Assessment of Clinical, Socio-demographic Profile and Stressors in patients with Conversion/Dissociative Disorders: An Exploratory study from Southern India

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Research article

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Abstract

Background

Patients present with 'conversion disorder' as a response to the underlying stressful situation. It is clinically important to evaluate the presence, type, and temporal relation of the stressors resulting in conversion. Further knowing the Socio-demographic and psychological profile of the conversion patient helps in better management.

Aim

To study the clinical presentations, Socio-demographic characteristics and underlying stressors associated with conversion disorder.

Methods

Fifty patients admitted to the department of psychiatry, NRI Medical College and Hospital, Vishakhapatnam, during January 2013 to December, 2014 who fulfilled the inclusion criteria of the study were evaluated for Socio-demographic characteristics, clinical presentations and stressor on a semi-structured proforma.

Results

Majority of the patients with conversion symptoms were children and young adults (74.0%), females (62.0%), students (46.0%), married (54.0%) and those from nuclear families (78.0%) and rural background (62.0%). Socioeconomic status wise, majority (66.0%) of the patients belonged to middle class. Majority of the patients (92.0%) had a recognizable precipitating factor, of which family-related/marital (36.0%) and education/school-related (18.0%) problems accounted for the major types. Purely motor symptoms were the predominant presentation (84.0%) with unresponsiveness /syncopal attack and pseudo seizure being the commonest.

Conclusion

Conversion disorders are commonly seen in females, children and young adults, students and in those belonged to middle class in socioeconomic status and rural areas. Underlying psycho-social stressors could be identified in majority of the cases of conversion disorder.

Background

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The term 'conversion disorder' was coined by renowned psychologist Sigmund Freud, who hypothesized that the symptoms of conversion disorder reflect unconscious conflict.[1] The word *conversion* refers to the substitution of a somatic symptom for a repressed idea[1,2] Conversion disorder, renamed as functional neurological symptom disorder in DSM-V,[3]is defined as a deficit of sensory or motor function that cannot be explained by a medical condition and where psychological factors are judged to be associated with the deficit because symptoms are preceded by conflicts or other stressors.[4] It tends to start in early adulthood, and generally follows a stress factor. In International Classification of Disease,10th edition, conversion symptoms are classified as dissociative disorders (e.g., dissociative motor disorder), with similar diagnostic criteria.[5]Although conversion/dissociative disorders have been described in literature for long and being diagnosed for a good time, their aetiology, pathogenesis, phenomenology and management continues to evoke debate. The proper diagnosis of these patients has important implications for their clinical course. [6,7]

Conversion disorder presents with loss of physical function with a wide range of signs and symptoms and findings on physical examination which are not consistent with any known neurological, anatomical, or physiological pathology.[8]Common examples of conversion symptoms include blindness, paralysis, dystonia, psychogenic non-epileptic seizures (PNES), anaesthesia, swallowing difficulties, motor tics, difficulty walking, hallucinate ions, anaesthesia, and dementia.[9]Despite the lack of a definitive organic diagnosis, the patient's distress is very real and the physical symptoms the patient experiences cannot be controlled at will.

Patients of conversion disorder spend nine times the cost for healthcare as people not having this, and 82 percent of adults with this disease stop working because of their symptoms.[10] The annual bill for conversion disorder in the United States is $20 billion, not counting absenteeism from work and disability payments due to the disease.[10]Despite its clinical importance, there has been only marginal progress in our understanding of conversion disorder relative to many other neurological and psychiatric disorders.[11]

The reported prevalence of conversion disorder varies widely depending on the population studied. Studies have estimated that 20 to 25 percent of patients in a general hospital setting have individual symptoms of conversion, and five percent of patients in this setting meet the criteria for the full disorder.[12,13]Further, medically unexplained neurological symptoms account for approximately 30 percent of the referred neurology outpatients.[14]In a study of 100 randomly selected patients from a psychiatry clinic, 24 were noted to have unexplained neurological symptoms.[14]

Among adults, women diagnosed with conversion disorder outnumber men by a 2:1 to 10:1 ratio; less educated people and those of lower socioeconomic status are more likely to develop conversion disorder; race by itself does not appear to be a factor.[10] There is a major difference between the populations of developing/underdeveloped countries compared to the developed countries; in developing countries, the prevalence of conversion disorder may run as high as 31 percent.[10]

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Some Indian studies have focused on the clinical characteristics in conversion disorder.[15,16] They have emphasized on the role of stressors in conversion disorder. In India, high occurrence of conversion disorder has been reported in young adults, from poor low-income, joint families, and significantly higher in females.[17]Also, higher prevalence of conversion disorder has been seen in illiterates, married housewives being the commonest group.[18]But less is known from the region of Southern India about the clinical presentations and socio-demographic variables in conversion disorder.

