

CHAPTER 22.

SOMATIZATION

Introduction

A great clinical challenge is the care of people who complain of physical symptoms for which no physical, or insufficient physical cause, can be found.

The problem has a long history. In ancient Greece the disorder was observed in women, and was believed to be caused by the womb (hystera) roaming around the female body. The condition was called hysteria. Also in early times, the term 'hypochondria' was used when a person believed that he/she had an illness for which there was no physical evidence. This term indicated that the problem was under the cartilage (chondrium) of the front of the chest and could not, therefore, be examined with the fingers.

The field is crowded with theories, and when there are many theories, none holds the complete answer. Some useful terms/theories are described below. These concepts are not mutually exclusive. With our present knowledge, it may be necessary to conceptualize the problems of different patients using different theoretical concepts.

Physical complaints for which little physical cause can be identified are costly. Patients with these conditions have twice the number of primary care visits, three times the number of general hospital bed-days and almost four times as many psychiatric bed-days as controls (Andersen et al, 2013).

Suicidality can be a substantial problem in managing this patient group in the primary care setting (Wiborg et al, 2013).

While this chapter focuses on psychological/sociological/cultural aspects, biological investigation continues. A recent suggestion is that some of these disorders are the result of aberrations of the tryptophan catabolite pathway (Maes & Rief, 2012).

DSM-5 – Somatic Symptom and Related Disorders

DSM-5 has re-arranged the diagnostic material for this area - introducing one new diagnosis and expunging others. Research conducted using other labels has been placed where it best fits.

Soma (Greek) refers to the body of an organism. These disorders take the form of body/physical disorders. However, no physical lesion can be found which satisfactorily explains the reported symptoms.

DSM-5 lists the following sub-categories:

- Somatic symptom disorder
- Illness anxiety disorder (hypochondriasis)
- Conversion disorder
- Factitious disorder

'Pain disorder' has been removed from the DSM-5. However, chronic pain is the most common symptom of 'somatization' (Katon et al, 1984; Aigner & Bach, 1999).

Somatization

This is a descriptive term (not a diagnosis), and is free of etiological speculation.

Somatization is defined as the propensity of a patient to experience and report physical/somatic symptoms that have no pathophysiological explanation, to misattribute them to disease, and to seek medical attention for them (Lipowski, 1988).

Some elements of this definition deserve individual examination. There is a "propensity", thus particular personality traits are present (and repeated presentations can be expected from individuals with this propensity). The symptoms are "experienced", not just reported. Thus, somatizing patients are not feigning (faking) symptoms. There is no "pathophysiological explanation" to be found in the organ or region in which such a finding could be expected. However, comorbid psychiatric symptoms may exist. The misattribution of symptoms to somatic disease may result in, or arise out of, the belief that disease is present. There is ample opportunity for misattribution as population based surveys reveal that healthy adults experience more than one 'somatic symptom' each week (Egan and Beston, 1987). Medical attention is sought, and sought frequently. In addition, a large amount of attention is sought from relatives, friends, pharmacists and alternative therapists.

Neuropsychological testing has shown that somatization is associated with information-processing deficits (Shapiro, 1965; Rief & Nanke, 1999).

Alexithymia, meaning being "without words to describe emotions", has been described as an important factor in somatization (Sifneos, 1996). It is proposed that in the absence of the ability to describe emotions, individuals respond to stressful life situations in a maladaptive ways, and one of these is to express emotional distress as physical symptoms. Alexithymic individuals focus on facts, details and external events, and tend to have a limited fantasy life.

Factors including education and culture/sub-culture (eg, "macho" males) play a part in somatization. Intelligence is negatively associated with the number of "functional somatic symptoms" reported (Kingma et al, 2009). Somatization is more frequent in the lower socioeconomic classes (Gentry et al, 1974).

When a somatizing patient presents, the doctor and patient need to communicate effectively. The doctor must attempt to understand the patient's "physical" language.

Somatic Symptom Disorder

DSM-5 criteria Somatic symptom disorder

- A. One or more somatic symptoms that are distressing or result in disruption of daily life.
- B. Excessive thoughts, feelings, or behaviours related to the somatic symptoms as manifested by at least one of the following:
 - 1. Disproportionate and persistent thoughts about the seriousness of symptoms
 - 2. Persistently high level of anxiety about health symptoms
 - 3. Excessive time and energy devoted to these symptoms or health concerns
- C. Although any one somatic symptom may not be continuously present, the state of being symptomatic is persistent.

