Conversion disorder

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Taylor, S., & Brown, I. D. (1994). Illusion and well-being revisited: Separating fact from fiction. *Psychological Bulletin, 116*, 21–27.

Thompson, S. (1981). Will it hurt less if I can control it? A complex answer to a simple question. *Psychological Bulletin, 90*, 89–101.

SUGGESTED READINGS

Frank, J. (1982). Therapeutic components shared by all psychotherapies. In J. J. Harvey & M. M. Parks (Eds.), *Psychotherapy research and behavior change*. Master lecture. Washington, DC: American Psychological Association.

Shapiro, D. H., & Astin, J. A. (1998). *Control Therapy: An integrated approach to psychotherapy, health, and healing*. New York: John Wiley & Sons.

Strupp, H. (1970). Specific versus non-specific factors in psychotherapy and the problem of control. *Archives of General Psychiatry, 23*, 393–401.

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See also: **Behavioral Modeling; Perceptual Control Theory; Self-Control**

CONVERSION DISORDER

Conversion disorder is a mental disturbance in which patients present with neurological symptoms such as paralysis, numbness, or blindness, but for which no neurological or other organic explanation can be identified. Instead, psychological mechanisms are believed to cause the symptoms. Conversion symptoms were initially described in the context of hysteria. The term "conversion disorder" was originated by the physicians Josef Breuer and Sigmund Freud, who suggested that negative emotions were repressed and "converted" into physical symptoms. Other adjectives frequently used to describe conversion symptoms are "psychogenic," "pseudoneurological," or "medically unexplained" bodily symptoms. Known for millennia, this disorder has always been subject to debate and conceptual confusion. This is

reflected, for example, in the manner in which the disorder is currently classified within the two major current nosologies. In the *International Statistical Classification of Diseases and Related Health Problems* (ICD-10: WHO, 1992) conversion disorder is a dissociative disorder; in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR: APA, 2000) it is a type of somatoform disorder.

Characteristics

Definition

The diagnostic criteria for conversion disorder according to the DSM-IV-TR are as follows:

- The patient has one or more symptoms or deficits affecting voluntary motor or sensory function suggesting a neurological or other general medical condition.
- Psychological factors are judged to be associated with the symptoms because conflicts or other stressors precede the initiation or exacerbation of the symptoms.
- The symptom is not intentionally produced or feigned (as in factitious disorder or malingering).
- The symptom, after appropriate investigation, cannot be fully explained by a medical condition, substance intake, or as a culturally sanctioned behavior.
- The symptom causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or warrants medical evaluation.
- The symptom is not limited to pain or sexual dysfunction, does not occur exclusively in the context of somatization disorder, and is not better accounted for by another mental disorder.

Symptom Presentation

The presentation of conversion symptoms mimics a broad spectrum of neurological disorders. The most common conversion symptoms are motor symptoms, such as paralysis, weakness, gait disturbances, and tremor. The second most common symptom cluster consists of sensory symptoms that may involve loss of sensation, blindness, and sometimes deafness. Another cluster of symptoms involve psychogenic non-epileptic insults. There can also be a mixed presentation in which there are motor, sensory, and seizure-like symptoms.

Demographics

The lifetime prevalence rates of conversion disorder in the general U.S. population are estimated to fall between 11 and 300 per 100,000 people. In clinical populations, the rates vary between 5% and 14% of general hospital patients; 1%–3% of outpatient referrals to psychiatrists; and 5%–25% of psychiatric outpatients. However, in neurological settings, up to 30% of the patients present with symptoms that are only somewhat or not at all explained by disease (Carson et al., 2000). Because only a few of these patients are referred for additional psychiatric evaluation, it remains unknown how many of these patients meet the diagnostic criteria for conversion disorder. Prevalence rates are higher in rural and lower socio-economic groups, and conversion disorder is more common in females than males, with a female-to-male ratio varying between 6:1 and 2:1. Although conversion disorder may present at any age, symptom onset is most frequently between age 30 and 40.

Psychiatric and Neurological Comorbidity

Psychiatric comorbidity is common in conversion disorder. Depression and anxiety disorders are present in 22%–75% of the patients. Personality disorders are observed in 37–59% of the patients. Although histrionic personality disorders have been observed, other types of disorders such as avoidant and dependent personality disorder are far more common. Conversion symptoms are, by definition, not attributable to a neurological or other organic pathology. Nevertheless, neurological comorbidity is common, with rates varying between 3% of the patients in psychiatric settings and up to 50% in neurological settings.

Diagnostic Issues

Major difficulties in diagnosing conversion disorder are (1) the exclusion of neurological disease, (2) the exclusion of feigning, and (3) the identification of psychological mechanisms. With respect to excluding neurological disease, Slater and Glithero (1965) published an alarming report that at follow-up one third of their patients appeared to have developed neurological disease. Later authors argued that this study was biased and published studies reporting rates around 4%, which is comparable to the rate of neurological disorders in general. Some signs like the Hoover's sign (the involuntary extension of a paralyzed leg when the "good" leg is flexing against resistance) may be beneficial in discriminating conversion from neurological disorder (Ziv et al., 1998). However, signs formerly taken as indicative of conversion disorder, such as *"la belle indifference"* (a relative lack of concern about the nature or implications of the symptoms), appear to be unreliable and equally common in neurological disorder.