With this background, this study was planned & conducted with the aim to assess the various types of clinical presentations and the related socio-demographic variables in patients with conversion disorder in this part of Southern India.

Methods

Study Settings & Design

A cross sectional observational study of patients presenting with conversion symptoms was carried out from January,2013 to December 2014.

Patients attending department of psychiatry, outpatient, and inpatients both, of a teaching medical college and hospital in Andhra Pradesh, Southern India with conversion/dissociative symptoms amounting to disorder were the study subjects. They were evaluated for possible precipitating factors, clinical features, Socio-demographic profile using semi structured proforma.

Study tools

-The ICD10 –Classification of mental & behavioral disorder: criteria for dissociative (conversion) disorder was used[4].

-A semi-structured proforma to record Socio-demographic details of the patients which include age, sex, education, occupation, domicile, marital status, family type and socioeconomic status; in addition to birth order, clinical presentations and possible precipitating factor for developing dissociative (conversion) disorder.

 Inclusion criteria: Subjects of both sexes of age 6 years and above fulfilling diagnostic criteria of dissociative (conversion) disorder according to ICD-10 and DSM-4.

Exclusion criteria: Subjects having known history of organic disorder, including epilepsy and co morbid other psychiatric illness, e.g., anxiety disorder, depressive disorder, etc., were excluded.

Study procedure

All the study subjects were thoroughly evaluated on the basis of history and mental status examination, and the diagnosis was confirmed by a senior psychiatrist

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Then, the written informed consent was taken from every patient before enrolling into the study. All the patients and their attendants were then evaluated to elicit necessary information required in our semi-structured proforma.

Statistical analysis

Data were entered in excel spreadsheets. Categorical variables were presented as frequency and proportions whereas Continuous variables were presented as mean with standard deviations.

Ethical Considerations

The study was protocol was reviewed and approved by Institutional Ethics Committee (IEC) of the institute of the NRI Medical college and Hospital, Vishakhapatnam, A.P., India. Written Informed consent was taken from all the participants. In participants less than 18 years of age, consent was taken from parents or the primary caregiver and assent was obtained from the children less than 18 years of age.

Results

The Socio-demographic characteristics of the study subjects are summarized in Table 1. Majority of the subjects were female (62.0%), married (54.0%) and were in the age group of 18–30 years (38.0%), followed by 6–17 years of age group (36.0%). Half of the study subjects were students (46.0%), followed by housewives (44.0%). About half of the subjects were illiterates (44.0%) and another 32% were educated up to secondary level. A majority of the subjects had a rural background (62.0%) and were from a nuclear family (78.0%). Most of the study subjects belonged to middle class as per socioeconomic status (66.0%)(Table 1).

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Table 1
Socio-demographic Profile of the patients with
Conversion disorder (N = 50)

Variable	No. (%)
Mean Age (in years)	20.97 ± 8.54
Sex	19(38.0)
Male	31(62.0)
Female	
Age-groups (in years)	18(36.0)
6−18	19(38.0)
19−30	11(22.0)
31−42	2(4.0)
43−54	
Education level	22(44.0)
Illiterate	16(32.0)
Lower Secondary (Below 10th Class)	7(14.0)
Higher Secondary (Intermediate)	5(10.0)
Graduate or above	
Type of family	39(78.0)
Nuclear	11(22.0)
Joint	
Marital Status	23(46.0)
Single	27(54.0)
Married	
Occupation	2(4.0)
Employed	3(6.0)
Unemployed	22(44.0)
Housewife	23(46.0)
Students	

