ORIGINAL ARTICLE

Prevalence and Correlates of Bipolar Disorder among Patients Attending Mental Health Services in Balochistan

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ABSTRACT

Background: Bipolar disorder (BD) is a chronic, severe mental illness marked by recurrent episodes of mania and depression. Despite its growing global burden, limited data exists on its prevalence and risk factors in under-researched regions such as Balochistan, Pakistan.

Objective: To determine the prevalence and associated sociodemographic and clinical correlates of bipolar disorder.

Methodology: This cross-sectional, quantitative study was conducted in four major psychiatric facilities in Balochistan. Four hundred patients were recruited using systematic random sampling. Diagnoses were confirmed using the DSM-5 criteria, and structured questionnaires were used to gather sociodemographic and clinical information.

Results: The prevalence of bipolar disorder was found to be 18.5% among the studied population. Significant correlates included family history of mood disorders (OR=2.45, p=0.004), substance use (OR=1.88, p=0.017), un-employment (OR=1.61, p=0.031), and early age at onset (OR=2.92, p<0.001).

Conclusion: Bipolar disorder is notably prevalent among psychiatric patients in Balochistan. Socioeconomic and clinical factors play a significant role in its occurrence. These findings highlight the need for targeted screening and mental health policy reforms in the region.

Keywords: Bipolar disorder, Prevalence, Correlates, Psychiatric epidemiology, Risk factors

INTRODUCTION

Bipolar disorder (BD) is a severe and chronic mood disorder characterized by alternating episodes of mania and depression, with significant impacts on personal, social, and occupational functioning.[1] Globally, bipolar disorder affects approximately 1–2% of the population, with a higher burden in low- and middle-income countries due to under diagnosis, stigma, and limited access to mental health services.[2] Despite its clinical significance, bipolar disorder often remains misdiagnosed or inadequately treated, particularly in regions with under-resourced healthcare systems.[3]

Pakistan, with a growing burden of psychiatric illnesses, faces considerable challenges in the detection and management of mood disorders. According to the World Health Organization (WHO), the country ranks among those with the highest treatment gaps for mental illness.[4] However, most existing psychiatric research in Pakistan is concentrated in urban centers such as Lahore, Karachi, and Islamabad, leaving peripheral and under-served regions such as Balochistan largely unexplored.[5,6]

Balochistan, the largest province in Pakistan by area, is marked by geographic isolation, ethnic diversity, poverty, and limited healthcare infrastructure. These factors create a unique sociocultural and clinical context for mental health, yet epidemiological studies from this region remain scarce.[7] Anecdotal clinical experience and case reports suggest a growing burden of mood disorders in Balochistan, but there is a lack of empirical data quantifying this burden or identifying its correlates.[8,9]

Understanding the prevalence and correlates of bipolar disorder in Balochistan is critical for several reasons First, it provides insight into the scale of the problem and the need for mental health resources. Second, identifying sociodemographic and clinical risk factors enables targeted screening and intervention strategies. Third, regional data can inform culturally sensitive diagnostic and treatment protocols that are often neglected in standardized psychiatric care.[10,11]

The present study aims to address this gap by examining the prevalence of bipolar disorder among patients attending mental health services in Balochistan and by identifying key correlates such as age, gender, family history, substance use, employment

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status, and educational background. Using a cross-sectional, quantitative design and structured diagnostic assessments, this research seeks to contribute to the body of knowledge necessary for evidence-based mental health planning and intervention in the province.

