

## An Overview of Conversion Disorder: Prevalence, Causes, and Treatment

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### Abstract

This paper reviews an overall picture of conversion disorder to develop a clear and systematic understanding of its etiology, causes, and treatment.

**Keywords:** Conversion Disorder; Etiology Treatment; Paralysis; Blindness; Neurological; Organic Cause; Psychoanalysis; Indian Research Studies

### Introduction

#### Psychosomatic disorders

The term 'psychosomatic disorder' was first introduced by German Psychiatrist Heinroth in the year 1818. During that period in Germany, the focus of most researchers and psychiatrists was towards studying the unconscious mind and dreams. However, due to rapid advancement in the development of medicine and science, the philosophical thought of psychology shifted towards a more medicine-oriented aspect. This provided a climate for the beginning of diagnoses of psychosomatic disorders [1]. It was in early 1900s that German physicians during World War-1 received numerous complaints of illnesses and disorders which did not have any organic cause. Thus, psychosomatic disorders came to be defined as those disorders which although may have a physiological explanation for their point of origin but lack any substantial or organic cause and are more related to emotional factors. Zegarelli along with his colleagues classified psychosomatic disorders into psychoneurotic disorders, psycho-physiologic disorders, personality disorders, and psychotic disorders [2]. Under psychoneurotic disorders comes the conversion disorder, one of the most popularly researched psycho-somatic disorder.

#### Conversion disorder

According to the American Psychiatric Association, conversion disorders are defined as those disorders which involve symptoms and deficits that affect voluntary motor or sensory functioning, without any substantial organic physiological cause. In simple terms, conversion disorders are defined as those disorders which are characterized by motor or sensory dysfunctions, without any neurological or medical explanations. There many explanations for the onset of conversion disorders. The most common and historic notion of conversion disorder is the psychodynamic explanation proposed by Sigmund Freud. According to Freud's psychodynamic theory, conversion disorders result due the individual's repressed childhood traumatic events or aggressive and sexual urges. Because these conflicts and urges result in anxiety, the individual tends to repress them. When this anxiety threatens to come into the conscious awareness, the individual unconsciously converts that in the form of physical symptoms, thereby avoiding the anxiety. This way of escaping from the unconscious anxiety is referred to as primary gain. Freud's other explanations suggest that the individual may show that he/she has serious physiological symptoms of a disease and might gain sympathy and attention from others. Freud referred to this tendency as secondary gain [3].

There are social and cultural explanations of conversion disorder as well. Such explanations are mainly based on the evidence of conversion symptoms occurring in lower socio-economic groups and family backgrounds which have lack of knowledge and awareness about medical diseases. In some research studies using control groups, it has been found that patients tend to adopt the similar conversion symptoms that members of their family adopted in the past and believe them to be a part of the family history (Brady and Lind, 1961). Some explanations of conversion disorder also point to sexual abuse in childhood, specially among women. According to Pierre Janet, emotional responses to early childhood abuse often results in a disrupted state of consciousness. This state of consciousness sometimes results in a form of hypnosis. Janet suggested that an individual who suffered sexual abuse/traumatic events in childhood is likely to use such hypnotic states as a defensive reaction to such traumatic events. Thus, such people are more likely to develop conversion symptoms in response to traumatic events in life.

#### Prevalence rate of conversion disorder

The prevalence rate of conversion disorder in neurological settings is higher as compared to socio-cultural settings. Conversion symptoms are found to be more prevalent among women and these develop mostly during adolescence. A high degree of conversion symptoms are also found among soldiers on combat. Patients with psychogenic non-epileptic seizures also have a prevalence rate of conversion disorder, which is about 20% around the world. Patients with dissociative symptoms also have a prevalence rate of conversion disorder. In other instances, conversion disorder is common among cultures that emphasize on religious and spiritual healings. A condition like paralysis or blindness is often considered to occur due to actions of god in such cultures [3].

