



Original Article

Prevalence of Relapse of Mania, Sociodemographic and Clinical Parameters in Relapse of Mania in A Tertiary Care Hospital in North Kerala

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ABSTRACT

Aim: To assess the prevalence of relapse of mania. We also explained various socio-demographic and clinical parameters associated with relapse of mania.

Methods: It was a hospital based cross-sectional study on 180 BPAD patients who attended psychiatry department. The patients were assessed with socio-demographic proforma, young mania rating scale for assessment of relapse. Statistical analysis was done using SPSS statistical version 24 software. Manic episodes among BPAD patients were expressed as frequency and percentage. Associated socio-demographic and clinical factors were expressed as frequency and percentage. Prevalence of relapse of mania, socio-demographic and clinical factors associated with relapse was studied by using Chi square test t-test. Probability value 'p' < 0.05 considered statistically significant.

Results: In this study, 28.33% patients having relapse of mania. This rate is analogous to previous research by Hebbe et al., which reported a relapse rate of 25.52%, Perlis et al., who calculated a 1-year relapse rate of 48.5%, and Vázquez et al.'s review, which estimated recurrence rates of 26.3% among the naturalistic studies examined.

In this study, 12.22% of patients were aged <25 years, 27.22% of patients aged between 25-35 years, 19.44% of patients aged between 35-45 years, Mean age in this study was 41.41±12.45 years. Mean age in relapse group was 41.31±12.55 year.

Conclusion: Prevalence of relapse of mania in this study was 28.33%. Younger age of onset of disease, broken family, stressful life events, family history of psychiatric illness, past history of psychiatric illness, and substance abuse were some of the risk factors associated with relapse of mania.

Keywords: Mania, relapse, bipolar affective disorder

INTRODUCTION

Mood disorders commonly repeat, usually in periodic or cyclical fashion, and clearly deviate from a person's normal functioning. Usually to either depression (with or without accompanying anxiety) or to elation, the fundamental disruption in mood disorders is a change in mood or affect.¹ Usually, mood shift corresponds with a change in the degree of activity, either raised or lowered. Usually, the start of particular episodes is connected to demanding circumstances and occurrences. Bipolar disorder (BD) is defined by episodic and recurrent distinct mood episodes, resulting in considerable psycho-social impairment. It is distinguished by episodes of extreme emotional instability, cognitive impairments, immunological and physiological abnormalities, and functional problems² notwithstanding the existence of various treatment modalities, the long-term trajectory of BD is marked by a low recovery rate, elevated recurrence rate, inadequate inter-episodic functioning, and a high incidence of comorbid physical and substance use disorders.³

Given the complex character of the condition, it is sometimes misdiagnosed or identified following a significant delay. In the general population, for the bipolar type 1 disorder epidemiological studies have indicated a lifetime prevalence of about

1%. With a prevalence of 0.6% for type I and 0.4% for type II, a major cross-sectional study of 11 nations revealed an overall lifetime prevalence of bipolar spectrum diseases of 2.4%. Affective disorder is rather common in India, ranging from 0.51 to 20.78 per thousand inhabitants.⁴ Moreover, Asian and Latino patients showed increased frequency of BD type I and less frequency of BD type II and non-specific BP than did Caucasian patients.

Though many research have looked at the aetiology, clinical course, functional disability, treatment approaches, medication adherence, and disease outcome of BD, these were short-term studies with small sample size and not really representative of the population. Furthermore, biological and sociocultural elements could influence the frequency and clinical characteristics of mood disorders; so, data gathered in western environments are not likely to be relevant anywhere else in the globe.⁵ In tropical nations like India, the course of BD with predominance of manic episodes can be different than in other countries from where much of the published research has originated.

