functions) and symptoms on functioning. This study found that the relationship between ToM deficits and poor functioning was not affected by these particular cognitive functions, whereas was influenced by the severity of subclinical depressive symptoms. In our study, in which for the first time many cognitive functions were included simultaneously in the analysis, the relationship between ToM and functioning was independent of any other clinical or cognitive factor.

Deficits in basic cognitive functions found in the present study –in all functions evaluated, except for verbal memory– are in agreement with the findings of previous studies in euthymic patients.[10] Moreover, this study found ToM deficits consistent with many previous studies in patients during remission.[15,16] In particular, identified deficits were related to cognitive rather than emotional component of ToM, as revealed in all previous studies that distinguished those two components during ToM assessment.[37–39]

The mediating role of ToM in the relationship between symptoms or cognitive deficits and social skills in BD patients, seems similar to what has been found regarding these relationships in schizophrenia.[14] The present study revealed significant correlations between functioning and depressive and psychotic symptoms, although patients had only subclinical symptoms. The impact of these symptoms on functioning in BD during remission has also emerged from previous studies.[4–7] Contrary to the majority of previous studies,[8] no correlation was found between functioning and any cognitive function other than ToM in this study. However, it should be noted that other studies have not found a direct correlation between cognition and functioning,[40,41] while even across positive studies the findings vary widely regarding which particular cognitive functions were found to be related to social dysfunction.[9] On the other hand, social cognition

Table 4. The effect of clinical and cognitive variables on psychosocial functioning: Hierarchical multivariate regression.

	Model summary of each step			Contribution of each variable		
Variables	**R^2 change**	**F change**	**p**	**B**	**t-value**	**Predictor p**
Analysis1						
Step1	0.15	4.14	0.022			
Depressive symptoms*				–0.11	–0.67	0.504
Psychotic symptoms**				–0.33	–2.11	0.040
Step 2	0.15	9.30	0.004			
Depressive symptoms				–0.14	–0.98	0.331
Psychotic symptoms				–0.23	–1.58	0.121
Theory of Mind ***				0.39	3.05	0.004
Final model	0.30	6.37	0.001			
Analysis 2						
Step1	0.09	4.29	0.044			
History of psychotic episodes				–0.29	–2.07	0.044
Step 2	0.17	10.29	0.002			
History of psychotic episodes				–0.24	–1.87	0.069
Theory of Mind				0.42	3.21	0.002
Final model	0.26	7.72	0.001			
Analysis 3						
Step 1	0.00	0.01	0.932			
Basic cognitive functions[a]				0.01	0.08	0.932
Step 2	0.22	12.57	0.001			
Basic cognitive functions				0.21	1.47	0.147
Theory of Mind				0.51	3.55	0.001
Final model	0.22	6.29	0.004			

Dependent variable: Global Assessment of Functioning (GAF) total score, *Depressive symptoms: Hamilton Depression Rating Scale (HDRS) total score, **Psychotic symptoms: Brief Psychiatric Rating Scale (BPRS) total score, ***Theory of Mind (ToM): Faux Pas-detection score, [a]Basic cognitive functions: mean average of z scores of all cognitive functions except Theory of Mind

and especially ToM may be a mediator of the effect of cognitive impairment and symptoms on social functioning, as it has been found that the degree of ToM dysfunction is strongly related to both symptom severity[42] and neurocognition in BD.[39] It is likely that ToM similarly mediates the effect of previous psychotic BD episodes on patients' functioning, as shown by the present study. BD patients with a history of psychotic episodes appear to have a modest but significant impairment in cognitive functioning, according to a recent review of relevant research.[43] In addition, a recent study showed that these patients are also impaired in ToM, particularly in the emotional component of ToM, compared to the BD patients without psychotic history.[39]

According to our findings, approximately 30% of the variance in psychosocial functioning is explained by both symptoms and social cognition impairment, indicating that these factors have important contribution in BD remitted patients' social dysfunction. However, the contribution of other clinical (coexisting personality disorders, substance abuse and generalized anxiety) and psychosocial factors (stigma, self-stigma, lack of social network) in BD patients' functioning should be examined.

