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Original Research Article

A Cross-Sectional Study of Sociodemographic Profile and Clinical Presentation of Psychosis in Adolescence

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Abstract:

Background: Psychosis during adolescence represents one of the most challenging areas in psychiatry, both diagnostically and therapeutically. Adolescence is marked by neurobiological vulnerability and psychosocial transitions, and the emergence of psychotic symptoms during this critical period can result in lasting social and cognitive impairments. Despite the increasing recognition of adolescent psychosis, data from developing countries remain limited. Aim of this study is to analyze the sociodemographic characteristics and clinical presentation of adolescents with psychosis attending psychiatric consultation at a tertiary care hospital.

Methods: A hospital-based cross-sectional study was conducted at the Institute of Mental Health over 12 months (November 2021–November 2022). One hundred adolescents aged 10–19 years, diagnosed with psychotic disorders as per ICD-10 criteria (F10–F39), were included. Individuals with intellectual disability, neurological disorders, or childhood-onset conditions were excluded. Each participant underwent detailed sociodemographic and clinical assessment using standardized tools including the Brief Psychiatric Rating Scale (BPRS), Young Mania Rating Scale (YMRS), and CRAFFT questionnaire, Leeds Dependence Questionnaire (LDQ), Adolescent Stress Questionnaire (ASQ), and the Kuppuswamy Socioeconomic Scale (2022). Statistical analysis was performed using SPSS v26 with descriptive statistics and chi-square tests.

Results: Among 100 adolescents, 55% were male and 45% female, with a mean age of 14.49 ± 2.89 years. Urban participants accounted for 53%, while 53% belonged to lower socioeconomic strata. Family history of psychosis was present in 22%. The mean BPRS score was 42.53 ± 10.44, indicating moderate severity. YMRS scores revealed that 64% had mild mania, 14% moderate, and 12% severe. CRAFFT scores ≥2 were noted in 64%, indicating risky substance use. LDQ revealed medium dependence in 50% and high dependence in 35%. The majority (75%) had moderate stress and 20% had severe stress on ASQ.

Conclusion: Adolescent psychosis is closely associated with socioeconomic deprivation, high psychosocial stress, and comorbid substance use. Early identification and multi-pronged psychosocial interventions are essential to reduce chronicity and improve long-term functional outcomes.

Keywords: Adolescent psychosis, Socio-demographic factors, BPRS, YMRS, Substance use, Stress, CRAFFT questionnaire.

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Introduction

Psychotic disorders in adolescence pose unique challenges due to their heterogeneous presentations, developmental implications, and psychosocial consequences. Adolescence, encompassing the ages between 10 and 19 years, represents a transitional period marked by cognitive maturation, hormonal shifts, and heightened sensitivity to environmental stressors. During this phase, vulnerability to mental illnesses such as psychosis is particularly pronounced [1,2]. Globally, approximately 14% of adolescents are affected by mental health disorders, and psychotic disorders form a crucial but often under recognized subset [3]. Psychosis in adolescence is defined by disturbances in perception, thought, and affect that interfere with the individual's sense of reality. The clinical picture often includes hallucinations, delusions, disorganized behavior, or cognitive decline [4]. Early-onset psychosis, manifesting before 18 years, and very early-onset psychosis, before 13 years, are associated with poor prognosis, cognitive deficits, and reduced social functioning [5]. A growing body of evidence suggests that environmental adversity—including poverty,

childhood trauma, urban living, and substance use—plays a major role in precipitating psychotic disorders among adolescents [6–8]. These factors interact with genetic vulnerability and neurodevelopmental delays, resulting in abnormal brain maturation and neurotransmitter dysregulation [9]. Moreover, adolescent patients often present with overlapping affective and behavioral symptoms, complicating diagnosis and delaying treatment [10].

In India, sociocultural determinants such as family structure, socioeconomic disparities, and stigmatization of mental illness further influence presentation and help-seeking behavior [11,12]. Despite increasing awareness, systematic studies exploring the sociodemographic and clinical profiles of adolescent psychosis in Indian settings are sparse.

This study aimed to delineate the sociodemographic characteristics, symptomatology, and associated factors—including stress and substance use—in adolescents presenting with psychosis to a tertiary care psychiatric hospital. The findings may provide insight into patterns of presentation and guide future prevention and intervention strategies.

