Clinical, sociodemographic profile and stressors in patients with conversion disorders: An exploratory study from southern India

**ABSTRACT**

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 Diagnostic and Statistical Manual of Mental Disorders (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 (ICD), 10th edition, conversion symptoms are classified as dissociative disorders (e.g., dissociative motor disorder), with similar diagnostic criteria.

**Background:** Patients present with “conversion disorder” as a response to any underlying stressful situation. It is clinically important to evaluate the presence, type, and temporal relation of the stressors, resulting in conversion. Further, knowing the sociodemographic and psychological profile of the conversion patient helps in better management. **Aim:** The aim of the study was to study the clinical presentations, sociodemographic characteristics, and underlying stressors associated with conversion disorder. **Materials and Methods:** Fifty patients admitted to the Department of Psychiatry, NRI Medical College and Hospital, Guntur, Andhra Pradesh, from January 2013 to December 2014, who fulfilled the inclusion criteria of the study were evaluated for sociodemographic characteristics, clinical presentations, and stressor on a semi-structured pro forma. **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. They are mostly preceded by identifiable psychosocial stressors.

**Keywords:** Conversion, psychosocial, sociodemographic profile, southern India, stressors

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

**How to cite this article:** Bammidi R, Ravipati LP, Bashar MD, Kumar KS. Clinical, sociodemographic profile and stressors in patients with conversion disorders: An exploratory study from southern India. Ind Psychiatry J 2020;29:222-7.
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. Common examples of conversion symptoms include blindness, paralysis, dystonia, psychogenic nonepileptic seizures, anesthesia, swallowing difficulties, motor tics, difficulty walking, hallucinate ions, anesthesia, and dementia. Despite lack of a definitive organic diagnosis, the patient's distress is quite real and the physical symptoms experienced by the patient can not be controlled at will.

Patients of conversion disorder spend nine times the cost for health care as people not having the disorder. It is also estimated that 82% of the adults with this disease stop working because of their symptoms. 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. Despite its clinical importance, there has been only marginal progress in the understanding of conversion disorder relative to many other neurological and psychiatric disorders.

The reported prevalence of conversion disorder varies widely depending on the population studied. Studies have estimated that 20%–25% of patients in a general hospital setting have individual symptoms of conversion, and 5% of patients in this setting meet the criteria for the full disorder. Further, medically unexplained neurological symptoms account for approximately 30% of the referred neurology outpatients. In a study of 100 randomly selected patients from a psychiatry clinic, 24 were noted to have unexplained neurological symptoms.

Among adults, women diagnosed with conversion disorder outnumber men by a 2.1–10:1 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. 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%. Some Indian studies have focused on the clinical characteristics in conversion disorder. 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. Furthermore, higher prevalence of conversion disorder has been seen in illiterates, married housewives being the most common group. However, less is known from the region of Southern India about the clinical presentations and sociodemographic variables in conversion disorder.

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

### MATERIALS AND METHODS

#### Study settings and design

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

Patients attending the Department of Psychiatry of NRI Medical College and Hospital, Guntur, Andhra Pradesh (A.P) a tertiary care medical Institute in Southern India, with conversion/dissociative symptoms amounting to disorder were the study subjects. They were evaluated for possible precipitating factors, clinical features, sociodemographic profile using semi-structured pro forma.

#### Study tools

- The ICD10 – Classification of mental and behavioral disorder: criteria for dissociative (conversion) disorder was used.
- A semi-structured pro forma to record sociodemographic details 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 the diagnostic criteria of dissociative (conversion) disorder according to ICD-10 and DSM-4 were included in the study.

#### Exclusion criteria

Subjects having known history of organic disorder including epilepsy and comorbid other psychiatric illness, for example, anxiety disorder and depressive disorder were excluded from the study.

#### Study procedure

All the study subjects were thoroughly evaluated based on history and mental status examination, and the diagnosis was confirmed by a senior psychiatrist.
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 pro forma.

**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 protocol was approved by the Institutional Ethics Committee of the institute. Written informed consent was taken from all the participants. In participants <18 years of age, consent was taken from parents or the primary caregiver and assent was taken from them.

