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Influence of Childhood Trauma on Clinical Features and Suicidal Attempts in Schizophrenia

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Abstract

Background: There have been reports that patients with schizophrenia have high rates of childhood trauma and neglect. Patients with increased experience of childhood trauma demonstrated worse mental and physical health, poor social functioning, increased suicidal attempts and non-adherence to treatment in the course of their illness. This current study aimed to find the prevalence of childhood trauma (CT) in patients with schizophrenia and to compare it with controls and to study the impact of childhood trauma on illness characteristics and suicidal attempts.

Methods: A cross-sectional study was conducted in the Institute of Mental Health, Chennai comprising 50 schizophrenia patients stable on antipsychotics for the past 6 months selected consecutively and 50 controls chosen from the community. PANSS was used to assess severity of schizophrenia, Adverse Childhood Events International Questionnaire (ACE-IQ) was used to assess childhood trauma in subjects and GAF was used to assess current level of functioning. Statistical analysis was done using descriptive and correlation statistics.

Results: The prevalence of childhood trauma in patients was 80% and in controls was 54% with emotional abuse being more common in patients and physical abuse in controls. A significant association was found between positive and general psychopathology symptoms of schizophrenia and childhood trauma as well as suicidal attempts and childhood trauma.

Conclusion: Greater attention should be given to trauma history among schizophrenia patients and more effective treatment plans should be formulated.

Keywords: Childhood trauma, schizophrenia, clinical features, suicidal attempt.

Introduction

According to the Centre for Disease and Prevention, childhood abuse or maltreatment includes any act of commission or omission by a parent or another caregiver that results in harm, potential of harm or threat of harm to a child.[1]

In the past two decades, a growing body of research has called attention between childhood adversity and psychotic disorders, particularly schizophrenia.[2] Patients with psychotic disorders have high rates of self-reported childhood abuse and neglect, ranging from 30% to over 75%.[3-5] This has led some authors to speculate that, childhood traumatic events play a causal role, in at least some cases of schizophrenia, by affecting brain development, a "traumagenic neurodevelopment model".[6] Patients

with increased experience of childhood trauma demonstrated worse mental and physical health, poorer social function, and non-adherence or lower treatment engagement during the course of their illness than those with less or no childhood traumatic experience.[7] There is evidence that childhood trauma history has at least an impact on the clinical phenomenology of schizophrenia .[8]

Childhood maltreatment may also act as an independent risk factor for suicidal attempts in schizophrenia with the risk aggravated by development of depressive symptoms and feelings of hopelessness in adult life in these patients.[9] Adolescents and adults with schizophrenia who experienced child abuse are more likely to have had poor peer relationships in childhood, more difficulty in school, early age of first hospitalization, more number of hospitalizations, which would have led to elevated symptoms of depression and anxiety, thereby leading to increased reports in suicidal ideation and behaviour.[8]

Most of the literature regarding childhood trauma and schizophrenia is derived from Western Countries. Not many studies in our country have spoken about influence of childhood trauma on schizophrenia. The present study was done keeping this in mind and evaluated the possible influence of childhood trauma on the clinical phenomenology and the suicidal attempts in schizophrenia.

Aims and Objectives

Our aims were

1. To find the prevalence of childhood trauma (CT) in patients with schizophrenia and to compare it with controls.
2. To study the impact of childhood trauma on illness characteristics and suicidal attempts.

Materials And Methods

This cross-sectional study was conducted at Institute Of Mental Health in South India. 50 patients who met the ICD-10 criteria for schizophrenia were selected from the OPD consecutively and 50 controls were selected from the community as the participants of this study. The patients who were stable on antipsychotics for past 6 months were recruited. Written informed consent was obtained from them and their attenders. The study was conducted over a period of 2 months. Ethical committee approval was obtained from the Institutional Ethics Committee, Madras Medical College, Chennai.

The participants in the schizophrenia group were in the age group between 18-45 years. Patients with history of substance use disorders, mood disorders, neurological disorders like seizures and tics and history of head injury were excluded from the study. Also patients with severe cognitive impairment and those non-cooperative due to severe psychosis were excluded from the study.

The participants in the control group were also within the age group of 18-45 years. They were age and sex matched and gave written informed consent. People with history of any psychiatric or major medical illness were excluded.

Semi-structured proforma was used to collect information regarding socio-demographic characteristics and other related clinical information regarding the study participants. Positive And Negative Syndrome Scale (PANSS) was employed for assessing the severity of psychopathology symptoms in schizophrenia.

