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Frequency of Episodes of Mania among Adults

Ibadullah[1], Ameer Abbas Qureshi[1], Muhammad Haseeb[1], Atif Ahmad[1], Qandeel Shahid[1], Faheem Ullah Khan[1]

[1]Psychiatry Department, Hayatabad Medical Complex, Peshawar, KP, Pakistan.

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Correspondence to: Ibadullah, TMO, Psychiatry Department, Hayatabad Medical Complex, Peshawar, KP, Pakistan.
Email: dribadkhattak@gmail.com

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ABSTRACT

Background: Bipolar disorder represents a significant mental health burden among young adults, with manic episodes being a core diagnostic feature. Limited research exists on the prevalence of manic episodes among young adults with psychiatric disorders in developing countries, particularly regarding sociodemographic associations. Understanding these patterns is crucial for targeted intervention strategies and resource allocation. **Objective:** To determine the prevalence of manic episodes among adults with psychiatric disorders. **Methodology:** A cross-sectional study was conducted in the Department of Psychiatry in the duration from 1st February, 2025 to 15th June, 2025. Using consecutive sampling, 64 participants aged 18-35 years with psychiatric disorders were enrolled. Demographic data, medical history, and comorbidities were recorded. Manic episodes were assessed using the Young Mania Rating Scale (YMRS). Statistical analysis was performed using SPSS 23, with chi-square tests applied for associations at 5% significance level. **Results:** The prevalence of manic episodes was 28.1% (n=18). Participants were predominantly male (59.4%) with mean age 26.8±5.2 years. Significant associations were found between manic episodes and socioeconomic status (p=0.033), with poor participants having the highest prevalence (50.0%). Rural residence was significantly associated with manic episodes (45.0% vs 20.5% urban, p=0.033). YMRS severity levels also showed significant association with socioeconomic status (p=0.014). **Conclusion:** Young adults from lower socioeconomic backgrounds and rural areas demonstrated significantly higher rates of manic episodes.

INTRODUCTION

Episodes of mania among adults, often associated with bipolar disorder, represent a fascinating and complex facet of mental health. Mania is characterized by an intense and sustained period of elevated mood, heightened energy levels, and a range of behavioral symptoms (Kessing *et al.,* 2018). These episodes can be both exhilarating and challenging, not only for the individuals experiencing them but also for their loved ones (Nestsiarovich *et al.,* 2022).

The primary characteristic of mania is a persistent and abnormal elevation in mood. Individuals experiencing a manic episode often feel excessively happy, euphoric, or even irritable. They may exhibit a heightened sense of self-importance and grandiosity, believing they possess special powers or abilities (McIntyre *et al.,* 2019). Manic episodes are often accompanied by increased energy levels, impulsivity, and restlessness. Individuals may engage in reckless behaviors such as overspending, risky sexual activities, or substance abuse (Kranti *et al.,* 2020).

Their speech may become rapid, pressured, and difficult to interrupt. A decreased need for sleep is also common, and individuals may go days without restful slumber. Mania can affect an individual's thinking and judgment. Racing thoughts, distractibility, and poor decision-making are frequent cognitive symptoms (Vazquez *et al.,* 2018). People in a manic state may have difficulty concentrating on tasks or making rational choices, which can lead to conflicts and negative. The precise causes of manic episodes remain a subject of ongoing research (McIntyre *et al.,* 2019; Rowland *et al.,* 2018).

Genetics plays a significant role in bipolar disorder; the most common condition associated with mania. If a close family member has bipolar disorder, an individual's risk of developing the disorder is higher. In some cases, medications or other medical conditions can induce mania as a side effect (Jon *et al.,* 2020). Personality traits and coping mechanisms may contribute to the development of mania. People with certain traits, such as high levels of extraversion and impulsivity, may be more prone to manic episodes. The management of mania is a multifaceted process that involves a combination of therapeutic interventions and support (Perry *et al.,* 2019; Johnson *et al.,* 2019). A study reported the episodes of mania among young adults presented with psychiatric disorders was (7.5%) (Jansen *et al.,* 2011).