PATIENTS AND METHODS

This cross-sectional, quantitative study was conducted in four major psychiatric service centers across Balochistan: Bolan Medical Complex Hospital Quetta, Sandeman Provincial Hospital Quetta, Jhalawan Medical College Hospital Khuzdar and Mekran Medical College Hospital Turbat from 1st April 2023 to 30th September 2023. Patients were approached in the outpatient waiting areas and provided with a description of the study. After obtaining informed consent, participants were interviewed in a private space within the hospital premises. Each interview took approximately 30–40 minutes. Ethical approval was obtained from the Institutional Review Board (IRB) of the University of Balochistan and the respective hospital ethics committees. These facilities were selected due to their high patient load and regional representation of the province's geographic and ethnic diversity. The study population included all patients aged 18–65 years attending outpatient psychiatric services during the study period. Patients with known intellectual disabilities or neurodegenerative diseases were excluded. Using a conservative estimate of prevalence (p=0.5 for maximum sample size) and a 95% confidence interval with a 5% margin of error, the required sample size was calculated to be 400. To account for potential non-responses or incomplete data, the sample was increased to 400 participants, selected using systematic random sampling. Aged between 18 and 65 years, attending outpatient's psychiatric services and provided informed consent were included. Cognitive impairment or intellectual disability, acute psychotic symptoms interfering with participation and refusal to participate were included. Sociodemographic profile age, gender, marital status, education, occupation, and residence, age at onset of symptoms, substance use history, family psychiatric history, and number of hospitalizations and ADSM-5-basedstructuredclinicalinterviewwas used by trained psychiatrists to confirm the diagnosis of bipolar disorder were noted. Data were analyzed using SPSS-26. Chi-square tests were used to assess associations between categorical variables, and binary logistic regression was conducted

to identify significant predictors of bipolar disorder. A p-value of <0.05 was considered statistically significant. Odds ratios (OR) and 95% confidence intervals (CI) were reported for all significant predictors.

RESULTS

Seventy four were diagnosed with bipolar disorder, resulting in a prevalence of 18.5%. The mean age of participants was 34.2±10.7 years with 52.5% were male and 47.5% female. The majority were unemployed (58%), and 63% had no education beyond secondary school (Table 1).

The overall prevalence of bipolar disorder was 18.5% (n = 74). Among those diagnosed, 61% were males and 39% were females. The highest prevalence was found between 31–45 years (23%) [Table 2].

A binary logistic regression was conducted to identify significant predictors of bipolar disorder. The following variables were included: family history of mood disorder, substance use, employment status, and early age at onset (<25 years) [Table 3].

Table 1: Sociodemographic characteristics of the samples (N=400)

Variable	Category	No.	%
Gender	Male	210	52.5
	Female	190	47.5
Age (years)	18–30	142	35.5
	31–45	178	44.5
	46–65	80	20.0
Marital status	Married	244	61.0
	Unmarried	156	39.0
Education	≤ Secondary school	252	63.0
	> Secondary school	148	37.0
Employment status	Employed	168	42.0
	Unemployed	232	58.0
Residence	Urban	260	65.0
	Rural	140	35.0

Table 2: Bivariate analysis of variables associated with bipolar disorder

Variable	Category	Bipolar (n=74)	Non-Bipolar (n=326)	χ²	p-value
Gender	Male	45	165	1.98	0.159
	Female	29	161		
Family History	Yes	42	108	13.12	0.000
	No	32	218		
Substance Use	Yes	39	96	6.62	0.010
	No	35	230		
Employment Status	Unemployed	51	181	4.67	0.031
	Employed	23	145		
Age at Onset(<25)	Yes	46	109	12.73	0.000
	No	28	217		

Table 3: Binary logistic regression: Predictors of bipolar disorder

Predictor	B	SE	OR (95% CI)	p-value
Family history (Yes)	0.897	0.312	2.45(1.32–4.52)	0.004
Substance use (Yes)	0.633	0.265	1.88(1.12–3.15)	0.017
Unemployment	0.476	0.222	1.61(1.05–2.87)	0.031
Ageat onset <25	1.073	0.281	2.92(1.70–5.03)	0.000
Constant	-2.232	0.441	—	—

DISCUSSION

The present study aimed to assess the prevalence and correlates of bipolar disorder among patients attending mental health services in Balochistan. The results revealed a prevalence of 18.5%, indicating a significant burden of bipolar disorder among psychiatric patients in the region. This finding aligns with previous hospital-based studies from urban centers in Pakistan, such as Lahore and Karachi, which have reported prevalence rates ranging between 15% and 22% among outpatient psychiatric populations.[12,13]

Compared to global population-based prevalence estimates, which typically range from 1% to 2%[14], the higher rate observed here is likely due to the sample being drawn from a clinical population. Nonetheless, it highlights the urgent need to address bipolar disorder as a priority within mental health services in Balochistan, a region often marginalized in healthcare planning.