#### Diagnosis of conversion disorder

The diagnostic criteria used by DSM-V and ICD-10 in classifying conversion disorder takes a psycho-social perspective. Both diagnostic systems define the following four features to qualify for conversion disorder:

- Neurological symptoms (motor and sensory) and loss of consciousness.
- No substantial evidence of organic causes that can explain the disease.
- Psychological stressors at the onset of the disease.
- Exclusion of faking symptoms.

This perspective of the diagnostic systems seeks to distinguish conversion disorder from most neurological disorders [4].

In the Indian context, psycho-social factors in children and adolescents with conversion disorder have also been assessed. According to the literature, conversion disorder is usually associated with a psycho-social stressor, unexplainable by any physiological mechanism. Therefore, the patient experiences distress due to these stressors and eventually develop symptoms like pseudo seizures and paralysis. These symptoms are most commonly reported among children and adolescents [5]. Lower literacy rates, poor socio-economic background, and family factors play an important role in the development of conversion symptoms. In India, system of joint family is most commonly followed. Primary caregivers and secondary caregivers have been defined. Primary caregivers are identified as parents, while secondary caregivers are identified as grandparents and other family members. Constant clashes between both types of caregivers have been reported which result in the development of conversion disorder. It is also widely reported that the status of a child, poor parenting styles, and imitating the behaviour of people with conversion symptoms also play an important role in conversion disorder [5].

#### Methods

Numerous researches have been conducted to understand the onset and treatment of conversion disorders. As widely reported, onset of conversion disorder occurs due to early traumatic childhood experiences. Therefore, most research studies based on conversion disorders were found using keywords 'conversion disorder' and 'childhood experiences'. Different research articles were found based on these keywords. Journals used for searching these research articles included the Journal of Nervous and Mental Disease, Jstor, and International Journal of Contemporary Medicine Surgery and Radiology. A lot of neurological studies have also been done to examine conversion disorder, such as using fMRI studies. As neurological symptoms are one of the most important diagnostic criteria for conversion disorders and are commonly found among conversion patients, therefore, studies were searched using keywords 'neurological symptoms' and 'conversion disorder'. Also, specific studies were searched which included how different neurological techniques are used in the diagnosis and treatment of conversion disorder. The journals that were specifically used were Elsevier, Research gate, and Journal of Neural, Neurosurgery, and Psychiatry.

As many organic symptoms without any pathological evidence are presented by the patients of conversion disorder, research articles focused on the topic 'the kinds of organic symptoms reported by conversion patients' were searched. The journal that included research articles based on this topic was the Journal of Psycho-somatic Research. Numerous articles on the treatment and rehabilitation of conversion disorder were also found from same journal resources. Articles related to the role of emotions in conversion disorder were also searched using the keywords 'emotions of patients with conversion disorder' on the PLOS Journal. Studies on conversion disorder in India were also searched to get a clear of its prevalence. These studies were assessed using the keywords 'conversion disorder research in India'. The journals that came up were Indian Journal of Psychiatry.

## Results

Results from all the studies indicated the causes, symptoms, and treatment among patients with conversion disorder. Most studies involving early traumatic experiences and childhood abuse were comparative in nature which involved the use of matched healthy control groups. These studies showed that patients with conversion disorder report higher levels of early traumatic events and sexual abuse, along with effects of significant life events, stress in job and relationships. Studies involving neurological mechanisms to study conversion disorders found that conversion symptoms were associated with abnormal levels of cerebral processing, particularly involving emotional processes and sensory networks. Some of the studies also found that patients with conversion disorder were also suspected to suffer from one or more neurological disorders. Suspected cancer is also considered to be a contributing factor in the development of psychogenic nonepileptic seizures.

