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Preliminary communication

Stigma and functioning in patients with bipolar disorder

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ABSTRACT

Objective: The aim of this study was to investigate the impact of self-rated stigma and functioning in patients with bipolar disorder in Latin-America.
Methods: Two-hundred and forty-one participants with bipolar disorder were recruited from three Latin American countries (Argentina, Brazil, and Colombia). Functional impairment was assessed with the Functioning Assessment Short Test (FAST) and experiences with and impact of perceived stigma was evaluated using the Inventory of Stigmatizing Experiences (ISE).
Results: Higher scores of self-perceived stigma were correlated with lower scores of functioning. After multiple regression analysis, being on disability benefit, current mood symptoms and functioning were associated with self-perceived stigma.
Conclusions: This is the first study to demonstrate an association between stigma and poor functioning in bipolar disorder. Possible implications of such findings for practitioners are discussed.
Limitations: The main limitation of this study is that the Inventory of Stigmatizing Experiences has not yet been validated in a population of bipolar patients in our countries. The sample size and heterogeneous clinical subjects from different countries and cultures limit the generalization of the present findings.

1. Introduction

Bipolar disorder is a chronic illness which can lead to severe disruptions in family, social and occupational functioning (Yatham et al., 2009). It has been shown that people with bipolar disorder experience functional impairment (Cacilhas et al., 2009a,b; Rosa et al., 2009). Patients suffering from bipolar disorders have reported difficulties with their jobs, and around 20% of them have permanent disability. In addition, they report fewer social interactions with their friends and family, lower interest or pleasure in their leisure activities, less autonomy to maintain duties and worse cognitive functioning (Rosa et al., 2008).

Stigma reflects people's responses to individuals who possess some undesirable or unusual characteristic. It may be expressed as mild intolerance, in ways that are more deeply discrediting, or through overtly prejudicial and discriminatory practices (Goffman, 1963; Jones et al., 1984). Although legislation in many countries is supposed to prevent

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discriminatory practices, significant barriers that distance people with a mental illness from mainstream society still exist. According to Link and Phelan (2001), stigma exists when the following converge: people distinguish and label human differences; dominant cultural beliefs link labeled persons to undesirable characteristics that form the stereotype; labeled persons are seen as an out-group, as "them and not us"; and labeled persons experience status loss and discrimination that lead to unequal outcomes. As suggested by the notion of the "stigma process" (Link et al., 1997), the four stigma components can be conceived of as being arranged in a logical order. This process may start with the identification and labeling of "differentness", ending with loss of status and discrimination (Angermeyer and Matschinger, 2005).

For several years, social stigma towards the mentally ill has been studied by surveying the general public about their knowledge, attitudes, or behaviors. This work has highlighted a number of inaccurate ideas about symptoms, etiology, and treatments (Angermeyer et al., 1993; D'Arcy and Brockman, 1976; Reda, 1996). The degree of stigmatization has been found to be positively associated with the perceived severity of the mental disorder (Farina, 1981). To date stigmatization towards patients with bipolar disorder has received little attention in the scientific literature, (Fadden et al., 1987; McKeon and Carrick, 1991; Perlick et al., 2001) with most studies of the stigma associated with mental illness focusing on persons with schizophrenia. To our knowledge, stigma, social discrimination and functioning have not been studied simultaneously on patients affected with bipolar disorder. We therefore report here on the potential interrelationship between these aspects in a multicenter study conducted in three Latin American countries.

2. Material and methods

2.1. Participants

Participants with bipolar disorder were recruited through inpatient and outpatient research programs in three Latin American countries (Argentina, Brazil, and Colombia). Diagnoses of bipolar disorder were established with the Structured Clinical Interview for DSM-IV, Patient Edition (First et al., 1995), by investigators experienced on affective disorders. Exclusion criteria were any significant medical illnesses, Axis II severe personality disorder, and substance abuse disorder as primary diagnosis. After full description of study procedures, written informed consent was provided by all subjects. The study was approved by the institutional review boards of the study sites.