In contrast to some studies that have identified gender differences in the clinical presentation of bipolar disorder, gender was not significantly associated with diagnosis in our sample. This aligns with findings by Arnold[15], who reported that while clinical features may differ by gender, overall prevalence remains comparable.

However, unemployment emerged as a significant correlate, with unemployed individuals having 1.6 times higher odds of being diagnosed with bipolar disorder. This supports existing evidence suggesting that bipolar disorder can disrupt occupational functioning and contribute to loss of income, creating a vicious cycle of poverty and psychiatric morbidity.[16] It also underscores the socioeconomic vulnerabilities faced by individuals with mood disorders in resource-poor settings.

The strongest predictor in our study was early age at onset, with individuals whose symptoms began before age 25 having nearly three times higher odds (OR=2.92) of receiving a bipolar diagnosis. Early onset has been consistently associated with a more severe illness course, greater risk of comorbidity and poorer long-term outcomes.[17,18] This finding suggests the need for early screening and intervention programs in adolescent and young adult populations in Balochistan.

Additionally, family history of mood disorders was another robust correlate (OR = 2.45), reaffirming the genetic underpinnings of bipolar disorder. This is consistent with international studies estimating heritability between 60% and 85%.[19] Clinicians in Balochistan should take detailed family histories during diagnostic assessments, especially given the widespread stigma and underreporting of mental illness in the region.

Substance use was also significantly associated with bipolar disorder (OR = 1.88). While the causal direction remains unclear in a cross-sectional design, this finding mirrors global research indicating a strong comorbidity between bipolar disorder and substance abuse, particularly stimulants and cannabis.[15,20] In Balochistan, where access to substance rehabilitation services is limited, this dual diagnosis presents a substantial public health challenge.

The current findings are largely consistent with prior research from both local and international contexts, but they also provide a unique contribution by focusing on an underrepresented, rural, and multi-ethnic region of Pakistan. The lack of significant gender differences, the impact of unemployment, and the role of early onset are in line with studies conducted in more urban or developed regions, suggesting some universality of risk factors. However, the relatively high prevalence rate and strong associations with family history and substance use may reflect specific cultural or systemic factors in Balochistan including delayed help-seeking, limited awareness, and lack of community-based mental health education. These results have several practical implications: routine screening for bipolar disorder in outpatient settings should be prioritized, particularly for patients with a positive family history, early onset, or comorbid substance use.

- Mental health services in Balochistan require expansion, particularly in rural areas, with investments in psychiatric staff, training, and medication supply.
- Public awareness campaigns should address stigma and promote early identification and treatment of mood disorders.
- Integrating mental health into primary care could bridge service gaps in remote areas.

CONCLUSION

This provides important insights into the prevalence and correlates of bipolar disorder among patients attending mental health services in Balochistan. The findings reveal a significantprevalencerateof18.5%, underscoring bipolar disorder as a substantial mental health concern in the province. Notably, several sociodemographic and clinical variables were identified as significant correlates, including early age of onset, family history of mood disorders, substance use, and unemployment. These results are consistent with existing national and international literature but also highlight the unique challenges faced by patients in low-resource, rural, and underserved regions like Balochistan. Factors such as limited access to specialized mental health services, high stigma, and poor mental health literacy may further compound the burden of bipolar disorder in this setting. From a clinical and policy perspective, the study emphasizes the need for early screening and diagnosis, especially in youth inclusion o family history and substance use assessments in routine psychiatric evaluations Expansion of mental health services and training of primary care providers community-level awareness campaigns to reduce stigma and encourage help-seeking behavior while this study is limited by its cross-sectional and hospital-based design, it lays the ground work for more comprehensive epidemiological and longitudinal research in the region. It also highlights the urgent need for targeted interventions to improve the detection, management, and outcomes of bipolar disorder in Balochistan. Addressing these gaps could significantly improve the quality of life for affected individuals and reduce the overall mental health burden in the province.

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