Research

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Internalized Stigma and Its Associations with General and Family Functioning in Patients with Bipolar Disorder

Bipolar Bozukluğu Olan Hastalarda İçselleştirilmiş Damgalanma ve Genel İşlevsellik ile Aile İşlevselliği ile İlişkisi

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ABSTRACT

Objective: This study explored associations between internalized stigma, overall functioning, and family dynamics in individuals with bipolar disorder during remission.

Methods: Eighty-four adults with bipolar I disorder followed at a specialized clinic were included. Internalized stigma, general functioning, and family functioning were measured with the Internalized Stigma of Mental Illness Scale, the Functioning Assessment Short Test, and the Family Assessment Device.

Results: Most demographic and clinical characteristics, including age, gender, illness duration, and number of episodes, were not significantly associated with internalized stigma. Internalized Stigma of Mental Illness Scale scores differed according to employment status and alcohol use. Poorer family functioning correlated with greater internalized stigma ($r = 0.314$, $p = 0.005$). In the exploratory regression model, poorer family functioning was significantly associated with higher internalized stigma ($B = 9.779$, 95% CI: 3.07–16.48).

Conclusion: Family functioning may be an important psychosocial correlate of internalized stigma in individuals with bipolar disorder in remission. Incorporating family-based assessments and interventions into treatment may help reduce self-stigma and support long-term recovery.

Keywords: Bipolar disorder, internalized stigma, family functioning, remission, psychosocial outcomes

ÖZ

Amaç: Bu çalışma, remisyon dönemindeki bipolar bozukluk hastalarında içselleştirilmiş damgalanma ile genel işlevsellik ve aile dinamikleri arasındaki ilişkileri incelemeyi amaçlamıştır.

Yöntem: Bir tedavi kliniğinde izlenen bipolar bozukluk tip I tanılı toplam 84 birey çalışmaya dahil edildi. İçselleştirilmiş damgalanma, genel işlevsellik ve aile işlevselliğini sırasıyla Ruhsal Hastalıklarda İçselleştirilmiş Damgalanma Ölçeği, Kısa İşlevsellik Değerlendirme Ölçeği ve Aile Değerlendirme Ölçeği ile değerlendirildi.

Bulgular: Yaş, cinsiyet, hastalık süresi ve epizod sayısı dahil olmak üzere çoğu demografik ve klinik özellik, içselleştirilmiş damgalanma ile anlamlı düzeyde ilişkili değildi. İçselleştirilmiş Damgalanma Ölçeği puanları, çalışma durumu ve alkol kullanımı açısından farklılık göstermekteydi. Daha kötü aile işlevselliği, daha yüksek içselleştirilmiş damgalanma düzeyleri ile ilişkiliydi ($r = 0,314$; $p = 0,005$). Keşifsel regresyon modelinde, daha kötü aile işlevselliği daha yüksek içselleştirilmiş damgalanma ile anlamlı düzeyde ilişkiliydi ($B = 9,779$; %95 GA: 3,07–16,48).

Sonuç: Aile işlevselliği, remisyon dönemindeki bipolar bozukluk hastalarında içselleştirilmiş damgalanmanın önemli bir psikososyal ilişkili değişkeni olabilir. Aile temelli değerlendirme ve müdahalelerin tedaviye dahil edilmesi, öz-damgalanmayı azaltmaya ve uzun dönem iyileşmeyi desteklemeye yardımcı olabilir.

Anahtar sözcükler: Bipolar bozukluk, içselleştirilmiş damgalanma, aile işlevselliği, remisyon, psikososyal sonuçlar

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Introduction

Stigmatization occurs when individuals are marginalized or judged negatively due to personal traits that challenge prevailing social expectations (Goffman 1986, Sori et al. 2022). Within the realm of mental health, stigma is expressed through different dimensions—including societal attitudes, self-perceptions, institutional barriers, workplace discrimination, and internalized beliefs (Thornicroft et al. 2007, Brohan et al. 2010, Ahmedani 2011, Subu et al. 2021). Among these, internalized stigma—defined as the internal assimilation of negative societal attitudes—has been identified as particularly detrimental to affected individuals (Kök Eren and Demir 2018). It often emerges following psychiatric diagnosis, when individuals begin to perceive themselves as inferior or unworthy, even in the absence of explicit discriminatory acts (Ritsher and Phelan 2004, Kılınçel and Ay 2022). This internal process may lead to diminished self-worth, shame, social withdrawal, and ultimately impaired recovery (Livingston 2013, Corrigan et al. 2014).

