



ORIGINAL RESEARCH PAPER

Psychiatry

DISSOCIATIVE SYMPTOMS IN PATIENTS WITH SCHIZOPHRENIA AND THEIR ASSOCIATION WITH CHILDHOOD TRAUMA.

KEY WORDS: dissociative symptoms, schizophrenia, childhood trauma, DES, ACE.

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ABSTRACT

Background: Dissociative symptoms(DS) in patients with schizophrenia have been reported, with greater association of DS with positive symptoms of schizophrenia. Some studies have proven that dissociative symptoms occurring in schizophrenia are often preceded by traumatic experiences.

Aim: To study and compare the prevalence of dissociative symptoms in schizophrenia patients and controls, and explore the associations between childhood trauma and DS.

Materials And Methods: This is a cross sectional study in which two groups of subjects were recruited - First comprising of schizophrenia patients and second of controls. PANSS was used to assess the severity of schizophrenia in patients. Dissociative Experiences Scale(DES) and Adverse Childhood Experiences- International Questionnaire(ACE-IQ) was used to assess the presence of dissociative symptoms and childhood trauma respectively in all subjects. Statistical analysis was done using SPSS.v.20.

Results: The prevalence of dissociative symptoms in schizophrenia was 52% as compared to 24% in controls, with more significant findings for dissociative amnesia and absorption subscales. Prevalence of childhood trauma in schizophrenia was 80%, more commonly being emotional abuse and neglect. Significant association was found between dissociative symptoms and childhood trauma.

Conclusion: Patients with predominantly positive symptoms should be assessed for the presence of dissociative disorders. Trauma history needs to be given more importance.

INTRODUCTION:

The term "dissociation" refers to a disorder in normal functioning of perception, memory, identity or consciousness(1). Although, dissociation is a distinguished symptom of dissociative disorders in the DSM, patients with other mental disturbances develop dissociative symptom as well.

Since Bleuler's original conception of schizophrenia as the 'splitting of the psyche', there has been a consistent interest in dissociative phenomenon in patients diagnosed with schizophrenia spectrum disorders(2). In some studies, the symptomatology of dissociation in samples of patients with schizophrenia and schizoaffective disorder has been reported over 50%(3). However with many patients receiving numerous different diagnoses prior to the recognition of a dissociative disorder, the diagnosis of dissociative disorders is often overlooked or significantly delayed(1,4). Diagnosis of these conditions is complicated by the tendency for patients to present with symptoms which resemble other disorders, notably schizophrenia(1). Both tend to present with Schneiderian first rank symptoms. In fact, it is not uncommon for patients with posttraumatic stress disorder or dissociative identity disorder to receive a misdiagnosis of schizophrenia(5). Only upon the discovery of a precipitating event are such patients reassessed and assigned proper diagnoses and treatments(6). A major problem with diagnosing dissociative disorders in inpatients with schizophrenia was noted because these patients were often too symptomatic to be assessed properly(7).

The study of dissociation in patients with schizophrenia is mainly due to high traumatic confrontation in patients with severe mental breakdown(8). 98% of severe mental patients have been once confronted with traumatic incident during their lifetime or abused in their childhood leading to severe positive type of schizophrenia in adulthood(9). Read *et al* showed that 21-65% of schizophrenia patients have had childhood sexual or physical abuse(10). 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(11,12).

schizophrenia is complex than previously thought; studies have suggested that impact of childhood trauma on psychotic symptoms is mediated by dissociation(2,13). Dissociation is strongly associated with childhood trauma in general and this link has been well replicated in schizophrenia(2,14). Dissociation may overlap with positive psychotic symptoms especially in the acute period, thus confounding the relationship between childhood trauma and positive symptoms(2). Vogel *et al* showed that dissociation has more to do with symptoms of schizophrenia, including positive and negative symptoms, than previous trauma(13). Thus, children who are at risk of schizophrenia, may be more liable to suffer from dissociation as well. Sometimes, the critical cases of dissociation may be misdiagnosed as schizophrenia.

Not many studies in our country have spoken about dissociative symptoms and how they correlate with psychotic symptoms and childhood trauma. Based on this accumulating evidence, the present study was concerned with possible relationships between childhood trauma, dissociative experiences, and the clinical phenomenology of schizophrenia.

