

Prevalence of Trauma and PTSD in Psychiatric Patient at ANMCH Gaya Ji Bihar

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Abstract

Background: Trauma and Post-Traumatic Stress Disorder (PTSD) are significant mental health concerns among psychiatric patients, yet their prevalence in regional populations such as Bihar remains underexplored. Anugrah Narayan Magadh Medical College and Hospital (ANMMCH), Gaya, serves a diverse psychiatric population, providing an opportunity to assess trauma exposure and PTSD prevalence in this context.

Methods: A cross-sectional observational study was conducted from January 2025 to June 2025, involving 100 psychiatric patients. Data were collected using the Mini International Neuropsychiatric Interview (MINI) for psychiatric diagnoses and the Clinician-Administered PTSD Scale (CAPS) for assessing PTSD severity. Descriptive statistics, chi-square tests, and logistic regression analyses were performed to identify prevalence patterns and associated factors.

Results: The overall prevalence of PTSD was 22%, with interpersonal violence and natural disasters identified as the primary trauma types. Female gender, age 31–45 years, and lower socio-economic status were associated with higher PTSD prevalence. Comorbid conditions, particularly depression (73%) and anxiety (55%), were common among PTSD patients.

Conclusion: PTSD is a prevalent and clinically significant condition among psychiatric patients at ANMMCH. Integrating routine trauma screening and trauma-informed care into psychiatric services is essential to improve patient outcomes and address co-occurring psychiatric disorders effectively.

Keywords: ANMMCH, Bihar, Comorbid Disorders, Psychiatric Patients, Trauma, PTSD, Trauma-Informed Care.

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Introduction

Gaya's ANMMCH is a well-known Bihar government hospital. ANMMCH has led medical research, treatment, and teaching for over 50 years [1]. Gaya and its neighbours are served by Bihar University of Health Sciences' hospital. Critical healthcare and research hub ANMMCH serves a varied patient population through its clinical departments. The ANMMCH Department of Psychiatry diagnoses and treats anxiety, bipolar, schizophrenia, depression, and trauma. The centre provides a once-in-a-lifetime chance to study trauma and PTSD in its patients due to its clinical treatment and research focus.

Mental patients' trauma and PTSD rates are essential in Bihar, where environmental and socioeconomic stressors are high. Due to its poverty and high population density, Bihar suffers from floods and droughts that impair mental health. Psychological distress and psychiatric disease risk

increase with environmental and socioeconomic factors. Environmental disasters and social pressures like unemployment, interpersonal conflicts, and domestic abuse can produce trauma [2]. Many psychiatric patients in these settings have complicated mental health histories, and trauma can affect symptoms, therapy, and prognosis. Intrusive thoughts, flashbacks, hyperarousal, emotional numbing, and avoidance are symptoms of PTSD, a disabling illness caused by trauma.

Misdiagnosed or untreated PTSD in psychiatric settings can worsen treatment outcomes, healthcare burden, and quality of life, as well as complicate management of co-existing mental health illnesses [3]. Clinically relevant evidence on trauma and PTSD in psychiatric patients in India, especially Bihar, is rare. Global study shows PTSD prevalence rates in mental populations ranging from 10% to 50%, but local data is sparse [4]. Lack

of epidemiological research prevents local mental health professionals from providing trauma-informed care or focused interventions. Assessing trauma and PTSD in psychiatric patients presenting to ANMMCH can fill this information gap and improve clinical care and mental health policy. With its backing, evidence-based early identification, intervention, and rehabilitation programs can be designed and at-risk populations effectively allocated. Studies like this help adapt mental health therapies to Bihar's cultural and environmental circumstances, where trauma may be different than in cities or other parts of the country.

Thus, this study examines trauma and PTSD in ANMMCH's psychiatric patients from January 25th to June 25th, a six-month period. This research aims to (1) measure trauma exposure, (2) determine what percentage of patients meet PTSD diagnostic criteria, and (3) examine demographic and clinical characteristics related to PTSD using standardised diagnostic instruments and organised clinical interviews. Standard psychiatric care should include trauma-focused examination and management, and this study should show the severity of trauma-related mental disease. Studying trauma and PTSD in psychiatric patients at ANMMCH can improve patient outcomes, mental health care delivery, and evidence-based public health efforts in Bihar.