Although bipolar disorder (BD) is generally perceived as less stigmatized than schizophrenia or other severe mental illnesses, individuals with BD frequently report elevated levels of internalized stigma (Aydemir 2004). This self-stigmatization involves the adoption of societal stereotypes and prejudices about mental illness, often occurring subconsciously (Drapalski et al. 2013, Tanabe et al. 2016, Türk and Uğurlu 2023). Feelings of stigma may arise as early as the initial psychiatric consultation or diagnosis, regardless of whether overt discrimination is experienced (Çam and Çuhadar 2011). One in three individuals with serious mental illness reports such experiences (Çuhadar and Çam 2014). While early investigations on mental health stigma predominantly focused on schizophrenia (Bal et al. 2023), internalized stigma in BD has been connected to poorer illness outcomes and reduced functioning (Au et al. 2019).

Internalized stigma is frequently reported by individuals with bipolar disorder, as consistently demonstrated in both clinical and cross-cultural research (Pal et al. 2017). Beyond its frequency, internalized stigma significantly undermines treatment adherence, as individuals who internalize stigma are less likely to maintain medication compliance (Howland et al. 2016). These harmful effects persist across mood states, including during remission, emphasizing internalized stigma as a persistent barrier to recovery (Post et al. 2018).

In addition to its negative impact on adherence, internalized stigma has been associated with impairments in general functioning, including social, occupational, and cognitive domains. Regardless of the severity of symptoms or emotional state, previous research has demonstrated that those with high levels of self-shame tend to report reduced functional capacity (Au et al. 2019). Thus, internalized stigma may compromise recovery not only through clinical nonadherence but also by undermining broader psychosocial functioning.

One possible psychosocial mechanism through which stigma may impair functioning is avoidance-based coping, characterized by behavioral disengagement and social withdrawal (Çam and Çuhadar 2011). Alongside stigma, family functioning plays a critical role in shaping illness trajectories in BD. Given the chronic and episodic nature of BD, affected individuals often rely on familial support to maintain daily functioning (Köroğlu and Çiçek 2019). Dysfunctional family dynamics—such as conflict, low cohesion, and poor communication—have been associated with exacerbated symptoms and hindered functional recovery (Zhang et al. 2019). In addition, family-related factors may be associated with psychosocial adjustment and illness-related experiences in individuals with BD (Hançer et al. 2020).

Although previous research has examined the separate effects of stigma and family functioning on BD outcomes, few studies have investigated the relationships between these factors, particularly during remission. Moreover, the literature has predominantly centered on psychotic disorders, including schizophrenia (DeLuca et al. 2021). Based on this gap in the literature, we aimed to investigate the relationships between internalized stigma, family functioning, and overall functioning in patients with BD during remission. By evaluating these psychosocial variables together, the present study may contribute to a more comprehensive understanding of the factors associated with internalized stigma in BD. This study intends to support family-centered approaches to long-term recovery in this population and inform clinical interventions by identifying important psychosocial correlates. We hypothesized that higher levels

of internalized stigma would be associated with poorer family functioning and poorer overall functioning in patients with BD during remission.

Method

Study Design and Participants

This cross-sectional study included 84 individuals aged 18 to 65 years who presented to the specialized psychiatry outpatient clinic of Dr. Abdurrahman Yurtaslan Ankara Oncology Training and Research Hospital, a tertiary care hospital, between April 2023 and August 2023 and met DSM-5 diagnostic criteria for Bipolar I Disorder (BD-I). The target sample size was informed by previous literature indicating a negative association between internalized stigma and general functioning in individuals with BD (Au et al. 2019).

The inclusion criteria were: (1) being aged between 18 and 65 years, (2) meeting the DSM-5 diagnostic criteria for BD-I, (3) being in clinical remission at the time of assessment, (4) having sufficient cognitive and physical capacity to comply with the study procedures, and (5) providing written informed consent.

Using G*Power 3.1.9.7, an a priori power analysis was performed to determine the minimum sample size required for correlational analysis. The required sample size was calculated as 84, assuming a medium effect size (r = 0.30), an alpha level of 0.05, and statistical power of 0.80. The final sample size met the minimum requirement for the planned correlational analysis. No separate a priori power analysis was conducted for the exploratory regression analysis.