Adverse Childhood Experiences International Questionnaire(ACE-IQ) was administered for assessing presence of childhood trauma in all the participants.

This scale was translated in Tamil and back translated. ACE-IQ is designed for administration to people aged 18 years and older. Questions cover family dysfunction, physical, sexual, emotional abuse and neglect by parents or caregivers; peer violence; witnessing community violence and exposure to collective violence. GAF was administered to assess the current level of functioning.

Mean and standard deviation were used for the quantitative variables while the categorical variables were calculated as frequencies and percentages. Pearson correlation was used to assess the relationship among the individual symptoms in patients with schizophrenia and childhood trauma. Statistical Analysis was done using SPSS. V 20.

Results

General description of the study population

In our study comprising of 100 subjects, 50 were patients with schizophrenia and 50 belonged to the control group. Participants in both the groups were matched for age and gender. The matching was done to remove any selection bias. The socio demographic data is shown below [Table no. 1].

37(74%) of the patients were diagnosed with paranoid schizophrenia. 7 (14%) persons with disorganised and 6 (12%) with undifferentiated schizophrenia.

Table 1: Socio- Demographic profile of the population.

		Schizophrenia patients	Controls
Age:	Age	30.56 ± 6.695	29.84 ± 7.280
Sex:	Male	24	25
	Females	26	25
Marital status:	Married	30	25
	Divorced/Separated	7	6
	Unmarried	13	19
Education:	Education(in yrs)	9.84 ± 2.64	9.56 ± 3.876
Employment:	Employed	33	44
	Unemployed	17	6
GAF	GAF	63.04 ± 5.406	88.04 ± 4.961

Adverse Childhood Experiences:

The prevalence of childhood trauma was 80% in patients while it was 54% in the control group[Figure 1]. Emotional abuse(74%) followed by emotional neglect (72%) and psychiatric illness in a family member (56%) was found to be more common in patients and physical abuse(46%) was more common in controls [Table no.2].

Figure 1: Prevalence of childhood trauma in the two groups.

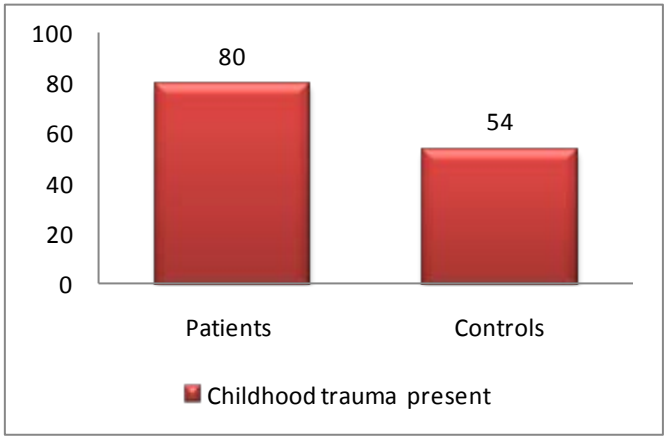

Table no. 2: The distribution of various types of childhood trauma in the two groups.

CT subscale	Schizophrenia patients	Normal controls
Physical abuse	32%	**46%**
Emotional abuse	**74%**	30%
Sexual abuse	24%	32%
Substance abuse in family member	38%	14%
Incarcerated member	8%	32%
Mentally ill member	**56%**	10%
Violence against member	28%	22%
Parental death or separation	34%	28%
Emotional neglect	**72%**	16%
Physical neglect	18%	26%
Bullying	10%	16%
Community violence	26%	28%
Collective violence	26%	20%

CT- childhood trauma

Relationship of childhood trauma with the illness characteristics

Patients were further divided into two groups. One group comprising of patients who have experienced childhood trauma and the other group of patients who did not. The illness characteristics of the two groups were compared. None of the factors were statistically significant between the two groups[Table no. 3].

Table no. 3: Comparison of illness characteristics between the patients who have experienced childhood trauma and those who haven't.

	Schizophrenia with CT		Schizophrenia without CT		P value
	Mean	SD	Mean	SD	
Age	30.85	6.863	29.40	6.168	0.546
Age of onset	25.75	5.158	25.10	3.479	0.708
DOI	61.58	38.87	51.00	40.324	0.449
DUP	27.68	14.798	30.60	17.076	0.590
DOT	16.50	19.772	9.60	14.751	0.308
GAF	62.43	5.262	65.50	5.543	0.108

CT – childhood trauma; DOI – Duration of illness; DUP – Duration of untreated psychosis; DOT – Duration of treatment

Relationship between childhood trauma and symptomatology

Correlation between PANSS and ACE score was done using Pearson's correlation. A significant correlation was found between positive, general psychopathology, total PANSS score and the ACE scores[Table no. 4].