Many studies have shown that throughout the interepisodic phase, a considerable fraction of BD patient's still show residual or subsyndromal symptoms. Residual symptoms in BD have several different, multifarious meanings. Social, vocational, and impairment in cognitive functioning has been proven to be somewhat correlated with residual or subsyndromal symptoms in BD.^{6,7} Whereas residual manic symptoms have a negative influence on financial concerns, familial stigma, interpersonal relationships, sexual functioning, and occupational stigma, residual

depressed symptoms have a negative impact on general functioning.⁸⁻¹⁰ Moreover, research assessing the course of residual symptoms have shown that impairment in normal level of functioning in remitted BD patients reduces in tandem with increasing remission length. While persistent manic symptoms have been identified to be connected with shorter time to manic, hypomanic, or mixed recurrences, residual depressed symptoms is associated with shorter time to depressed recurrence. Furthermore, indicated by evidence is a high correlation between persistent mood symptoms and sleep disturbance, which has been shown to independently forecast the returning of mood episodes.

This study emphasizes the requirement for exploring the socio-demographic and clinical factors in relapsed Mania patients. Predicting future such relapses and developing new pharmacological and non-pharmacological measures targeting this aspect will help in understanding the association of socio-demographic and clinical factors with relapse in Mania, so maximizing both reduction in symptom and enhancing the quality of life in patients with bipolar affective disorder.

MATERIALS AND METHODS

DESIGN OF STUDY

Cross Sectional Study

STUDY POPULATION

BPAD patients Attending Psychiatry Department In Government Medical College Kannur, Kerala

STUDY SETTING

Department of Psychiatry, Government Medical College Kannur, Kerala.

DURATION OF STUDY

After getting ethical clearances study was done from September 2024 to march 2025.

SAMPLE SIZE

Sample size was calculated as minimum of 180 patients based on previous study by Habte Belete et al. where a 35% prevalence of relapse in BPAD was found. Calculation was based on formula Z^2pq/d^2 . p was taken as 35%, q as 65%, relative precision(d) is 20% of p, taken as 7% and the sample size is rounded to 180.

$$n = \frac{1.96 \times 1.96 \times 35 \times 65}{7 \times 7} \\ = 178.36 \text{ (rounded to 180)}$$

SAMPLING METHOD

All the consecutive patients diagnosed with bipolar affective disorder who attended psychiatry department during the 6-month period from September 2024 to march 2025 were included in the study.

INCLUSION CRITERIA

- ❖ BPAD Patients in age group of 18 - 65 years, coming in department of Psychiatry, Government Medical College, Kannur.
- ❖ Patients or relative who gave informed written consent.

EXCLUSION CRITERIA

- ❖ Patients with any acute medical or organic brain disorder such as dementia and patients with MR which is interfering with formal assessment of mental status
- ❖ Patients who are not cooperative or consent is not available from patients or informants

METHOD OF DATA COLLECTION

After obtaining informed written consent socio-demographic data and clinical details including age, gender, substance abuse, were collected using pre-designed proforma for this study. The diagnosis of BPAD was made based on structured clinical interview schedule ICD-10. Manic episode was characterized by elated mood resulting in overactivity, pressure of speech and decreased need for sleep. Marked distractibility, inflated self-esteem and grandiose ideas are freely expressed. Episode should last for atleast one week and should be severe enough to disrupt ordinary work and social activities. Rating of mania was done by using YMRS.

ETHICAL CONSIDERATIONS

- ❖ The study was approved by the Institutional research committee as well as Ethics committee [IEC No.107/2024/GMCK] GMC, Kannur
- ❖ Subjects were recruited only after an informed written consent from patient or relative
- ❖ Subjects or relative were having right to refuse consent at any time of the study
- ❖ All the information collected was strictly kept confidential and was not disclosed to others. .
- ❖ No financial assistance or compensation was paid for taking part in this study.