The exclusion criteria were the presence of a current manic, hypomanic, or major depressive episode, with or without mixed features; a severe comorbid psychiatric disorder; a neurological disorder or serious medical condition that could compromise overall functioning or interfere with study participation; intellectual disability or marked cognitive decline; and notable hearing or visual impairment that could interfere with the assessment.

During the study period, a total of 117 patients were assessed for eligibility. Of these, 33 were not included: 17 did not meet the remission criteria, 2 had an intellectual disability or marked cognitive decline, and 14 declined to participate. No patients were excluded because of a severe comorbid psychiatric disorder, neurological disorder, or serious medical condition, or because of hearing or visual impairment that interfered with the assessment. Consequently, 84 participants were included in the final analysis.

Procedure

Eligible patients who attended the specialized outpatient clinic during the study period were informed about the aim and procedures of the study. Patients who met the inclusion criteria and did not meet any exclusion criteria were invited to participate. After providing written informed consent, participants underwent a clinical psychiatric interview conducted by a psychiatrist. The same clinical interview was used to evaluate diagnostic eligibility and remission status. The study was approved by the Ethics Committee of Dr. Abdurrahman Yurtaslan Ankara Oncology Training and Research Hospital (approval number: 2023-02/22; date: 09.02.2023) and was conducted in accordance with the Declaration of Helsinki.

Remission status was assessed by the psychiatrist during the clinical interview and supported by a review of the available clinical follow-up records. Patients were considered to be in remission when they did not meet DSM-5 criteria for a current manic, hypomanic, or major depressive episode, with or without mixed features at the time of evaluation and had remained clinically stable for at least two months before study inclusion. No standardized mania or depression rating scale was administered; therefore, predefined scale-based cut-off scores were not used to determine remission.

Following the clinical psychiatric interview, participants completed the sociodemographic data form and study scales in a single assessment session. Sociodemographic and clinical information, including current psychotropic medication use, was obtained from participant reports and clinical records and recorded

using a structured data form. The reliability of the clinical records was supported by the routine documentation of diagnostic, treatment, and follow-up information by treating physicians and by cross-checking participant-reported clinical information against the available records. The Internalized Stigma of Mental Illness Scale (ISMI), Functioning Assessment Short Test (FAST), and Family Assessment Device (FAD) were completed by the participants under researcher supervision when necessary. Standardized instructions were provided to clarify how the forms should be completed, without influencing participants' responses. No financial compensation was provided for participation.

Measures

Sociodemographic Data Form

A structured questionnaire developed by the researchers was used to collect information regarding participants' demographic characteristics and clinical features relevant to bipolar disorder, including current psychotropic medication use.

Functioning Assessment Short Test (FAST)

The FAST is a 24-item instrument, rated on a Likert-type scale, developed to evaluate functioning in individuals with psychiatric disorders (Rosa et al. 2007). Higher scores indicate poorer functioning. In the original validation study, the scale demonstrated excellent internal consistency (Cronbach's alpha = 0.909), strong test–retest reliability over a one-week interval (ICC = 0.98), and good concurrent validity, as indicated by a strong negative correlation with the Global Assessment of Functioning score ($r = -0.903$, $p < 0.001$) (Rosa et al. 2007).

The Turkish adaptation of the scale was carried out by Aydemir and Uykur (2012), who reported excellent internal consistency (Cronbach's alpha = 0.960) and high test–retest reliability ($r = 0.945$) (Aydemir and Uykur 2012). The FAST evaluates functioning across six core domains: interpersonal relationships, occupational life, autonomy, cognitive performance, financial difficulties and leisure time. In the Turkish validation study, FAST scores were correlated with the corresponding domains of the Bipolar Disorder Functioning Questionnaire. The scale also effectively differentiated patients experiencing symptomatic episodes from remitted patients and healthy controls, with an area under the receiver operating characteristic curve of 0.824 (Aydemir and Uykur 2012).

The Internalized Stigma of Mental Illness Scale (ISMI)

The ISMI was introduced by Ritsher et al. as a standardized self-report instrument for assessing internalized stigma among individuals with psychiatric disorders (Ritsher et al. 2003). The scale includes 29 items and assesses five domains: alienation, stereotype endorsement, perceived discrimination, social withdrawal, and stigma resistance. In the original validation study, the ISMI demonstrated high internal consistency (Cronbach's alpha = 0.90) and test–retest reliability ($r = 0.92$). The internal consistency coefficients for its subscales ranged from 0.58 to 0.80 (Ritsher et al. 2003). The Turkish adaptation was conducted by Ersoy and Varan (2007).

