16

Treating Somatic Symptom Disorder and Illness Anxiety in Integrated Care Settings

ALLA LANDA, MARINA MAKOUS, AND BRIAN A. FALLON

BOX 16.1
KEY POINTS

1. **Somatic symptoms and fears about them are neurophysiologic phenomena and should not be dismissed by clinicians as "not real."**
2. **Stepped-care approach to the treatment of somatic symptom disorder (SSD) and illness anxiety (IA) is recommended.**
3. **Effective treatment requires integration of primary care and mental health at all levels of care, establishment of psychosomatic services, and reorganization of fragmented medical care to a whole-person medicine approach. These changes have been shown to be clinically effective and to reduce costs and inefficient use of health care resources.**
4. **The abandonment of mind–body dualism and an increase in biopsychosocial awareness (BPSA) are essential for the culture of the integrated care clinic.**
5. **Interventions need to be tailored to the patient's current level and stage of BPSA.**
6. **The key difference between SSD and IA is that in SSD distress is due to somatic symptoms (e.g., pain) while in IA distress is primarily due to fear of serious medical condition (e.g., mild pain elicits fear that patient has cancer).**
7. **Specialized psychotherapy and pharmacologic treatments delivered by an interdisciplinary team can be effective treatments for SSD and IA.**

INTRODUCTION

Integration of medical and mental health care is essential for the effective treatment of patients with somatic symptom disorder (SSD) or illness anxiety (IA). The world's best models of care for these disorders are based on an integrated approach. Unfortunately, in many countries, patients with SSD and IA often fall through the cracks between primary care and mental health and do not find much help in either specialty. Such a chasm is often widened by a lack of communication between disciplines, leading to increased patient suffering, disability, and ineffective use of health care resources.[1] This creates a public health problem, and in some countries, an alarming one, given the prevalence of individuals with these disorders in medical settings.[2]

A number of challenges in the diagnosis and treatment of SSD and IA contribute to this public health problem. While the diagnosis of SSD or IA rightfully motivates a primary care provider (PCP) to make a referral to a behavioral health specialist (e.g., psychiatrist, psychologist, or a clinical social worker who specializes in psychosomatic medicine), many patients will not accept a psychiatric diagnosis and therefore will not follow the PCP's recommendations, making it impossible for them to get the specialized treatment they need. Another

difficulty is the continuous need for reassessment and differentiation between the symptoms that require medical treatment (e.g., cancer) and symptoms that require SSD/IA-focused treatment. Yet another challenge is clinician burnout. Patients with these disorders often present with unending suffering and complaints despite numerous investigations and treatments, making clinicians feel helpless. Patients often feel that their symptoms are not taken seriously and are dismissed as "not real" or "unimportant" by the physician, clinic staff, and/or their family and friends. This adds to their despair, further exacerbating the vicious cycle of distress and somatic symptoms. Finally, in many countries, the very organization of health care and medical education is organ- or system-focused, making the treatment of brain–body conditions quite challenging as these disorders fall through the gap in the psychiatry–medicine divide. However, patients with SSD and IA can be treated effectively, and working with these patients can be a deeply rewarding experience for both the PCP and behavioral health clinicians.

The approaches presented in this chapter are aimed at overcoming these challenges and helping multidisciplinary teams to care for SSD and IA patients in primary care or integrated care settings. They are based on the integration of (1) the best practices and available guidelines for treating these conditions in the world today, (2) evidence from research studies on diagnosis and treatment, and (3) the latest translational research relevant to the understanding of the etiology and treatment of SSD and IA. Research on SSD and IA has been expanding rapidly. Usually, it takes years for the insights from basic neuroscience to be implemented into clinical care and tested in large randomized control trials and dissemination studies. To diminish this time gap, this chapter presents approaches that are informed by the latest findings in translational neuroscience relevant to SSD and IA. Box 16.1 summarizes key points that are discussed in this chapter.

CLINICAL PRESENTATION AND ETIOLOGY

The nosology of somatic symptoms and illness fears is complex and has changed considerably in recent years. Numerous diagnostic labels are used to describe somatic symptoms somatoform, multisomatoform, abridged somatoform, bodily distress syndrome, psychophysiologic, psychosomatic, functional, or somatic symptom disorders; somatization; medically unexplained, psychogenic, or idiopathic symptoms. In a medical office, a patient with somatic symptoms may be diagnosed with fibromyalgia, irritable bowel syndrome, or chronic fatigue syndrome, as criteria for these diagnoses are based on the similar list of symptoms. Terms also periodically change to newer ones that haven't yet acquired the pejorative connotation of "not real" or "imagined," a connotation that is understandably distressing for patients.

Recently, the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5)[3] replaced the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (DSM-IV)[4] diagnoses of somatoform, somatization, and pain disorders with the diagnosis of SSD. While the new criteria have some advantages (e.g., the diagnosis no longer requires a certain arbitrary number of symptoms as was the case with DSM-IV's somatization disorder), the primary disadvantage is that the criteria now include both the somatic symptoms and "excessive worry or distress about somatic symptoms," making it difficult to distinguish patients who primarily have somatic symptoms from those who primarily have a fear about what their somatic symptoms mean (e.g., pain vs. worry that pain is a sign of undiagnosed cancer, the latter being a symptom of IA). Because the distinction between these two dimensions is important for treatment planning, we focus separately on somatic symptoms and IA.

Somatic Symptoms

Clinical Presentation

Patients with somatic symptoms present with bodily symptoms (e.g., pain, fatigue, gastrointestinal [GI] symptoms) resulting in distress and impairment. If a medical problem is present, the severity of distress or disability significantly exceeds what would be expected. Estimates of lifetime prevalence of somatic symptoms depend on the diagnostic criteria used. Studies that have used more inclusive criteria report a 12-month prevalence of somatic symptoms of up to 30% in the general population[2] and up to 49% in primary care clinics.[5] Women are more frequently affected than men.[2]

Patients with somatic symptoms are often frustrated by the lack of a medical diagnosis. Because these patients consult many different physicians in pursuit of a diagnosis and treatment, the result is often fragmented patient care, unnecessary repetitive tests, and costly, potentially dangerous surgeries. Ordering multiple diagnostic tests increases the

likelihood of an abnormal finding that is medically inconsequential, which, despite reassurance from the physician, leads to the patient's concern that findings are being ignored. For example, multiple studies of asymptomatic populations revealed that structural spine or knee abnormalities on magnetic resonance imaging did not predict pain.[6,7] Additional rounds of tests and procedures lead to further delays in the initiation of treatments focused on somatic symptoms.

A somatic reaction to an acute stressor usually resolves on its own or when the PCP offers psychoeducation and reassurance. Somatic symptoms associated with chronic or early developmental stressors require a specialized treatment. Because timely diagnosis and treatment are important for preventing the transformation of acute somatic symptoms into chronic ones, exploration of psychosocial stressors at the initial primary care visit is essential. Unfortunately, in most current medical practices, psychological stressors are often considered last, after all medical reasons for the symptoms have been explored, leading to significant delays in establishing the diagnosis of SSD. Clues to the diagnosis of SSD include: (1) symptoms that change bodily location from one month to the next, (2) neurologic complaints that do not follow the anatomic distribution of nerve pathways, (3) somatic symptoms that fluctuate with varying levels of stress on macro (scale of months and years) and/or micro (scale of minutes, hours, days) levels, and (4) amplified affective or experiential aspect of a symptom (e.g., report a of pain rating of "20" on a 0–10-point scale or a report of pain level that does not correspond to the patient's observed level of functioning).