DATA COLLECTION METHOD

For the study purpose, 180 BPAD patients who are coming to Psychiatry department in Government Medical College Kannur, Kerala were taken. After getting the Ethical clearance from the institutional research committee as well as ethical committee the study was carried out from september,2024 to march,2025. Patients were approached individually. Informed written consent was taken after explaining the nature and purpose of study to them. Patients or relatives not consenting were excluded. Those patients giving informed consent and satisfying the inclusion and exclusion criteria were assessed separately with a socio-demographic proforma, young mania rating scale. All the information collected was strictly kept confidential and was not disclosed to others.

STATISTICAL ANALYSIS

The data collected were entered in excel and statistical analysis was done using SPSS statistical version 24 software. Manic episodes among BPAD patients were expressed as frequency and percentage. Associated socio-demographic and clinical factors were expressed as frequency and percentage. Prevalence of relapse of mania, socio-demographic and clinical factors associated with the relapse was studied by using Chi square test & t-test. Probability value 'p' < 0.05 was considered statistically significant.

Table 2: Comprehensive Demographic and Clinical Profile of Study Participants (n=180)

| Characteristic | Category | Number | Percentage (%) |
|-----------------------------|--------------------|--------|----------------|
| Age Distribution | <25 Years | 22 | 12.22 |
| | 25-35 Years | 49 | 27.22 |
| | 35-45 Years | 35 | 19.44 |
| | 45-55 Years | 39 | 21.67 |
| | 55-65 Years | 35 | 19.44 |
| Educational Status | Illiterate | 15 | 8.33 |
| | Primary School | 30 | 16.67 |
| | Secondary School | 62 | 34.44 |
| | Graduation | 73 | 40.56 |
| Occupational Status | Business | 19 | 10.56 |
| | Cooli* | 28 | 15.56 |
| | Government Job | 12 | 6.67 |
| | Private Job | 65 | 36.11 |
| | Unemployed | 56 | 31.11 |
| Marital Status | Un-Married | 51 | 28.33 |
| | Married | 41 | 22.78 |
| | Separated/Divorced | 72 | 40.00 |
| | Widower | 16 | 8.89 |
| Socioeconomic Status | Upper | 23 | 12.77 |
| | Middle | 79 | 43.88 |
| | Lower | 78 | 43.33 |
| Family Type | Nuclear | 120 | 66.67 |
| | Joint | 40 | 22.22 |
| | Extended | 20 | 11.11 |
| Background | Rural | 50 | 27.78 |
| | Semi-Urban | 98 | 54.44 |
| | Urban | 32 | 17.78 |

| | | | |
|--|------------------|-----|-------|
| Past Psychiatric History | Yes | 31 | 17.22 |
| | No | 149 | 82.78 |
| Family History of Psychiatric Illness | Nil | 104 | 57.78 |
| | Depression | 14 | 7.78 |
| | BPAD | 15 | 8.33 |
| | Anxiety Disorder | 12 | 6.67 |
| | Psychosis | 17 | 9.44 |
| | Substance Abuse | 18 | 10.00 |

This comprehensive table presents a complete demographic and clinical profile of the 180 patients who participated in the study. The data is organized into nine distinct categories, providing a multi-faceted view of the participant population.

The largest age group was 25-35 years (27.22%), and educationally, most participants were graduates (40.56). Occupationally, the majority worked in private jobs (36.11%) or were unemployed (31.11%). A significant finding in marital status shows that separated/divorced individuals constituted the largest group (40.00%). Socioeconomically, the sample was predominantly middle (43.88%) and lower class (43.33%), with most participants coming from nuclear family setups (66.67%). Geographically, over half of the patients came from semi-urban backgrounds (54.44%).

Clinically, the data reveals that most patients had no past psychiatric history (82.78%) and no family history of psychiatric illness (57.78%). Among those with a family history, substance abuse (10.00%), psychosis (9.44%), and BPAD (8.33%) were the most prevalent conditions.

Table 2: MANIA of the patients and their percentages

| MANIA | NUMBER (n=180) | PERCENTAGE (%) |
|------------|-------------------|-------------------|
| RELAPSE | 51 | 28.33 |
| NO RELAPSE | 129 | 71.67 |

In this study, 51 patients (28.33%) having relapse of mania.