2.2. Instruments

Functional impairment was assessed with the Functioning Assessment Short Test (FAST) (Cacilhas et al., 2009a,b), an interview developed to evaluate disability in patients with bipolar disorders. It includes items on autonomy, work, cognitive functioning, financial issues and interpersonal relationships. This scale provides a total score of functioning and also 6 specific subscores (one for each domain). Items are rated using a 4-point scale, where (0) = no difficulty, (1) = mild difficulty, (2) = moderate difficulty, and (3) = severe difficulty. Higher FAST scores indicate more disability. It has excellent reliability, both in terms of internal consistency ($\alpha = 0.95$) and test–retest (ICC = 0.90). It also has good construct validity (Rosa et al., 2007a), highly discriminates patient and control groups and converges with the Global Assessment of Functioning. The FAST has been validated thus far in Brazilian and Spanish populations with very similar factor structures (Rosa et al., 2007a; Cacilhas et al., 2009a,b).

The Inventory of Stigmatizing Experiences (ISE) was originally developed by Milev and Stuart for a study that surveyed mental health consumers and family members about their experiences with stigma and discrimination (Stuart et al., 2005). This is a standardized questionnaire which documents both a person's experiences with stigma and the impact this stigma has had on their lives, as well as general social characteristics.

Questions of the ISE are designed to provide descriptive detail on peoples´ experiences in three areas: prejudicial attitudes, discriminatory actions, and coping mechanisms used to prevent rejection and discrimination. The ISE can be used either in a semi-structured interview (for more seriously disabled individuals) or as a semi-structured self-administered questionnaire (for less seriously impaired individuals). The ISE is then scored as two separate scales, the Stigma Experiences Scale (SES) and the Stigma Impact Scale (SIS). The SES is based on scores of 10 items that are dichotomized and therefore range from 0 to 10. The SIS results from the summation of 7 items, each ranging from 0 to 7, with thus a maximum score of 49. For both scales (SES and SIS) the higher the score rated, the worse the experiences with and the impact of stigma reported by bipolar patients.

The complete inventory was translated into Spanish and Portuguese from the original English text and adapted by the lead author (G.H.V.). Both Spanish and Portuguese versions were then back-translated (Brislin, 1986) by professional translators in Argentina and Brazil, and subsequently approved by two of us (G.H.V. & F.K.).

Psychiatric symptoms were assessed using the Young Mania Rating Scale (YMRS) (Young et al., 1978) and the 17-item Hamilton Rating Scale for Depression (HAM-D) (Hamilton, 1960).

2.3. Statistical analyses

The aim of this study was to identify potential predictors of impact and experiences with stigma. As such, we used principal component analysis to extract the shared variability of the two subscales generated with the ISE. The first component was thus the dependent variable for the multilevel model. We term this component the "composite stigma score" in the results section.

We utilized a linear multiple regression model that included all variables that were associated with the composite stigma score at $p<0.10$. First level predictors were all demographic variables and study site (tested as multiple dummy variables). In the second level were placed all clinical characteristics and functioning was placed in a third level, so it could be adjusted for all significant confounders.

3. Results

Demographic and clinical characteristics of patients according to country can be seen in Table 1.

Table 1
Sample demographical, clinical and treatment characteristics according to inclusion site.

Characteristic	Argentina (n=96)	Brazil (n=60)	Colombia (n=85)
Age	47 (22)	48 (15)	44 (21)
Age at onset	24 (13)	25 (23)	25 (15)
Female sex	71%	73%	58%
Married	40%	38%	25%
Employed**	75%	35%	59%
On disability benefit**	15%	33%	6%
History of suicide attempts*	32%	57%	41%
Ever hospitalized**	55%	70%	91%
Bipolar I disorder**	46%	97%	87%
Rapid cycling*	12%	32%	11%
Number of depressive episodes**	4 (5)	6 (12)	2 (3)
Number of (hypo) manic episodes	3 (3)	4 (6)	4 (4)
Years of untreated illness			
FAST scores**	23 (24)	26 (23)	15 (25)
HDRS scores**	6 (8)	9 (9)	4 (9)
YMRS scores	3(5)	2 (4)	3 (10)
Stigma experiences scale	5 (5)	5 (5)	5 (5)
Stigma Impact Scale	32 (31)	35 (32)	36 (31)

Results are shown as median (interquartile range).
*p<0.05 for difference between groups (one-way ANOVA).
** p<0.001 for difference between groups (one-way ANOVA).