**RESULTS**

The sociodemographic 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. Majority of the study participants had a rural background (62.0%) and belonged to a nuclear family (78.0%). Further, most of the study participants (66.0%) belonged to the middle class as per their socioeconomic status.

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

As many as 12.0% of the study subjects presented with “mixed symptoms,” 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 into two groups: Children and young adults between age of 6 and 22 years and adults above the age of 22 years.

**Table 1: Sociodemographic profile of the subjects with conversion disorder (n=50)**

| Variable                        | n (%)     |
|---------------------------------|-----------|
| Mean age (years)                | 20.97±8.54|
| Sex                             |           |
| Male                            | 19 (38.0) |
| Female                          | 31 (62.0) |
| Age-groups (years)              |           |
| 6-18                            | 18 (36.0) |
| 19-30                           | 19 (38.0) |
| 31-42                           | 11 (22.0) |
| 43-54                           | 2 (4.0)   |
| Education level                 |           |
| Illiterate                      | 22 (44.0) |
| Lower secondary (below 10th class) | 16 (32.0) |
| Higher secondary (intermediate) | 7 (14.0)  |
| Graduate or above               | 5 (10.0)  |
| Type of family                  |           |
| Nuclear                         | 39 (78.0) |
| Joint                           | 11 (22.0) |
| Marital status                  |           |
| Single                          | 23 (46.0) |
| Married                         | 27 (54.0) |
| Occupation                      |           |
| Employed                        | 2 (4.0)   |
| Unemployed                      | 3 (6.0)   |
| Housewife                       | 22 (44.0) |
| Students                        | 23 (46.0) |
| Type of residence               |           |
| Rural                           | 31 (62.0) |
| Urban                           | 19 (38.0) |
| Socioeconomic status            |           |
| Lower                           | 16 (32.0) |
| Middle                          | 33 (66.0) |
| Upper                           | 1 (2.0)   |

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) prior to onset, 8.7% reported to have peer group problems, and in 8.7%, no identifiable stressor could be found.

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.

**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 below 5 years of age. The most commonly affected group in our study were young adults (38.0%) between the age of 18–30 years, followed by children and adolescents (36.0%) in the age group of 6–17 years. This corresponds with the findings by Vyas and Bharadwaj et al. Bagadia et al., Deka et al., and Subramanian et al. in their studies on patients with conversion disorder. However, studies from outside India suggest a peak onset in the mid to late 30s.

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 and Bharadwaj, Bagadia et al., Deka et al., and Subramanian et al. in line with our findings.

Majority of our study subjects were illiterate (44.0%). Among literate ones, most of them had completed only up to 10th standard or had <10 years of formal education (32.0%). Studies by Vyas and Bharadwaj, Bagadia et al., Deka et al., and Subramanian et al. reported similar findings of majority of the patients being either illiterates or having received education up to primary or high school level.

In our study, the predominant population was of students (46.0%) and housewives (44.0%). Similar finding was reported by Deka et al. and Reddy et al. Similarly, most of our study subjects were married (54.0%). Study by Vyas and Bharadwaj also reported similar findings. However, Studies by Deka et al. and Reddy et al. 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., Deka et al., and Gupta et al. also found subjects belonging to rural background as the predominant ones. However, Vyas and Bharadwaj in their study found majority belonged to urban background. This may be due to different settings, in which these studies were conducted.

As high as 78.0% of the study subjects belonged from nuclear families, which could possibly be due to lifestyle pattern in rural areas too changing to a modernized one. Similar findings were reported by Deka et al. and Gupta et al. However, Vyas and Bharadwaj 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. In contrast, Deka et al. found majority (75%) of their study subjects belonged to lower socioeconomic status which indicates toward changing epidemiology of conversion disorder with respective to socioeconomic status.