Episodes of mania among young adults are a challenging aspect of mental health that demand a

comprehensive and compassionate approach. There is a paucity of literature on this, the purpose of this study is to determine the frequency of episodes of mania among young adults presenting with psychiatric disorders at our health setup. The results of this study will help medical professionals in understanding the manifestations, causes, and management of mania, which is vital in providing effective care and support for those experiencing these episodes. With the right interventions and support, individuals that involve mania can lead fulfilling lives and manage their symptoms effectively.

METHODOLOGY

Sample Selection

This cross-sectional study was conducted in the Department of Psychiatry from 1st February, 2025 to 15th June, 2025. The sample size was 64 participants selected through non-probability consecutive sampling technique. Inclusion criteria comprised male and female participants aged 18-35 years diagnosed with psychiatric disorders as per operational definition. Exclusion criteria included patients with substance use disorders and those with central nervous system or neuromuscular disorders.

Data Collection

The study was initiated after approval was obtained from the ethical committee board of the hospital and research department of CPSP Karachi. Patients satisfying the inclusion criteria were enrolled in the study. Informed written consent forms were obtained from all patients after explaining the goals of this research work and assuring them that there was no risk involved in participating in this study. Demographic information including gender, age, socio-economic status, profession, education status, and residence area was recorded. Comorbidities such as diabetes mellitus and hypertension were noted down. Medical history was taken and physical examination was performed. Young adults identified with psychiatric disorders were examined for episodes of mania based on the Young Mania Rating Scale.

Data Analysis

Data analysis was performed using SPSS 23. Numerical data (age, symptom duration) were presented as mean ± SD or median (IQR) after assessing normality with Shapiro-Wilk test. Categorical variables (gender, manic episodes, socioeconomic status, profession, education, residence, diabetes, hypertension) were presented as frequencies and percentages. Effect modifiers were addressed through stratification, and post-stratification chi-square tests were applied at 5% significance level. Results were displayed in tables and graphs.

RESULTS

Demographics

Table 1 demonstrates that the majority of participants were male (59.4%) with a mean age of 26.8 ± 5.2 years, predominantly from middle-class socioeconomic backgrounds (65.6%) and urban areas (68.8%). Most participants were literate (75.0%) with students comprising the largest professional group (34.4%), while comorbidities were relatively uncommon with diabetes mellitus present in 14.1% and hypertension in 18.8% of participants. The overall prevalence of manic episodes was 28.1% among the study population.

Table 1

Demographic Characteristics of Study Participants (n=64)

Variable	Frequency (n)	Percentage (%)
Gender		
Male	38	59.4
Female	26	40.6
Age (Years)		
Mean ± SD	26.8 ± 5.2	
18-25	28	43.8
26-35	36	56.3
Duration of Symptoms (Weeks)		
Median (IQR)	8.5 (4.0-16.0)	
≤ 8 weeks	32	50.0
> 8 weeks	32	50.0
Socioeconomic Status		
Rich	8	12.5
Middle Class	42	65.6
Poor	14	21.9
Profession		
Labour	16	25.0
Student	22	34.4
Office Worker	12	18.8
Unemployed	10	15.6
Other	4	6.3
Education Status		
Literate	48	75.0
Illiterate	16	25.0
Residence Area		
Urban	44	68.8
Rural	20	31.3
Diabetes Mellitus		
Yes	9	14.1
No	55	85.9
Hypertension		
Yes	12	18.8
No	52	81.3
Episodes of Mania		
Yes	18	28.1
No	46	71.9

Figure 1

Gender Distribution of Study Participants (n=64)