It demonstrated high internal consistency for the total scale (Cronbach's alpha = 0.93), a split-half reliability coefficient of 0.89, and subscale Cronbach's alpha coefficients ranging from 0.63 to 0.87. The convergent validity of the Turkish version was supported by significant correlations with measures of depression, self-esteem, psychiatric symptom severity, perceived social support, and overall functioning (Ersoy and Varan 2007).

Family Assessment Device (FAD)

The McMaster Family Assessment Device (FAD), originally developed by Epstein et al. (1983), was used to assess family functioning. The Turkish version, known as the Aile Değerlendirme Ölçeği (ADÖ), was adapted by Bulut (1990). The FAD is a 60-item self-report instrument comprising seven subscales: problem solving, communication, roles, affective responsiveness, affective involvement, behavior control, and general functioning. In the original development study, the Cronbach's alpha coefficients of the subscales ranged

from 0.72 to 0.92, and the instrument demonstrated the ability to differentiate between clinically rated healthy and unhealthy families (Epstein et al. 1983). In the Turkish adaptation, the internal consistency coefficients of the subscales ranged from 0.38 to 0.86, while the test–retest reliability coefficients ranged from 0.62 to 0.90 (Bulut 1990). Items are rated on a four-point Likert-type scale ranging from "strongly agree" to "strongly disagree." Reverse-scored items are coded inversely, and higher scores indicate poorer family functioning.

Statistical Analysis

Descriptive statistics were used to summarize continuous variables, including mean, standard deviation, median, and range (minimum–maximum). Categorical variables were reported as frequencies and percentages. The Kolmogorov–Smirnov test was used to assess the assumption of normality for age, illness duration, number of mood episodes, number of psychiatric hospitalizations, and the ISMI, FAST, and FAD scores. Because several continuous variables did not meet the assumption of normal distribution, non-parametric tests were used for group comparisons and correlation analyses.

Mann–Whitney U tests were used to compare ISMI total scores between groups defined by dichotomous sociodemographic and clinical variables, including gender, living alone, smoking, alcohol use, and the presence of suicidal ideation. Kruskal–Wallis tests were used to compare ISMI total scores across variables with three or more categories, including educational level, marital status, and occupational status. Post hoc pairwise comparisons were not performed; therefore, statistically significant Kruskal–Wallis findings were interpreted cautiously. Spearman's rank correlation analysis was used to examine the associations of ISMI total scores with age, illness duration, number of mood episodes, number of psychiatric hospitalizations, FAST scores, and FAD scores. The FAD score was selected a priori as the independent variable based on the primary aim of the study and previous literature suggesting an association between family functioning and internalized stigma. No data-driven or stepwise variable selection procedure was applied.

A simple linear regression analysis was conducted with ISMI total score as the dependent variable and FAD total score as the independent variable. This regression analysis was conducted as an exploratory model to evaluate the statistical association between family functioning and internalized stigma. Regression assumptions, including linearity, normality of residuals, homoscedasticity, were evaluated prior to analysis. Statistical analyses were conducted using IBM SPSS Statistics version 20.0. A two-tailed p value of <0.05 was considered statistically significant.

Results

A total of 84 individuals diagnosed with bipolar I disorder in remission were included in the study. The mean age of the participants was 42.57 ± 10.96 years, with a median age of 43 (range: 20–63). Of the sample, 45.2% (n = 38) were male and 54.8% (n = 46) were female. Regarding educational attainment, 33.3% (n = 28) had completed 8–12 years of schooling, while 65.5% (n = 55) had completed 12 or more years. Marital status distribution showed that 35.7% (n = 30) were single, 44% (n= 37) were married, 4.8% (n = 4) were widowed, and 14.3% (n = 12) were divorced. In terms of living arrangements, 11.9% (n = 10) were living alone, 47.6% (n = 40) with a spouse or children, 31% (n = 26) with parents, and 8.3% (n = 7) with others. Employment status revealed that 31% (n = 26) were unemployed, 44.0% (n = 37) were employed, 20.2% (n = 17) were retired, and 3.6% (n = 3) were students. Smoking was reported by 44.0% (n = 37) of participants, while 54.8% (n = 46) were non-smokers. Alcohol use was reported by 17.9% (n = 15), whereas 81.0% (n = 68) reported abstinence (Table 1).

