

Somatoform disorders concept: from classification to biopsychosocial model

David Gigineishvili

Sarajishvili Institute of Neurology & Neurosurgery, Tbilisi, Georgia

ABSTRACT

The category of somatoform disorders (SD) was introduced not so long ago with the purpose of stressing diagnostic and clinical problems regarding patients with somatic complaints, unexplained by current medical conditions, in whom some psychological disturbances are seen. The concept became successor of conversion and dissociative models of hysterical symptoms formation. To date, much more data have been collected in favour of reconsidering SD classification since it does not meet clinical and research demands. In preparation of DSM-V, radical option to abolish SD category has been proposed by international expert group (Mayou et al. 2005). Our article is aimed to discuss this view along with etiological issues and other neurobiological models in psychiatry. We suggest that regardless a condition being related to Axis I or Axis II of mental disorders classification, the somatic symptoms may have the same multifactoral genesis, based on interaction of genetic, psychophysiological and social factors with patterns of neuroanatomical and neurochemical alterations.

KEYWORDS: *somatoform disorders, classification, etiological model, functional somatic symptom*

Somatoform disorders (SD) have become a special focus of neurology, because there is a noticeable proportion of patients who are initially presented with apparent neurological complaints, though the suspicion of organic disorder is not confirmed following appropriate investigations and repeated examinations. Such findings are not uncommon in primary care settings and neurology outpatient clinics. Also of note, there is a high rate of psychic disturbances among neurology patients, which includes not only patients with a well established neurological condition (36-38%), but also those for whom neurologists find scant evidence of organic pathology or even none at all (43-66,7%) [2,4]. In a Danish study SD were identified and diagnosed according to the ICD-10 criteria in about one-third of new neurological patients [5]. However, clear recognition and correct diagnosis of this condition as defined by clinical syndrome according to the current classification system represents one of the most challenging challenges in medicine. Nevertheless, the task is extremely important, just as with any general medical condition that requires labeling in order to choose adequate treatment strategies and management.

ETIOLOGICAL ISSUES

It is common to think that psychological distress is the only recognizable etiological factor for SD. This concept is reflected by the placing them into the section labeled 'Neurotic, stress-related and somatoform disorders' of the current WHO mental and behavioral disorders classification. Actually, there is increasing evidence that biological factors are relevant for these patients, as psychophysiological theories related to the disturbed regulation of physiological functions via the autonomic, endocrine, and immune systems provide plausible explanations for most common functional symptoms [12]. It is clear that the etiology is complex and contains other factors as well, among which may be personality (vulnerability, genetic predisposition) and environmental or social factors. We suggest that an integration of all the factors provides the basis for revealing symptoms that may mimic general medical conditions. This process itself shows a lack of reflection of organic symptoms by psyche. Thus, a dualistic approach that assumes a separation of mind and body seems to not work, or is at least unhelpful. We have hypothesized that somatoform symptoms represent the same organic symptoms but with another

modality, when the psychological factor is much more pronounced, and pathophysiology (morphology) changes are so minor or subtle that they can not be detected by current clinical examinations and laboratory tests [6]. It is very likely that elucidation of a SD category that lies on the boundary between neurology (or general medicine) and psychiatry will change our views of the genesis of so called 'unexplained somatic symptoms'.