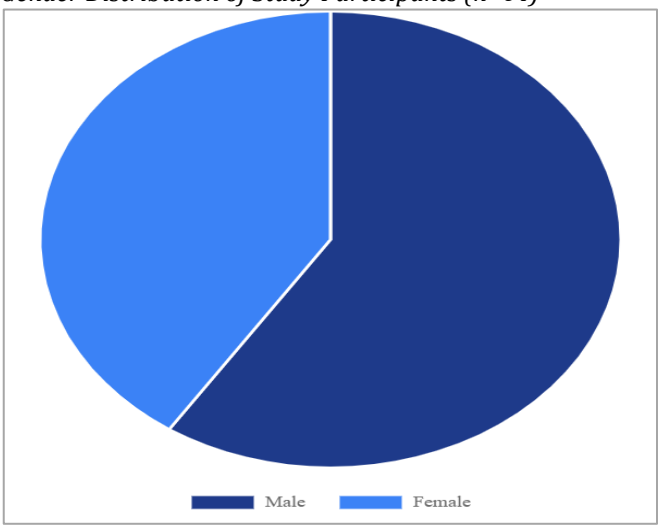


Figure 2
Socioeconomic Status Distribution Among Study Participants

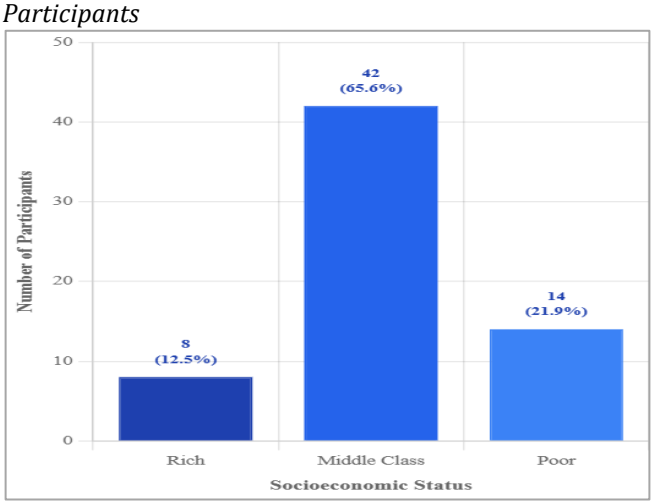


Figure 3
Residential Area Distribution of Study Participants

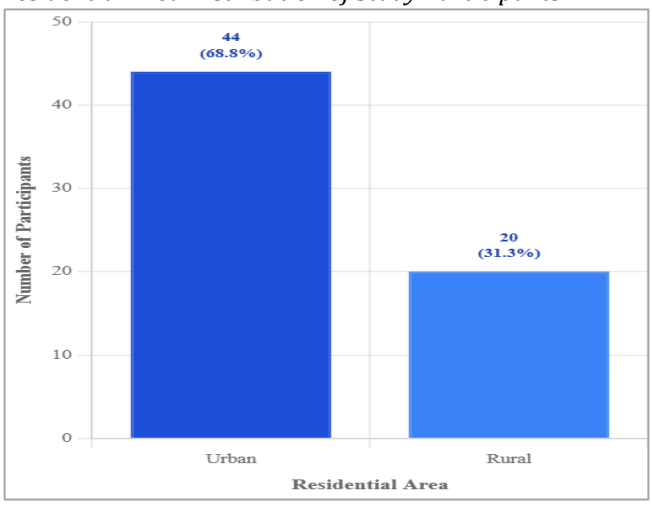
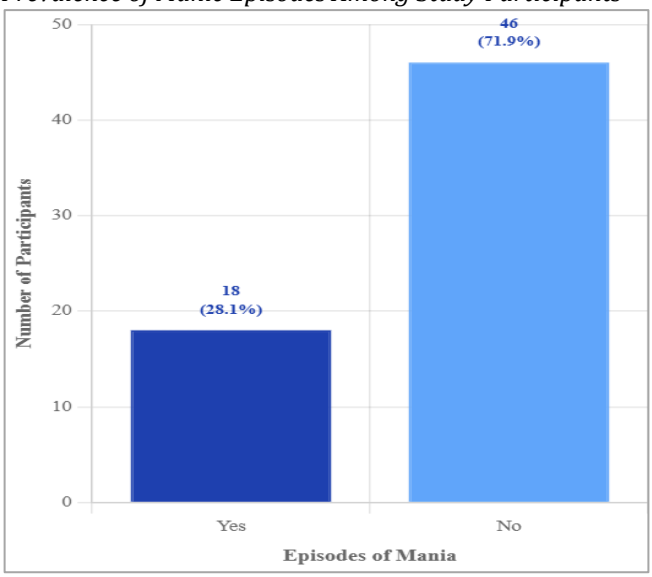


Figure 4
Prevalence of Manic Episodes Among Study Participants



Young Mania Rating Scale Distribution

Table 2 reveals that the majority of participants (71.9%) had minimal manic symptoms with YMRS scores ranging from 0-12, while only a small proportion exhibited severe symptoms (6.3%). The mean YMRS score was 8.4 ± 12.6 with a median of 4.0, indicating that most participants had low-level manic symptomatology. The distribution shows a clear skew towards lower severity levels, with moderate to severe manic symptoms present in only 15.7% of the total sample.