Patients with chronic somatic symptoms are often disconnected from their emotions, alexithymic (i.e., have difficulty expressing emotions verbally), have problems tolerating conflicting emotions, or have difficulty differentiating between various emotions they experience. Typically, when asked about feelings in an emotional situation, these individuals either don't respond or talk about thoughts, actions, or somatic sensations. Research suggests these difficulties are often associated with a history of early interpersonal trauma, insecure attachment, or growing up in non-optimal interpersonal environments (e.g., when a parent is depressed or physically ill, emotionally abusive, or overprotective), or cultural norms that restrict emotional expression; all of these factors can impede socioemotional development.[2,8] As adults, many patients tend to feel lonely or are highly sensitive interpersonally, perceiving others as hurting, abandoning, or unavailable.[8] Though some patients may seem socially distant, this demeanor may represent the defensive stance of someone who craves interpersonal closeness but fears abandonment and rejection. Lack of help from physicians is often perceived by an emotionally fragile patient as yet another abandonment, which exacerbates the vicious cycle of interpersonal distress and somatic symptoms. In a subgroup of patients, emotional conflict kept outside of awareness can also manifest as somatic symptoms.

Comorbidity and Differential Diagnosis

An appropriate medical workup is essential for ruling out an underlying medical disorder in patients with somatic symptoms.[2,9] Although a patient may present with exclusively somatic complaints, comorbid psychiatric disorders among those with somatic symptoms are common. In one study, 54% of the patients with somatic symptoms had comorbid depression, anxiety, or both.[10] In another study, over 76% of primary care patients with depression presented somatically.[11] Careful temporal plotting of somatic and mood symptoms as well as assessment of which symptoms cause most distress and disability helps to determine which diagnosis is primary. Once the primary disorder is effectively treated, somatic symptoms may dissipate. Somatic symptoms (especially chronic pain) may be particularly comorbid with atypical depression, characterized by mood reactivity (i.e., patient's mood may be brightened by interaction with the physician) and heightened interpersonal sensitivity. Somatic symptoms should not be confused with factitious disorders (e.g., Munchausen syndrome) or malingering. Unlike malingers who manipulate society by reporting fictitious symptoms, or factitious and Munchausen patients, who unconsciously long to be treated as an ill patient, patients with somatic symptoms genuinely experience bodily distress.

Etiology

Somatic symptoms may result from different etiologic pathways. Recent research suggests that genetic predisposition, multigenerational transmission of trauma through psychological or epigenetic mechanisms, exposure to early stressors, or a non-optimal early interpersonal environment can all influence development of the nervous and immune systems. These factors can contribute to difficulty

differentiating somatic and emotional cues from the body, problems with the regulation of somatic and emotional distress, and chronic hyperactivation of central neural circuits (i.e., central sensitization).[2,8] These obstacles to healthy development may predispose a person to experiencing emotional distress primarily somatically.

Illness Anxiety

Clinical Presentation

IA refers to the irrational, excessive fear or belief that one has a serious illness based on a misinterpretation of physical signs and symptoms. Individuals with IA do not experience sustained relief after being reassured by a PCP that no serious illness is present. IA can also affect a patient with an underlying medical condition if worry about a stable illness becomes so excessive as to impair the patient's well-being and functioning. In the DSM-5, IA with no or only mild somatic symptoms is referred to as illness anxiety disorder. IA, however, is also a criterion for DSM-5 SSD. Previously, in DSM-IV, IA was a distinct diagnosis known as hypochondriasis.

Issy Pilowsky in 1967 identified three central aspects of hypochondria: fear of illness, disease conviction, and bodily preoccupation. These three aspects may occur in any combination, giving the patient a distinctively different clinical presentation. For example, a patient with a high degree of illness fear may actually avoid going to see a doctor, scared that the doctor will confirm the presence of a dreaded disease. In fact, avoidance of medical care is a dangerous and often underrecognized symptom of IA that causes patients to miss available life-saving diagnostic procedures and treatments. However, in another presentation of IA, a patient with a high degree of disease conviction and lower fear may pursue a diagnosis with relentless persistence, berating physicians who fail to repeat a full battery of tests and becoming enraged by medical science's inability to help. A patient with high bodily preoccupation but lesser conviction may present to the physician with a variety of inexplicable physical complaints and appear to have SSD. Other obsessional traits may be present: a fear that terrible harm might come to loved ones; intrusive, horrific images; obsessive thoughts about dirt or germs; an anxiety-driven need for perfection, order, or symmetry; troubling sexual images; and scrupulous moral or religious concerns. Common compulsions include excessive body checking, searching for medical information, and talking about their medical symptoms and fears with others.

Transient hypochondriasis implies illness fears that last weeks or months and do not become chronic, typically abating on their own (e.g., medical students often develop transient hypochondriasis after learning about a new horrific disease). In IA, disease fears persist for at least 6 months. The course of IA may wax and wane in severity, exacerbated by various stressors in the patient's life.

Estimates of the prevalence of IA depend on the restrictiveness of the criteria. A meta-analysis of 47 independent samples suggested that IA was found in up to 13% in the general population and up to 8% in primary care settings.[12] In a study of specialty clinics in England, the prevalence of health anxiety assessed by self-report questionnaire was 25% in neurology, 21% in respiratory medicine, 19.5% in gastroenterology, 19% in cardiology, and 18% in endocrinology.[13]

Comorbidity and Differential Diagnosis

Common conditions that might present with IA include panic disorder, major depression, and generalized anxiety disorders. The similarities between IA and obsessive-compulsive disorder have important treatment implications as the methods of treating obsessive-compulsive disorder are also effective for hypochondriasis.

Etiology

The etiology of IA is unclear but likely includes psychological, cultural, and biological components. Psychologically, IA may serve as a window into unresolved emotional issues or earlier developmental conflicts. Culturally, IA and bodily concerns may be an acceptable mode of expressing emotional stress. One current theory emphasizes that hypochondriacs have a tendency to amplify, augment, and misinterpret normal bodily sensations, experiencing interoceptive cues as more intense and noxious.[14] Hypochondriacs are physiologically hyperreactive to external stimuli.[15] The neurochemical underpinnings of these constitutional differences in the IA patient may be similar to the serotonergic imbalance seen in OCD, or to the noradrenergic imbalances seen in panic disorder, with similar neural circuity abnormalities observed in all three conditions.[16]

Somatic Symptoms Versus Illness Anxiety

While somatic symptoms and IA often co-occur, most patients suffer primarily from either somatic symptoms or IA. Different treatment approaches

to these conditions have been suggested (e.g., treatment studies with serotonergic pharmacotherapy typically report greater improvement in IA than in somatic symptoms).[17] To determine which treatment approach to emphasize, the clinician should determine whether somatic symptoms or obsessional anxiety about health are central. We recommend using direct questions about distress and functional interference from somatic symptoms versus from illness worries as described in the Columbia Somatic Symptoms & Illness Anxiety Ratio Scale.[18] This scale should be administered after rapport is established and after the clinician validates the patient's symptoms; posing a question about anxiety too early may communicate to the patient that the symptoms are not taken seriously.

IDENTIFICATION AND TREATMENT IN INTEGRATED HEALTH CARE SYSTEMS

Overall Approach and Principles

The following are essential principles of effective care for patients with SSD and IA in integrated settings and relevant recommendations for organization of care.