Regarding clinical variables, the mean number of manic episodes was 3.57 ± 3.45 (median = 3, range: 1–25), and the mean number of depressive episodes was 3.00 ± 3.21 (median = 2, range: 0–25). The total number of episodes averaged 6.56 ± 6.12 (median = 5, range: 1–50). The mean number of psychiatric hospitalizations was 1.78 ± 1.79 (median = 1, range: 0–9), and the mean illness duration was 17.10 ± 9.54 years (median = 16, range: 1–40). A total of 52.4% (n = 44) reported comorbid physical illness.

Table 1. Sociodemographic characteristics of the participants		
Variables	**Ortalama ± SS [Medyan (Min-Maks)]**	
Age (years)	42.57 ± 10.96 [43 (20-63)]	
Gender	n	%
Male	38	45.2
Female	46	54.8
Education		
8-12 years	28	33.3
≥12 years	55	65.5
Marital Status		
Single	30	35.7
Married	37	44.0
Widowed	4	4.8
Divorced	12	14.3
Living Arrangement		
Alone	10	11.9
With Spouse/children	40	47.6
With Parents	26	31.0
Other	7	8.3
Employment Status		
Unemployed	26	31.0
Employed	37	44.0
Retired	17	20.2
Student	3	3.6
Smoking	37	44.0
Alcohol Use	15	17.9

SD, standard deviation; Min, minimum; Max, maximum; n, number of participants; Note: Valid n varies by item due to missing responses; percentages are calculated over valid n and may not sum to 100% due to rounding.

Table 2. Clinical characteristics of the participants		
Variable	**Mean ± SD [Median (Min-Max)]**	
Number of Manic Episodes	3.57±3.45 [3 (1-25)]	
Number of Depressive Episodes	3.00±3.21 [2 (0-25)]	
Total Number of Episodes	6.56±6.12 [5 (1-50)]	
Number of Psychiatric Hospitalizations	1.78±1.79 [1 (0-9)]	
Duration of Illness (years)	17.10±9.54 [16 (1-40)]	
	n	**%**
Type of First Episode	n	%
Mania	47	56.0
Depression	34	40.5
Mixed	3	3.5
Comorbid Physical Illness	44	52.4
History of Suicide Attempt	21	25.0
Presence of Psychotic Features	53	63.1
Pharmacological Treatment Regimen		
MS only	9	10.7
AP only	6	7.1
MS+AP	59	69.0
MS+AP+AD	7	8.3
No treatment	2	2.4
Comorbid Psychiatric Diagnosis	12	14.3
Presence of Movement Disorders	10	11.9
Reported Side Effects		
Yes	41	48.8
No	41	48.8

AD, antidepressant; AP, antipsychotic; Max, maximum; Min, minimum; MS, mood stabilizer; n, number of participants; SD, standard deviation.; Valid n varies by item due to missing responses; percentages were calculated using valid n and may not sum to 100% due to rounding.

In terms of the polarity of the first episode, 56.0% (n = 47) had manic, 40.5% (n = 34) depressive, and 3.6% (n = 3) mixed episodes. Psychotic features were present in 63.1% (n = 53) of the sample. Comorbid psychiatric diagnoses were observed in 14.3% (n = 12), movement disorders in 11.9% (n = 10), and medication-related side effects in 48.8% (n = 41). A history of suicide attempt was reported by 25.0% (n = 21) of the participants (Table 2).

Table 3. Comparison of Internalized Stigma of Mental Illness Scale scores according to participants' sociodemographic characteristics

Variable	n	Mean ± SD	*p*
Gender			
Male	37	55.00±12.61	0.918
Female	42	54.70±1.97	
Educational Status			
8-12 years	28	53.36±12.33	0.535
≥12 years	52	55.21±12.87	
Marital Status			
Single	29	57.83±12.33	0.254
Married	37	53.65±13.03	
Widowed	4	47.25±8.38	
Divorced	10	51.40±12.35	
Living Arrangement			
Alone	9	52.12±11.86	0.540
With Spouse/Children	40	53.53±12.75	
With Parents	25	53.64±12.41	
Other	6	59.83±14.79	
Employment Status			
Unemployed	26	52.92±11.90	**0.011**
Employed	36	55.3 ±13.52	
Retired	15	52.47±1.20	
Student	3	70.33±2.88	
Smoking			
Yes	36	55.44±13.71	0.576
No	44	53.84±11.79	
Alcohol Use			
Yes	15	60.80±13.74	**0.033**
No	65	53.12±12.02	

n, number of participants; SD, standard deviation; Group comparisons were performed using the Mann–Whitney U test for binary variables and the Kruskal–Wallis test for variables with three or more categories. All tests were two-tailed. Valid n varied across variables because of missing responses. The student subgroup was small (n = 3); therefore, the corresponding finding should be interpreted with caution. Bold values indicate statistical significance ($p < 0.05$).