Variable	No. (%)
Type of residence	31(62.0)
Rural	19(38.0)
Urban	
Socioeconomic Status	16(32.0)
Lower	33(66.0)
Middle	01(2.0)
Upper	

Motor symptoms were the most common type of clinical presentation (84.0%) followed by mixed ones (12.0%) (Table 2). Amongst the motor symptoms, syncopal attack/altered consciousness was the commonest presentation (20.0%) followed by pseudo seizures (18.0%). Other motor symptoms included paresis (14.0%), hyperventilation (10.0%), aphonia/dysphonia (8.0%), abnormal gait/Atasia Abasia (4.0%) and diplopia (4.0%). Only one patient (2.0%) presented with isolated sensory symptoms.

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Table 2
Symptomatology of patients with Conversion disorder (N = 50)

S. No.	Symptom Type	N (%)
1	Unresponsiveness / Syncopal attack	10(20.0)
2	Pseudo Seizures	9(18.0)
3	Paresis / paralysis	7(14.0)
4	Functional aphonia	4(08)
5	With mixed symptoms (Headache, burning sensation, weakness of whole body)	6(12)
6	Hyperventilation	5(10)
7	Stomach pain	1(02)
8	Isolated / pure sensory loss	1(02)
9	Deviation of neck (dystonia)	1(02)
10	Diplopia / Blindness	2(04)
11	Deafness	1(02)
12	Abnormal gait	2(04)
13	Unable to pass urine or distention of bladder	1(02)
	Total	50(100)

As many as 12.0% of the subjects presented with "mixed symptoms," of dissociate disorders which included Headache, burning sensation and weakness of the whole body (Table 2).

For evaluating whether the subjects had any obvious precipitating factor prior to onset of the disorder, they were divided in two groups: child & young adults between age of 6 to 22 years and adults above the age of 22 years.

In the first group, out of the 23 subjects, majority (39.1%) of the subjects were found to have education/school-related problems, 17.4% had suffered parental separation/ improper parenting, 17.4% were demanding children or were pampered in their childhood, 8.7% has faced change in living conditions (came to hostel), 8.7% reported to have peer group problems and in 8.7%, no stressor could be identified(Table 3).

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Table 3

Precipitating factors/ Stressors seen among Children and young adults aged < 23 years with conversion disorder (N = 23)

Sl. No.	Type of stressors/precipitating factors	N (%)
1.	Education /School related problem	9(39.1)
2.	Parental separation / improper parenting	4(17.4)
3.	Pampered/demanding child	4(17.4)
4.	Change in living condition (Hostel)	2(8.7)
5.	Peer group problems	2(8.7)
6.	No Stressor	2(8.7)
	Total	23(100)

Similarly, in second group, majority (66.7%) had family-related/marital problems, 14.8% reported to have work related stress,7.4% reported having no children as stressor, and 3.7% reported being unmarried as stressor(Table 4).

Table 4

Precipitating factors/ Stressors seen among the adults aged 23 years or above with conversion disorders (N = 27)

Sl. No.	Type of stressors/precipitating factors	N (%)
1.	Marital/Family problems (Husband who is irresponsible, unemployment, extra marital affair, Financial Problems, and conflict with mother-in-law (or) other family members)	18(66.7)
2.	Work stress	4(14.8.0)
3.	Having no children	2(7.4)
4.	Being unmarried	1(3.7)
5.	No stressor	2(7.4)
	Total	27(100)

Discussion

Conversion disorder can manifest at any age as seen in the study. In our study, age of the patients ranged from 6 to 54 years. The age criterion was used as conversion is rarely seen in ages below 5 years.[19] The most commonly affected were young adults (38.0%) between 18 to 30 years followed by children and adolescents (36.0%) in the age-group of 6–17 years. This corresponds with the findings by Vyas et. al[17],

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Bagadia et al.[20], Deka et al.[21] and Subramanian et al.[22]. Although studies from outside India suggest a peak onset in the mid to late 30 s.[23–25]

Occurrence of conversion disorder was found to be higher in females (62.0%) than in males (38.0%) in our study. Similar pattern was observed by Vyas et al[17], Bagadia et al.[20], Deka et al.[21] and Subramanian et al.[22]in line with our findings.