1. Complete Abandonment of Mind–Body Dualism

For centuries, the division between the body and the mind/brain has been at the core of philosophy and mentality in many cultures around the world. The biopsychosocial approach proposed by Engel in the 1970s[19] aimed to reverse this dualism by emphasizing that everything that is psychological *is* biological, and everything that is biological *is* psychological. *Bio, psycho,* and *social* are just different levels of inquiry at which health can be considered from molecular, through organ, individual, family, to societal levels and beyond. (For example, an emotion of anger involves fluctuation of neural circuits and neurotransmitters in the brain, muscle tension, and perhaps a behavior of clenching a fist or yelling). This paradigm shift away from dualism to full acceptance of the biopsychosocial approach is necessary for treating SSD and IA, for organizing effective care, and for explaining these diagnoses to patients. Since duality is deeply rooted in our culture, eradicating this dualism in everyday patient care is a process that will initially require an effort on the part of clinicians and health care organizations.

One example of implementation of this paradigm shift is seen in outpatient pain clinics in which all patients, regardless of the presenting complaint, are seen by both a pain physician and a pain psychologist during their first visit. (See Chapter 23: Integrated Chronic Pain and Psychiatric Management.) Some countries have institutionalized this paradigm shift. For example, in Germany many medical centers have a psychosomatic medicine service focused on patients with somatic symptoms arising from medical and/or psychological causes (e.g., SSD, mixed anxiety/depression with somatic symptoms, anxiety due to breast cancer diagnosis) where patients receive integrated multidisciplinary treatments.

2. Emotions and Stress Are Universally Experienced on a Somatic (Bodily) Level

Patients with somatic symptoms are often perceived by others (including health care professionals) as "them" versus "us," and as having mysterious, inexplicable symptoms. However, any emotion is a somatic experience, involving physiologic changes in our bodies. For example, feeling lack of energy for days after a breakup with a romantic partner, or experiencing an increase in the rate of breathing when we are anxious are natural somatic reactions to stress. There is an individual variability in the tendency to somatize, in the intensity and duration of bodily distress, as well as in the ability of a person to regulate this distress. Highlighting to patients the universality of somatization will help them feel less alienated and more accepting of the bidirectional relationship between emotions and somatic symptoms. This is a crucial component of treatment. Sincere acceptance and understanding of the patient's suffering goes a long way.

Similarly, fears of having a serious disease and of death are universal phenomena. The duration, distress, and dysfunction associated with these fears distinguish pathologic from nonpathologic IA.

3. Level and Stage of a Patient's Biopsychosocial Awareness Informs All Aspects of Care

Treatment of SSD and IA will depend on the degree to which a patient accepts the diagnosis, which, in turn, will depend to a large degree on whether the patient adopts a biopsychosocial understanding of health, disease, and his/her symptoms. We call this a biopsychosocial awareness (BPSA). Patients, health care professionals, and societies vary in the level of BPSA. In fact, full BPSA is still rare among

patients, clinicians, and health care organizations in many countries around the world. BPSA is, however, not an all-or-none phenomenon; and it can increase gradually, with time and interventions, in a person or in an organization. To help conceptualize this process, we developed the Columbia Stages for BioPsychoSocial Awareness (CS-BPSA) model (Fig. 16.1) and a rating scale to track a patient's progress (Table 16.1). The CS-BPSA includes two dimensions: comprehensiveness of BPSA and the stage of readiness for BPSA. The stage of readiness dimension is based on the framework of the Trans-Theoretical Stages of Change[20] developed by Prochaska and DiClemente, who had suggested that an individual's readiness to develop new, healthier behaviors is a process that consists of five stages: (1) precontemplation, (2) contemplation, (3) preparation, (4) action, and (5) maintenance.

A patient presenting to primary care can be at any stage (temporal) and level (unidirectional vs. reciprocal concept of biopsychosocial interaction) of BPSA (see Fig. 16.1 and the example in Table 16.1). If SSD or IA is suspected, one of the primary goals of evaluation is determining the patient's current stage and level of BPSA in order to tailor appropriate interventions.

Levels of BPSA

In the CS-BPSA model levels describe the degree of awareness of the bidirectional relationship between emotions and somatic symptoms (see Fig. 16.1B). Level A indicates recognition that somatic symptoms can unidirectionally affect mood or functioning, level B indicates recognition that psychological stressors or emotions can unidirectionally influence the body and lead to somatic symptoms, and level C indicates awareness of the bidirectional relationship between "bio" and "psychosocial." If a patient presents with no BPSA, usually level A is the easiest to reach first. To facilitate this, clinician may ask: "Has your pain affected your sleep?" or "How does pain make you feel emotionally?" or "It must be difficult to pick up your two-year-old son when you have such severe back pain; how has that affected your relationship with him?" Though unidirectional, level A is a step toward full BPSA. Level B refers to awareness of the reverse relationship: stress/emotion/brain affect the body and may produce or exacerbate somatic symptoms. Level B understanding will range in depth, for example, from acknowledging that lack of sleep can increase pain, to realization that anger at a spouse leads to bouts of back pain. Stressors that are more "somatic" (sleep, appetite) are more easily integrated into Level B BPSA than emotions, blends of emotions, conflicting emotions, or interpersonal issues. Full BPSA (Level C) implies acceptance of the complete bidirectionality of *bio* and *psychosocial* factors, including the vicious circle that this relationship creates (e.g., the realization that "anger at a spouse elicits my back pain, which in turn makes my anger even stronger").

Stages of Change in BPSA

A patient at the *precontemplation stage* (see Fig. 16.1A and example in Table 16.1) presents with complete mind–body dualism. These patients are usually focused on finding only a biological explanation for somatic symptoms and are not open to considering BPSA. At this stage, the most challenging task for a clinician is to stay at the patient's level of understanding, carefully assessing whether the patient is ready to move to the contemplation stage (i.e., to consider the association between stressors and somatic symptoms). However, pushing a patient along the stages too fast may only alienate the patient and harm the doctor–patient relationship, making the patient feel misunderstood, depressed, or angry. The main tasks at the precontemplation stage are acknowledging the patient's suffering and symptoms and establishing a cooperative patient–clinician working alliance. Hearing another person (especially a clinician) reiterate the patient's main complaint can be a powerful validation. The clinician may say: "You have been in a lot of pain for many years." Open-ended questions about symptoms and stressors are more helpful than statements. Instead of saying "Your GI problems can be related to the stress of losing your job," the clinician may ask, "Did your GI symptoms increase in the last month? What else was going on in your life at that time?" Patients are more likely to incorporate new understanding of the link between stressors and symptoms into their view of the world if they arrive at those conclusions by themselves.

The clinician's best stance at the *contemplation stage* is to invite the patient to be on a team of investigators regarding his or her condition. This demonstrates interest in the patient's experience, validates the presence of somatic symptoms, and models a genuine curiosity regarding links between somatic symptoms and experiences. After all, with no laboratory findings to confirm SSD, we can never have 100% certainty about the diagnosis. However, we can

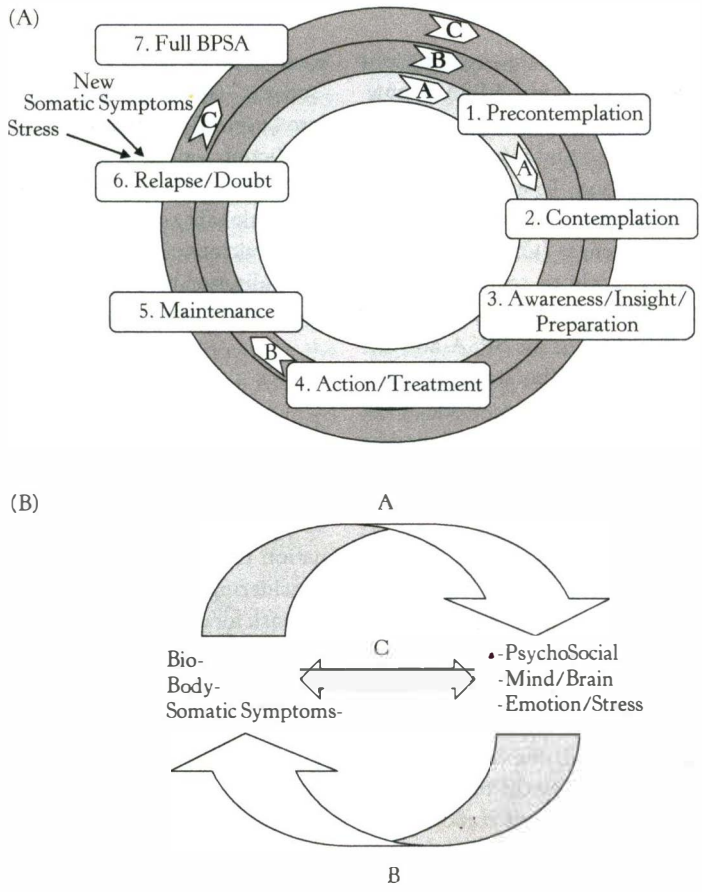


FIGURE 16.1. Columbia Stages (A) and Levels (B) of Biopsychosocial Awareness (CS-BPSA) model overview.