Group comparisons indicated that ISMI total scores were generally consistent across different sociodemographic categories, with the exception of employment status (p = 0.011) and alcohol use (p = 0.033). Because post hoc pairwise comparisons were not performed for employment status, subgroup-level differences should be interpreted cautiously (Table 3). Similarly, ISMI total scores did not significantly differ across clinical variables such as episode polarity, suicide attempt history, medication regimen, presence of psychotic features, psychiatric comorbidity, physical illness, movement disorders, or side effects (Table 4).

Correlation analyses revealed no significant associations between ISMI scores and age (r = -0.076, p = 0.498), number of manic episodes (r = -0.123, p = 0.276), number of depressive episodes (r = 0.017, p = 0.880), total number of episodes (r = -0.058, p = 0.609), number of psychiatric hospitalizations (r = -0.048,

p = 0.673), or duration of illness (r = -0.114, p = 0.314). The correlation between ISMI and FAST total scores was also non-significant (r = 0.165, p = 0.143). However, a significant positive correlation was observed between ISMI and FAD total scores (r = 0.314, p = 0.005) (Table 5).

Table 4. ISMI total scores by clinical characteristics

Variable	n	Mean ± SD	*p*
Type of First Episode			
Mania	45	55.18±12.19	0.536
Depression	33	55.12±13.79	
Mixed	3	46.67±11.54	
History of Suicide Attempt			
Yes	20	54.35±15.55	0.931
No	60	54.63±11.66	
Pharmacological Treatment Regimen†			
MS only	8	55.50±8.33	0.665
AP only	6	53.83±9.47	
MS+AP	57	55.40±13.57	
MS+AP+AD	7	50.14±12.30	
No treatment	2	44.50±7.77	
Presence of Psychotic Features	51	54.41±12.99	0.889
Yes			
No	29	54.83±12.19	
Comorbid psychiatric diagnosis			
Yes	11	56.09±16.80	0.669
No	69	54.32±11.98	
Comorbid Physical Illness			
Yes	43	55.00±12.12	0.741
No	37	54.05±13.36	
Presence of Movement Disorder			
Yes	8	58.00±14.62	0.421
None	72	54.18±12.45	
Reported Side Effects			
Yes	39	54.59±11.44	0.985
None	41	54.54±13.81	

Abbreviations: AD, antidepressant; AP, antipsychotic; ISMI, Internalized Stigma of Mental Illness Scale; M, mean; MS, mood stabilizer; n, number of participants; SD, standard deviation.

Note: Group comparisons were performed using the Mann–Whitney U test for binary variables and the Kruskal–Wallis test for variables with three or more categories. All tests were two-tailed. Valid n varied across variables because of missing responses. Results for small subgroups, particularly the no-treatment group (n = 2), should be interpreted with caution.

Table 5. Spearman correlations between ISMI and related variables

Variables	ISMI	
	r	p
Age	-.076	0.498
Number of Manic Episodes	-.123	0.276
Number of Depressive Episodes	.017	0.880
Total Number of Episodes	-.058	0.609
Number of Psychiatric Hospitalizations	-.048	0.673
Duration of Illness (years)	-.114	0.314
FAST (Functioning Assessment Short Test)	.165	0.143
Family Assessment Device (FAD)	.314	**0.005**

FAD, Family Assessment Device; FAST, Functioning Assessment Short Test; ISMI, Internalized Stigma of Mental Illness Scale; r, Spearman's rank correlation coefficient. Note: All tests were two-tailed. Bold values indicate statistical significance at $p < 0.05$.

Finally, in the exploratory linear regression analysis, FAD total score was significantly associated with ISMI total score (B = 9.78, SE = 3.36, 95% CI: 3.07–16.48, p = 0.005). The model explained approximately 9.9% of the variance in internalized stigma ($R^2 = 0.099$) (Table 6).

Table 6. Simple linear regression of ISMI total on FAD total score				
Predictor	**B**	**SE**	**95 % CI**	***p***
FAD	9.78	3.36	3.07-16.48	.005

B, unstandardized regression coefficient; CI, confidence interval; F, F statistic; FAD, Family Assessment Device; ISMI, Internalized Stigma of Mental Illness Scale; SE, standard error. Note: Simple linear regression analysis was performed with the ISMI total score as the dependent variable and the FAD total score as the predictor. Model fit: $R^2 = 0.099$, $F(1, 77) = 8.44$, $p = 0.005$.