Majority of our study subjects were illiterate (44.0%). Among literate ones, most of them had completed only 10th standard or had less than 10 years of formal education (32.0%). Studies by Vyas et al.[17], Bagadia et al.[20], Deka et al.[21] and Subramanian et al.[22]reported similar findings.

In our study, the predominant population was of students (46.0%) and housewives (44.0%). Similar finding was reported by Deka et al.[21] and Reddy et al.[26] Similarly, most of our study subjects were married (54.0%). Study by Vyas et al.[17] also reported similar findings. However, Studies by Deka et al.[21] and Reddy et al.[26]found unmarried ones to be the predominant group by in contrast to our findings.

Majority (62.0%) of our study subjects were from rural background. Bagadia et al.[20], Deka et al.[21] and Gupta et. al[27] also found subjects belonging to rural background as the predominant ones. However, Vyas et. al.[17] in their study found majority belonged to urban background.

As high as 78.0% of the study subjects came from nuclear families, which could possibly be due to lifestyle pattern changing to a modernized one. Similar findings were reported by Deka et al.[21] and Gupta et. al[27]. However, Vyas et al.[17] found majority of their study subjects belonged to joint family.

In our study, Majority (66.0%) of the study subjects belonged to middle class with respect to their socioeconomic status (75%). In contrast, Deka et.al[21] found majority (75%) of their study subjects belonging to lower social-economic status which indicates towards changing epidemiology of conversion disorders with respective to socio-economic status.

Purely motor symptoms were the commonest presentation (84%), of which syncopal attack and pseudo seizures were the commonest. Deka et. al[21] and Gupta et.al[27] also found pseudo seizures as the commonest presentations in their studies. However, study by Vyas et al.[17] found pain (48.46%) as the most common presentation whereas Roelofs et al.[28] found paresis/paralysis to be the commonest.

Assessing the subjects for psychosocial stressors (Tables 3 & 4), it was observed that majority (94.0%) of the patients had an underlying psychosocial stressor preceding the onset of conversion. In study by Deka et. al[21] and Reddy et. al[28], underlying stressor was found in all the patients whereas Subramanian et al[22] in their study found that only 52.5% patients gave history of any obvious precipitating factor.

While education/school-related factors were the major stressors in children and young adults (39.1%), it was the family/marital disharmony-related factors (66.7%) in older adults leading to conversion. Similar

findings were reported by Deka et al.[21] and Reddy et. al.[28] while studies from the western countries report the common stressors to be sexual abuse, emotional, and physical abuse.[29,30] Even though literature from the west emphasize more on the childhood sexual abuse as a precipitating factor for conversion, this has not been found in any of the Indian studies on conversion which is a matter of further investigation.

Limitations of the study

The sample size was small. Being a cross-sectional study, the pattern of symptomatology in subsequent recurrences could not be studied thereof.

Conclusion

Conversion disorders are more commonly seen in children & young adults, students, and housewives, and in those living in a nuclear family, belonging to middle class of socioeconomic status and rural areas. Conversion is significantly more common in females than males (2.5:1). It mostly occurs in the background of increased stressful life events and in the presence of identifiable psycho-social stressors. An understanding of the precipitating psycho-social factors and stressors that overpower the patients' coping abilities have implications for treatment in conversion disorder and enable the clinicians to devise specific strategies for early intervention and prevention. Further research is required with bigger sample to validate and replicate our findings.

Declarations

- *Ethics approval and consent to participate* Ethics approval for the study was granted by Institutional Ethical Committee (IEC), NRI Institute of Medical Sciences & Research, Vishakhapatnam, India. Written Informed consent was taken from all the participants. In participants less than 18 years of age, consent was taken from parents or the primary caregiver and assent was obtained from the children above 12 years.

- *Consent for publication* All participants gave consent for publication

- *Competing interests* All Authors declare no conflicts of interests

- *Availability of data and material* Data for the study can be accessed by writing to the corresponding author.

- *Funding* Nil

- *Authors' contributions* RB and KSK conceived the concept for the study. MAB & RB performed the literature review. RB & KSK devised the study methodology and finalized the study questionnaire. RB collected data from the patients and performed analysis. RB written the first draft and later drafts which were revised by MAB. All authors approved the final draft for submission.

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