(A) Key for stages of BPSA.

Stages	*Description of Person's Current Views*
1. Precontemplation	Mind/brain-body dualism: there is no relationship between body and mind/brain
2. Contemplation	Considering possibility of A, B, and/or C level mind/brain-body relationships
3. Awareness/Insight/Preparation	Biopsychosocial awareness (BPSA) at A, B, and/or C level; preparation for treatment or action
4. Action/Treatment	Treatment engagement at A, B, or C levels, application of BPSA in life
5. Maintenance	Continued application of BPSA in life
6. Relapse/Doubt	Going back in stages or levels, often occurs with increase of stress or new somatic symptoms
7. Full BPSA	Level C awareness re all SS; applies level C BPSA to new SS, even under stress
(B) Key for Levels of BPSA.	
Levels	
A	Somatic symptoms can affect mood/functioning/level of stress
B	Psychosocial stress/emotion/brain can affect somatic symptoms and the body
C	Bidirectional relationship between Bio/Body/Somatic symptoms and Emotion/Mind/Brain/Stress

TABLE 16.1. COLUMBIA STAGES OF BIOPSYCHOSOCIAL AWARENESS RATING FORM (CS-BPSA-R) AND EXAMPLE OF ASSESSMENT

CS-BPSA-S—RATING FORM

Instructions: Please use the Clinician's Form below to code each symptom separately on both Stage of BPSA and Level of BPSA (only Precontemplation is not associated with a Level of BPSA). Each coding is *symptom specific*: each somatic symptom may be at a different *Stage* of BPSA and at a different *Level* of biopsychosocial integration. Level C awareness is not necessary for engagement in treatment or successful outcome. A patient may stay at level A or B awareness his/her whole life, but benefit from treatments that meet him/her at that level. Intervention for each somatic symptomhas to match current Stage and Level of BPSA. Optimal zone/focus of work during evaluation and treatment is moving one step at a time between the Levels (A, B, C) and/or Stages.

Patient's Name _____ Date _____ Rated by _____

	Levels of Integration				Patient's Perspective
Stages of BPSA	None	A	B	C	
1. Pre-contemplation	back pain				"Caused by disk problem," "does not have anything to do with any other aspect of wellbeing, mood, relationships". Patient denies observable correlation of back pain and moments of unexpressed anger
2. Contemplation		headaches			Considers possibility that headaches at night are contributing to insomnia and feeling tired next day
3. Awareness/ Insight/ Preparation				GI symptoms	Realization that GI symptoms start with increase of anxiety, and then fear of GI cancer increases anxiety and GI symptoms
4. Action			shortness of breath during panic attack		"Caused by anxiety"—scheduled appointment with psychiatrist; but no recognition of panic attacks affecting worsening relationship with children due to avoidance of activities
5. Maintenance				fatigue and lack of energy	Aware of the following vicious cycle and acts on breaking it: fatigue and lack of energy is associated with feeling alone and memories of being abandoned by parents; fatigue leads to withdrawal from social interaction with friends and boyfriend, which leads to deepening of the feelings of aloneness. When feeling this way patient now reaches out to friends, boyfriend, and/or psychotherapist, which alleviates both feelings of abandonment and fatigue.
6. Relapse/doubt		difficulty concentrating			Presents with new fear that previously identified symptom of depression is an early sign of Alzheimer's disease
7. Full BSPA					

track temporal relationships between symptoms and life experiences, look for patterns at the macro (years, months) and micro (minutes, hours, days) levels, and integrate this knowledge with the research studies of patients with similar presentations. A comprehensive multidisciplinary evaluation (described subsequently) helps patients in the precontemplation and the contemplation stages move towards the awareness, preparation, and action stages.

Once any level of BPSA (A, B, or C) is reached, the patient moves into the *awareness, insight, and preparation stage*, which involves considering putting BPSA into action. A collaborative approach to treatment planning increases the likelihood of the plan implementation by a patient. Inquiring about the patient's thoughts, feelings, and expectations provides an opportunity to dispel myths about treatments that are often not accurate. The *action/treatment stage* involves starting a psychosomatic treatment or implementing BPSA in everyday life (see examples in Table 16.1).

Once a person reaches BPSA regarding a symptom, the *maintenance stage* usually requires an active approach to supporting patient's BPSA (e.g., continued assessment by clinicians, or participation in BPSA-promoting activities). *Relapse* back to a lack of BPSA can happen at any stage and regarding one or all symptoms. New symptoms or stressors are particularly susceptible to relapse. For example, a patient who already learned that his GI symptoms are associated with anxiety may present in the precontemplation stage with the new onset of back pain. Therefore, ongoing work on relapse prevention in the maintenance stage is important.

Using the CS-BPSA Model

The CS-BPSA Rating form (see Table 16.1) can be used during diagnosis and treatment planning and for tracking the patient's progress. The optimal zone of intervention during the moment-to-moment interactions with patients is usually one level or stage away from the patient's current BPSA. Jumping over a level or stage can alienate a patient and lead to a rupture in the patient–clinician relationship. A patient may be at different levels and stages of BPSA regarding different symptoms (see the examples in Table 16.1). Progress in treatment and symptom alleviation, however, often happens before a full BPSA is achieved, and some patients may become asymptomatic without ever achieving compete BPSA.

4. A Multidisciplinary Team Approach Is Essential

"It takes a village . . ." An ideal team may include a variety of primary care providers (e.g., physician, physician assistant, nurse practitioner), nurses, behavioral health specialists (e.g., psychiatrist, psychologist, clinical social worker), a care manager, a mind–body therapist, a physical therapist, a nutritionist, and/or a sleep specialist. The team may be permanent (i.e., a core team of the clinic is preferred), or, if that is not feasible, the team can be created as a "team without walls" in which specialists relevant to treating a particular patient (e.g., GI, infectious disease, pain physician) collaborate via phone, electronic medical records, telebehavioral health, and so forth. (See Chapter 9: Telehealth in an Integrated Care Environment for discussion about virtual teams.) Regular multidisciplinary team case conferences are essential.

For patients, the very fact of primary care and behavioral health integration communicates the biopsychosocial approach to health and disease. Mind–body dualism might, however, still creep in. For example, a common view of a medical care as *primary* and mental health as *supplementary/optional* can be perceived by patients as implicit communication of *biological* being much more important than *psychological*. Genuine respectful collaboration, as seen in an integrated care team, validates the unity of biopsychosocial factors for the patient.

