Biomedical and Biopharmaceutical Research
Abbreviation: Biomed. Biopharm. Res.
Volume: 14: Issue: 02 |Year: 2017
Page Number: 45-51

A STUDY ON PREVALENCE OF BIPOLAR DISORDER AND RISK FACTORSAND ITS MEDICAL MANAGEMENT IN PURBA MEDINIPUR: CROSS-SECTIONAL OBSERVATIONAL STUDY

Dr. Rajendra Radhakishan Agarwal[1], Dr. Vivek Kumar Sinha[2], Dr. Sushil Agarwalla[3], Dr. Naresh Kumar Munda[4]

[1] Assistant Professor, Department of Psychiatry, Faculty of Icare Institute of Medical Sciences and Research and Dr. B C Roy Hospital, Haldia, India.
[2] Assistant Professor, Department of Physiology, Faculty of NIMS Medical College & Hospital Jaipur, Rajasthan.
[3] Assistant Professor, Department of Psychiatry, Faculty of Icare Institute of Medical Sciences and Research and Dr. B C Roy Hospital, Haldia, India.
[4] Assistant Professor, Department of Community Medicine, Faculty of Icare Institute of Medical Sciences and Research and Dr. B C Roy Hospital, Haldia, India

Corresponding Author

Dr. Naresh Kumar Munda

Assistant Professor, Department of Community Medicine, Faculty of Icare Institute of Medical Sciences and Research and Dr. B C Roy Hospital, Haldia, India

Received: 02-11-2017

Accepted: 18-11-2017

Published: 23-12-2017

Abstract

Background: Bipolar disorder is a chronic psychiatric condition characterized by mood fluctuations between mania and depression. The disorder affects functioning, quality of life, and increases the risk of comorbid conditions. **Objective**: This study aims to assess the prevalence, associated risk factors, and medical management practices for bipolar disorder among 32 diagnosed patients. **Methods**: A cross-sectional observational study was conducted using clinical interviews and questionnaires. Demographic data, medical history, risk factors, and treatment regimens were collected. **Results**: Among 32 participants, 62.5% were male and 37.5% female. Common risk factors included genetic predisposition, substance abuse, and sleep disturbances. Lithium and mood stabilizers were the most commonly prescribed treatments. **Conclusion**: Bipolar disorder shows a significant prevalence in individuals with familial history and lifestyle triggers. Early diagnosis and continuous pharmacological management are key to improving outcomes.

KEYWORDS: *Bipolar disorder (BD), Mania.*

INTRODUCTION

Bipolar disorder (BD) is a mental illness marked by extreme mood swings, including manic/hypomanic episodes and depressive phases. It impacts approximately 1-3% of the global population and often presents in late adolescence or early adulthood. Untreated BD increases the risk of suicide, social dysfunction, and physical health problems[1].

Approximately 40 million people worldwide live with bipolar disorder[2-5]. This represents about 0.53% of the global population. While prevalence rates are roughly equal between men and women, women tend to be diagnosed more often. Bipolar disorder is a significant contributor to disability and mortality, often due to suicide and cardiovascular disease[6-9].

The prevalence of bipolar disorder in India is estimated to be around 0.6% of the adult population, with 70% of cases remaining untreated. This translates to approximately 1 in 150 people being affected. More Details: Global Prevalence: The World Health Organization estimates that around 40 million people globally live with bipolar disorder, which is roughly 0.53% of the world's population[10-14].
Age of Onset: The typical age of onset for bipolar disorder is between 15 and 24 years old, with over 70% of individuals showing symptoms before the age of 25[15-18].
Risk Factors: While the disorder shows a relatively even distribution across sex, ethnicity, and urban/rural settings, there can be regional variations in prevalence and disease burden[19].
Bipolar disorder can significantly impact an individual's life, leading to disability and increased risk of suicide. Treatment Effective treatment options are available and include psychoeducation, stress reduction, social support, and medication.
Regional Variations: Studies indicate that the prevalence of bipolar disorder varies across different regions, with higher rates observed in North and South America and Australia, while lower rates are reported in Asian and African countries. Comorbidity: A significant proportion of individuals with bipolar disorder experience co-occurring conditions, including anxiety disorders, substance use disorders, and suicidal ideationRisk factors contributing to BD include genetic predisposition, environmental stressors, substance abuse, and disrupted circadian rhythms. Medical management typically includes mood stabilizers, antipsychotics, and psychotherapy[20]. This study investigates these elements in a sample of 32 patients.