Table 3: Comparison of Demographic, Clinical, and Historical Characteristics Between Relapse and No Relapse Groups

| Characteristic | Category | Relapse Group (n=51) | No Relapse Group (n=129) | P-Value |
|--|------------------|-------------------------|-----------------------------|---------|
| Mean Age (Years) | - | 41.31 ± 12.55 | 41.44 ± 12.41 | 0.473 |
| Mean Age of Onset (Years) | - | 19.21 ± 0.64 | 23.89 ± 3.72 | <0.001* |
| Past Psychiatric History | Yes | 29 (56.86%) | 2 (1.55%) | <0.001* |
| | No | 22 (43.14%) | 127 (98.45%) | |
| History of Deliberate Self-Harm | Yes | 11 (21.57%) | 1 (0.78%) | <0.001* |
| | No | 40 (78.43%) | 128 (99.22%) | |
| Substance Use | Yes | 44 (86.27%) | 12 (9.30%) | <0.001* |
| | No | 7 (13.73%) | 117 (90.70%) | |
| Family History of Psychiatric Illness | Nil | 2 (3.92%) | 101 (78.29%) | <0.001* |
| | Depression | 10 (19.61%) | 4 (3.10%) | |
| | BPAD | 10 (19.61%) | 4 (3.10%) | |
| | Anxiety Disorder | 10 (19.61%) | 4 (3.10%) | |
| | Psychosis | 9 (17.65%) | 8 (6.20%) | |
| | Substance Abuse | 10 (19.61%) | 8 (6.20%) | |
| Marital Status | Unmarried | 3 (5.88%) | 48 (37.21%) | <0.001* |
| | Married | 2 (3.92%) | 39 (30.23%) | |
| | Separated | 24 (47.06%) | 13 (10.08%) | |
| | Divorced | 20 (39.22%) | 15 (11.63%) | |
| | Widower | 2 (3.92%) | 14 (10.85%) | |
| Gender | Male | 38 (74.51%) | 91 (70.54%) | 0.595 |
| | Female | 13 (25.49%) | 38 (29.46%) | |
| Religion Family Type | Hindu | 33 (64.71%) | 86 (66.67%) | 0.814 |

| | | | | |
|-----------------------------------|------------------|-------------|-------------|-------|
| | Christian | 9 (17.65%) | 25 (19.38%) | |
| | Muslim | 9 (17.65%) | 18 (13.95%) | |
| | Nuclear | 32 (62.75%) | 88 (68.22%) | 0.720 |
| | Joint | 12 (23.53%) | 28 (21.71%) | |
| | Extended | 7 (13.73%) | 13 (10.08%) | |
| Background | Rural | 9 (17.65%) | 41 (31.78%) | 0.160 |
| | Semi-Urban | 32 (62.75%) | 66 (51.16%) | |
| | Urban | 10 (19.61%) | 22 (17.05%) | |
| Socioeconomic Status (SES) | Upper | 6 (11.76%) | 17 (13.18%) | 0.860 |
| | Middle | 24 (47.06%) | 55 (42.64%) | |
| | Lower | 21 (41.18%) | 57 (44.19%) | |
| Educational Status | Illiterate | 4 (7.84%) | 11 (8.53%) | 0.892 |
| | Primary School | 8 (15.69%) | 22 (17.05%) | |
| | Secondary School | 16 (31.37%) | 46 (35.66%) | |
| | Graduation | 23 (45.10%) | 50 (38.76%) | |
| Occupational Status | Business | 7 (13.73%) | 12 (9.30%) | 0.736 |
| | Cooli* | 8 (15.69%) | 20 (15.50%) | |
| | Government Job | 5 (9.80%) | 7 (5.43%) | |
| | Private Job | 15 (29.41%) | 50 (38.76%) | |
| | Unemployed | 16 (31.37%) | 40 (31.01%) | |