OTHER NEUROBIOLOGICAL MODELS IN PSYCHIATRY

It was recently shown that mood disorders represent a good neurophysiological model in psychiatry [10] and very promising data from neurobiological studies seem to suggest the same view [14]. Further, it is very plausible that this view can accommodate the early experience, stress, and impact of social interaction into the biological model of depression, factors which have received attention in the discussion of the etiology of somatization in the past decade. Depression is a relatively frequent comorbidity of epilepsy (43% as postictal manifestation [11]) and stroke (30-50% [16]), conditions with a suspected or clearly identified brain lesion. Indeed, Kanner [9] suggested common operant pathogenic mechanisms in epilepsy and depression, based on the higher comorbidity occurrence of these two disorders. On the other hand, somatic symptoms are not uncommon in patients with depression and/or anxiety. Among patients with a verified diagnosis of SD (according to DSM-IV), the prevalence of depression and/or anxiety was 26%, whereas of all patients with an anxiety and/or depressive disorder 54% also had a SD [3]. High rate of psychiatric (depression and anxiety) diagnoses was recently observed among patients with medically unexplained symptoms both in primary care and tertiary care clinics (60.2 & 53.8% respectively [18, 7]) Furthermore, Sharpe and Mayou [17] emphasized that referring somatic complaints to a SD may lead to the underdiagnosis of depression and anxiety. According to the authors' opinion, this is one of the limitations of the current SD classification, by reason of which they argue to abolish the diagnostic category.

PROPOSAL OF NEW SD CLASSIFICATION FOR DSM-V

Many other criticisms have been raised to classification of SD within latest ICD and DSM revisions, ranging from terminological inconvenience and dualistic thinking to problems regarding medical-legal entitlement. In contrast

to previous DSM work groups of the SD section, where no international nosology experts had been included [19], researchers from Great Britain, Canada, and the United States recently have joined efforts to make the classification more flexible and useful for clinical and research purposes and published their proposal to reconsider a SD category for the forthcoming DSM-V classification [13]. They suggest that the biggest part of diagnoses could be redistributed within another group of mental disorders, on either Axis I (psychiatric disorders) or Axis II (personality disorders), while the remaining conditions, which are currently defined solely in terms of the number or type of somatic symptoms and most commonly managed by general medical doctors (for example, pain disorder), are best placed under Axis III as 'functional somatic syndromes.' This reorganization is supposed to make classification more compatible with those used in general medicine settings. Additionally, they argue for greater use of the Axis I category, 'psychological factors affecting a medical condition,' which could accompany any Axis III diagnosis. Further, hypochondriasis should be reclassified within anxiety disorders and considered as a health anxiety disorder. A substantial overlap of the somatization disorder with personality disorder, particularly with borderline

personality disorders and a lack of validity as a psychiatric diagnosis (since it is based solely on counting the number of symptoms) led the authors to consider it as a combination of personality disorder (Axis II) with an affective or anxiety disorder. Accordingly, somatic symptoms that are highly associated with depression and/or anxiety should be classified with depression or anxiety, respectively, by adding an additional specification 'with prominent somatic symptoms.' Conversion could be reunited with dissociation to belong to the main psychiatric diagnoses in Axis I (Tab.1). The authors also note that the use of the term 'functional,' which is in active use by general medicine physicians, undoubtedly will avoid any dualistic meanings and is otherwise acceptable to patients, since it indicates a disturbance of bodily versus psychological functioning. According to the proposal, unhelpful interaction by patients with medical services could be placed with environmental and psychosocial factors currently included in Axis IV. All other characteristics of patients (reflecting dimensions of the concept of somatization) can be described by introducing an additional multi-axial classification (Tab.2), which seems to be useful for research and treatment purposes.

Axis I Psychiatric Diagnoses

Schizophrenia and Delusional Disorders

Depressive Disorders

Anxiety disorders: General anxiety, Panic disorder, Health anxiety / (Hypochondriasis), Specific phobia (illness fears)

Conversion / Dissociation disorders

Psychological factors affecting general medical condition

Axis II Personality disorder

To include personality disorder as manifest in somatization disorder, hypochondriasis, etc.

Axis III Medical conditions, including (functional) somatic symptoms and syndromes

Axis IV Psychosocial and environmental problems, including interaction with the health care system

Tab.1 A new classification for conditions previously referred to as SD (proposed by initiative group, Mayou et al., 2005)

- Type of somatic symptom
- Number of symptoms
- Course (e.g., acute, chronic, recurrent)
- Disease pathology/pathophysiology
- Health beliefs
- Illness behavior
- Associated psychiatric disorder
- Social factors (employment, social benefits, etc)

Tab.2 A multi-dimensional descriptive system for somatic symptoms.

