



A STUDY ON STRESSFUL LIFE EVENTS AND ROLE OF PERSONALITY IN PATIENTS WITH FIRST EPISODE PSYCHOTIC ILLNESS.

Psychiatry

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ABSTRACT

Background: First episode psychosis refers to “any first episode psychosis who had first treatment contact or had never taken antipsychotic medication or taken medication for suboptimal duration or dosage”. Personality characteristics, stressful life event and their contribution and interrelatedness in psychotic disorders are not well understood. This study aimed to investigate whether personality predicts stressful life events, if the effect of these events is mediated by personality, and if stressful life events are associated with first episode psychosis. **Methods:** A cross-sectional study was conducted at Silchar Medical College's Department of Psychiatry, using semi-structured questionnaires to collect socio-demographic data. Perceived stress was assessed using the Holmes and Rahe life stress inventory, and personality disorders were assessed using the Alternative Models of Personality Disorder (AMPD) from Personality Inventory for DSM-5-Short Form and ICD 10 classification of mental and behavioural disorders was used for diagnosis of psychosis. **Results:** The study found that 58% of patients with first episode psychosis were females, with a mean age of 28.26 years. The majority were from rural areas, married, educated, and housewives. A positive correlation was found between personality and stressful life events in first episode psychosis, with the majority falling in cluster A and C personality groups. However, no positive correlation was found between stressful life events and psychosis. **Conclusion:** The study indicates that patients with certain personality disorders are more likely to experience psychotic episodes, with stressful life events being a significant source of perceived stress in first-episode psychosis. This underscores the importance of psychosocial intervention in this vulnerable group in managing illness and potentially preventing it.

KEYWORDS

Psychosis, Personality, Stressful life events, ICD 10 classification of mental and behavioural disorders, Alternative Models of Personality Disorder from Personality Inventory for DSM-5- Short Form, Holmes and Rahe life stress inventory.

INTRODUCTION:

Psychosis is characterised by abnormal perceptions and thoughts, anhedonia, social disengagement, and cognitive deficits such as impaired memory and executive functioning.¹ First episode psychosis is defined as “any first episode psychosis who had first treatment contact or had never taken antipsychotic medication or taken medication for sub-optimal duration or dosage”².

According to the stress diathesis model, psychosis is caused by heightened stress vulnerability, which is mainly genetic but may be perinatal.³ Social stress interacts with social environmental risk factors and brain molecular alterations, impacting the dopaminergic system, neuro inflammation/immune, and endocannabinoid signalling.⁴

Research on psychotic disorders often uses the 'life events' approach to quantify stress. Life events are significant life changes that may occur outside an individual's control⁵. Mc Elroy and Hevey (2014) identified relationship between early childhood trauma, adult personality traits, and recent life events. Thus trauma from childhood may influence adult life events through stress sensitive personality traits.⁶

DSM-based cluster A personality disorders are usually associated with schizophrenia, although neurodevelopmental bias has obscured non-spectrum personality disorders. Recent research relating cluster C personality disorders to schizophrenia has reignited interest in studying them in non-schizophrenia psychoses to understand their patterns and specificity of personality⁷.

Aims:

1. To determine the distribution of personality in first episode psychotic illness.
2. To determine the association of stressful life events in first episode psychotic illness.
3. To determine the association of personality and stressful life events in first episode psychotic illness.

MATERIALS AND METHODS:

The study included 50 first-episode psychosis patients aged ≥ 18 years at SMCH, Psychiatry Department between the period of January to July 2024.

The study excluded patients with affective or organic psychosis,

medical illness affecting central nervous system, neuroleptic treatment, or substance-induced psychosis.

Patients were included after approval from SMCH, Institutional Ethical Committee and informed consent.

The diagnosis was made as per ICD 10 classification of mental and behavioural disorders in consultation with senior Psychiatrist, typically 3-4 weeks after initial evaluation and stabilization of acute psychotic symptoms.

The Holmes/Rahe life stress inventory measured stress before psychosis.

Alternative Models of Personality Disorder (AMPD) from Personality Inventory for DSM-5-Short Form measured personality.

Statistical Analysis-

The data are tabulated in Microsoft excel and analysed with SPSS V.24 software. Chi square test and Pearson's correlation are used for the statistical analysis. The p value ≤ 0.05 is considered statistically significant.

RESULTS:

Our current study comprises of 50 samples.