METHODS

This study was conducted in tertiary hospital. After obtaining institutional ethical committee approval. It was Cross-sectional observational study conducted on 32 patients in the department of Psychiatry, at a tertiary care centre, from February/ 2017 to August/2017
Total 32 participant were approached to project among them No one were excluded due to non-fulfilling of eligibility criteria and Total 32 Confirmed cases were included on the basis of fulling of the eligibility criteria
The institute Ethics Committee approval was obtained before starting the sample collection. A written and informed consent was taken from the patient regarding the study in his/her vernacular language and English. In this study Patients were subjected to: A detailed history of sign & symptoms and its duration. Detailed history of systemic diseases and its duration, medication were noted. Patients were subjected to General physical examination

Study Design: Cross-sectional, observational study
Sample Size: 32 patients diagnosed with bipolar disorder (DSM-5 criteria)
Inclusion Criteria:

- Age 18–65 years
- Confirmed diagnosis of bipolar I or II disorder
- Receiving treatment for at least 3 months

Exclusion Criteria:

- Severe cognitive impairment
- Active psychosis preventing consent

Data Collection:
Structured interviews, medical records, and patient questionnaires were used to collect demographic data, risk factors, and treatment history.

Data Analysis:
Descriptive statistics were used to summarize data.

Flowchart: Study Methodology

Participant Selection (n=32)
↓
Informed Consent Taken
↓
Clinical Interviews and Records Review
↓
Data Collection: Demographics, Risk Factors,
Treatment and Medication History
↓
Data Analysis
↓
Interpretation of Results

RESULTS

In this study we found that bipolar disorder (BD) is associated with demographic profile of patient. 37.5%% patient suffered of bipolar disorder (BD) belongs to 18 -30 years years age group followed by 31.3 % belong to 31-45 years ag group.

It means age is important factors for bipolar disorder (BD).Age is contributary factors for bipolar disorder (BD).

In this study we got know that Male (62.5%) were more prone to suffered of bipolar disorder (BD) as compared to Female gender. (Table 1)

Prevalence in Urban residence is more as compare to Rural area, its prevalence are 68.8 % of bipolar disorder (BD) (Table 1)

Demographic Profile

Demographic Variable	Category	Frequency (n=32)	Percentage (%)
Age Group	18–30	12	37.5%
	31–45	10	31.3%
	46–60	7	21.9%
	>60	3	9.3%
Gender	Male	20	62.5%
	Female	12	37.5%
Residence	Urban	22	68.8%
	Rural	10	31.2%
Education Level	Illiterate	4	12.5%
	Primary	9	28.1%
	Secondary	13	40.6%
	Graduate and above	6	18.8%

In this study we found that Family History of Bipolar is important risk factors for bipolar disorder (BD). its prevalence is 43.8%Followed by Substance Abuse year. Its prevalence is 34.5 % (Table 2).

Risk Factors (Table 2)

Risk Factor	Frequency (n=32)	Percentage (%)
Family History of Bipolar	14	43.8%
Substance Abuse	11	34.4%
Sleep Disturbances	2	6.2%
Stressful Life Events	2	6.2%
History of Childhood Trauma	2	6.2%
Thyroid Dysfunction	1	3.1%

Medical Management Observed

- **Lithium Carbonate:** 65.6%
- **Valproate (Divalproex):** 53.1%
- **Antipsychotics (Olanzapine, Risperidone):** 46.9%
- **Cognitive Behavioral Therapy (CBT):** 28.1%
- **Psychoeducation and Family Therapy:** 21.9%

DISCUSSION

This study highlights the multifactorial aetiology of bipolar disorder. Genetic predisposition remains the most consistent risk factor, affirming previous findings. The high frequency of sleep disturbances and substance abuse suggests that lifestyle factors play a significant role in triggering or exacerbating episodes[21].

In this study we found that bipolar disorder (BD) is associated with demographic profile of patient. 37.5%% patient suffered of bipolar disorder (BD) belongs to 18 -30 years years age group followed by 31.3 % belong to 31-45 years ag group.