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

Assessing the subjects for psychosocial stressors [Tables 3 and 4], it was observed that majority (94.0%) had an identifiable underlying psychosocial stressor preceding the onset of conversion. In study by Deka et al. and Reddy et al., underlying stressor was found in all the patients (100%), whereas Subramanian et al. 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

Table 2: Symptomatology of patients with conversion disorder (n=50)

| Symptom type                                           | n (%)       |
|--------------------------------------------------------|-------------|
| Unresponsiveness/syncopal attack                       | 10 (20.0)   |
| Pseudo seizures                                        | 9 (18.0)    |
| Paresis/paralysis                                      | 7 (14.0)    |
| Functional aphony                                       | 4 (8)       |
| With mixed symptoms (headache, burning sensation, weakness of whole body) | 6 (12) |
| Hyperventilation                                        | 5 (10)      |
| Stomach pain                                            | 1 (2)       |
| Isolated/pure sensory loss                             | 1 (2)       |
| Deviation of neck (dystonia)                           | 1 (2)       |
| Diplopia/blindness                                      | 2 (4)       |
| Deafness                                                | 1 (2)       |
| Abnormal gait                                           | 2 (4)       |
| Unable to pass urine or distention of bladder           | 1 (2)       |
| Total                                                  | 50 (100)    |

Table 3: Precipitating factors/stressors seen among children and young adults aged 6-22 years with conversion disorder (n=23)

| Type of stressors/precipitating factors | n (%)       |
|----------------------------------------|-------------|
| Education/school related problem       | 9 (39.1)    |
| Parental separation/improper parenting | 4 (17.4)    |
| Pampered/demanding child               | 4 (17.4)    |
| Change in living conditions (hostel)   | 2 (8.7)     |
| Peer group problems                    | 2 (8.7)     |
| No stressor                            | 2 (8.7)     |
| Total                                  | 23 (100)    |
adults, leading to conversion. Similar findings were reported by Deka et al.\textsuperscript{[21]} and Reddy et al.\textsuperscript{[28]} while studies from the western countries report the common stressors to be sexual abuse, emotional, and physical abuse.\textsuperscript{[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 common in children and 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 psychosocial stressors. An understanding of the precipitating psychosocial 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 to be conducted with bigger sample to validate and replicate our findings.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

**REFERENCES**

1. Blitzstein SM. Recognizing and treating conversion disorder. Virtual Mentor 2008;10:158-60.

2. Freud S, Strachey J, Freud A. The Neuro-Psychoses of Defense. Institute of Psychoanalysis editors. The Standard Edition of the Complete Psychological Works of Sigmund Freud. London: Hogarth Press and the Institute of Psycho-Analysis; 1962. p. 45-61.

3. American Psychiatric Association. DSM 5 Development. Highlights of Changes from DSM-IV-TR to DSM 5. Available from: http://www.dsm5.org/Documents/changes%20from%20dsmin-fv%20to%20dsm-5.pdf. [Last accessed on 2014 Apr 28].

4. Ballmaier M, Schmidt R. Conversion disorder revisited. Funct Neurol 2005;20:105-13.

5. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders. Geneva: World Health Organization; 2010.

6. Sadock BJ, Sadock VA. Kaplan, Sadock’s Synopsis of Psychiatry. 10th ed. Philadelphia, United States: Lippincott Williams, Wilkins; 2007. p. 638-42.

7. Isaac M, Chand PK. Dissociative and conversion disorders: Defining boundaries. Curr Opin Psychiatry 2006;19:61-8.

8. Dula DJ, DeNaples L. Emergency department presentation of patients with conversion disorder. Acad Emerg Med 1995;2:120-3.

9. Marshall S, Bienefeld D. Conversion Disorder, Medscape. Drugs and Diseases. June 26, 2013. https://emedicine.medscape.com/article/287464-overview. [Last accessed on 2020 Mar 30].

10. Encyclopedia of Mental Disorders. Conversion Disorder. Available from: http://www.minddisorders.com/BrDel/Conversiondisorder.html#ixzz3Sz2ySNxAX. [Last accessed on 2020 Mar 30].

11. Nicholson TR, Stone J, Kanaan RA. Conversion disorder: A problematic diagnosis. J Neurol Neurosurg Psychiatry 2011;82:1267-73.

12. Engl GL. Conversion symptoms. In: McBride CM, editor. Signs and Symptoms: Applied Pathologic Physiology and Clinical Interpretation. 5th ed.. Philadelphia: JB Lippincott; 1970. p. 650-68.