Table 2
Young Mania Rating Scale (YMRS) Scores Distribution (n=64)

YMRS Score Range	Frequency (n)	Percentage (%)	Interpretation
0-12 (Minimal)	46	71.9	No significant manic symptoms
13-19 (Mild)	8	12.5	Mild manic symptoms
20-25 (Moderate)	6	9.4	Moderate manic symptoms
26+ (Severe)	4	6.3	Severe manic symptoms
Mean ± SD	**8.4 ± 12.6**		
Median (IQR)	**4.0 (1.0-11.5)**		

Association between Demographic Variables and Episodes of Mania

Table 3 shows significant associations between socioeconomic status and episodes of mania (p=0.033), with poor patients having the highest prevalence of manic episodes (50.0%) compared to middle-class (23.8%) and rich patients (12.5%). Rural residence was also significantly associated with manic episodes (p=0.033), with 45.0% of rural participants experiencing mania compared to 20.5% of urban participants. Other demographic variables including gender, age, education status, and comorbidities showed no statistically significant associations with manic episodes.

Table 3
Association between Demographic Variables and Episodes of Mania

Variable	Episodes of Mania			Chi-square	p-value
	Yes (n=18)	No (n=46)	Total		
Gender					
Male	13 (34.2%)	25 (65.8%)	38	2.187	0.139
Female	5 (19.2%)	21 (80.8%)	26		
Age Groups					
18-25 years	10 (35.7%)	18 (64.3%)	28	1.524	0.217
26-35 years	8 (22.2%)	28 (77.8%)	36		
Socioeconomic Status					
Rich	1 (12.5%)	7 (87.5%)	8	6.842	**0.033***
Middle Class	10 (23.8%)	32 (76.2%)	42		
Poor	7 (50.0%)	7 (50.0%)	14		
Education Status					
Literate	11 (22.9%)	37 (77.1%)	48	2.844	0.092
Illiterate	7 (43.8%)	9 (56.3%)	16		
Residence Area					
Urban	9 (20.5%)	35 (79.5%)	44	4.571	**0.033***

Rural	9 (45.0%)	11 (55.0%)	20		
Diabetes Mellitus					
Yes	4 (44.4%)	5 (55.6%)	9	1.876	0.171
No	14 (25.5%)	41 (74.5%)	55		
Hypertension					
Yes	5 (41.7%)	7 (58.3%)	12	1.542	0.214
No	13 (25.0%)	39 (75.0%)	52		

**p < 0.05 (statistically significant)*

YMRS Severity Association

Table 4 demonstrates a significant association between socioeconomic status and YMRS severity levels (p=0.014), with poor participants showing higher rates of moderate (21.4%) and severe (14.3%) manic symptoms compared to middle-class and rich participants. The data indicates that 35.7% of poor participants had clinically significant manic symptoms (moderate to severe) versus only 11.9% in the middle class and 0% in the rich category. Gender and age groups showed no significant associations with YMRS severity levels, suggesting that socioeconomic factors play a crucial role in symptom severity.

Table 4

Association between Clinical Variables and YMRS Severity Levels

Variable	*YMRS Score Categories*				*Chi-square*	*p-value*
	Minimal (0-12)	**Mild (13-19)**	**Moderate (20-25)**	**Severe (26+)**		
Gender						
Male	25 (65.8%)	6 (15.8%)	4 (10.5%)	3 (7.9%)	2.458	0.482
Female	21 (80.8%)	2 (7.7%)	2 (7.7%)	1 (3.8%)		
Age Groups						
18-25 years	18 (64.3%)	4 (14.3%)	3 (10.7%)	3 (10.7%)	3.842	0.279
26-35 years	28 (77.8%)	4 (11.1%)	3 (8.3%)	1 (2.8%)		
Socioeconomic Status						
Rich	7 (87.5%)	1 (12.5%)	0 (0%)	0 (0%)	12.456	**0.014***
Middle Class	32 (76.2%)	5 (11.9%)	3 (7.1%)	2 (4.8%)		
Poor	7 (50.0%)	2 (14.3%)	3 (21.4%)	2 (14.3%)		

**p < 0.05 (statistically significant)*

DISCUSSION

The present study revealed a 28.1% prevalence of manic episodes among young adults with psychiatric disorders, which is notably higher than previous epidemiological reports. Jansen *et al.* (2011) reported a 7.5% prevalence of manic episodes in young adults, while global studies indicate bipolar disorder affects 1-5% of the population (Hussain *et al.,* 2025; Dong *et al.,* 2019). This elevated prevalence may reflect the specific clinical setting and inclusion of patients already presenting with psychiatric disorders, representing a more severe patient population seeking specialized care.