Feigning or malingering is difficult to detect in persons with physical complaints, and clinicians should be suspicious when patients are involved in legal or insurance procedures. An increasing number of neurophysiological studies have shown that, at least in a research setting, feigning can be differentiated from conversion disorder, as evidenced by discrete brain activation in cases of motor and sensory conversion disorder (e.g., Spence et al., 2000). In clinical settings video observations may be helpful.

Despite the difficulties of excluding neurological disorder and feigning, experts state that conversion disorder can be diagnosed with a fair amount of reliability provided that standard diagnostic protocols are carefully followed (Halligan, Bass, & Marshall, 2001).

The third and perhaps most controversial step in diagnosing conversion disorder is the identification of a psychological stress factor that, according to the DSM-IV, should precede the onset or exacerbation of the symptoms. Childhood trauma and subsequent life-events have indeed been linked to conversion and somatization symptoms. Nevertheless, several authors have questioned the necessity of identifying psychosocial precipitants in order to make a firm diagnosis of conversion disorder. Although clear environmental precursors are often found, they can be absent in some cases (see Roelofs & Spinhoven, 2007, for a review).

History and Theoretical Models

In the nineteenth century, Jean-Martin Charcot and Paul Briquet in France and Josef Breuer in Vienna were investigating what was then called hysteria, a disorder primarily affecting women (the term "hysteria" comes from the Greek word for uterus or womb). Women diagnosed with hysteria had frequent emotional outbursts and presented with a variety of pseudo-neurological symptoms. Descriptions of *arc-de-cercle* (a bizarre posture in which patients arched their body backwardly) stem from this time. Pierre Janet, a French psychiatrist and student of Charcot, suggested that hysteria resulted from psychological trauma and proposed that patients suffering from hysteria presented with an altered state of consciousness, described as a state of dissociation (Janet, 1907).

Despite the variety of manifestations of conversion symptoms, the symptoms share one important feature, that is, the patient's symptom presentation is characterized by marked dissociation between voluntary (more conscious or explicit) and automatic (more unconscious or implicit) functions, whereby the voluntary motor and sensory processes fail and the automatic more unconscious processes remain intact (Kihlstrom, 1992). Systematic investigations have shown, for example, that patients with conversion blindness could modify their behavior in response to visual information they deny seeing. In the case of conversion paralysis, the patient is unable to intentionally move one or more parts of the body, whereas under less controlled or intentional circumstances, such as during sleep, hypnosis, or during tests like the Hoover's test, the patient may show some movement in the affected area (Ziv et al, 1998). These discrepancies between voluntary and automatic motor as well as sensory functions have raised considerable confusion in clinical practice. The question of what accounts for these contradictory phenomena has intrigued and preoccupied philosophers, psychiatrists, and neurologists throughout history. Roughly, three categories of explanatory models can be distinguished (Roelofs & Spinhoven, 2007).

Psychodynamic Models

According to psychodynamic models stemming from Freud's theories, conversion symptoms reflect repressed emotions that have been converted to bodily symptoms. Freud later argued that the repressed experiences were sexual or aggressive in nature. In his view, the primary gain from conversion symptoms is the negative emotions associated with these experiences becoming unconscious and no longer felt. However, high comorbidity of anxious and depressed mood in conversion disorder question the validity of this theory by indicating that patients with conversion symptoms may continue feeling distressed.

Dissociation Models

Dissociation theory, initially developed by Pierre Janet (1859–1947), assumes that under the influence of overwhelming psychological stress, individuals experience a spontaneous narrowing of attention. This attentional narrowing limits the number of sensory channels that can be attended to simultaneously and results in the loss of deliberate attentional control over unattended channels. However, information in the unattended channel is still processed outside of awareness and leads to so-called negative dissociative symptoms (e.g., loss of motor control or somatosensory awareness). Moreover, attentional narrowing precludes full awareness of aspects of the traumatic event and prevents integration of new memories with existing autobiographical memories. However, trauma reminders can trigger these dissociated traumatic memories (also described as fixed ideas) and produce so-called positive dissociative symptoms (e.g., sensory distortions or pain). More recent dissociation models (Kihlstrom, 1992) are still influential in explaining conversion disorder, but they cannot adequately specify when, why, and at what level information processing will fail.

Cognitive Integrative Models

More recently cognitive theories have been developed that build on dissociation theory but regard dissociation as a non-pathological "normal" psychological process. In these models, the term dissociation is used descriptively rather than mechanistically, and traumatic experiences are no longer incorporated as a necessary causal factor in the development of dissociative symptoms. Brown (2004), for example, emphasizes the role of illness-related cognitive representations that may develop and become increasingly activated under the influence of a variety of cognitive and environmental factors, including psychological stress,

self-suggestion, and self-focused attention. Cognitive models can adequately account for the fact that conversion symptoms are experienced as non-volitional, but they lack integration with current neurophysiological findings.