This study must be placed in national and international research frameworks to properly understand trauma and PTSD in mental patients. According to epidemiological study, India's general population has PTSD rates of 0.2 percent, much lower than global rates [5]. This research revealed several socio-cultural and demographic factors that affect PTSD. Women are more prone to endure interpersonal violence and social marginalisation, which may explain their higher PTSD rates.

Middle-aged persons have a higher prevalence, maybe due to lifelong pressures. Living in an urban location increases the risk of PTSD due to exposure to urban violence, accidents, and other high-stress factors [6,7]. Even though national surveys show low prevalence of trauma-related disorders, psychiatric patients may have preexisting mental health vulnerabilities and impaired coping mechanisms, making them more vulnerable to trauma-related disorders.

Environmental and socioeconomic variables may increase PTSD in Bihar. Disasters, especially droughts and floods, often strike Bihar, affecting its residents psychologically. Research shows that elderly and socially isolated Bihar flood survivors are more likely to have PTSD and despair. Poverty, limited mental health care, and repeated trauma put local mental health patients at danger [8,9]. These

regional findings demonstrate the importance of understanding local trauma exposure patterns and demographic and environmental factors that affect PTSD risk. Cultural attitudes of mental illness, social networks, and familial support systems also affect PTSD perception and reporting, according to [10].

Research demonstrates that PTSD prevalence varies widely within psychiatric populations due to trauma exposure, diagnosis techniques, and cultural environments [11]. Psychiatric prevalence ranges from 10% to 50% globally, with higher rates in war, terrorism, and serious interpersonal violence victims. Comparative studies suggest that localised investigations are necessary to capture context-specific risk variables and clinical manifestations, even while international data provide useful norms [12]. PTSD prevalence varies internationally due to socioeconomic position, environmental conditions, and healthcare considerations. PTSD research in Bihar's mental health patients is crucial since environmental disasters, demographic variables, and socio-cultural factors all affect trauma-related psychiatric illness.

Regional studies in Bihar show that PTSD is more widespread than assumed, especially among the elderly and natural disaster survivors. Localised research that considers socio-cultural and environmental aspects is essential, and global comparisons show PTSD prevalence variety. This analysis provides a good foundation for the current investigation, which will examine PTSD and trauma in ANMMCH psychiatric patients. The findings may inform mental health care interventions and plans based on this scenario.

Methodology

Study Design: Cross-sectional observational study at ANMMCH in Gaya, Bihar, to identify trauma and PTSD prevalence among psychiatric patients. To quickly analyse trauma and PTSD rates in psychiatric patients, researchers used cross-sectional methods. This design provides epidemiological data for mental health planning and service delivery by correlating trauma-related, demographic, and clinical variables.

Study Population and Sample Size: ANMMCH Psychiatry Department patients from January 25 to June 25 participated.

The study included 100 patients depending on practicality, resources, and hospital patient flow. To establish a representative mental population, the sample includes male and female patients of varied ages and socioeconomic backgrounds.

Inclusion and Exclusion Criteria:

The inclusion criteria for the study were:

- patients diagnosed with any psychiatric disorder at ANMMCH during the study period,
- patients aged 18 years or older, and
- Patients providing informed consent to participate in the study.

The exclusion criteria were:

- patients with significant cognitive impairments that could interfere with comprehension or participation,
- patients unable to provide informed consent due to severe psychiatric symptoms or altered mental status, and
- Patients with acute medical conditions requiring immediate hospitalization. These criteria were designed to ensure that participants could reliably complete the assessments and provide accurate information about trauma exposure and PTSD symptoms.

Data Collection Tools: Precision and reliability were achieved by collecting data with standardised equipment. PTSD was found in the Mini International Neuropsychiatric Interview. Clinical and research contexts use the MINI, a systematic diagnostic interview that examines major mental diseases using DSM and ICD criteria.

The Clinician-Administered PTSD Scale assessed PTSD severity. The widely used clinician-administered CAPS scale analyses PTSD symptoms' frequency and severity, providing diagnostic and severity data. The study collected

demographic, trauma, and clinical data using a standardised questionnaire.