The significant association between lower socioeconomic status and manic episodes (p=0.033) contrasts with some existing literature. While historical studies suggested higher socioeconomic status was associated with bipolar disorder due to creativity and occupational achievement (Johnson *et al.,* 2018), recent epidemiological studies have failed to find an association between BD and SES, instead reporting similar distribution across social classes. Our findings align more closely with studies showing stressful life events including unemployment and disability are associated with developing bipolar disorder, suggesting that socioeconomic disadvantage may trigger manic episodes through increased psychosocial stressors.

Rural residence emerged as another significant risk factor for manic episodes (45.0% vs 20.5% in urban areas, p=0.033), which may reflect limited access to mental healthcare, delayed diagnosis, and increased psychosocial stressors in rural settings (Musliner *et al.,* 2016). This finding has important implications for healthcare planning and resource allocation. The YMRS score distribution showed most participants (71.9%) had minimal symptoms, consistent with the episodic nature of bipolar disorder where patients may present during interepisodic periods (Karanti *et al.,* 2020; Oliva *et al.,* 2025).

The lack of significant associations between gender, age, and manic episodes differs from some studies reporting male predominance in manic presentations (McIntyre & Calabrese, 2019; Nestsiarovich *et al.,* 2022). However, our findings support research indicating similar prevalence across demographic groups when examining broader populations. The low prevalence of medical comorbidities (diabetes 14.1%, hypertension 18.8%) reflects the relatively young age of our sample.

The present study's strengths include the use of a validated instrument (YMRS) for assessing manic symptoms and comprehensive demographic data collection including socioeconomic factors often overlooked in psychiatric research. However, limitations include the study's hospital-based setting which may have resulted in overrepresentation of more severe cases, limiting generalizability to community populations.

Future longitudinal studies should investigate the temporal relationship between socioeconomic decline and manic episode onset to establish causality. Healthcare policies should prioritize mental health services in rural areas and address socioeconomic determinants of mental health through integrated care approaches. Screening protocols for manic symptoms should be implemented in primary care settings, particularly in underserved populations. Research should explore the effectiveness of socioeconomic interventions as adjunctive treatments for bipolar disorder prevention and management.

CONCLUSION

This study demonstrates significantly higher rates of manic episodes among young adults from lower socioeconomic backgrounds and rural areas, highlighting

the importance of addressing social determinants of mental health. The findings emphasize the need for targeted interventions and improved mental healthcare access in vulnerable populations to reduce the burden of manic episodes.

REFERENCES

Dong, M., Zeng, L., Lu, L., Li, X., Ungvari, G. S., Ng, C. H., Chow, I. H., Zhang, L., Zhou, Y., & Xiang, Y. (2018). Prevalence of suicide attempt in individuals with major depressive disorder: A meta-analysis of observational surveys. *Psychological Medicine*, *49*(10), 1691-1704. https://doi.org/10.1017/s0033291718002301

Hussain, S., Brewer, E., & Tyler, E. (2025). A systematic review of measures of mania and depression in older people with bipolar disorder. *Journal of Affective Disorders*, *373*, 133-148. https://doi.org/10.1016/j.jad.2024.12.067

Jansen, K., Ores, L. D., Cardoso, T. D., Lima, R. D., Souza, L. D., Magalhães, P. V., Pinheiro, R. T., & Da Silva, R. A. (2011). Prevalence of episodes of mania and hypomania and associated comorbidities among young adults. *Journal of Affective Disorders*, *130*(1-2), 328-333. https://doi.org/10.1016/j.jad.2010.10.007

Johnson, S. L., Madole, J. W., & Freeman, M. A. (2018). Mania risk and entrepreneurship: Overlapping personality traits. *Academy of Management Perspectives*, *32*(2), 207-227. https://doi.org/10.5465/amp.2016.0165