This comprehensive comparative table analyzes a wide range of demographic, clinical, and historical factors between patients who experienced relapse (n=51) and those who did not (n=129). The analysis reveals several powerful and statistically significant clinical predictors of relapse. Most strikingly, the relapse group showed a dramatically higher prevalence of past psychiatric history (56.86% vs. 1.55%), history of deliberate self-harm (21.57% vs. 0.78%), and substance use (86.27% vs. 9.30%). Additionally, these patients experienced a significantly earlier mean age of illness onset (19.21 vs. 23.89 years).

DISCUSSION

Bipolar disorder (BD) is a severe mental illness that affects around 1–2% of the population, leading to diminished quality of life, cognitive impairment, an elevated risk of suicide, and significant financial burdens on society.¹¹ The rate of relapse among this population is pivotal to their suffering and financial burden. Bipolar disorder is characterised by recurrent mood episodes or relapses (i.e., manic, depressive, and mixed), each of which can significantly diminish or even obliterate a life over the course of years. Comprehending relapse over time to enhance collaborative decision-making for doctors and patients is expected to significantly benefit both parties and mental health services overall.¹² Identifying factors linked to relapse facilitates the recognition of modifiable risk factors, which can be serve as new targets for intervention and prevention strategies in bipolar disorder. Moreover, patients are entitled to this information, to make informed decision regarding their life and care.

In this study, 51 patients (28.33%) having relapse of mania. This rate is analogous to prior research by Hebte et al.¹³, which reported a relapse rate of 25.52%, Perlis et al.¹⁴, who calculated a 1-year relapse rate of 48.5%, and Vázquez et al.¹⁵ review, which estimated recurrence rates of 26.3% among the naturalistic studies examined.

In this study, 12.22% of patients aged <25 years, 27.22% of patients aged between 25-35 years, 19.44% of patients aged between 35-45 years, 21.67% of patients aged 45-65 years and 19.44% of patients aged between 55-65 years. Mean age of participants in this study was 41.41±12.45 years. Mean age in relapse group was 41.31±12.55 years and mean age in no relapse group was 41.44±12.41 years aligning with findings of selvakumar et al.¹⁶ who also found no significant association between age distribution and relapse rates.

With regard to gender, 129 (71.67%) participants were male and 51 (28.33%) were female patients. The relapse group included 38 male and 13 female. This result was similar with studies conducted by Davarinejad et al.¹⁷, found that gender has no significant effect on relapse.

In terms of educational background, most patients in both groups had completed at least secondary education. However educational level was not found to be significantly associated with relapse, indicating that relapse may occur across educational strata without a clear predictive trend.

Occupational status also varied, with private employment being the most common, followed by unemployment. Among those who relapsed, a notable proportion were unemployed or engaged in informal labour, though the relationship between occupation and relapse was not statistically significant.

Out of 180 patients, 27 patients (15%) were Muslim patients, 34 patients (18.89%) were Christians and 119 patients (66.11%) were Hindu patients. Out of 51 patients in relapse group, 33 patients were Hindu, 9 patients were Christian and 9 patients were Muslim. Out of 129

patients in no relapse group, 86 patients were Hindu, 25 patients were Christian and 18 patients were Muslim.

Significant finding emerged concerning marital status. Relapse was markedly higher among individuals who were separated (24 out of 51) or divorced (20 out of 51). This association was statistically significant ($p < 0.05$) and aligns with the work of Merikangas et al.¹⁸, who reported higher relapse rates among divorced individuals, suggesting that marital disruption may contribute to emotional instability and lack of social support, exacerbating relapse risk.