A methodological limitation of the present study that should be noted is that functioning was measured by a single overall score, which did not allow the assessment of specific domains (e.g. independent living, work, interpersonal relations). Furthermore,

other dimensions of social cognition that were not assessed may also be particularly important in BD, such as recognizing emotions or empathy. Finally, it was not possible to eliminate the impact of medication, as in all previous studies, yet only the daily doses of antipsychotic drugs were accounted for in the analysis.

In conclusion, the findings of this study suggest that social cognition deficits particularly in ToM, is a key determinant of psychosocial functioning in BD patients regardless of the severity of psychopathology. Moreover, ToM is a mediator of the impact of subclinical symptoms and basic cognitive deficits on social dysfunction, as observed in euthymic states of BD. Therefore, specialized therapeutic interventions for enhancing social cognition are expected to have beneficial effect on general functioning of BD patients.

Acknowledgements

Nikoleta Ioannidi is supported by a PhD scholarship from the AG. Leventis Foundation. Authors would like to thank the clinicians and the nursing staff at the Eginition Hospital and the General Hospital "G. Gennimatas" for their assistance with participant recruitment, as well as the participants themselves.

Κλινικοί και νοητικοί παράγοντες που επιδρούν στην ψυχοκοινωνική λειτουργικότητα των ασθενών με διπολική διαταραχή σε ύφεση

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Ψυχιατρική 2016, 27:182–191

Πολύ συχνά παρατηρείται στη διπολική διαταραχή μειωμένη διαπροσωπική, κοινωνική και επαγγελματική λειτουργικότητα, όχι μόνο στις οξείες φάσεις της νόσου αλλά και κατά τις περιόδους ύφεσης. Το εύρημα αυτό εγείρει ερωτήματα για την παράλληλη επίδραση πολλών παραγόντων, όπως τα εμμένοντα υποκλινικά συμπτώματα αλλά και τα νευροψυχολογικά ελλείμματα, στην ψυχοκοινωνική δυσλειτουργία των διπολικών ασθενών. Η δυσλειτουργία της κοινωνικής νόησης και ιδιαίτερα της Θεωρίας του Νου (ΘτΝ) είναι επίσης πιθανό να παίζει σημαντικό ρόλο στη λειτουργικότητα των ασθενών αυτών, κατ' αντιστοιχία με ό,τι έχει βρεθεί σε ασθενείς με σχιζοφρένεια. Η παρούσα μελέτη είχε ως σκοπό να διερευνήσει την πιθανή επίδραση κλινικών και νοητικών παραγόντων στην ψυχοκοινωνική λειτουργικότητα ασθενών με διπολική διαταραχή κατά την ύφεση της νόσου, συνεκτιμώντας τη ΘτΝ και ένα ευρύ φάσμα βασικών νοητικών λειτουργιών. Σαράντα εννέα ασθενείς με διπολική διαταραχή τύπου Ι σε ύφεση και 53 υγιείς συμμετέχοντες αξιολογήθηκαν με μια συστοιχία νευροψυχολογικών δοκιμασιών για το γενικό νοητικό δυναμικό, τις οπτικοχωρικές ικανότητες, τη μνήμη εργασίας, την προσοχή, την ταχύτητα επεξεργασίας, τη λεκτική μνήμη και τις εκτελεστικές λειτουργίες. Η ΘτΝ αξιολογήθηκε με τη δοκιμασία αναγνώρισης ατοπήματος (Faux Pas Recognition Test). Οι δύο ομάδες εναρμονίστηκαν ως προς το φύλο, την ηλικία και το επίπεδο εκπαίδευσης. Στους ασθενείς χορηγήθηκαν επίσης οι κλινικές κλίμακες: Hamilton Rating Scale for Depression (HRSD), Young Mania Rating Scale (YMRS), Brief Psychiatric Rating Scale (BPRS), ενώ για την εκτίμηση της