Many patients with somatic symptoms or IA feel a lack of control over their bodies and lives, which increases their distress and exacerbates somatic symptoms. Engaging patients as part of an integrated care team is essential, as it restores their feelings of agency and promotes self-awareness and responsibility. Asking open-ended questions (e.g., "What are your goals?" "What treatments do you believe will help?" "What are your fears?"), inviting the patient's feedback, and developing a treatment plan in an interactive way is therapeutic. It is also important to let patients know that they can and will see different members of an integrated care team.

5. Changing the Culture of a Clinic and Health Care Organization to Adopt Full BPSA

Moving organizations along BPSA stages of change and implementing the principles described herein requires commitment at the team and organization (e.g., clinic, hospital) levels. The following

methods may facilitate this change: (1) create a BPSA-informed organizational structure (e.g., by including the primary care and behavioral health professionals in the team and by organizing regular multidisciplinary team meetings); (2) train all staff in the BPSA model and its clinical applications; (3) disseminate information about the latest research on the diagnosis and treatment of somatic symptoms and IA; and (4) develop interactive trainings, including role plays of clinical scenarios, that help the team learn how colleagues from other disciplines think, and how they interact with patients, in order to develop a unified and cohesive way of treating patients as a team.

A BPSA culture also includes recognition of the burnout and stress among health care professionals. Patients suffering from somatic symptoms or IA are particularly difficult to treat. Professionals caring for these patients often develop feelings of helplessness and frustration, as well as empathic emotional and bodily reactions. Processing these reactions with colleagues, in a group setting, can prevent burnout, contribute positively to clinicians' heath, and promote BPSA-informed self-awareness. Onsite training for clinic staff in mind–body techniques (e.g., mindfulness training or relaxation techniques) helps their well-being and enhances the BPSA culture of the clinic.

Language is an integral aspect of culture. It is important to explore which terms for somatic symptoms and IA are currently best accepted by the local community of patients and health care professionals. At the same time, patients and providers need to be educated about the actual meaning of the terms they may hear (e.g., that *psychosomatic* does *not* mean "it's all in your head"). While adopting acceptable terms, it is important to not avoid or be apologetic about using the term *psychological*, as doing so indirectly communicates that the term has derogatory meaning and implicitly promotes mind–body dualism. In fact, it is best not to divide factors into *medical/biological* and *psychological*. Currently, in many cultures, referring to the "brain" and the "nervous system" provides an easily understandable bridge between the "bodily" and "psychological" as people tend to readily accept that the brain is involved in psychological processes, yet at the same time is an organ of our body, which controls other bodily functions.

6. The Quality of Patient–Clinician Relationship Is an Essential Treatment Component

Patients with somatic symptoms and IA often crave care and interpersonal connection. Many of them grew up in challenging interpersonal environments and continue to experience interpersonal distress and loneliness, expecting others to hurt, ignore, or abandon them.[8] Repeated experiences of having their symptoms discredited as imaginary reinforce their distrustful interpersonal worldview and exacerbate interpersonal sensitivity and somatic symptoms. Continuously fearing rejection, they are particularly attuned to nonverbal and implicit interpersonal cues. Unfortunately, clinicians often react negatively to patients suffering with somatic symptoms and IA. One study reported that the single greatest factor that led a physician to suspect hypochondriasis in a patient was the degree of frustration in treating that patient.[21] Videotapes of PCPs interviewing somatoform pain patients revealed split-second facial expressions of disgust. Breaking the vicious cycle of interpersonal distress and exacerbation of somatic symptoms is highly therapeutic. In fact, a recent study showed that a physician's patient-oriented interview style affected activity in pain-modulating brain regions.[22]

Patient–clinician communication styles vary by team member and country. If maintaining professional distance with a patient is a cultural norm, it might be advisable to modify this enculturated style toward a more personable, warm, and engaged approach, as professional distance might be perceived as lack of care by a sensitive patient. Being listened to and validated by all team members (i.e., front desk to medical and specialist staff) are vital human needs that frequently are unmet among patients with somatic symptoms and IA. Giving patients their voices, as much as possible, will start reversing their experience of feeling invalidated/not heard by physicians, team members, friends, and family.

Primary care clinicians, and ultimately the team, are advised to be transparent with somatic symptoms or IA patients about what diagnoses were ruled out and why, and to cite specific research that is being considered when thinking about the patient. Sharing the team's reasoning and treatment plan with the patient shows the thoughtfulness that went into making a recommendation, helps a patient experience being cared for, and models the biopsychosocial way of thinking.

7. Including Translational Research Findings in Education of Patients and Clinicians

Symptoms of SSD and IA are often surrounded by a mystique and raise the questions "Are they real? How do they magically appear in the absence of

any detectable peripheral damage or disease?" Unfortunately, in many cultures *psychosomatic* still means "not real" or "imagined." Neuroscience research indicates that validity of somatic symptoms should no longer be questioned: Musculoskeletal pain, GI, neurologic, and other bodily symptoms can be experienced without findings of peripheral abnormalities. Numerous studies showed that somatic symptoms are associated with dysregulation of neural circuits in the brain; changes in brain neurochemistry and immune functions; emotions and stress that can modulate physical pain on a neural level and can affect health in humans and animals; and the quality of the early environment, which affects development of the brain and other systems of the organism.[8,23,24] These findings help demystify SSD and IA syndromes, providing both patients and their treatment teams tangible information that can decrease anxiety caused by "unexplained symptoms, for unknown reasons, with uncertain future," as well as increase the clinician's confidence when recommending psychosocial (i.e., neuromodulating) treatments for somatic symptoms, as these treatments affect neural circuits and neurotransmitter systems in the brain. Research-based psychoeducation is critical.

Organization of Care

The current state of SSD and IA treatment varies among countries.[2] While several countries have guidelines for the treatment of specific symptoms (e.g., chronic pain or fibromyalgia), specialized guidelines for the organization of care and treatment of SSD and IA patients are rare. Germany[25] and the Netherlands[26] issued comprehensive guidelines based on the systematic review of the latest evidence. The Dutch Multidisciplinary Guideline for Medically Unexplained Symptoms, commissioned by the Dutch Ministry of Public Health, Welfare, and Sport, was published in 2011.[26] In 2012, the third edition of the Guidelines for Management of Patients with Non-specific, Functional, and Somatoform Bodily Complaints was issued in Germany.[25] It was developed by a special taskforce organized by the German College of Psychosomatic Medicine and the German Society of Psychosomatic Medicine and Medical Psychotherapy, which consisted of the representatives of 28 medical and psychological societies who reached a multidisciplinary consensus on assessment and treatment guidelines. Recommendations presented here are based on the integration of those guidelines and research conducted since they were published.

Systems Approach to Establishing Integrated Care for SSD and IA

Overwhelming evidence points to the need for radical reorganization of fragmented health care approaches to SSD and IA. This reorganization needs to be in accord with the evidence from neuroscience for the crucial role of the central nervous system in health and disease. International consensus suggests that the following organization of care is essential for the effective identification, diagnosis, and treatment of SSD and IA: (1) creation of specialized psychosomatic clinics, (2) integration of primary care and specialty psychosomatic/behavioral health care, and (3) a stepped-care approach to treatment.[2,14,25,26] The following steps (or levels) of care are suggested: (1) multidisciplinary collaborative care within the primary care clinic; (2) multidisciplinary care in primary care clinic in combination with outpatient psychosomatic/BHS treatment (e.g., individual and/or group psychotherapy); and (3) intensive psychosomatic day-treatment and inpatient programs in collaboration with primary care.