Fig. 1 shows smoother plots of the relationships of functioning and the stigma subscales in each of the countries. Functional impairment was directly associated with impact and experiences with perceived stigma at a significant level of p<0.05 in Brazil (rho=0.49, p<0.001 and rho=0.54, p<0.001) and Colombia (rho=0.34, p=0.002 and rho=0.26, p=0.017), and at a lesser statistical significant level (p≤0.10) in Argentina (rho=0.21, p=0.078 and rho=0.18, p=0.10). As there were meaningful differences regarding clinical features as well as FAST scores, treatment center was entered in the regression analysis.

Several variables had a bivariate association with the composite stigma score extracted with a primary component analysis: being on disability, presence of depressive and (hypo) manic symptoms, number of affective episodes and suicide attempts. After multilevel adjustment, however, only being on disability benefit, current depressive and (hypo) manic symptoms and functioning were associated with the perception of stigma (Table 2).

Overall, our results demonstrate that there is a direct relation between functioning and perceived stigma, in which better functioning is associated with less perceived impact of and experiences with stigma by bipolar patients in our countries.

4. Discussion

To our knowledge, this is the first study demonstrating that functional impairment is significantly associated with perceived stigma in patients with bipolar disorder.

Several studies have shown a partial functional recovery among bipolar patients even in remission periods (Tohen et al., 2000; Strakowski et al., 1998). Particularly, severe difficulties in occupational and cognitive functioning have been demonstrated (Zarate et al., 2000). In addition, bipolar patients presented lower rates of autonomy, and fewer interpersonal relationships than individuals without bipolar disorder (Rosa et al., 2007b, 2008). Such difficulties may lead to embarrassment and discrimination among bipolar patients which contributes to high levels of perceived stigma. On the other hand, stigma-related impairment in functioning could result from avoidant coping strategies such as withdrawal and behavioural avoidance, that BD patients may use as a

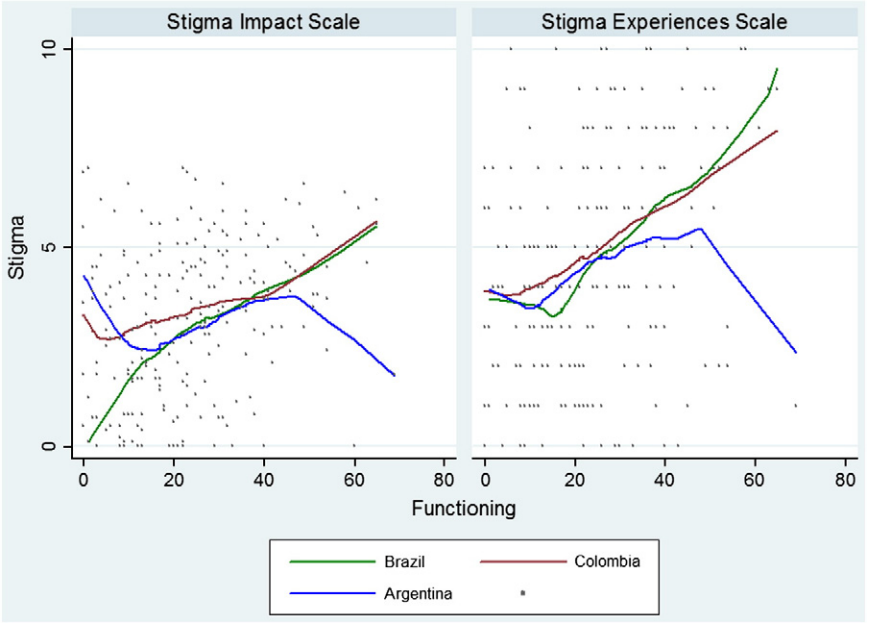

Fig. 1.

Table 2
Bivariate and multivariate associations between independent variables and stigma.