MATERIALS AND METHODS:

This cross-sectional descriptive study was conducted at a tertiary care centre. 50 patients who met the ICD-10 criteria for schizophrenia were selected from the OPD randomly and 50 age and sex matched controls were selected from the community as the participants of this current study. The participants were recruited after obtaining an informed written consent from them and their attenders. The study was conducted over a period of 3 months. Ethical committee approval was obtained before the start of the study.

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

Relationship between past trauma and current symptoms of

The participants in the control group were also within the age group of 18-45 years, age and sex matched and the ones who had given written informed consent. People with history of any psychiatric or major medical illness were excluded from the study.

The diagnosis of schizophrenia is ascertained on detailed clinical examination using ICD-10 DCR. Schedules Clinical Assessment Neuropsychiatry(SCAN) was administered to all the participants of the study to include only patients with schizophrenia or patients with schizophrenia and co-morbid dissociative disorders and to rule out other co-morbid mental disorders.

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.

Dissociative Experiences Scale (DES) was administered for all the participants to assess the presence of dissociative symptoms(DS) and to record the subscale of dissociative symptoms present in them. The DES is a 28-item self-report instrument developed by Bernstein and Putnam.(14) It is not a diagnostic tool but serves as a screening device for chronic dissociative disorders with subjects asked to rate on scale of 0-100% according to the frequency with which the symptom is experienced in daily life. It was designed as a trait measure of dissociative symptoms with a high score indicating a tendency towards dissociation.

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

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 dissociative, positive and negative symptoms in patients with schizophrenia as well as controls.

RESULTS:

In our study comprising of 100 subjects, the mean age was 30.54yrs ± 6.65. More than half of the patients were female(52%). Most of the patients were educated up to secondary level(62%) and were married(55%), belonging to lower middle class(72%), residing in urban areas(63%) and following Hinduism(66%).

The prevalence of Dissociative symptoms(DS) in schizophrenia patients attending a tertiary care centre was 52%, while the prevalence in controls was 24%. Dissociative symptoms in schizophrenia were seen mostly in the age group 26-35 years(50%), more commonly in males(54%) and more in patients suffering from paranoid schizophrenia(36%).

Table 1 shows the comparison of clinical characteristics of Schizophrenia patients with and without Dissociative symptoms. No significant differences are seen in the two groups.

	Schizophrenia with DS		Schizophrenia without DS		P value
	Mean	SD	Mean	SD	
Age	31.31	6.757	29.75	6.674	0.417
Age of onset	26.00	4.205	25.21	5.517	0.569
Duration of illness	64.73	37.759	53.75	40.287	0.326
DUP	31.50	15.066	24.75	14.730	0.116
Duration of treatment	18.46	21.860	11.50	14.794	0.197

DS- Dissociative symptoms; DUP-Duration of Untreated Psychosis

Table no. 2: Comparison of the total DES score as well as subscales between the two groups.

	SCHIZOPHRENIA PATIENTS		CONTROLS		P value
	mean	SD	mean	SD	
Dissociative Amnesia	6.06	6.015	2.20	3.980	<0.001**
Dissociative Absorption	8.32	8.324	0.96	1.818	<0.001**
Dissociative Depersonalization	3.08	3.161	3.34	3.408	0.693
DES Total	6.64	7.362	1.68	3.074	<0.001**

DES-Dissociative Experiences Scale; **statistically significant p<0.001

Table no. 3: Comparison between PANSS and DES

DES		PANSS POSITIVE	PANSS NEGATIVE	PANSS GEN PSY	PANSS TOTAL
		Pearsons correlation	.581**	.083	.621**
	P value	<.001**	.565	<.001**	<.001**

**statistically significant p<0.001; PANSS-Positive and Negative Symptom Scale; DES- Dissociative Experiences Scale.

Comparison between PANSS and DES done using Pearson's correlation showed significant association between dissociative symptoms and positive and general psychopathology symptoms whereas there seemed to be no significant association between negative symptoms and DS.

The prevalence of childhood trauma in the patients was 80% while it was 54% in the control group. Emotional abuse was more common in patients(74%) and physical abuse(46%) was more common in controls.

Table no. 4: Comparison between PANSS and ACE score done using Pearson's correlation showed similar findings as in dissociative symptoms.