Karanti, A., Kardell, M., Joas, E., Runeson, B., Pålsson, E., & Landén, M. (2019). Characteristics of bipolar I and II disorder: A study of 8766 individuals. *Bipolar Disorders*, *22*(4), 392-400. https://doi.org/10.1111/bdi.12867

Kessing, L. V., Andersen, P. K., & Vinberg, M. (2017). Risk of recurrence after a single manic or mixed episode – a systematic review and meta-analysis. *Bipolar Disorders*, *20*(1), 9-17. https://doi.org/10.1111/bdi.12593

Latalova, K., Kamaradova, D., & Prasko, J. (2014). Perspectives on perceived stigma and self-stigma in adult male patients with depression. Neuropsychiatric Disease and Treatment, 1399. https://doi.org/10.2147/ndt.s54081

McIntyre, R. S., & Calabrese, J. R. (2019). Bipolar depression: The clinical characteristics and unmet needs of a complex disorder. *Current Medical Research and Opinion*, *35*(11), 1993-2005. https://doi.org/10.1080/03007995.2019.1636017

McIntyre, R. S., Suppes, T., Earley, W., Patel, M., & Stahl, S. M. (2019). Cariprazine efficacy in bipolar I depression with and without concurrent manic symptoms: Post hoc analysis of 3 randomized, placebo-controlled studies. *CNS Spectrums*, *25*(4), 502-510. https://doi.org/10.1017/s1092852919001287

Musliner, K. L., Munk-Olsen, T., Eaton, W. W., & Zandi, P. P. (2016). Heterogeneity in long-term trajectories of depressive symptoms: Patterns, predictors and outcomes. *Journal of Affective Disorders*, *192*, 199-211. https://doi.org/10.1016/j.jad.2015.12.030

Nestsiarovich, A., Gaudiot, C. E., Baldessarini, R. J., Vieta, E., Zhu, Y., & Tohen, M. (2022). Preventing new episodes of bipolar disorder in adults: Systematic review and meta-analysis of randomized controlled trials. *European Neuropsychopharmacology*, *54*, 75-89. https://doi.org/10.1016/j.euroneuro.2021.08.264

Oliva, V., Fico, G., De Prisco, M., Gonda, X., Rosa, A. R., & Vieta, E. (2025). Bipolar disorders: An update on critical aspects. *The Lancet Regional Health - Europe*, *48*, 101135. https://doi.org/10.1016/j.lanepe.2024.101135

Perry, A., Gordon-Smith, K., Webb, I., Fone, E., Di Florio, A., Craddock, N., Jones, I., & Jones, L. (2019). Postpartum psychosis in bipolar disorder: No evidence of association with personality traits, cognitive style or affective temperaments. *BMC Psychiatry*, *19*(1). https://doi.org/10.1186/s12888-019-2392-0

Rowland, T. A., & Marwaha, S. (2018). Epidemiology and risk factors for bipolar disorder. *Therapeutic Advances in Psychopharmacology*, *8*(9), 251-269. https://doi.org/10.1177/2045125318769235

Vázquez, G. H., Lolich, M., Cabrera, C., Jokic, R., Kolar, D., Tondo, L., & Baldessarini, R. J. (2018). Mixed symptoms in major depressive and bipolar disorders: A systematic review. *Journal of Affective Disorders*, *225*, 756-760. https://doi.org/10.1016/j.jad.2017.09.006

CONSENT FORM

FREQUENCY OF EPISODES OF MANIA AMONG ADULTS

Name of the participant: _____
Age: _____ Years
Address: _____
NIC No: _____

This study is conducted for research purposes. The results of this study will not be entered into your medical report. (Explain in Urdu, Pashto, or English). Please sign below to confirm that you are willing to participate in this study and that you have been explained in detail regarding the procedure employed and its risks and benefits.