Neurophysiological Findings

Several neurophysiological and neuropsychological studies support the view that higher-level voluntary motor and sensory control functions are disturbed in conversion disorder, while elementary stages of sensory or motor processing remain intact. Using a variety of brain imaging techniques, these studies have attempted to identify specific neural correlates associated with conversion symptoms. In an exhaustive review, Vuilleumier (2005) concluded that striato-thalamo-cortical circuits controlling sensorimotor function and voluntary behavior may play an important role in the manifestation of conversion symptoms. Most of the findings fit theories proposing that the sensorimotor representations may be modulated by stress-related factors, perhaps involving primitive reflexive defense mechanisms and hyperalertness that are partly independent of conscious control (Vuilleumier, 2005). However, the variability in results, methods, and populations in these studies prohibit definite conclusions on the neurophysiological correlates of conversion symptoms. Moreover it remains a question whether the neurophysiological and neuropsychological alterations reflect causative, maintaining, or consequential factors of conversion symptoms.

Treatment

Controlled single case studies suggest that various treatments, including cognitive-behavioral, operant, cue conditioning, and symptom-focused approaches, may be effective in treating conversion disorder. However, controlled clinical group trials providing information on the successful treatment of longstanding conversion disorders and long-term treatment outcome are very few in number. Only two randomized-controlled group studies on the treatment of conversion disorder have been published, both demonstrating the efficacy of an eclectic multi-modal approach that includes hypnotic techniques in both inpatients and outpatients with conversion disorder (Moene et al., 2002). Important elements of the treatment are a clear explanation, application of symptom-reduction techniques, physiotherapy where appropriate, treatment of comorbid depression or anxiety if present, and teaching learning to cope with stressful events if applicable. The explanation should emphasize that the symptoms are genuine, common, and potentially reversible. Giving a rational for the symptoms that is acceptable for the patient as well as the environment of the patient is helpful in preventing the patient from losing face. In addition, symptom-reduction techniques using indirect suggestions, such as hypnosis and imagery, are thought to be helpful by virtue of by-passing the voluntary (impaired) functions (Moene et al., 2002).

REFERENCES

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (DSM-IV-TR). (4th ed., text rev.) Washington DC, Author.

Brown, R.J. (2004). Psychological mechanisms of medically unexplained symptoms: An integrative conceptual model. *Psychological Bulletin, 130,* 793–812.

Carson, A. J., Ringbauer, B., Stone, J., McKenzie, L., Warlow, C., & Sharpe, M.. (2000). Do medically unexplained symptoms matter? A prospective cohort study of 300 new referrals to neurology outpatient clinics. *Journal of Neurology, Neurosurgery and Psychiatry, 68,* 207–210.

Halligan, P.W., Bass, C., & Marshall, J. (2001). *Contemporary approaches to the study of hysteria: Clinical and theoretical perspectives.* Oxford: Oxford University Press.

Janet, P. (1907). *The major symptoms of hysteria.* New York: MacMillan.

Kihlstrom, J.F. (1992). Dissociative and conversion disorders. In D.J. Stein & J.E. Young (Eds.). *Cognitive science and clinical disorders* (pp. 247–270). San Diego: Academic Press.

Moene, F.C., Spinhoven, P., Hoogduin, C.A.L., & Van Dyck, R. (2002). A randomized controlled clinical trial on the additional effect of hypnosis in a comprehensive treatment programme in patients with conversion disorder of the motor type. *Psychotherapy and Psychosomatics, 71,* 66–76.

Roelofs, K., & Spinhoven, P. (2007). Trauma and medically unexplained Symptoms: Towards an integration of cognitive and neuro-biological accounts. *Clinical Psychology Review 27,* 798–820.

Slater E.T., & Glithero, E. (1965). A follow-up of patients diagnosed as suffering from "hysteria." *Journal of Psychosomatic Research, 9,* 9–13.

Spence, S.A., Crimlisk, H.L., Cope, H., Ron, M.A., & Grasby, P.M. (2000). Discrete neurophysiological correlates in prefrontal cortex during hysterical and feigned disorder of movement. *Lancet, 355,* 1243–1244.

Vuilleumier, P. (2005). Hysterical conversion and brain function. *Progress in Brain Research, 150,* 309–329.

World Health Organization (W.H.O., ICD 10, 1992). *International classification of disorders.* Clinical descriptions and diagnostic guidelines. Chapter 5: Mental and Behavioral Disorders, Diagnostic Criteria and Diagnostic Guidelines. Geneva: World Health Organization, Division of Mental Health.

Ziv, I., Djaldetti, R., Zoldan, Y., Avraham, M., & Melamed, E. (1998). Diagnosis of "non-organic" limb paresis by a novel objective motor assessment: The quantitative Hoover's test. *Journal of Neurology, 245,* 797–802.

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