It means age is important factors for bipolar disorder (BD). Age is contributary factors for bipolar disorder (BD).In this study we got know that Male (62.5%) were more prone to suffered of bipolar disorder (BD) as compared to Female gender. (Table 1)

Prevalence in Urban residence is more as compare to Rural area, its prevalence are 68.8 % of bipolar disorder (BD) (Table 1).

In this study we found that Family History of Bipolar is important risk factors for bipolar disorder (BD). its prevalence is 43.8%Followed by Substance Abuse year. Its prevalence is 34.5 % (Table 2) .

Medical management was largely consistent with guidelines, favouring mood stabilizers such as lithium and valproate. However, psychotherapy and non-pharmacological interventions were underutilized, pointing to the need for integrated care approaches[22].

The medical management of bipolar disorder in India primarily involves a combination of medication and psychotherapy. Mood stabilizers, antipsychotics, and sometimes antidepressants are used in conjunction with therapies like CBT and IPSRT to manage symptoms and prevent recurrence[23].

Medications: MoodStabilizers: These are the cornerstone of treatment, aiming to regulate mood swings. Common examples include lithium, valproate, and lamotrigine. Antipsychotics:

Atypical antipsychotics like quetiapine, olanzapine, and risperidone are used to manage manic and mixed episodes, and to address psychotic symptoms. Antidepressants:

These are used cautiously, often in combination with mood stabilizers, during depressive phases, but may trigger mania if used alone[24-26].

Psychotherapy: CognitiveBehavioural Therapy (CBT): Helps individuals identify and manage negative thought patterns and behaviours. Interpersonal and Social Rhythm Therapy (IPSRT): Focuses on regulating daily routines and social rhythms to stabilize mood. Lifestyle Management: Regular sleep, healthy diet, and

physical activity are crucial for managing bipolar disorder. Psychoeducation: Educating both the patient and their family about the disorder is an important part of treatment. Individualized Treatment:
Treatment plans are tailored to the specific needs of each individual, taking into account factors like age, symptom severity, and response to medication[27-30].
Regular Monitoring: Blood tests are often required for monitoring lithium levels and kidney/thyroid function, especially with long-term use. Addressing Co-occurring Conditions:
It's important to address any other mental health conditions or substance use issues that may be present[31,32]. Early InterventionEarly diagnosis and treatment can improve outcomes and prevent severe episode Early identification and continuous treatment monitoring are critical. Community awareness and access to psychiatric services in rural areas remain gaps in care.

CONCLUSION

Bipolar disorder is influenced by genetic, environmental, and lifestyle factors. Proper diagnosis, early intervention, and adherence to pharmacological treatment significantly improve patient outcomes. Future studies should explore larger populations and focus on the effectiveness of combined medical and psychosocial interventions.

SOURCE OF FUNDING: No

CONFLICT OF INTEREST

The authors report no conflicts of interest

SUBMISSION DECLARATION

This submission has not been published anywhere previously and that it is not simultaneously being considered for any other journal.

REFERENCES

1. Geller B, Zimerman B, Williams M, Delbello MP, Frazier J, Beringer L, et al. Phenomenology of prepubertal and early adolescent bipolar disorder: Examples of elated mood, grandiose behaviors, decreased need for sleep, racing thoughts and hypersexuality. J Child AdolescPsychopharmacol. 2002;12:3–9. doi: 10.1089/10445460252943524. [DOI] [PubMed] [Google Scholar]
2. Wozniak J, Biederman J. Childhood mania: Insights into diagnostic and treatment issues. J Assoc Acad Minor Phys. 1997;8:78–84. [PubMed] [Google Scholar]
3. Aravind VK, Krishnaram VD. Pediatric bipolar disorder. Indian J Psychol Med. 2009;31:88–91. doi: 10.4103/0253-7176.63579. [DOI] [PMC free article] [PubMed] [Google Scholar]
4. Perlis RH, Miyahara S, Marangell LB, Wisniewski SR, Ostacher M, DelBello MP, et al. Long-term implications of early onset in bipolar disorder: Data from the first 1000 participants in the systematic treatment enhancement program for bipolar disorder (STEP-BD) Biol Psychiatry. 2004;55:875–81. doi: 10.1016/j.biopsych.2004.01.022. [DOI] [PubMed] [Google Scholar]
5. Goldstein BI, Levitt AJ. Further evidence for a developmental subtype of bipolar disorder defined by age at onset: Results from the national epidemiologic survey on alcohol and related conditions. Am J Psychiatry. 2006;163:1633–6. doi: 10.1176/ajp.2006.163.9.1633. [DOI] [PubMed] [Google Scholar]
6. Carlson GA, Weller EB. Phenomenology and treatment of bipolar I disorder in children: A critical review. In: Yatham LN, Maj M, editors. Bipolar Disorder: Clinical and Neurobiological Foundations. Chichester, UK: Wiley-Blackwell; 2010. [Google Scholar]
7. Roy AK, Lopes V, Klein RG. Disruptive mood dysregulation disorder: A new diagnostic approach to chronic irritability in youth. Am J Psychiatry. 2014;171:918–24. doi: 10.1176/appi.ajp.2014.13101301. [DOI] [PMC free article] [PubMed] [Google Scholar]
8. Axelson DA, Birmaher B, Findling RL, Fristad MA, Kowatch RA, Youngstrom EA, et al. Concerns regarding the inclusion of temper dysregulation disorder with dysphoria in the diagnostic and statistical