Participant's signature or Thumb impression:_____
Consent was taken by: _____
Designation:_____
Signature:_____

QUESTIONNAIRE
(Annexure A)

PROFORMA
FREQUENCY OF EPISODES OF MANIA AMONG ADULTS

DATE._____
Medical No._____
Case No._____
Gender._____ Male/Female
Age._____ Years
Address._____
Duration of symptoms._____ Weeks
Monthly Income (Rs)._____
Socio economic status:

Rich ☐ Middle Class ☐ Poor ☐

Profession

Labour ☐ Student ☐ Office Worker ☐ Un-employed ☐ Other ☐

Education status:

Literate ☐ Illiterate ☐

Residence area:

Rural ☐ Urban ☐

Diabetes mellitus:

Yes ☐ No ☐

Hypertension:

Yes ☐ No ☐

EPISODES OF MANIA:

Yes ☐ No ☐

Signature of researcher._____

(*Annexure B)*

FREQUENCY OF EPISODES OF MANIA AMONG ADULTS

Young Mania Rating Scale (YMRS)

GUIDE FOR SCORING ITEMS:

The purpose of each item is to rate the severity of that abnormality in the patient. When several keys are given for a particular grade of severity, the presence of only one is required to qualify for that rating.

The keys provided are guides. One can ignore the keys if that is necessary to indicate severity, although this should be the exception rather than the rule.

Scoring between the points given (whole or half points) is possible and encouraged after experience with the scale is acquired. This is particularly useful when severity of a particular item in a patient does not follow the progression indicated by the keys.

1. **Elevated Mood**
   - 0 Absent
   - 1 Mildly or possibly increased on questioning
   - 2 Definite subjective elevation; optimistic, self-confident; cheerful; appropriate to content
   - 3 Elevated; inappropriate to content; humorous
   - 4 Euphoric; inappropriate laughter; singing

2. **Increased Motor Activity-Energy**
   - 0 Absent
   - 1 Subjectively increased
   - 2 Animated; gestures increased
   - 3 Excessive energy; hyperactive at times; restless (can be calmed)
   - 4 Motor excitement; continuous hyperactivity (cannot be calmed)

3. **Sexual Interest**
   - 0 Normal; not increased
   - 1 Mildly or possibly increased
   - 2 Definite subjective increase on questioning
   - 3 Spontaneous sexual content; elaborates on sexual matters; hypersexual by self-report
   - 4 Overt sexual acts (toward patients, staff, or interviewer)

4. **Sleep**
   - 0 Reports no decrease in sleep
   - 1 Sleeping less than normal amount by up to one hour
   - 2 Sleeping less than normal by more than one hour
   - 3 Reports decreased need for sleep
   - 4 Denies need for sleep

5. **Irritability**
   - 0 Absent
   - 2 Subjectively increased
   - 4 Irritable at times during interview; recent episodes of anger or annoyance on ward
   - 6 Frequently irritable during interview; short, curt throughout
   - 8 Hostile, uncooperative; interview impossible

Young Mania Rating Scale (YMRS)

6. Speech (Rate and Amount)
- 0 No increase
- 2 Feels talkative
- 4 Increased rate or amount at times, verbose at times
- 6 Push; consistently increased rate and amount; difficult to interrupt
- 8 Pressured; uninterruptible, continuous speech

7. Language-Thought Disorder
- 0 Absent
- 1 Circumstantial; mild distractibility; quick thoughts
- 2 Distractible, loses goal of thought; changes topics frequently; racing thoughts
- 3 Flight of ideas; tangentiality; difficult to follow; rhyming, echolalia
- 4 Incoherent; communication impossible

8. Content
- 0 Normal
- 2 Questionable plans, new interests
- 4 Special project(s); hyper-religious
- 6 Grandiose or paranoid ideas; ideas of reference
- 8 Delusions; hallucinations

9. Disruptive-Aggressive Behavior
- 0 Absent, cooperative
- 2 Sarcastic; loud at times, guarded
- 4 Demanding; threats on ward
- 6 Threatens interviewer; shouting; interview difficult
- 8 Assaultive; destructive; interview impossible

10. Appearance
- 0 Appropriate dress and grooming
- 1 Minimally unkempt
- 2 Poorly groomed; moderately disheveled; overdressed
- 3 Disheveled; partly clothed; garish make-up
- 4 Completely unkempt; decorated; bizarre garb

11. Insight
- 0 Present; admits illness; agrees with need for treatment
- 1 Possibly ill
- 2 Admits behavior change, but denies illness
- 3 Admits possible change in behavior, but denies illness
- 4 Denies any behavior change