Materials and Methods

This cross-sectional observational study was carried out at the Institute of Mental Health (IMH), a tertiary psychiatric teaching hospital, over a period of twelve months from November 2021 to November 2022. The study received approval from the Institutional Ethics Committee.

Written informed consent was obtained from all participants aged 18–19 years and from parents or guardians for those aged below 18 years after explaining the study's purpose and procedures in their local language.

A total of 100 adolescents between 10 and 19 years of age were enrolled through purposive sampling. Participants were diagnosed with psychotic disorders based on the International Classification of Diseases, 10th Revision (ICD-10) under categories F10–19, F20–29, and F30–39. Individuals with intellectual disability, organic or chronic neurological disorders, stress-related or neurotic conditions, or psychiatric disorders with onset before age 10 were excluded to ensure diagnostic clarity.

After recruitment, each participant underwent a detailed interview to collect sociodemographic data, including age, gender, domicile, socioeconomic status (as per the Kuppuswamy Socioeconomic Scale 2022), family type, and history of psychiatric illness.

Clinical assessment included evaluation using standardized psychometric instruments. The Brief Psychiatric Rating Scale (BPRS) was used to assess the severity of core psychotic symptoms such as hallucinations, conceptual disorganization, and emotional withdrawal. The Young Mania Rating Scale (YMRS) measured manic symptoms such as irritability, pressured speech, and grandiosity. Substance use risk was evaluated through the CRAFFT questionnaire, while the Leeds Dependence Questionnaire (LDQ) quantified the severity of substance dependence. Stress levels were measured using the Adolescent Stress Questionnaire (ASQ), which evaluates ten domains including home life, academic performance, peer pressure, romantic relationships, and financial stress.

All assessments were conducted by trained psychiatrists and psychologists. Data were entered into a predesigned proforma and analyzed using IBM SPSS Statistics v26.0. Continuous variables were summarized as mean ± standard deviation, and categorical variables as percentages. The Chi-square test was used to evaluate associations between categorical variables, with $p < 0.05$ considered statistically significant.

Results

Table 1: Distribution of Age among Study Participants (N = 100)

Age Group (Years)	Frequency	Percentage
10–12	30	30%
13–15	28	28%
16–19	42	42%
Mean ± SD = 14.49 ± 2.89		

The study population predominantly comprised older adolescents, with 42% aged between 16 and 19 years. The mean age of 14.49 years indicates that the majority of cases clustered in mid to late adolescence, a critical period for the onset of psychotic disorders due to neurodevelopmental and social transitions.

Table 2: Gender and Residence Distribution

Variable	Category	Frequency	Percentage
Gender	Male	55	55%
	Female	45	45%
Residence	Urban	53	53%
	Rural	47	47%

A slight male predominance (55%) was observed. The urban-to-rural ratio was nearly equal, suggesting comparable prevalence and help-seeking patterns across domiciles. However, urban exposure may contribute to stress, academic pressures, and substance availability.

Table 3: Socioeconomic and Family Profile

Parameter	Frequency (%)	
Socioeconomic status	Lower – 53%	Upper-lower – 35%
Family type	Nuclear – 53%	Joint – 15%
Family history of psychosis	Present – 22%	Absent – 78%

Most participants belonged to the lower socioeconomic group (53%), reflecting the economic vulnerability associated with psychosis risk. Over half (53%) lived in nuclear families, which may limit emotional support systems. Family history of psychosis in 22% underscores a genetic or familial predisposition.

Table 4: Clinical Assessment Scores

Scale	Findings	Mean ± SD / %
BPRS	Overall severity	42.53 ± 10.44
YMRS	Mild mania (64%), moderate (14%), severe (12%)	34.79 ± 3.74
CRAFFT	Risky substance use (≥2)	64%
LDQ	Medium dependence (50%), high dependence (35%)	—
ASQ	Moderate stress (75%), severe stress (20%)	18.7 ± 1.2

BPRS scores indicated moderate psychotic severity across the sample. YMRS results showed affective instability, with 64% exhibiting mild mania. Notably, 64% scored ≥2 on CRAFFT, highlighting substantial risk for substance misuse. Stress was overwhelmingly prevalent, with 95% reporting moderate-to-severe stress.