Discussion

This study contributes to the literature by examining internalized stigma in individuals with BD-I during remission, a clinical phase in which acute mood symptoms are less prominent but psychosocial vulnerabilities may persist. The main finding was that poorer family functioning was significantly associated with higher internalized stigma, whereas general functioning and most sociodemographic and clinical variables were not significantly associated with stigma levels. By focusing on remitted patients, the present study suggests that internalized stigma may not be fully explained by current clinical instability or illness burden, but may also be related to relational and family-contextual factors.

Most sociodemographic and clinical variables, including age, gender, educational level, marital status, living arrangements, smoking status, suicidal ideation, number of episodes, history of hospitalization, and duration of illness, were not significantly associated with internalized stigma. These null findings may indicate that internalized stigma is not necessarily determined by illness chronicity or basic demographic characteristics alone. Instead, stigma may be shaped by more subjective and interpersonal factors, such as perceived social support, illness-related self-concept, coping style, and family attitudes. This interpretation is consistent with previous literature emphasizing the multifactorial nature of internalized stigma and its associations with psychosocial rather than purely clinical variables (Livingston and Boyd 2010, Drapalski et al. 2013, Corrigan et al. 2014).

Evidence regarding the effects of age and gender on internalized stigma remains inconsistent. While some studies have reported a negative association between age and stigma (Barney et al. 2010, Mackenzie et al. 2019), systematic review evidence has suggested that this relationship is not uniform (Livingston and Boyd 2010). Similarly, although some studies have reported higher stigma levels among women (Li et al. 2017), others have found no significant gender differences (Szcześniak et al. 2018). The absence of significant age and gender differences in the present study is therefore broadly consistent with the heterogeneous nature of previous findings.

ISMI scores differed according to employment status and alcohol use; however, the employment-related finding should be interpreted cautiously because post hoc pairwise comparisons were not performed and some subgroups were small. Previous studies have linked internalized stigma with poorer social support, treatment nonadherence, and adverse psychosocial outcomes, but further research is needed to clarify the role of employment and substance-related variables in remitted BD-I (Howland et al. 2016, Alemu et al. 2023).

The most consistent finding of the present study was the association between family functioning and internalized stigma. Higher FAD scores, indicating poorer perceived family functioning, were associated with higher ISMI scores. This finding is consistent with previous research suggesting that family emotional support, negative family interactions, and broader family dynamics may influence internalized stigma and quality of life among individuals with mental illness (Chang and Chen 2021, Wang et al. 2021). Family communication, emotional responsiveness, role distribution, and illness-related attitudes may shape the extent to which individuals internalize negative beliefs about their psychiatric diagnosis. In this context, the family environment may function either as a source of protection against stigmatizing self-beliefs or as a context in which such beliefs are reinforced.

This finding also extends previous work by emphasizing the relevance of family functioning during remission. Even when acute mood symptoms are not clinically prominent, patients may continue to experience self-stigmatizing beliefs that are embedded in interpersonal and family contexts. Family members may provide emotional support, promote treatment adherence, and facilitate psychosocial

rehabilitation; however, family environments characterized by criticism, low cohesion, or limited mental health literacy may contribute to shame, concealment, and self-devaluation. Psychoeducational and family-focused interventions may therefore be useful for addressing internalized stigma, particularly when they target communication patterns, illness-related beliefs, and negative attributions within the family system (Çuhadar and Çam 2014, Hsiao et al. 2018).

Unlike some previous studies, the present study did not find a significant association between general functioning, as measured by FAST, and internalized stigma. This finding differs from research reporting associations between self-stigma and functional impairment in remitted bipolar disorder (Au et al. 2019). Several explanations are possible. First, the remission status of the sample may have reduced variability in general functioning, limiting the ability to detect significant associations. Second, FAST primarily evaluates functional domains such as occupational functioning, autonomy, cognition, and interpersonal functioning, whereas internalized stigma reflects subjective self-evaluation and illness-related identity. Third, the relatively modest sample size may have limited the detection of smaller effects. Therefore, the absence of a significant FAST–ISMI association should not be interpreted as evidence that functioning and stigma are unrelated, but rather as a finding that requires further investigation in larger and more diverse samples.