In 'hysteria', an earlier designation for this disorder, information-processing deficits were demonstrated. These were characterized by distractibility and difficulty in distinguishing target stimuli (Ludwig, 1972, Flor-Henry et al, 1981).

Single photon emission computed tomography (SPECT) has demonstrated, in people with 'somatization disorder', hypoperfusion in the non-dominant frontal, prefrontal, temporoparietal and cerebellar areas (Garcia-Campayo et al, 2001).

In an exciting imaging study (Atmaca, et al, 2011) demonstrated that people with 'somatization disorder' (compared to controls) had significantly smaller mean volumes of the left and right amygdala without any differences in regard to whole brain, total grey and white matter or hippocampus volumes. More recently came a report (Yildirim et al 2012) that patients with 'somatization disorder' have smaller pituitary volumes compared with healthy controls (yet to be replicated).

Illness Anxiety Disorder

DSM-5 Illness anxiety disorder largely overlaps with the previous diagnosis 'hypochondriasis'.

DSM-5 criteria Illness anxiety disorder

- A. Preoccupation with having or acquiring a serious illness
- B. Somatic symptoms are not present, or only mild in intensity
- C. There is a high level of anxiety about health, easily alarmed
- D. Excessive health related behaviours (checks pulse, attends hospital)
- E. Has been present for at least 6 months

'Hypochondriasis' (former term for similar set of symptoms) involves preoccupation with an unrealistic fear or belief of having a serious disease, despite appropriate investigation and reassurance.

Fear or belief of having a serious disease, however, is common to all the disorders in this chapter.

When the belief is unshakable and held with delusional intensity, the diagnosis Delusional disorder – somatic type, is appropriate.

The diagnosis is frequently made in the primary care setting, and management is notoriously difficult.

It is noteworthy that Illness anxiety disorder is not listed among the Anxiety disorders (Olatunji et al, 2009). In support of this argument, the observations are made that Illness anxiety disorder involves intrusive distressing thoughts, much like OCD, and concern over bodily symptoms, which can also be found in panic disorder. Also, in both Illness anxiety disorder and the anxiety disorders, there is the seeking of reassurance which is only temporarily effective.

The notion of placing Illness anxiety disorder with the Anxiety disorders finds some support in recent neuroimaging. Groups of patients with 1) hypochondriasis, 2) OCD, and 3) panic disorder, were compared with healthy controls while performing mental tasks, using fMRI (Van den Heuvel et al, 2011). Each patient group showed a decreased recruitment of the precuneus (a part of the superior parietal lobule hidden in the medial longitudinal fissure between the two cerebral hemispheres), caudate nucleus, global pallidus and thalamus compared to healthy controls. And, there were no statistically significant differences in brain activation between the three patient groups. Thus, these 3 patient groups share an alteration in frontal-striatal brain regions during some mental activity.

CBT is a recommended treatment, but with little scientific support. This is a difficult condition to manage. A 4-16 year follow-up of patients suffering 'hypochondriasis' who have received therapeutic doses of SSRIs found that 40% of patients continued to meet diagnostic criteria (Schweitzer et al, 2011).

Conversion disorder



Happily, DSM-5 retained the diagnosis of 'Conversion disorder' (however, the diagnostic criteria were altered a little).

DSM-5 criteria Conversion disorder

- A. One or more symptoms of altered voluntary motor or sensory function.
- B. Evidence of incompatibility between the symptom and recognized neurological or medical conditions.
- C. Not explained by another medical or mental disorder
- D. Causes significant distress or impairment in function.

Conversion disorder involves a loss or alteration in bodily function which is not caused by a medical disorder. The most common examples are loss of movement or sensation of a limb; others include blindness, pseudoseizures, gait abnormalities, mutism, and movement disorders (Hallett, 2010).

Conversion disorder is more common among women, and onset occurs across the lifespan.

There are difficulties with the definition. We are limited in the degree to which we can exclude somatic disease by the limitations of available investigative technology. For example, certain cortical lesions (e.g., heterotopia) which could not be identified with CT, only became observable with the arrival of MRI.

The risk of failing to identify and misdiagnosing physical disorders as conversion is ever present. A recent long-term follow-up study found up to 4% of patients had developed organic disorders which explained their earlier unexplained symptoms (Stone et al, 2009). The DOP author recently diagnosed a patient with conversion disorder who was later found to have a large mediastinal tumour on X-ray. The nervous system had appeared normal (within the patient's ability to co-operate), but there was some weight loss, and carcinomatous neuropathy was the corrected diagnosis.