Implementation of these changes may seem unrealistic in the current climate of the primary care medicine/mental health divide, especially given the shortage of health care resources in many countries. However, the new model of integrated care offers hope. Studies demonstrate that an integrated approach not only results in effective treatment of somatic symptoms and IA, but also dramatically decreases health care costs and disability, as well as inefficient use of resources and physician–patient time. Patients with somatic symptoms and IA represent a large proportion of visits in primary care, neurology, pain, GI, other medical clinics, and emergency departments. The cost of such inefficient care is enormous. For example, medical care costs of SSD in the United States in 2002 were estimated at $256 billion, an amount nearly double the $132 billion cost of diabetes care that year.[1] The overall societal costs almost double health care costs as they include disability and decreased productivity, which are highly prevalent among untreated SSD and IA patents.[27]

The cost and resource effectiveness of providing specialized psychosomatic care was documented in a number of studies in several countries.[27] For

example, in Chile, a randomized controlled trial of Brief Family Intervention (one to three sessions) among 256 somatoform patients decreased health care cost at the 1-year-follow-up by 97% versus no change in the treatment-as-usual control group ($p < .0001$, $d = .8$).[28] (See Chapter 27: Best Practice for Family-Centered Health Care: A Three-Step Model for additional information about a family therapy approach.) Among 216 patients with fibromyalgia in Spain, psychoeducation intervention significantly decreased pain, improved global and physical functioning, and demonstrated cost utility of the intervention versus usual care.[29] In a Canadian emergency department study, treating 50 patients with medically unexplained symptoms with a short-term dynamic therapy (averaging 3.8 sessions and $438/patient) reduced emergency department visits by 69% and costs by $910/patient.[30] In Germany, treatment for somatic symptoms comprising 10 weekly group sessions conducted by the PCP and psychosomatic specialists/BHS decreased the severity of somatic symptoms, psychosocial distress, and the number of visits to a PCP.[31] (See Chapter 28: Group Interventions in Integrated Care Settings for additional information about groups.) In the Netherlands, a randomized controlled trial of a collaborative-care model, which included training for primary care clinicians and a psychiatric consultation for patients with persistent medically unexplained symptoms, showed a 58% decrease in somatic symptoms and a significant reduction in health care use.[32]

In a number of countries, including the United States, the health care payers (e.g., Medicare and private health insurance companies) have initiated and promoted transition to accountable care models (enabling collaborative multidisciplinary care as opposed to the traditional fee-for-service model), which are being rewarded financially.[33] (See Chapter 6: Financing Integrated Care Models.) This shift makes the resource-intensive in-depth multidisciplinary assessments described in this chapter not only financially feasible but advantageous.

Specialized psychosomatic services that collaborate with other medical and psychiatric departments in a hospital are essential. Has this been done? In Germany, almost every university hospital has a specialized psychosomatic department. In 2007, there were 151 of them throughout the country, treating about 50,000 patients.[2] Psychosomatic clinic staff members provide education to other medical specialties regarding the diagnosis and treatment of somatic symptoms and IA, which contributes to implementation of a BPSA culture in a hospital or health care system and helps move patients along the steps of care. In Denmark, the staff of the Research Clinic for Functional Disorders and Psychosomatics gradually educated their medical colleagues throughout the hospital in recognizing the somatic symptoms and IA and facilitating somatic symptoms/IA-focused treatments.[34] An innovative collaborative care program in Germany brings psychosomatic care to the workplace, which increases early detection and intervention for somatic symptoms and IA.[35]

While transition to electronic medical records may have increased efficiency in providing health care for many other diagnoses, this is not yet the case with SSD and IA. Providers tend not to enter SSD and IA diagnoses into the electronic medical record. Those who do may enter any of the terms used to described somatic symptoms and IA, hindering reliable tracking of these conditions. Reluctance to enter a diagnosis of SSD or IA into the electronic medical record may occur for many reasons, one of which is the limited availability of specialized treatments for these disorders. Systematic reorganization of care for SSD and IA should include educating providers about the importance of accurately documenting and tracking these patients' diagnosis and treatment progress.

At a primary care clinic level, the implementation of a stepped-care approach would include the following:

1. Creating a multidisciplinary team of a PCP, a BHS, a physical therapist, a mind–body clinician, and a care manager
2. Establishing collaboration with a psychosomatic and/or behavioral health specialist in the area
3. Training all staff in the BPSA model and in effective clinician–patient communication
4. Developing regular multidisciplinary case conferences
5. Identifying psychoeducational materials about somatic symptoms and IA (handouts, videos, internet resources)
6. Organizing time-limited or ongoing psychoeducational groups
7. Setting up mind–body therapy groups or establishing collaboration with existing ones
8. Setting up a system for periodic check-ins with patients by a care manager.

Necessary steps include establishing close collaboration between primary care and a specialized psychosomatic clinic/other BHS providers. Psychosomatic medicine/behavioral health clinicians can participate in multidisciplinary evaluations in primary care to (1) contribute to diagnosis and treatment planning, (2) facilitate continuity of care if transition to specialized treatment is needed, and (3) provide additional expertise in treating particularly challenging cases.

Care Pathways

The level of care recommended for a particular patient depends on (1) the severity of somatic symptoms and illness anxiety; (2) the level and stage of the patient's BPSA; (3) medical and psychiatric comorbidities; (4) acute versus chronic stressors (e.g., bereavement within a month of death of a loved one vs. years of loneliness); and (5) developmental predisposing factors (e.g., well-developed emotional awareness and no early developmental traumas vs. a profound lack of emotional awareness and growing up in an emotionally abusive environment). The PCP's involvement at every step is crucial for the continuity of care (see Fig. 16.2 for an overview of the care pathways).