Data Analysis: Data was analysed using descriptive and inferential statistics. Demographics, trauma history, and PTSD prevalence were summarised using percentages, means, and standard deviations. We examined chi-square relationships between gender, age, trauma type, PTSD incidence, and other categorical variables. Logistic regression analysis was used to predict mental patients' PTSD after controlling for confounding variables. All analyses were conducted using SPSS software version (or R program) and statistical significance was set at $p < 0.05$, ensuring robust and reproducible results.

Results

Demographic Profile: The study included 100 psychiatric patients attending the Department of Psychiatry at ANMMCH during the study period.

The age distribution ranged from 18 to 65 years, with a mean age of 37.6 ± 12.4 years. Among the participants, 54% were male and 46% were female. Socio-economic status, assessed according to the Modified Kuppuswamy Scale, indicated that 40% of patients belonged to the lower socio-economic class, 45% to the middle class, and 15% to the upper class. Regarding educational attainment, 30% of patients were illiterate, 40% had completed secondary education, and 30% had pursued higher education. The demographic characteristics are summarized in Table 1.

Table 1: Demographic Profile of Psychiatric Patients (N = 100)

Demographic Variable	Frequency (n)	Percentage (%)
Age Group (years)		
18–30	28	28
31–45	42	42
46–65	30	30
Gender		
Male	54	54
Female	46	46
Socio-economic Status		
Lower	40	40
Middle	45	45
Upper	15	15
Education Level		
Illiterate	30	30
Secondary	40	40
Higher	30	30

Prevalence Rates: The overall prevalence of PTSD among the psychiatric patients was found to be 22%. Subgroup analysis revealed that trauma due to natural disasters, such as floods and accidents, accounted for 9% of PTSD cases,

whereas trauma related to interpersonal violence, including domestic abuse and physical assault, accounted for 13% of cases. Other less common trauma types included bereavement and serious accidents, contributing to the remaining prevalence.

Table 2: PTSD Prevalence Based on Trauma Type

Trauma Type	PTSD Cases (n)	Percentage (%)
Natural Disasters	9	9
Interpersonal Violence	13	13
Bereavement/Accidents	0	0
Total	22	22

Associated Factors: Analysis of associated factors indicated that female patients had a slightly higher PTSD prevalence (13%) compared to males (9%). Age-wise, individuals aged 31–45 years showed the highest prevalence (10%), followed by the 18–30 and 46–65 age groups. Socio-economic status was significantly associated with PTSD, with higher prevalence among patients from lower and middle socio-economic classes. Trauma type also emerged as a significant factor, with interpersonal violence showing the strongest association with PTSD ($p < 0.05$).

Additionally, comorbid psychiatric conditions were common among patients with PTSD. Depression was present in 16 of the 22 PTSD patients (73%), while anxiety disorders were observed in 12 patients (55%). The co-occurrence of PTSD with other psychiatric disorders underscores the complexity of mental health needs in this population and highlights the necessity for integrated care approaches.

Table 3: PTSD Prevalence by Associated Factors

Factor	PTSD Cases (n)	Percentage (%)
Gender		
Male	9	9
Female	13	13
Age Group (years)		
18–30	6	6
31–45	10	10
46–65	6	6
Comorbid Depression	16	73
Comorbid Anxiety	12	55

Discussion

This study examined trauma and PTSD in mental patients at ANMMCH, Gaya, and Bihar. This cohort has a high trauma-related psychiatric morbidity rate of 22%. Official statistics in India reveal a 0.2% prevalence of PTSD in public surveys, however this rate appears higher.

The study's target psychiatric group may be responsible for the disparity because pre-existing mental health conditions increase the risk of PTSD after trauma.

Poverty, flooding, and a lack of mental health services in Bihar may make psychiatric patients more vulnerable. Regional studies have found PTSD to be more common in Bihar, especially among older people and natural catastrophe victims

and these results match those. The 22% prevalence in this study matches with global estimates, demonstrating that trauma exposure is a substantial public health issue in mental health settings regardless of income.

Under subgroup analysis, natural catastrophes were the second most common trauma connected to PTSD after interpersonal violence. This supports global and national research that found interpersonal trauma to be a risk factor for PTSD.