13. Feinstein A. Conversion disorder: Advances in our understanding. CMAJ 2011;183:915-20.

14. Carson AJ, Best S, Postma K, Stone J, Warlow C, Sharpe M. The outcome of neurology outpatients with medically unexplained symptoms: A prospective cohort study. J Neurol Neurosurg Psychiatry 2003;74:897-900.

15. Malhi P, Singh P. Clinical characteristics [correction of characteristics] and outcome of children and adolescents with conversion disorder. Indian Pediatr 2002;39:747-52.

16. Srinath S, Bharat S, Girimaji S, Seshadri S. Characteristics of a child inpatient population with hysteria in India. J Am Acad Child Adolesc Psychiatry 1993;32:822-5.

17. Vyas JN, Bharadwaj PK. A study of hysteria-An analysis of 304 patients. Indian J Psychiatry 1977;19:71-4.

18. Saxena S, Pachauri R, Wig NN. DSM-III diagnostic categories for icd-9 hysteria: A study on 103 cases. Indian J Psychiatry 1986;28:47-9.

19. Spierings C, Poels PJ, Sijben N, Gabreëls FJ, Renier WO. Conversion disorders in childhood: A retrospective follow-up study of 84 inpatients. Dev Med Child Neurol 1990;32:865-71.

20. Bagadia VN, Shastri PC, Shah JP. Hysteria: A study of demographic factors. Indian J Psychiatry 1973;5:178.

21. Deka K, Chaudhury PK, Bora K, Kalita P. A study of clinical correlates and socio-demographic profile in conversion disorder. Indian J Psychiatry 2007;49:205-7.

22. Subramanian D, Subramanian K, Devaky MN, Verghese A. A clinical study of 276 patients diagnosed as suffering from hysteria. Indian J Psychiatry 1980;22:63-8.

23. Tezcan E, Atmaca M, Kuloğlu M, Geçici O, Buyukbayram A, Tutkun H. Dissociative disorders in Turkish inpatients with conversion disorder. Compr Psychiatry 2003;44:324-30.

**Table 4: Precipitating factors/stressors seen among the adults aged 23 years or above with conversion disorders (n=27)**

| Type of stressors/precipitating factors | n (%) |
|----------------------------------------|-------|
| Marital/family problems (husband who is irresponsible, unemployed, extra marital affair, financial problems, and conflict with mother-in-law (or) other family members) | 18 (66.7) |
| Work stress | 4 (14.8) |
| Having no children | 2 (7.4) |
| Being unmarried | 1 (3.7) |
| No stressor | 2 (7.4) |
| Total | 27 (100) |
24. Deveci A, Taskin O, Dinc G, Yilmaz H, Demet MM, Erbay-Dundar P, et al. Prevalence of pseudoneurologic conversion disorder in an urban community in Manisa, Turkey. Soc Psychiatry Psychiatr Epidemiol 2007;42:857-64.

25. Stefánsson JG, Messina JA, Meyrowitz hysterical neurosis, conversion type: Clinical and epidemiological considerations. Acta Psychiatry Scand 1976;53:119-38.

26. Reddy LS, Patil NM, Nayak RB, Chate SS, Ansari S. Psychological dissection of patients having dissociative disorder: A cross-sectional study. Indian J Psychol Med 2018;40:41-6.

27. Gupta V, Singh A, Upadhyay SK, Bhatia BD. Clinical and socio-demographic profile of conversion disorder in children. Indian J Prev Soc Med 2011;42:375-7.

28. Roelofs K, Kajiers GP, Hoogduin KA, Naring GW, Moene FC. Childhood abuse in patients with conversion disorder. Am J Psychiatry 2002;159:1908-13.

29. Greshuny BS, Najavits LM, Wood PK, Heppner M. Relation between trauma and psychopathology: Mediating roles of dissociation and fears about death and control. J Trauma Dissociation 2004;5:101-17.

30. Ozcetin A, Belli H, Ertel U, Bahcebası T, Ataoglu A, Canan F. Childhood trauma and dissociation in women with pseudoseizure-type conversion disorder. Nord J Psychiatry 2008;63:462-8.