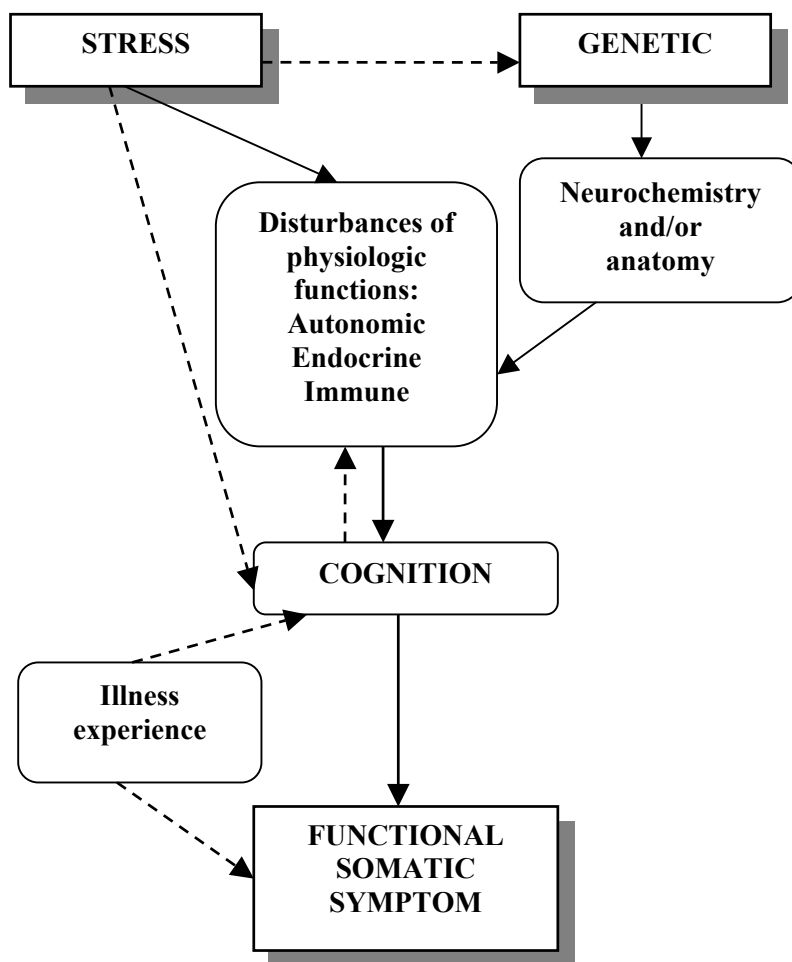


Fig.1 A hypothesized explanation of functional somatic symptoms etiology.

Probably, the most positive side of the SD revision in DSM-V classification is that there is no longer necessity for parallel classificatory system of unexplained somatic symptoms, particularly in psychiatry as SD category and in general medicine as functional somatic syndromes. This will support the further integration of psychiatry with medicine and abolishing the dualistic approach to body-mind interaction.

It is apparent that the terms somatoform and somatization disorder are not acceptable to patients. 'Somatoform' might be considered implausible, since it creates some doubt of whether the condition is concerned with medicine and can thus be pejorative. 'Functional' may be better a term, as it is actively in use by Georgian physicians, primarily for conversion or pseudoneurological symptoms. However, diagnoses referred to 'functional somatic syndromes' are less popular and related conditions have usually been classified as neurasthenia or vegetodystonia (neurocirculatory asthenia). The diagnosis is determined mainly by the great influence of Russian psychiatric and neurologic schools and some isolation from contemporary western psychiatric views, particularly in psychosomatic medicine. Unfortunately, in the past decade the term did not appear often enough to become adopted and or discussed as a part of the concept of somatization, which was firstly introduced as the category of somatoform disorders in North American psychiatric classification more

than 20 years ago. It does not mean that we must reject or skip the conception, but the logic of evolution requires its thorough acquiring.