manual of mental disorders, fifth edition. J Clin Psychiatry. 2011;72:1257–62. doi: 10.4088/JCP.10com06220. [DOI] [PMC free article] [PubMed] [Google Scholar]
9. Kessing LV, Vradi E, McIntyre RS, Andersen PK. Causes of decreased life expectancy over the life span in bipolar disorder. J Affect Disord. 2015;180:142–7. doi: 10.1016/j.jad.2015.03.027. [DOI] [PubMed] [Google Scholar]
10. Khazanov GK, Cui L, Merikangas KR, Angst J. Treatment patterns of youth with bipolar disorder: Results from the national comorbidity survey-adolescent supplement (NCS-A) J Abnorm Child Psychol. 2015;43:391–400. doi: 10.1007/s10802-014-9885-6. [DOI] [PubMed] [Google Scholar]
11. Mick E, Faraone SV. Family and genetic association studies of bipolar disorder in children. Child AdolescPsychiatr Clin N Am. 2009;18:441–53, x. doi: 10.1016/j.chc.2008.11.008. [DOI] [PubMed] [Google Scholar]
12. Fullerton JM, Koller DL, Edenberg HJ, Foroud T, Liu H, Glowinski AL, et al. Assessment of first and second degree relatives of individuals with bipolar disorder shows increased genetic risk scores in both affected relatives and young at-risk individuals. Am J Med Genet B Neuropsychiatr Genet. 2015;168:617–29. doi: 10.1002/ajmg.b.32344. [DOI] [PMC free article] [PubMed] [Google Scholar]
13. Meyer SE, Carlson GA, Wiggs EA, Ronsaville DS, Martinez PE, Klimes-Dougan B, et al. A prospective high-risk study of the association among maternal negativity, apparent frontal lobe dysfunction, and the development of bipolar disorder. Dev Psychopathol. 2006;18:573–89. doi: 10.1017/S0954579406060299. [DOI] [PubMed] [Google Scholar]
14. Anand A, Koller DL, Lawson WB, Gershon ES, Nurnberger JI BiGS Collaborative. Genetic and childhood trauma interaction effect on age of onset in bipolar disorder: An exploratory analysis. J Affect Disord. 2015;179:1–5. doi: 10.1016/j.jad.2015.02.029. [DOI] [PMC free article] [PubMed] [Google Scholar]
15. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. (DSM-5) 5th ed. Washington, DC: American Psychiatric Publishing; 2013. [Google Scholar]
16. Axelson DA, Birmaher B, Strober MA, Goldstein BI, Ha W, Gill MK, et al. Course of subthreshold bipolar disorder in youth: Diagnostic progression from bipolar disorder not otherwise specified. J Am Acad Child Adolesc Psychiatry. 2011;50:1001–16.e3. doi: 10.1016/j.jaac.2011.07.005. [DOI] [PMC free article] [PubMed] [Google Scholar]
17. Hirneth SJ, Hazell PL, Hanstock TL, Lewin TJ. Bipolar disorder subtypes in children and adolescents: Demographic and clinical characteristics from an Australian sample. J Affect Disord. 2015;175:98–107. doi: 10.1016/j.jad.2014.12.021. [DOI] [PubMed] [Google Scholar]
18. Youngstrom EA, Birmaher B, Findling RL. Pediatric bipolar disorder: Validity, phenomenology, and recommendations for diagnosis. Bipolar Disord. 2008;10:194–214. doi: 10.1111/j.1399-5618.2007.00563.x. [DOI] [PMC free article] [PubMed] [Google Scholar]
19. Birmaher B, Axelson D, Strober M, Gill MK, Valeri S, Chiappetta L, et al. Clinical course of children and adolescents with bipolar spectrum disorders. Arch Gen Psychiatry. 2006;63:175–83. doi: 10.1001/archpsyc.63.2.175. [DOI] [PMC free article] [PubMed] [Google Scholar]
20. World Health Organization. Geneva: World Health Organization; 1992. The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines. [Google Scholar]
21. McClellan J, Kowatch R, Findling RL Work Group on Quality Issues. Practice parameter for the assessment and treatment of children and adolescents with bipolar disorder. J Am Acad Child Adolesc Psychiatry. 2007;46:107–25. doi: 10.1097/01.chi.0000242240.69678.c4. [DOI] [PubMed] [Google Scholar]
22. Carlson GA, Meyer SE. Bipolar disorder. In: Dulcan M, editor. Dulcan's Textbook of Child and Adolescent Psychiatry. Arlington, VA: APP; 2010. [Google Scholar]