In the general hospital setting, 20-25% of patients in a general hospital have individual symptoms of conversion. Some 5% of patients in general hospital meet the criteria for the full syndrome. The greatest prevalence of full conversion syndrome (up to 20%) is found in neurology clinics.

Psychiatric co-morbidity is frequently present, particularly depression (38-50%) and anxiety (10-16%). Personality disorder and somatization disorder frequently co-occur.

Neuroimaging is producing interesting results. Structural MRI has indicated reduced volumes of right and left basal ganglia (Vuilleumier et al, 2001; Atmaca et al, 2006) and thalamus (Atmaca et al, 2006; Nicholson et al, 2013).

Functional MRI has been used to examine people with loss of sensation. When vibration was applied to the sensate limb there was the expected contralateral somatosensory activation, however, no such activation when the stimulus was applied to the anaesthetic side (Ghaffar et al, 2006). Vibration on the anaesthetic side produced activation in the orbitofrontal and cingulate regions.

The emerging theory is that in conversion disorder certain brain areas are able to override the activation of the motor and sensory cortices. Attention has focused on the cingulate: possibly, the caudal segment, which is responsible for willed action, can be deactivated by the pregenual anterior cingulate cortex as it processes information. Other prefrontal regions are probably also involved. Thus, discrete neural networks involved in processing emotion and executive control may be able to suppress regions associated with a range of other functions [motor, sensory, vision].

[Psychogenic (dissociative) amnesia is discussed elsewhere, but the same principle appears to apply, with activity in the hippocampus (a memory structure) being suppressed by activation of the frontal regions (which are involved in executive function and emotion processing).]

Management may include hospitalization, which relieves social and other pressures. It is important for any hospitalization to be active and brief. Such patients may become more dependent if placed in a passive role. There is support for cognitive behaviour therapy in Somatic Symptom and Related Disorders in general (Krocne, 2007), but less for conversion than the others. There is some support for the use of antidepressants and TMS (Schonfeldt-Lecuona et al, 2006). Psychiatric assessment should continue, and problems should be discussed. Solutions to problems should be developed with the participation of the patient. A return to physical activity is strongly urged. It is useful to send the patient to be mobilized in the physiotherapy department. While there is no significant physical lesion, such assistance allows the patient to recover and offers a “face-saving” explanation for the recovery.

Conversion disorder received close attention from psychoanalysts. The classical view is that unconscious conflicts between id drives and the superego are resolved by the unconscious production of physical symptoms. The relief of the intolerable conflict was designated the “primary gain”. The subsequent support from others and the release from responsibilities of daily life was designated “secondary gain”. The term secondary gain has leached out into broader use, but from the purist perspective, it should only be used when we are applying psychoanalytic explanations.

The outcome of conversion disorder is variable. Acute onset which is actively treated usually gives a good outcome, especially if concurrent psychiatric disorder is present, and responds to treatment. Chronic disorder may involve a wheel-chair existence and be difficult to assist (Mace & Trimble, 1996).

Factitious Disorder (and Malingering)

Are covered in Chapter 23

Conceptual Underpinning

As mentioned in the Introduction, many theories have been advanced to explain physical disorders for which no adequate physical explanation can be found. They spring from various schools of thought/disciplines with wide interest in human behaviour.

Attribution Theory

What individuals believe about their symptoms influences who they consult and how they manage their symptoms (King, 1983). Individuals have enduring attributional styles (Garcia-Campayo et al, 1997), such that when a symptom is experienced, it is likely to be attributed to a physical, psychological or environmental explanation (Robins and Kirmayer, 1991). Not surprisingly, general practice attendees with hypochondriacal tendencies have more physical attributions than those with anxiety disorders (MacLeod et al, 1998). Educational programs designed to modify attribution style are useful in the management of chronic pain conditions and somatization (Neng & Weck, 2013). In chronic pain conditions, the patient often attributes the pain to progressive damage and is therefore reluctant to be active. This leads to disuse atrophy and unnecessary disability. When the patient attributes the pain to an abnormal process (inappropriate pain) rather than progressive anatomical destruction, the scene is set for improved function.