Evaluation for Somatic Symptoms and Illness Anxiety

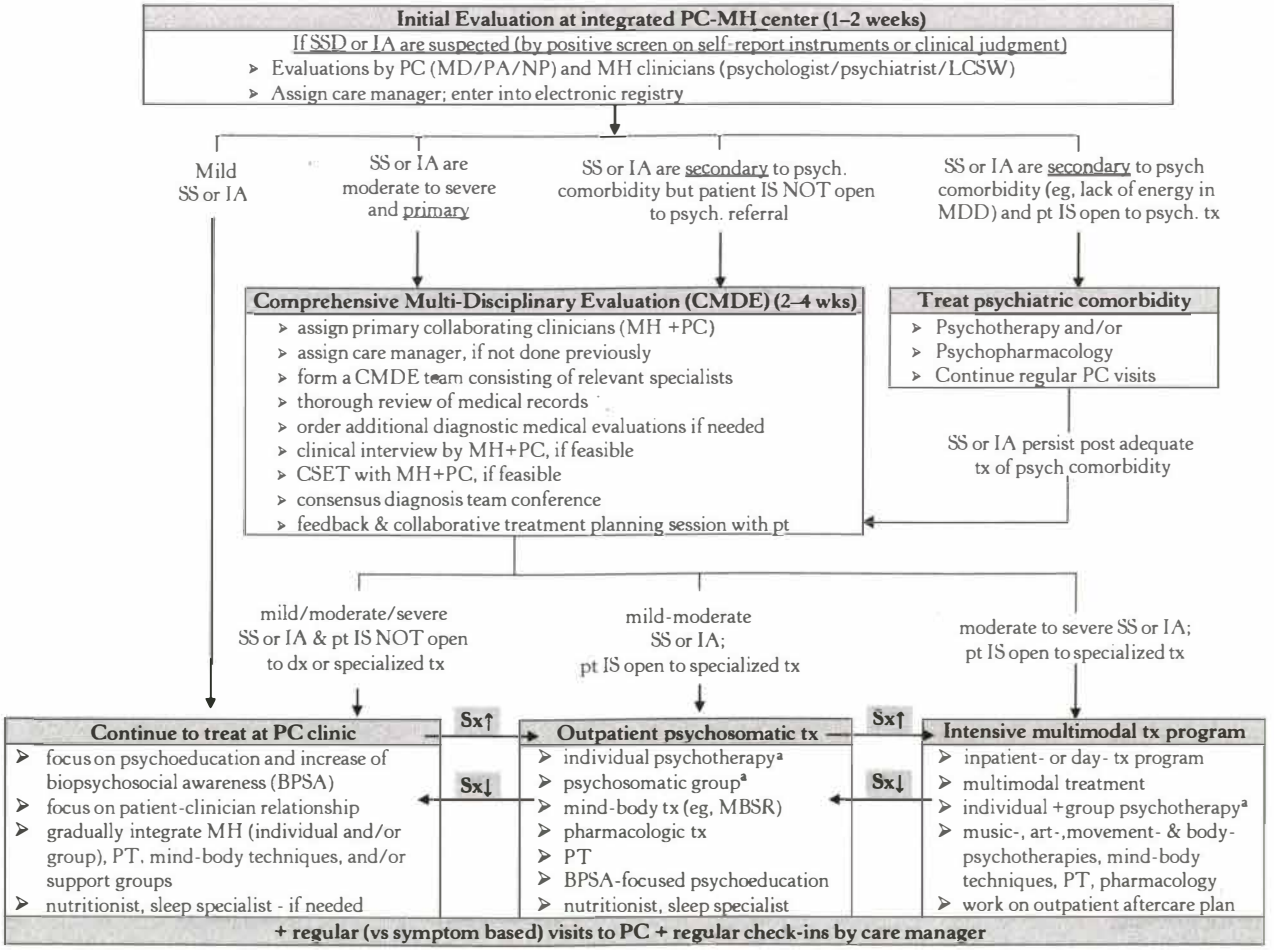
Up to 49% of visits to primary care clinics are associated with somatic symptoms,[5] and other patients may have psychosocial factors contributing to their medical conditions. Therefore, any initial visit to primary care would benefit from psychosomatic assessment. Self-report somatic symptoms screening scales (Tables 16.2 and 16.3) can be administered to all patients presenting to a clinic, and patients scoring high on these measures can then be seen by both primary care and behavioral health practitioners at an early stage of evaluation. As there is no clear consensus that any one or several screening instruments are better than other(s), individual practices will need to make their own choices depending on their context and goals. These scales are particularly helpful in picking up multiple somatic symptoms that are common is SSD and help differentiate between SSD and IA, for which patients usually present with one primary complaint.[25,36,37] Box 16.2 summarizes the issues to be addressed during the initial evaluation by the interdisciplinary team. Because somatic symptoms often require additional medical workup or review of medical records, the initial evaluation may take more than one visit. Evaluation visits to rule out other medical causes and arrive at an SSD or IA diagnosis should be closely spaced.

Somatic symptoms and IA occurring exclusively in the context of another psychiatric disorder usually dissipate once the underlying condition is treated. When referring a patient to psychiatry/psychology, it is important to stress a collaborative team-oriented treatment plan, saying: "Dr. B and other members of the team will work together to help you; you will see Dr. B and other members of the team on a regular basis" to minimize the chance that the patient will feel dismissed or handed over. If somatic symptoms and anxiety persist beyond successful treatment of the other neuropsychiatric condition, the steps recommended for primary SSD/IA should be followed.

In the case of mild somatic symptoms/anxiety, acute stressors, and/or a high stage of BPSA, patients can be effectively treated in primary care with psychoeducation (by a BHS, primary care clinician, or nurse), with reassurance from the PCP, time-limited individual or group sessions by the BHS, and/or a mind–body group. In the case of moderate to severe symptoms, a chronic or complicated course, developmental predisposition, and/or a low BPSA level or stage, a comprehensive multidisciplinary evaluation is recommended (Fig. 16.2).

Comprehensive Multi-Disciplinary Evaluation (CMDE)

Usually, the CMDE is conducted in a primary care clinic or in an integrated practice. If it occurs in a psychosomatic clinic, the primary care team takes part in the evaluation. The CDME is both assessment and the first stage of treatment. Headed by a PCP and BHS, a team relevant to the patient's somatic symptoms is assembled, and a care manager is assigned. A thorough critical review of medical records for any potentially missed diagnoses or necessary diagnostic assessments is conducted.[9] Fragmented care by multiple physicians actually puts somatic symptoms and IA patients at risk for missed diagnoses. In a semistructured diagnostic interview with the patient (see Table 16.2), the clinician comprehensively reviews all symptoms and systems and then conducts a Comprehensive Symptoms and Experiences Timeline (CSET) interview (Box 16.3). If it is not feasible for the PCP and the BHS to interview a patient together, one clinician conducts parts of CDME, the other team members are informed about the details of the interview, and the patient is made aware of this.



[a]Psychosomatic psychodynamic, interpersonal, and CBT approaches depending on SS vs IA ratio, chronicity, stressors, and developmental factors
Abbreviations: CBT, cognitive behavioral therapy; CSET, comprehensive symptoms and experiences timeline; IA, illness anxiety; LCSW, licensed clinical social worker; MBSR, mindfulness-based stress reduction; MD, doctor of medicine; MDD, major depressive disorder; MH, mental health; NP, nurse practitioner; PA, physician assistant; PC, primary care; pt, patient; PT, physical therapy; SS, somatic symptoms; sx, symptoms; tx, treatment

FIGURE 16.2. Critical pathways for stepped-care treatment approach to SSD and IA.

TABLE 16.2. SELECTED RELEVANT ASSESSMENT INSTRUMENTS

Purpose/Domain	Time Points	Instruments	Time to Administer	Completed by
Screening for somatic symptom disorder (SSD) and illness anxiety (IA)[a]	Intake	Patient Health Questionnaire (PHQ-15)[38]	1–2 min	Patient
		Screening for Somatoform Symptoms-7 (SOMS-7 or SOMS-2)[39]	3–5 min	Patient
		Bodily Distress Syndrome (BDS) Checklist[40]	3 min	Patient
		Whiteley Index for hypochondriasis[41] (WI-14, WI-7)	5 min	Patient
		Fibromyalgia Screening Scale[42]	3 min	Patient
Diagnosis of SSD & IA	Comprehensive Multidisciplinary Evaluation (CDME), mental health evaluation	Structured Clinical Interview (SCID) for DSM-5[43]		Clinician
		-- SSD and IA modules only	5–15 min	
		-- Comprehensive DSM-5 diagnosis	30–90 min	
		Schedules for Clinical Assessment in Neuropsychiatry (SCAN) for ICD-10 & DSM-IV[44b]		Clinician
		-- SS and IA modules only	5–15 min	
		-- Comprehensive psychiatric diagnosis	30–90 min	
		MINI for DSM-IV[45]		Clinician
		-- Somatoform disorders module	5–10 min	
		-- Comprehensive DSM-IV diagnosis	20–40 min	
Somatic symptoms type and severity	Initial visit; CMDE; periodic assessments during treatment	PHQ-15[38]	1–2 min	Patient
		SOMS-2 or SOMS-7[39]	3–5 min	Patient
		Brief Pain Inventory (BPI)[46 c]	5 min	Patient
IA severity, dimensions, and insight into illness	CMDE; periodic assessments during treatment	WI-14, WI-7[41]	3 min	Patient
		Hypochondriasis Yale-Brown Obsessive Compulsive Scale Modified (H-YBOCS-M): semistructured interview & self-report[47]	20–45 min	Clinician & patient
SSD vs. IA differential diagnosis	Initial visit; CMDE	Columbia Somatic Symptoms vs Illness Anxiety Ratio (CSS-IAR)[18 d]	3 min	Clinician or patient
Current biopsychosocial awareness (BPSA)	Initial visit; CMDE; throughout treatment	Columbia Stages of BioPsychoSocial Awareness Rating (CS-BPSA-RS)[48 d]	3 min	Clinician