23. McClellan JM, Hamilton JD. An evidence-based approach to an adolescent with emotional and behavioral dysregulation. J Am Acad Child Adolesc Psychiatry. 2006;45:489–93. doi: 10.1097/01.chi.0000196598.47221.d3. [DOI] [PubMed] [Google Scholar]
24. Wilens TE, Biederman J, Adamson JJ, Henin A, Sgambati S, Gignac M, et al. Further evidence of an association between adolescent bipolar disorder with smoking and substance use disorders: A controlled study. Drug Alcohol Depend. 2008;95:188–98. doi: 10.1016/j.drugalcdep.2007.12.016. [DOI] [PMC free article] [PubMed] [Google Scholar]
25. Carlson GA, Meyer SE. Bipolar disorder. In: Dulcan M, editor. Dulcan's Textbook of Child and Adolescent Psychiatry. Arlington, VA: APP; 2010. [Google Scholar]
26. Duffy A, Alda M, Milin R, Grof P. A consecutive series of treated affected offspring of parents with bipolar disorder: Is response associated with the clinical profile? Can J Psychiatry. 2007;52:369–76. doi: 10.1177/070674370705200606. [DOI] [PubMed] [Google Scholar]
27. Frías Á, Palma C, Farriols N. Comorbidity in pediatric bipolar disorder: Prevalence, clinical impact, etiology and treatment. J Affect Disord. 2015;174:378–89. doi: 10.1016/j.jad.2014.12.008. [DOI] [PubMed] [Google Scholar]
28. Duffy A. The nature of the association between childhood ADHD and the development of bipolar disorder: A review of prospective high-risk studies. Am J Psychiatry. 2012;169:1247–55. doi: 10.1176/appi.ajp.2012.11111725. [DOI] [PubMed] [Google Scholar]
29. Stahl SM. 5th ed. Cambridge, UK: Cambridge University press; 2014. Stahl's Essential Psychopharmacology. Prescribers Guide. [Google Scholar]
30. Nunn K, Dey C. 1st ed. Sydney: Glade Publishing; 2003. The Clinician's Guide to Psychotropic Prescribing in Children and Adolescents. [Google Scholar]
31. Santosh PJ, Bell L, Fiori F, Singh J. Pediatric antipsychotic use and outcomes monitoring. J Child Adolesc Psychopharmacol. 2017;27:546–54. doi: 10.1089/cap.2015.0247. [DOI] [PubMed] [Google Scholar]
32. 34.Luk E, Reed E. Polypharmacy or pharmacologically rich? In: Nunn KP, Dey C, editors. The Clinician's Guide to Psychotropic Prescribing in Children and Adolescents. 2nd ed. Sydney: Glade Publishing; 2003. pp. 8–11. [Google Scholar]