In line with prior studies, this study found that PTSD was more common in women and younger age groups (31–45).

Many PTSD patients also have anxiety (55%), sadness (73%), and other mental health difficulties. Trauma and mental health are interconnected.

Table 4: Comparison table of Present Study with Existing Research

Study	Study Type	Sample Size	Key Findings
Present Study (ANMMCH, Gaya, Bihar, 2025)	Cross-sectional observational	100 psychiatric patients	Overall PTSD prevalence: 22%; main trauma types: interpersonal violence (13%) and natural disasters (9%); higher prevalence in females, age 31–45, lower socio-economic status; comorbid depression (73%) and anxiety (55%)
Study 1 [13]	Cross-sectional survey	3,500 general population	PTSD prevalence: 0.2%; higher risk in females, middle-aged adults, and urban residents; highlights

			low overall prevalence in general population
Study 2[14]	Cross-sectional observational	210 flood-affected individuals	PTSD prevalence: 18%; older adults and socially vulnerable groups at higher risk; environmental disasters significantly contributed to trauma-related morbidity
Study 3[15]	Hospital-based cross-sectional	150 psychiatric patients	PTSD prevalence: 20%; trauma from interpersonal violence most common; high comorbidity with depression and anxiety; similar demographic risk factors as present study

Current research on PTSD prevalence and features shows similarities and variations with prior research. The current study's 22% overall PTSD prevalence matches study 1's 20% prevalence among tertiary care psychiatric patients, showing their trauma susceptibility. PTSD is much more common in those with pre-existing mental health issues, according to national surveys like study 2 that reveal 0.2% in the general population. Regional studies like study 3 in Bihar suggest higher prevalence (18%) among disaster-affected people due to environmental and socioeconomic pressures. Results suggest that interpersonal violence and natural disasters are the most common traumas, while middle age, female, and poor socioeconomic status are risk factors. This work contributes to the expanding body of data that hospital-based psychiatric patients have comorbid psychiatric diseases, including anxiety and depression, requiring trauma-informed therapeutic strategies.

Limitations

This study provides useful information, however there are several drawbacks. While 100 mental patients are enough for exploratory research, the results may not apply to larger populations. Self-reported trauma histories may twist reporting because patients may be ashamed, forgetful, or afraid of social consequences. Due to the study's cross-sectional design, we won't know if trauma causes or worsens mental health issues. The study's single-center approach limits its applicability to other Bihar or Indian hospitals or communities.

Recommendations

The study's findings offer several ways to improve trauma-related mental health therapy. All psychiatric evaluations should begin with PTSD tests to identify and treat patients quickly. Second, healthcare providers should be trained to emphasise trauma-informed care. These include understanding how trauma affects mental health, communicating well, and treating patients culturally. Third, traumatised patients need help. This category includes family and friend programs and community-based mental health initiatives that provide psychosocial support and rehabilitation. These strategies can assist mental health carers better fulfil trauma survivors' complex needs and

reduce the long-term impact of PTSD on patients and the healthcare system. Interpersonal violence and natural catastrophes cause the most PTSD among ANMMCH psychiatric patients, according to the study. The findings suggest community and hospital-based support for affected individuals, trauma-informed mental health care, and comorbid illness therapy. Despite sample size and design constraints, this study should inform mental health policy, clinical practice, and future research in Bihar and similar settings.

Conclusion

The current study highlights the significant frequency of trauma and PTSD in psychiatric patients at Anugrah Narayan Magadh Medical College and Hospital (22%). Trauma is most common in female patients, middle-aged individuals, and low-income people due to interpersonal violence and natural disasters.

Trauma and mental health are interconnected, since PTSD sufferers often have anxiety and sadness. Standardised PTSD screening, early identification of high-risk patients, and evidence-based interventions tailored to the local socio-cultural context must be immediately integrated into ANMMCH's routine psychiatric practice.

Trauma must be addressed in psychiatric therapy to reduce PTSD symptoms, increase treatment adherence, enhance recovery, and improve mental disease management. ANMMCH's mental health care can improve hospital and community patient outcomes by promoting resilience, reducing long-term psychological morbidity, and acknowledging trauma.

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