The proposed reclassification scheme of the SD categories to the same or even other axes associated with DSM coding is debatable in some aspects. Naturally, some doubt will emerge as to how useful it is to leave conversion within the main psychiatric diagnosis in Axis I, while somatization disorder is best placed in Axis II. However, it is not so uncommon for a patient to initially be presented with conversion neurological symptoms and then later develop unexplained somatic complaints in various organ systems. It has been argued in other studies that conversion disorder shares essential phenomenological features with dissociative disorders and should be classified with them, however, conversion disorder also appears to be related to somatization disorder. According to the proposal, somatization disorder, but not conversion disorder, could be attributed to personality disturbances. If a chronic course, multiplicity (symptom attribution to multiple organ system) and formidable management problems of functional symptoms, which otherwise can be considered as a function of time, can distinguish these two conditions, this raises the question of whether quantity changes quality? We suggest that the final place of conversion/dissociation should be further discussed.

HYPOTHETICAL MODEL OF FUNCTIONAL SOMATIC SYMPTOMS FORMATION

The possible neurophysiological mechanisms of conversion have become apparent since the development of advanced neuroimaging techniques. Further, in regards to observed findings, it is important to ask whether the role of conscious active inhibition, for example, in conversion symptom formation, will be diminished if a pseudoneurological deficit will be presented along with wide variety of complaints in multiple organ systems [8]. The difference may be in the intensity of active inhibition as a reflection of a person's psychological distress severity or another social factor. However, various factors may have an effect on the development of symptoms. Most likely, the process is also under the influence of a genetic factor, which in particular determines the activities of the serotonergic system, including receptors, synthetic enzymes, and uptake sites. As a result, reducing the responsiveness of the 5-HT (5-hydroxytryptophan) system and neurotransmitter insufficiency as additional factors may contribute to the development of unexplained physical symptoms. Recently published data support this idea [15]. In addition, genetic components can influence not only the brain neurochemistry, but also anatomy. There is no doubt that a person's experience and learned behavioral pattern (the cognitive factor) play a role in the genesis of functional symptoms. Further, from a

neurophysiology viewpoint, both environment and experience can modulate neuroplasticity. Thus, the hypothesized mechanism of somatic symptoms manifestation is illustrated in Fig.1.

It could be assumed that in the most dramatic presentation of somatization, somatization disorder is considered to be a combination of personality disturbance and depression or anxiety, which may contradict our hypothesis, though we expect that the neurobiological basis for personality disorders will be explored. In recent studies, dysfunctions of prefrontal and limbic circuits (decreasing hippocampal and amygdala volumes assessed by MRI) have been demonstrated in those brain areas that are involved in serotonergic neurotransmission in patients with borderline personality disorder, which seems to support the hypothesis [1]. It is quite possible that future neurobiological research will reveal structural and/or functional abnormalities of brain structures for a wide range of personality disorders.

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Соматоформные расстройства: от классификации до биопсихосоциальной модели

Давид Гигинеишвили

Институт неврологии им.Сараджишвили, Тбилиси, Грузия

РЕЗЮМЕ

‘Соматоформные расстройства’ (СР) в качестве диагностической категории появились относительно недавно, что вызвало необходимость исследования диагностических и клинических аспектов у больных с соматическими жалобами, не укладывающихся в рамки признанных медицинских состояний и проявляющихся в виде психологических нарушений. Концепция СР содержит конверсионную и диссоциативную модель формирования истерии. Всё больше критических замечаний накапливается в пользу пересмотра классификации СР, поскольку существующая в настоящее время уже не отвечает клиническим и исследовательским требованиям. Инициативной группой международных экспертов (Mayou et al. 2005) предложена радикальная идея её замены в следующей классификации DSM-V. В статье обсуждается данная классификация и этиологические вопросы СР, наряду с нейробиологическими моделями в психиатрии. Нам представляется, что независимо от своего месторасположения в классификации (в оси I, или оси II), соматические симптомы скорее всего имеют сходный генез, включающий генетические, психофизиологические и социальные факторы при наличии паттернов нейроанатомических и нейрохимических нарушений.

Ключевые слова: *соматоформные расстройства, классификация, этиология, функциональный соматический симптом*