	Bivariate analysis		Multivariate analysis		
	F or *r*	*P*	*coef*	95% CI	*P*
Level one variables					
Age	0.05	0.47		.	
Gender	0.07	0.79			
Employed	0.17	0.68			
On disability	4.39	0.04	0.38	0.17–0.73	0.04
Being single	0.12	0.73			
Colombian centres	0.02	0.88			
Argentinean centres	0.07	0.80			
Level two variables					
Bipolar subtype	1.05	0.31			
HDRS score	0.31	<0.01	0.04	0.02–0.05	<0.01
YMRS score	0.18	<0.01	0.03	0.01–0.05	0.04
Years of illness	0.02	0.83			
Rapid cycling	2.59	0.08	0.08	−0.29–0.45	0.68
N. of depressive episodes	0.19	<0.01	0.01	−0.01–0.02	0.46
N. of (hypo)manic episodes	0.18	0.01	0.02	−0.01–0.05	0.22
Any suicide attempts	7.02	<0.01	−0.23	−0.51–0.03	0.07
Hospitalized	0.08	0.78			
Level three variable					
Functioning	0.36	<0.01	0.02	0.01–0.03	<0.01

* The regression model includes all variables with a bivariate association with the composite stigma score at $p<0.10$. The Brazilian centre is the reference in the model. HDRS — Hamilton Depression Rating Scale; YMRS — Young Mania Rating Scale.

potential strategy to prevent discrimination from persons outside their family (Perlick et al., 2001). Those subjects with concerns about stigma adapt their social behaviour to avoid exposure to rejection or discrimination (Perlick et al., 2001). So it is possible that the relationship may be bidirectional, constituting a "vicious circle" between the perception of stigma and the impact at the functioning level.

In accordance with previous studies we found a significant association between current affective symptoms (both depressive and hypo/manic) and stigma (Hayward et al., 2002). Intensity of depressive symptoms is the major determinant of impaired functioning in bipolar disorder (Gyulai et al., 2008; Morris et al., 2005). In euthymic samples, current depressive symptoms albeit minimal, have also been strongly related with functional impairment, particularly, cognitive impairment and occupational impairment (Rosa et al., 2009). In addition, subsyndromal depressive symptoms are also clinically meaningful as they increase the likelihood of depressive relapse (Judd et al., 2008).

A potential explanation for the differences found between countries (Brazil and Colombia *versus* Argentina) could be related to differential clinical features in the samples. Argentinean patients had significantly less severe illness characteristics: they were less likely to have a history of hospitalizations, suicide attempts and bipolar I disorder and more likely to be employed. This finding is partially in line with some reports which had concluded that the degree of stigmatization perceived by the patients is directly associated with the severity of the mental disorder (Farina, 1981). The severity of illness has been also related with the functional impairment in bipolar patients (Rosa et al., 2007b). Perceived stigma is of central importance to persons with mental illness, both to how they experience their illness and its consequences and whether they use available health services (Rusch et al., 2005).

The generalizability of these findings to patients in other world regions is currently unknown. Further studies in other geographical regions confirming this association are needed, since the perception of stigma may be highly culture-bound. Sociocultural factors other than stigma that may influence the social adjustment of persons with mental illness should also be investigated. Another limitation of our findings is the lack of a previous validation study and a healthy control group to further determine the cultural nature of the results. For these reasons, the present results need to be replicated in differential cultures.

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Conflict of Interest

Dr. Gustavo H Vázquez is a consultant with AstraZeneca and Roche and has received honoraria as speaker from AstraZeneca, Glaxo-SmithKline (GSK), and Eli Lilly Corporations.

Dr. Flavio Kapczinski is a consultant and/or speaker for Eli Lilly, AstraZeneca, GSK and Servier.

Dr. Adriane Rosa has no conflict of interest.

Dr Pedro Magalhaes has no conflict of interest.

Dr. Rodrigo Cordoba is a consultant with Astra Zeneca, GSK, Sanofy-Aventis; has received honoraria as speaker from Abbot, Astra Zeneca, GSK and Janssen-Cilag; and has been part of clinical trials with Astra Zeneca, Dainnipon Suimitomo Pharma, Janssen-Cilag, Merck-Serono, Pfizer and Sanofy-Aventis.

Dr. Lopez-Jaramillo has no conflict of interest in connection with the submitted manuscript.

Dr Mauricio Tohen is a former employee of Eli Lilly (2008) and has received honoraria or is a consultant for AstraZeneca, Bristol-Myers-Squibb, Eli Lilly, GSK, Johnson & Johnson, Sepracor and Wyeth. His spouse is a current employee and stock holder at Eli Lilly.

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