Table 1: Distribution Of Demographic Parameters

Variable	Frequency	Percent
Age		
Mean Age= 28.26		
18-25	29	58.0%
26-35	10	20.0%
36-45	2	4.0%
46-55	7	14.0%
56-65	2	4.0%
Sex		
Male	21	42.0%
Female	29	58.0%
Religion		
Hindu	26	52.0%

Islam	22	44.0%
Christian	2	4.0%
Others	0	0.0%
Residence		
Urban	6	12.0%
Semi-urban	15	30.0%
Rural	29	58.0%
Marital status		
Married	24	48.0%
Unmarried	22	44.0%
Separated	1	2.0%
Divorce	1	2.0%
Widowed	2	4.0%
Education		
Illiterate	3	6.0%
Primary	10	20.0%
Middle school	11	22.0%
Higher secondary	16	32.0%
Diploma	1	2.0%
Under graduate	6	12.0%
Graduate	2	4.0%
Postgraduate	1	2.0%
Occupation		
Student	11	22.0%
Housewife	12	24.0%
Unemployed	5	10.0%
Unskilled worker	7	14.0%
Skilled worker	7	14.0%
employed	8	16.0%
Socioeconomic Status		
Lower	12	24.0%
Upper lower	6	12.0%
Lower Middle	19	38.0%
Upper Middle	13	26.0%
Upper Class	0	0.0%
Family		
Nuclear	25	50.0%
Joint	20	40.0%

In Table 1, demonstrates demographic distribution. Participants mean age were 28.26 years old, with 58% aged 18–25 years. There are more women (58.0%) than men (42.0%). Based on religion, 52.0% were Hindu. Most participants (58.0%) were from rural. Most participants (48.0%) were married, and 32.0% completed higher secondary education. Most (38.0%) were lower middle class and 50.0% were nuclear families.

Table 2. Distribution of Holmes and Rahe life stress inventory Score

Variable	Frequency	Percent
≤150	13	26.0%
150-300	30	60.0%
>300	7	14.0%

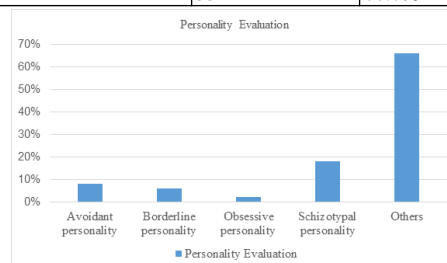
In Table 2. About 26.0% of participants scored ≤150, 60.0% scored 150-300, and 14.0% scored >300.



Table 3. Distribution of Personality evaluation

Variable	Frequency	Percent
Avoidant personality	4	8.0%
Borderline personality	3	6.0%
Obsessive personality	1	2.0%

Schizotypal personality	9	18.0%
Others	33	66.0%



In Table 3, The participant personality evaluation distribution is shown. The majority of participants—33 out of 50 participants i.e, 66.0%—are normal in personality evaluation (Others). 17 participants had personality disorder of which 18.0% of subjects are schizotypal, 8.0% avoidant, 6.0% borderline, and 2.0% obsessive.

Table 4. Association of personality and stressful life events

Personality evaluation	Stress Inventory Score		p-value
	≤150	>150	
Avoidant personality	2 (50%)	2 (50%)	0.0467
Borderline personality	0 (0.0%)	3 (100%)	
Obsessive personality	0 (0.0%)	1 (100%)	
Schizotypal personality	1 (11.11%)	8 (88.89%)	
others	10 (30.30%)	23 (69.7%)	

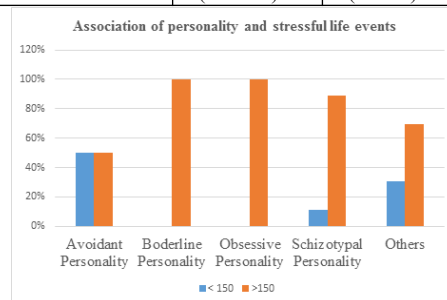


Table 4, shows association of personality types with stressful life events. Individuals with avoidant personality scored 50% < 150 and 50% >150 on the stress assessment, while borderline personality scored 100% >150, obsessive personality scored 100% >150, and schizotypal personality scored 11.11% <150 and 88.89% >150. And others showed a distribution of 30.3% scored <150 and 69.7% scored >150 on the stress inventory scale. The chi-square p-value is 0.0467, which is statistically significant.