Table no.4: Correlation between PANSS score and ACE score.

		PANSS POSITIVE	PANSS NEGATIVE	PANSS GEN PSY	PANSS TOTAL
ACE SCORE	Pearson	.442	.199	.517	.548
	P value	<.001**	.166	<.001**	<.001**

** Statistically significant $P < 0.001$; PANSS- Positive and Negative Symptom Scale; ACE- Adverse Childhood Experiences

Association between childhood trauma and suicidal attempts:

A significant association was found between childhood abuse and suicidal attempts showing that patients who had experienced childhood trauma had a greater number of suicidal attempts as well[Table no. 5].

Table no. 5: Association between childhood trauma and suicidal attempts.

		Suicidal attempts		Total
		Present	Absent	
Childhood trauma	Present	25	15	40
	Absent	1	9	10
	Fisher"s exact test			
	P value	<0.004**		

** Statistically significant p value < 0.05

Discussion

The prevalence of childhood trauma was found to be 80% in patients, and 54% in normal controls. The prevalence in our study was slightly higher than that found in previous studies. *Read et al* showed that 21-65% of schizophrenia patients had childhood sexual or physical abuse.[2] Read and colleagues also collected 51 studies of childhood abuse and psychosis and found the average prevalence of childhood abuse was 59% in males and 69% in females. The slightly higher rates in our study may be genuine, or there might be a possibility of over reporting by the patient in view of a falsified memory which cannot be ignored. There are wide variations regarding this topic depending on the study group chosen.[2]

Emotional abuse followed by emotional neglect was more common in our patients, whereas physical abuse was surprisingly more common in normal controls. In a study by Larsson S et al, physical abuse and physical neglect was more common in schizophrenia spectrum disorders.[10] In an Indian study done by Rajkumar et al, findings were somewhat similar to our study; the highest scores being noted for emotional neglect, followed by physical neglect and emotional abuse; scores on the physical and sexual abuse subscale scores were low. Overall, emotional abuse was reported by 56.5%, physical abuse by 33.9% patients, and sexual abuse by 3.2%.[11] The sexual abuse was lower in our study among the patients. These lower rates may be attributed to the stigma associated with revealing of sexual abuse in our culture.

Childhood trauma scores correlated more significantly with positive symptoms and general psychopathology in our study , which correlates well with *Kilcommons et al*[12], *Ross et al*[13]. study. Findings for negative symptoms are mixed; some found a significant positive correlation between negative symptoms [*Vogel et al*[14]] and past trauma while others reported opposite findings. These symptomatic expression may differ according to the type of childhood trauma, for eg: childhood abuse was associated with positive symptoms while childhood neglect was associated with negative symptoms.[15] A study by Schenkel et al showed convincing evidence that childhood trauma history has at least an impact on the clinical phenomenology of schizophrenia.

Our study also showed a significant association between Childhood trauma and suicidal attempts. These findings were similar to previous studies.[9,11] Adverse childhood experiences were found to increase the risk of attempted suicide two to five fold. Increased number of traumatic events were associated with increased number of suicidal attempts.[16] Amongst the multiple causes for suicidal attempt in schizophrenia, childhood trauma is to be considered .

Limitations

Major limitations in our study was that we relied on retrospective self reports of childhood trauma and so the accuracy of these reports may be in question, especially considering that the study involved schizophrenia patients. This might be due to the possible misinterpretation and distortions in psycho pathology. Other limitations were that the study focused only on childhood traumatic events and their interactions and effects of adulthood trauma was not considered. Sample size was small and cross sectional study design was used. Results of the study should be interpreted with these limitations in the background.

Conclusion

In spite of these shortcomings, our results replicate many of the positive findings in literature on the influence of childhood adversity on schizophrenia. They are consistent with the view that childhood maltreatment, despite not being necessary to cause schizophrenia, can have a significant impact on symptomatology. Greater attention should be given to trauma history among schizophrenia patients, and its impact, so as to formulate more comprehensive treatment plans for patients. Screening for history of traumatic experiences should be incorporated into diagnostic procedures, and the risk for suicide should not be ignored.

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