Medical Anthropology

Illness may be defined, anthropologically, as “the human experience of sickness”. The process begins with personal awareness of a change in body feeling and continues with the labelling of the sufferer by the sufferer and his/her family as “ill” (Kleinman et al, 1978). Illness is greatly dependent on cultural beliefs about disease and discomfort and has been viewed as a “cultural construction” (Wexler, 1974). Illness may be construed as the patient’s view of clinical reality (patient’s view). Some claim that medical doctors treat illness poorly, while traditional and alternative therapists, who listen and give culturally relevant explanations, treat illness well (Stimson, 1994).

Disease has been defined as “abnormalities in the structure and function of body organs and systems”. This may be construed as the medical view of clinical reality (medical view). One criticism of modern medicine is that it focuses on the treatment of disease and ignores the treatment of illness (Engel, 1977).

Common sense suggests a better outcome will be achieved if both illness and disease are treated. Toward this end, the doctor should seek to fully understand the patient’s view, explain the medical view and negotiate a shared view (Von Korff et al, 1997).

Abnormal Illness Behaviour

Abnormal illness behaviour (AIB) provides an intellectual framework for a range of human behaviours (Pilowsky, 1969). It depends on two sociological concepts, 1) illness behaviour, and 2) the sick role.

Illness behaviour is defined as, “the ways in which individuals experience, perceive, evaluate and respond to their own health status” (Mechanic, 1968).

The sick role is conceptualized as bringing obligations and privileges (Parsons, 1964). The obligations include that the person seeking the role, 1) accepts that the role is undesirable, 2) co-operates with others to achieve health, and 3) utilizes the services of those regarded by society as competent in healing. If these obligations are fulfilled, the individual is granted the following privileges, a) regarded as not being responsible for his/her condition, b) accepted as someone requiring care, and c) exempted from normal obligations (such as work).

On these foundations, Pilowsky (1997) defined AIB as, “an inappropriate or maladaptive mode of experiencing, evaluating or acting in relation to one’s own state of health, which persists, despite the fact that a doctor (or other recognized social agent) offered accurate and reasonably lucid information concerning the person’s health status and the appropriate course of management (if any), with provision of adequate opportunity for discussion, clarification and negotiation, based on a thorough examination of all parameters of functioning (physical, psychological and social) taking into account the individual’s age, educational and sociocultural background”.

AIB is an important multifaceted thesis. It highlights the connection between social influences and health and provides a unifying conceptual basis for illness related behaviour, including but extending beyond the above disorders, to factitious disorder and malingering. It also extends in another direction, to the denial of illness. It casts the individual who denies illness and stays at work under the same umbrella as the individual who pretends illness and goes to the football - with the majority of illness behaviours lying somewhere between these two extremes.

In addition, AIB gives context for the responsibility of the doctor as the socially designated controller of sick role privileges; a frequently onerous and unwelcome duty.

Medicalization

Medicalization describes the tendency of contemporary society to view everyday life with a medical perspective. In general it places increased responsibilities with health professionals, authorities and insurers. This process is a feature of society, not of the individual. The constructs of society influence the options and the course of action which will be chosen by the individual.

An example of one form of medicalization is the presentation at the general hospital of people with social problems. Marital disputes not infrequently result in one party achieving admission to hospital, wrongly diagnosed as suffering a psychiatric disorder.

Another form is an accompaniment of very sensible, well intentioned public health endeavours such as those which urge people to take chest pain seriously and to be alert for the early signs of diabetes/cancer. In all probability these save lives. Just as probably, they encourage the public to regard every ache and pain as a warning sign of disease and an indication for medical examination.

Psychoanalytic model

While the psychoanalytic model contributed greatly to our understanding of the human condition, it is rarely applied in the current management of the above disorders.

This model proposes that subjective experiences of childhood give rise to unconscious “conflicts” between basic drives (usually sexual and aggressive in nature) and the superego (the learned code or conscience). These conflicts lead to anxiety, depression, social and sexual inhibitions, difficulties in interpersonal relationships and somatic symptoms. It is the work of psychoanalysis to bring these conflicts into awareness. This process enables the patient to change maladaptive patterns of thinking, behaving and feeling. Psychoanalysis is a unique form of treatment which requires extensive training.

Biopsychosocial Model

The biopsychosocial model aims to take account of the broad range of influences (biological, psychological and social – cultural can also be included) which may coalesce in the formation of a disorder.

Chronic whiplash injury pain following rear-end collisions may be an example. Some authorities view the whiplash syndrome as culturally constructed (Trimble, 1981). It is non-existent or almost non-existent in Singapore, Lithuania, Germany and Greece, and among laboratory volunteers and fair-ground bumper car drivers, but common in the USA and Australia (Ferrari and Russell, 1999).