Table 5: Domains of Adolescent Stress Questionnaire

Domain	Mean ± SD
Home life	3.79 ± 1.92
School performance	3.04 ± 1.35
Teacher interaction	3.19 ± 1.38
Romantic relationship	3.05 ± 1.47
Peer pressure	2.46 ± 1.17
Financial pressure	2.58 ± 1.17

Home and academic environments emerged as the strongest stress sources, followed by interpersonal and financial stressors. Such cumulative stress may act as precipitating or exacerbating factors for psychotic episodes.

Discussion

The present study provides a comprehensive overview of the demographic and clinical profile of adolescents with psychosis in an Indian tertiary care setting. The mean age of onset (14.49 years) corresponds with existing literature suggesting mid-adolescence as the period of maximum risk for first-episode psychosis [13,14]. During this stage, cortical pruning, dopamine surge, and hormonal modulation may unmask latent neurodevelopmental vulnerabilities [15].

Sociodemographic Factors: A predominance of male participants in our study aligns with findings from Sagar et al. [16] and Sharma et al. [17], who reported higher incidence of psychosis in adolescent boys. Neurobiological theories attribute this to earlier neurodevelopmental disruptions and differential estrogen protection in females. The dominance of lower socioeconomic status highlights the social gradient in mental health, where poverty, inadequate nutrition, and exposure to chronic stressors enhance psychosis risk [18,19]. The near-equal rural-urban distribution contrasts some Western studies where urbanisation is a strong determinant of psychosis [20]. However, increasing urban migration and social isolation in Indian cities might explain the comparable figures. Family history in 22% of cases reinforces the role of heritable factors, consistent with twin and adoption studies [21].

Clinical and Psychological Findings: Moderate BPRS scores signify active psychotic symptoms at presentation, emphasizing the need for early screening and timely intervention. The predominance of mild mania on YMRS supports the hypothesis that adolescent psychosis often presents with mixed affective and psychotic features, rather than pure schizophrenia-spectrum symptoms [22]. The high rate of substance involvement (64%) is striking. Cannabis, alcohol, and inhalants are frequently reported triggers of psychotic decompensation in adolescents [23]. Early substance use alters dopaminergic signaling, leading to increased vulnerability to psychosis. Furthermore, substance misuse complicates treatment adherence and increases relapse rates

[24]. Psychosocial stress, evident in 95% of the cohort, further compounds vulnerability. Stress from family discord, academic pressures, and peer conflicts activates neuroendocrine responses that exacerbate psychotic symptoms [25]. The ASQ results underscore the multifaceted nature of adolescent distress, particularly in family and school domains.

Comparative Analysis with Literature: Our findings are consistent with Sagar et al. [16], who reported similar sociodemographic trends and stress profiles in Indian adolescents with psychosis. Sharma et al [17] found that 63% of patients hailed from rural areas and 80% from middle socioeconomic classes, while our study reflects a shift toward lower strata representation, possibly due to changing referral patterns and socioeconomic transitions. Internationally, McClellan and Stock [26] observed that adolescents with psychosis often present with affective instability, behavioral issues, and comorbid substance use—findings mirrored in our sample. Correll et al. [27] further highlighted that early-onset psychosis carries a high risk of progression to chronic disorders if unaddressed.

Public Health Implications: The findings highlight the urgent need for integrated community-based adolescent mental health services in India. Screening using brief tools such as CRAFFT and ASQ in schools could help identify at-risk youth. Family education programs can mitigate stigma and encourage timely treatment-seeking. Policies should focus on reducing substance access and enhancing social support systems.

Limitations: This study was hospital-based and limited to 100 participants, which restricts generalizability. The cross-sectional design does not allow determination of causality. Longitudinal follow-up and neurobiological assessments would strengthen future research.

Conclusion

Adolescent psychosis in this study was strongly associated with socioeconomic disadvantage, substance use, and psychosocial stress. The high prevalence of stress and substance involvement underscores the complex biopsychosocial interactions underlying psychosis onset. Early recognition, school-based mental health screening, and family-focused interventions are vital for improving prognosis.

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