Studies that assessed the role of emotions among conversion patients using fMRI studies found that amygdala is highly active in negative emotions. Activation of response to fear was also significantly higher among conversion patients as compared to normal control group. Related to emotions, some studies also found the relation between alexithymia (a condition which involves difficulty in recognizing emotional expressions) and conversion disorder. A high correlation was found between alexithymia and conversion disorder [6]. Conversion disorder is also found to have high correlations with other mental disorders. Binzer, *et al.* [7] found that patients with conversion symptoms also fulfil the criteria of psychiatric syndromes, personality disorders, as well as depression.

Studies that focused on the neurological symptoms of conversion disorder have used various neuroimaging methods like fMRIs, Positron Emission Tomography, and Photon Emission Computerized Tomography. These studies have found abnormal functioning in the brain circuits, such as cingulate cortex, that result in the development of neurological symptoms [8].

Studies that assessed the rehabilitation and management of conversion disorder suggested that operant behavioral treatment was highly successful in treating the symptoms of conversion disorder, using the technique of positive reinforcement [9]. Physical therapy has also found to be effective in the successful rehabilitation of patients with conversion disorder. Techniques of behavioral modification and shaping were used in the physical therapy, in which patients were praised for each correct movement.

Within the Indian context, the results of the studies suggested the role of family, relationships and problems in school among adolescents. Some of the commonly reported motor symptoms included dizziness, paresis, and limb paralysis [10].

## Discussion

The main objective of this paper was to review the overview of conversion disorder: its symptoms, causes, and treatment. Over the past many years, psycho-somatic disorders have become quite popular in the field of clinical psychology and psychiatry. Under the neurotic classification of psycho-somatic disorder comes the conversion disorder. Conversion disorders occur when an individual complains of having symptoms of a disorder or an illness such as blindness, paralysis, physical pain, etc., which do not have an organic cause. It is reported that these symptoms occur due to a psychological factor or stressor. Since its historical roots have been traced to psychoanalysis, conversion disorder has been extensively researched to identify its neurological as well as physical causes.

A review of many research articles, books, and review papers done to get an overall picture of conversion disorder. By going through the literature provided through these sources, it was found that the total prevalence rate of conversion disorder across the world is approximately 20%, which is higher among women and occurs more in neurological conditions than social or cultural conditions. In the India, conversion disorders are more often reported among adolescents. Different explanations of conversion disorders were formulated in this review article, starting with the psychoanalytic theory proposed by Freud. Some of the other

explanations of conversion disorder were based on socio-cultural factors, emotional experiences, and neurological and physiological explanations.

Under the neurological and physiological mechanism, researches point towards abnormal functioning of cerebral processing and high levels of fear response and negative emotions. Most popularly reported causes of conversion disorder are early childhood traumatic experiences and sexual abuse. Cognitive, sensory, and motor processes are dissociated due to these early traumatic experiences which in the long-run result in conversion disorder [11]. For the treatment of conversion disorder, therapeutic techniques involving behavioral therapies and other techniques like behaviour modification and shaping have been found to be effective. These therapeutic techniques involve positive reinforcement, such as praising the patient for showing improvement and help them unlearn the maladaptive behaviour. Sometimes confronting the patient regarding his/her false beliefs of the illness/disorder also helps in treating the patient. Some of the psycho-physiological techniques used in treating conversion disorders were electrical stimulation and EMG biofeedback. These techniques usually deal with excessive chronic pain that the patient experiences. It is combined with behaviour modification [9,12-21].

## Conclusion

This review paper provides an overall picture of conversion disorder, in terms of its etiology, causes, and treatment. Various etiological explanations, such as the psychoanalytic and socio-cultural explanations have been covered up which provides the basis for the various causes of conversion disorders. The onset of this disorder points to early childhood traumatic experiences and sexual abuse, abnormal neurological and emotional functioning, and role of social factors such as socio-economic backgrounds, literacy level, and family environment. Treatment and rehabilitation of conversion disorders included some of the therapies focused on reinforcement and behaviour modification which also sometimes combine physiological techniques. The review paper also takes the Indian perspective by including various researches done in exploring conversion disorder, involving Indian population.

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