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

**statistically significant p value<0.001; PANSS- positive and negative schizophrenia scale; ACE- Adverse Childhood Experiences Scale.

Significant association was found between DES and ACE scores in both patients as well as controls found using Pearson's correlation but it was significantly greater in patients as compared to controls as found by using t-test.

Table no 5: Association between DES and ACE score is more significant for patients as compared to controls.

	schizophrenia		Controls		P value
	DES	ACE	DES	ACE	
Mean	6.64	4.50	1.68	0.46	<0.001**
SD	7.362	2.908	3.074	0.503	<0.001**

**statistically significant p value<0.001; DES- Dissociative Experiences Scale; ACE- Adverse Childhood Experiences Scale.

DISCUSSION:

The prevalence of dissociative symptoms in our study is 52% in schizophrenia patients and it is significantly higher than in normal controls. Findings of this research are in accordance with those of Spitzer et al(16) and some other studies(5,9) which confirmed significant accompaniment of schizophrenia with dissociative symptoms. But a study by Brunner et al. showed that there was no difference in the degree of reported dissociative experiences between schizophrenia patients and normal volunteers(17).

We further divided the schizophrenia patients into two groups-one with dissociative symptoms and other without dissociative symptoms and we compared their clinical characteristics. No significant difference was found in the clinical characteristics of schizophrenia patients with dissociative symptoms as compared to those not having schizophrenia symptoms.

Among the dissociation subscales, absorption and amnesia scores were more significant compared to depersonalization scores. Spitzer *et al* analysed DES subscales and demonstrated that the absorption subscale was significantly higher than either of the two other subscales suggesting that the nature of the dissociative symptoms experienced by patients with schizophrenia is one of increased absorption in their surroundings and a greater tendency to be involved with their imaginative life(16).

Our study showed DS correlated significantly with positive and general psychopathology symptoms. Patients with predominance of positive symptoms, particularly hallucinations had significantly higher DES mean scores(16, 18,19). Inconsistent findings are seen regarding the relationship between negative symptoms and dissociative symptoms.

Prevalence of childhood trauma in patients in our study was found to be 80%, and it was 54% in normal controls. In our study, emotional abuse followed by emotional neglect was more common in patients, whereas physical abuse was more common in normal controls. But there are wide variations regarding this topic depending on the study group chosen. Significant correlation between childhood sexual, physical and emotional trauma and dissociation was seen in both schizophrenia as well as normal controls(20,21). Studies using the Childhood Trauma Questionnaire found the strongest relationships with childhood emotional abuse. Studies have found a relationship between childhood maltreatment and a more severe course of illness in schizophrenia spectrum disorders.(22)

Even childhood trauma correlated more with positive symptoms and general psychopathology symptoms in our study. According to literature, childhood abuse correlates well with positive symptoms of schizophrenia(9,19,24). Findings with negative symptoms are mixed; some found a significant positive correlation between negative symptoms(11,12) and past trauma while others reported opposite findings(31). These responses 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(11).

Schizophrenia patients with a childhood sexual abuse history had higher levels of dissociation, intrusive experiences, and state and trait anxiety than the non-abused schizophrenia group (23-25). Emotional abuse has high positive correlation with observed dissociation in schizophrenia population.

Our study found a significant association between dissociative symptoms and childhood abuse in both patients as well as controls, but more significantly for patients. These findings are in accordance with majority of studies done in the past which showed that dissociation was significantly associated with emotional abuse and physical abuse in childhood (26-28). Chae *et al* found that both dissociation and childhood sexual abuse were independent predictors of positive symptoms. Some studies suggest that childhood trauma is related to concurrent dissociation rather than to core features of schizophrenia, while there was a more proximal relationship between schizophrenia and dissociation (13,15).

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. They were subject to possible reinterpretation and are also susceptible to distortions by psychopathology. Other limitations were that the study focussed only on childhood traumatic events and their interactions or 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:

Since the prevalence of dissociative symptoms in schizophrenia patients is high, patients with predominantly positive symptoms should especially be assessed for presence of dissociative disorders due to overlap of symptoms. Greater attention should be given to trauma history among schizophrenia patients and its impacts to formulate more comprehensive treatment plans for patients. Screening for history of traumatic experiences should be incorporated into diagnostic procedures, and the possibility of alternate or co-morbid diagnoses entertained.

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