120 patients (66.67%) were in nuclear family, 40 patients (22.22%) in joint family and 20 patients (11.11%) in extended family. 32 patients in relapse group were in nuclear family, 12 patients in relapse group were in joint family and 7 patients in relapse group were in extended family. 88 patients in no relapse group were in nuclear family, 28 patients in no relapse group were in joint family and 13 patients in no relapse group were in extended family. Most of the relapse are from nuclear family but not statistically significant which is similar to the findings of Sam et al.¹⁹

In this study, 50 patients (27.78%) are coming from rural area, 98 patients (54.44%) coming from semi-urban area, and 32 patients (17.78%) coming from urban area. In relapse group, 9 patients from rural area, 32 patients from semi-urban area and 10 patients from urban area. In no relapse group, 41 patients from rural area, 66 patients from semi-urban area and 22 patients from urban area. Geographical background showed the majority of participants resided in semi-urban areas, and although relapse was more common in this group, the association was not statistically significant.

Socioeconomic status, as indicated by the Modified Kuppuswamy classification, did not show a significant correlation with relapse. However, the majority of those relapsing were from middle and lower SES, possibly due to higher representation of this group in the sample.

Family history of psychiatric illness was significantly associated with relapse. Participants with a familial background of depression, BPAD, anxiety, psychosis, or substance abuse showed a markedly higher risk of relapse. P value was 0.001 < 0.05 , which was statistically significant. This finding highlights the importance of screening for psychiatric history as a component of risk assessment.

Out of 180 patients, 31 patients (17.22%) are having past history of psychiatric illness in this study. 29 patients in relapse group and 2 patients in no relapse group having past history of psychiatric illness. P value was 0.001 < 0.05 , which was statistically significant.

Out of 180 patients, 13 patients (7.22%) having past history of deliberate self-harm in this study. 11 patients in relapse group and 1 patient in no relapse group having past history of deliberate self-harm. P value was 0.001 < 0.05 , which was statistically significant finding that underscores the need for careful monitoring of patients with such histories.

In relapse group 13 patients using alcohol, 5 patients using cannabis, 20 patients using tobacco and 6 patients using MDMA. In no relapse group 6 patients are using alcohol, 1 patient using

cannabis, 5 patients using tobacco and no patient using MDMA. P value was 0.001 < 0.05 , which was statistically significant. This result was similar with studies conducted by Hepte et al.¹³, where rate of substance use was 11.5% and in study conducted by O'Hagan et al.²⁰, rate of substance use was 14.1%.

Mean age of the onset in Relapse group was 19.21 ± 0.635 years and mean age of onset in no relapse group was 23.89 ± 3.72 years. It is consistent with the result of other studies by Chopra et al.²¹ & Backlund et al.²²

The research by Hett et al. indicates that, after adjusting for various sociodemographic factors, a documented history of deliberate self-harm or suicidality, the existence of comorbid mental health condition, and manifestations of psychotic symptoms—either at the initial diagnosis or during relapse—were all significantly correlated with the occurrence of at least one relapse episode over a five-year span.²³ Moreover, an analysis of factors correlated with the frequency of relapses over the five-year span revealed that a documented history of deliberate self-harm or suicidality, trauma, the manifestation of the psychotic symptoms (either at initial diagnosis or during relapse), comorbidity, and ethnicity were all significantly associated with increased number of relapses, indicating the strength of our findings.

CONCLUSION

Prevalence of relapse of mania in this study was 28.33%. Younger age of onset of disease, History of broken family, history of familial psychiatric illness, past history of psychiatric illness, past history of deliberate self-harm and history of substance abuse were found to influence relapse of mania. The study underscores the critical importance of recognizing these risk factors, as early identification can lead to more effective and tailored interventions. By addressing these contributing

elements, healthcare professionals can potentially reduce relapse rates and enhance long-term treatment outcomes for individuals with BD. The findings emphasize the need for personalized management plans that take into account these risk factors, which could improve patient care and overall quality of life. Understanding and targeting this specific risk factors can guide both clinicians and patients in making informed decisions about treatment, ultimately contributing to better control of the illness and improved mental health outcomes.

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