Table 5. Correlation between Stress inventory Score and AMPD Score

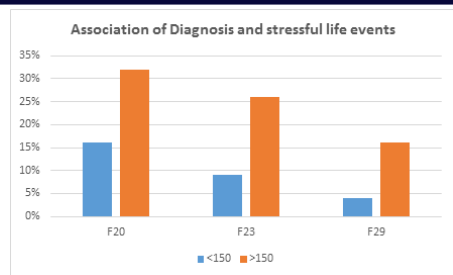
Correlation between Stress inventory Score and AMPD Score	Pearson's Correlation coefficient (r)	P value	Type of correlation
	0.506	0.046	Significantly positive correlation



Table 5, reveals a substantial positive association between the stress inventory score and the AMPD score, with a Pearson's correlation coefficient (r) of 0.506 and a P value of 0.046.

Table 6. Association of Diagnosis and stressful life events.

	Stress Inventory Score		Chi square P value
	≤150	>150	
F20	8 (16%)	16 (32%)	0.255
F23	3 (6%)	13 (26.0%)	
F29	2 (4.0%)	8 (16%)	



In Table 6, Association between individual diagnosis of psychosis and stressful life experiences is examined. Of those diagnosed with F20, 16% scored ≤ 150 and 32% scored >150 on the stress inventory. Of individuals diagnosed with F23, 16% scored ≤ 150 and 26% scored >150 and F29, 4% scored ≤ 150 and 16% scored >150 . This group's chi-square p-value is 0.255, indicating no statistical significance.

DISCUSSION:

Similar to Manuel J. Cuesta et al. 2022 study¹¹, this study also revealed 58.0% participants aged between 18-25-year-olds had in first-episode psychosis. Boldrini et al. in 2019 and Keshavan et al. in 2005 found that most patients were male, whereas our investigation found the opposite⁸. With a high female population reporting, our study shows that women react more emotionally to daily life stress than men.

In this study using the Holmes and Rahe life stress inventory score, 60.0% of study participants scored >150 have a 50% probability of serious stress-induced health problems in the next two years, whereas 14% have a score above 300, increasing the odds to 80%. Giovanni Mansueto et al. 2021 discovered that psychotic patients have more stressful experiences than the normal population.¹³ According to Morgan et al. 2008¹⁴, 2014¹⁵, Pearlin 2010¹⁶ Study showed that psychotic patients may experience a cycle of stressors that repeats over time. Subjects with schizophrenia often have a stress-prone lifestyle, contributing to life events due to factors like schizophrenia symptoms, unusual goals, limited social support, socioeconomic factors, and stigmatization (Bebbington et al. 1993¹⁷; Lukoff et al. 1984¹⁸).

Our study matches prior study of Matcheri S. Keshavan et al. in 2005 demonstrating that Cluster A and Cluster C personality dominated first episode psychosis. In their study, they found that schizophrenia patients had higher Cluster A and C dimensional scores, notably the avoidant personality score. Cluster C dimensional scores, especially avoidant personality, were highly associated with Cluster A dimensional scores.⁸

In our study, statistically significant association was found between personality and stressful life events in first episode psychosis, with borderline, obsessive, schizotypal and avoidant scoring above 150 in the stress inventory score (p-value 0.0467). Also K.D. Tessner et al. 2009¹⁹ found that adolescents with schizotypal personality disorder have more frequent and independent life events than healthy controls, especially among peers.

Our study found a significant positive correlation between stress inventory scores and AMPD scores, with a Pearson's correlation coefficient of 0.506 and a P value of 0.046. This suggests that as the AMPD score increases, the stress inventory score increases and vice versa. The strength of the correlation coefficient suggests a moderate to strong positive relationship between the two variables, indicating a connection between stress levels and potential manifestations in the context of AMPD.

The study evaluated stress inventory scores for individual diagnoses, finding that schizophrenic patients (32%), ATPD (26%), and Psychosis NOS (16%) had scores above 150, indicating no statistically significant association. However, other studies showed a positive correlation between stressful life events and psychosis. (Giovanni Mansueto et al 2020¹³, and Karki BD et al. 2021²⁰)

CONCLUSION:

Individuals with certain personality disorders are more likely to develop psychotic episodes, and the frequency of stressful life events is a major influence in perceived stress during their first psychosis episode. It emphasises psychosocial intervention in illness management and prevention. Event prevention may be difficult, but

understanding how events cause psychosis might help patients cope.

Limitation:

- As it is an institutional based study, only cases that are reported to us only taken into account, so, this study may not represent the whole community.
- Also, the patient's understanding and interpretation of life events and self-reported life events may affect the outcomes.
- Finally, cultural belief and low socioeconomic background made the evaluation more difficult.

Acknowledgement: None

Funding: None

Conflict Of Interest: None

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