In this example, the biological dimension is most probably an acute sprain which resolves/heals without any significant residual structural damage. At least in the majority of cases, no convincing, enduring pathology has been demonstrated using current medical technology. Important psychosocial determinants are present in cultures which provide “overwhelming information” regarding the potential for chronic pain following whiplash injury, medical systems which encourage inactivity and caution, and litigation processes which involve protracted battles with insurance companies. Patients are led to expect, amplify and attribute symptoms in a chronic fashion.

Four-dimensional symptom questionnaire (4DSQ)

The 4DSQ is a recent self-report questionnaire (Terluin et al, 2006) which measures “distress, depression, anxiety and somatization”. Few other instruments attempt to quantify somatization. This questionnaire is available free of charge for non-commercial use (EMGO, 2000).

Synthesis and Summary

Lipowski's view that some individuals have a propensity to experience and report somatic symptoms that have no pathophysiological explanation, to misattribute them to disease, and to seek medical attention has not been disputed in the literature and can be accepted. The Somatic Symptoms and Related Disorders all have elements of somatization and currently emerge in a cultural setting in which medicalization is a prominent feature. Evidence indicates that cognitive processes are etiologically important. Many of these disorders are associated with information processing deficits. In Somatic symptom disorder – with predominant pain, learning is an etiological mechanism, as demonstrated by the importance of secondary gains and the influence of social models. Fear of pain and movement may be important in the maintenance of some chronic pain.

Evidence of the importance of cognition in somatisation continues to grow. Attributional theory advances the reasonable proposition that ambiguous symptoms will be interpreted in accordance with personal beliefs and experience. Medical anthropology emphasizes the importance of the beliefs of the individual and the culture. AIB forms an alternative envelope for these DSM-5 disorders.

It is probable that somatization syndromes arise where there is an unmet need for closeness with others (Landa et al, 2012).

Management Recommendations

1. The anthropologists inform us there are at least two views of clinical reality (the patient's and the medical view) and that the best outcome is achieved when the patient and doctor can discuss their respective belief systems and come to a shared view of clinical reality. This approach is recommended.
2. The evidence for information-processing deficits of those presenting with somatization suggests that information should be presented in an understandable form and repeated frequently.
3. Present at all times as caring, confident, firm and approachable (within agreed limits).
4. After appropriate investigation, inform the patient that no further investigations are indicated, at this time. Investigations are expensive, and when somatization is present, they are unhelpful. If one investigates a somatically healthy individual long enough minor "abnormalities" will eventually be detected, which are not clinically significant, and which are confusing to the clinician and the patient. Also, if one investigates any patient long enough, eventually something will go wrong, a puncture site will become infected, the patient will fall off the X-ray table, a nurse will trip over a lead, there will be an anaphylactic response. Such events greatly complicate care.
5. Limit the number of number of invasive treatments (for similar reasons to 4).

6. Limit the number of doctors consulted. This is the only way to limit the investigations and invasive treatments, and number of explanations provided. Continue to be involved on condition that the patient does not go outside the agreed team. An interested general practitioner is essential.
7. Limit the time spent with the patient. Do not present this as punitive. Rather, discuss the fact that the patient's needs can best be met by regularly scheduled time-defined appointments. Point out that you are prepared to help, but that this is only possible if meetings are regularized. Negotiate a sensible protocol to be followed in the case of crises.
8. The patient has the right to care. Attention may be according to a time schedule, but should not be contingent on the patient hiding concerns and distress.
9. Limit the amount of medication. Benzodiazepines, stimulants and analgesics should be strenuously limited. These patients do experience distress and the use of antidepressants and mood stabilizers have a role. Antipsychotic medication has a place in highly aroused individuals or where psychosis is observed or suspected.
10. Diagnose and adequately treat comorbid psychiatric disorders. Be alert for depression and anxiety. Personality disorder will make management more difficult.
11. Conversion disorder is a special case as here there is usually loss of function. While there is no physical explanatory lesion, treatment with physiotherapy allows the patient to recover with dignity.
12. Encourage return to normal activities. Encourage hobbies, exercise, education and cultural pursuits – these will distract the patient from his/her body, stretch and strengthen the body and assist the return to normal function. Reward attempts at activities with praise.
13. Educate and involve the family in management.
14. Understand the need to repeat the reassurance, encouragement of activities and conditions of care (the limits).

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