The cultural context should also be considered when interpreting the association between family functioning and internalized stigma. In societies where family involvement in illness management is strong, family relationships may have a particularly important role in shaping patients' experiences of psychiatric illness. In the Turkish context, families often play an active role in treatment engagement and daily support. This involvement may be protective when the family environment is supportive, but it may also intensify stigma when psychiatric illness is associated with blame, shame, or negative expectations. Thus, culturally sensitive family assessment may be particularly relevant in clinical work with individuals with BD-I.

Overall, the findings suggest that assessment of family functioning may provide clinically useful information when addressing internalized stigma in remitted BD-I. Interventions aimed at improving family communication, increasing mental health literacy, reducing negative attributions, and strengthening supportive family interactions may help reduce self-stigmatizing beliefs. However, given the cross-sectional and exploratory nature of the study, these clinical implications should be interpreted cautiously and tested in longitudinal and intervention-based research.

Several limitations should be considered when interpreting the findings of this study. First, the cross-sectional design precludes causal inferences regarding the relationship between family functioning and internalized stigma. Second, remission status was determined through a clinical psychiatric interview and review of the available follow-up records after at least two months of clinical stability and was not operationalized using standardized mood rating scale cut-off scores, such as the Young Mania Rating Scale or the Hamilton Depression Rating Scale. Although clinical evaluation allowed the exclusion of patients with current manic, hypomanic, or major depressive episodes, with or without mixed features, the absence of standardized symptom severity thresholds may limit the reproducibility and comparability of this definition.

Third, the age range of participants (18–65 years) excluded younger and older individuals, potentially omitting age-related variations in the experience of internalized stigma and thereby limiting the generalizability of the findings across the full lifespan. Fourth, the sample was drawn exclusively from a single outpatient clinic within a tertiary care hospital, which may not adequately capture the cultural or sociodemographic diversity of individuals with bipolar disorder in other regions or clinical settings. Although the minimum required sample size was determined via power analysis and achieved, the relatively modest sample size may still restrict the generalizability and external validity of the results.

Given the modest sample size and small subgroup frequencies, a multivariable regression model including multiple sociodemographic and clinical covariates was not performed, as this could have increased the risk of model overfitting and unstable estimates. Therefore, the regression findings should be interpreted as exploratory and unadjusted associations rather than evidence of independent effects. Another

limitation is that psychiatric comorbidities were present in a subset of participants and may have acted as potential confounding factors influencing internalized stigma, family functioning, and general functioning. However, the specific distribution and potential differential effects of comorbid psychiatric diagnoses were not analyzed in detail. Because of the modest sample size, detailed subgroup analyses or adjusted analyses according to specific comorbid psychiatric diagnoses could not be performed. Therefore, this issue should be considered when interpreting the findings.

In addition, several psychosocial variables known to influence internalized stigma—such as perceived social support, self-efficacy, coping strategies, quality of life, intrafamilial stigma, trauma history, or coping styles—were not assessed in this study. The absence of these potentially confounding or mediating variables may have limited the scope of the findings and prevented a more comprehensive understanding of the psychosocial mechanisms contributing to stigma. Future longitudinal studies with larger and more diverse samples are warranted to clarify the directionality of the relationship between family functioning and internalized stigma and to explore potential mediating and moderating factors.

Conclusion

This study examined the associations among internalized stigma, sociodemographic characteristics, clinical variables, and family functioning in individuals with bipolar disorder in remission. Although most demographic and clinical variables showed no meaningful relationship with internalized stigma, family functioning emerged as the most consistent psychosocial correlate of internalized stigma in this sample. Notably, individuals with higher scores on the Family Assessment Device tended to report higher levels of internalized stigma.

These findings suggest that family dynamics may be meaningfully associated with a critical role in shaping the internalization of stigma and that addressing family-related factors may be essential for reducing stigma and promoting recovery in individuals with bipolar disorder. Incorporating family-based assessments and psychosocial interventions into routine clinical care could help mitigate the negative impact of stigma and enhance long-term functional outcomes. Future studies should employ longitudinal and multicenter designs with larger and more diverse samples to clarify the temporal direction and potential mechanisms of the association between family functioning and internalized stigma. Research incorporating caregiver reports, perceived social support, family expressed emotion, and cultural factors may provide a more comprehensive understanding of this relationship. Randomized controlled studies are also needed to determine whether family psychoeducation and family-focused interventions can reduce internalized stigma and improve recovery-related outcomes.

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