ψυχοκοινωνικής λειτουργικότητας χρησιμοποιήθηκε η κλίμακα Global Assessment of Functioning (GAF). Προκειμένου να ελεγχθεί ταυτόχρονα η συμβολή περισσότερων μεταβλητών στην ψυχοκοινωνική λειτουργικότητα, διενεργήθηκε ανάλυση πολλαπλής παλινδρόμησης με ιεραρχική μέθοδο. Οι ασθενείς με διπολική διαταραχή παρουσίασαν σε σύγκριση με τους υγιείς μάρτυρες σημαντικά ελλείμματα σε όλες τις βασικές νοητικές λειτουργίες πλην της λεκτικής μνήμης. Είχαν επίσης σημαντικά φτωχότερη επίδοση από τους υγιείς στη συνολική βαθμολογία του Faux Pas και στη γνωστική συνιστώσα της ΘτΝ, αλλά όχι στη συναισθηματική συνιστώσα της ΘτΝ. Βρέθηκαν σημαντικές συσχετίσεις της ψυχοκοινωνικής λειτουργικότητας των ασθενών με τη βαρύτητα της συμπτωματολογίας, ειδικότερα της καταθλιπτικής (p<0,001) και της ψυχωσικού τύπου (p=0,001), με την ύπαρξη ιστορικού ψυχωσικών επεισοδίων (p=0,031) και με τη ΘτΝ, τόσο με τη γενική ικανότητα (p=0,001) όσο και με τη γνωστική (p=0,023) και τη συναισθηματική συνιστώσα (p=0,004). Κατά την ανάλυση πολλαπλής παλινδρόμησης, μόνον η επίδραση της ΘτΝ στην ψυχοκοινωνική λειτουργικότητα παρέμεινε σημαντική. Τα ευρήματα της παρούσας μελέτης αναδεικνύουν ότι τόσο τα υποκλινικά συμπτώματα όσο και οι νοητικές δυσλειτουργίες, ειδικότερα οι δυσλειτουργίες στην κοινωνική νόηση, επιδρούν αρνητικά στην ψυχοκοινωνική λειτουργικότητα των ασθενών με διπολική διαταραχή κατά την ύφεση της νόσου. Επιπλέον, καταδεικνύουν τον κεντρικό ρόλο που παίζει η ΘτΝ στη λειτουργικότητα των ασθενών αυτών. Η ΘτΝ είναι ο παράγοντας που διαμεσολαβεί στη σχέση άλλων κλινικών και νοητικών παραμέτρων με τη λειτουργικότητα και έχει επιπλέον σημαντική επίδραση στις κοινωνικές δεξιότητες ανεξάρτητα από άλλους παράγοντες. Κατά συνέπεια, ειδικές θεραπευτικές παρεμβάσεις που βελτιώνουν την κοινωνική νόηση, αναμένεται να έχουν ιδιαίτερα ευεργετικά αποτελέσματα όσον αφορά τη σφαιρική λειτουργικότητα των ασθενών με διπολική διαταραχή. Πρέπει ωστόσο να διερευνηθεί η συμβολή και άλλων κλινικών παραμέτρων (συνυπάρχουσες διαταραχές προσωπικότητας, χρήση ουσιών και γενικευμένο άγχος) αλλά και ψυχοκοινωνικών παραγόντων (στίγμα, αυτοστιγματισμός, έλλειψη κοινωνικού δικτύου) στη λειτουργικότητα των ασθενών αυτών.

Λέξεις ευρετηρίου: Κοινωνική λειτουργικότητα, νοητική δυσλειτουργία, Θεωρία του Νου, κοινωνική νόηση, διπολική διαταραχή, ύφεση.

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