Early life environment and stressors[a]	CMDE	Childhood Trauma Questionnaire (CTQ)[49a] Parental Bonding Instrument (PBI)[50]	3 min 5 min	Patient Patient
Lifelong trauma[a]	CMDE	Life Events Checklist (LEC)[51a]	5 min	Patient
Current interpersonal well-being[a]	CMDE	UCLA Loneliness Scale[52a]	3 min	Patient
Developmental trajectory; association of life stressors and somatic symptoms; family history of somatic symptoms	CMDE; beginning of treatment	Comprehensive Symptoms and Experiences Timeline (CSET) [d]	45 min to several sessions	Clinician with patient

[a]Multiple other relevant measures are available or may be in development.
[b]Available at http://whoscan.org/wp-content/uploads/2014/10/xinterview.pdf
[c]Contact Dr. Charles S. Cleeland at symptomresearch@mdanderson.org
[d]Contact Dr. Alla Landa at AL2898@cumc.columbia.edu

TABLE 16.3. CRITICAL CARE PATHWAYS FOR SOMATIC SYMPTOMS AND ILLNESS ANXIETY

Stages and Steps of Care	Patient Characteristics	Team Members and Timeline	Helpful Instruments[a,b]	Goals of Integrated Team	Issues/Questions
Screening for SSD and IA at primary care	All primary care intakes	Part of initial intake paperwork given by office receptionist 10 min, pre-evaluation visit	PHQ-15[38] SOMS-2 or SOMS-7[39] Whiteley Index for hypochondriasis (WI-14, WI-7)[41]	Identification of patients with possible somatic symptoms or IA	Positive screens to be flagged and followed up by primary care clinician
Initial evaluation for SS/IA at primary care	Patients who screened positive on self-report measures and those with suspected SSD or IA during clinical evaluation	PCP, BHS, care manager 1 or 2 visits	CSS-IA Ratio Scale[18] BPI (body image for pain localizations; visual analog scale for pain; Pain Disability Index)[46] Symptom checklists (WHO-5, BSI, SCL-90R) H-YBOCS-M[47] Mood & somatic symptoms diary Functioning: SF-36, 12, 8	Diagnosis Evaluation of BPSA Begin psychoeducation Begin treatment planning	Was a thorough medical workup competed? Relative somatic symptoms vs. IA contribution? Acute vs. chronic? Recent stressors? Are somatic symptoms/IA primary or secondary to depression or anxiety disorder? Severity? Is CMDE warranted?
Comprehensive Multidisciplinary Evaluation (CMDE)	Somatic symptoms or IA are (1) suspected to be primary; OR (2) are secondary to psychiatric comorbidity but patient is NOT open to psychiatric referral; OR (3) persist after adequate treatment of psychiatric comorbidity	PCP, BHS, care manager, medical specialists relevant to somatic symptoms; consider including a specialist in psychosomatics 2–4 visits over 2–4 weeks	PHQ15,[38] SOMS-2 or SOMS-7,[39] WI-14 or WI-7[41] if not done during screening; Diagnostic Interview (SCID,[43] SCAN,[44] MINI[45]) Brief Pain Inventory[46] Symptom checklists (WHO-5, BSI, SCL-90R) Mood & somatic symptoms diary Functioning: SF-36, 12, 8 Loneliness scale[52] CTQ, PBI[50] CSET	Diagnosis Evaluation of BPSA CSET to increase BPSA Psychoeducation Increase in BPSA Collaborative treatment planning	Was thorough medical workup completed? Relative somatic symptoms vs. IA contribution? Acute vs. chronic? Recent and lifetime stressors? Are somatic symptoms/IA primary or secondary to depression or anxiety disorder? Severity? CSET and MSET interventions to increase BPSA and motivate for treatment Collaborative treatment planning
Referral to treat psychiatric comorbidity	Somatic symptoms or IA are secondary to psychiatric comorbidity (e.g., lack of energy due to depression) and patient IS open to psychiatric treatment	PCP; psychiatrist and/or psychologist or clinical social worker 1 session after initial evaluation or during CMDE	Mood & somatic symptoms diary SOMS-2, SOMS-7[39] WI-14/7[41] BPI[46] General symptom measure (BSI, SCL90, WHO5) to monitor progress	Treatment of other underlying neuropsychiatric disorder	Primary care and mental health specialists continue to work as a team. If somatic symptoms or IA persist after depression or anxiety is treated, reconsider SSD/IA as primary; consider CMDE.

Treat SSD/IA at primary care clinic	1. Mild SSD or IA; OR patient is NOT open to diagnosis or specialized treatment 2. Patient is in remission after specialized psychosomatic treatment	PCP, BHS, care manager; psychotherapy and mind–body clinicians; physical therapist; nutritionist and sleep specialist, if needed At least 6 months, then reassess; work on relapse prevention is ongoing	Mood & somatic symptoms diary SOMS-2, SOMS-7[39] WI-14/7[41] BPI[46] General symptom measure (BSI, SCL90, WHO5) to monitor progress	Psychoeducation Increase in BPSA Engage in physical therapy, mind–body treatments, psychotherapy	Primary care and mental health specialists continue to work as a team. Care manager is involved in care. Regular multidisciplinary team rounds
Outpatient psychosomatic treatment with regular primary care visits	1. Mild or moderate 2. SSD/IA & patient is open to specialized treatment	PCP, care manager, specialists in psychosomatic clinic At least 30 sessions	Mood & somatic symptoms diary SOMS-2, SOMS-7[39] WI-14/7[41] BPI[46] General symptom measure (BSI, SCL90, WHO5) to monitor progress	Primary care support Maintain continuity of care once psychosomatic treatment stops. Relapse prevention	Integrated primary care/mental health team works together with psychosomatic program.
Intensive multimodal psychosomatic treatment program (day treatment or inpatient program)	1. Moderate to severe SSD or IA, patient is open to specialized treatment	PCP, care manager, multidisciplinary psychosomatic treatment team 2–3 months	Mood & somatic symptoms diary SOMS-2, SOMS-7[39] WI-14/7[41] BPI[46] General symptom measure (BSI, SCL90, WHO5) to monitor progress	Primary care support Maintain continuity of care once psychosomatic treatment stops. Relapse prevention	Integrated primary care/mental health team works together with psychosomatic program.

[a]Names of many of these instruments are given in full in Table 16.2.
[b]Instruments to use in a particular setting to be chosen with both usefulness and feasibility in mind.
Additional abbreviations: BPI, Brief Pain Inventory; BPSA, biopsychosocial awareness; BSI, Brief Symptom Inventory; CMDE, Comprehensive Multidisciplinary Diagnostic Evaluation; H-YBOCS-M, Hypochondriasis-Yale Brown Obsessive Compulsive Scale—Modified; MINI, International Neuropsychiatric Interview; PBI, Parental Bonding Index, SCAN, Schedules for Clinical Assessment in Neuropsychiatry; SCID, Structured Clinical Interview for DSM; SCL-90, Symptom Checklist; MOS SF-36, Medical Outcomes Study Short Form; WHO, World Health Organization.

BOX 16.2
ISSUES TO BE ADDRESSED DURING INITIAL EVALUATION BY THE INTERDISCIPLINARY TEAM

- **Have all medical problems been thoroughly evaluated and ruled out?**
- **Is the SSD or IA of recent onset? Can the triggering stressor(s) be identified?**
- **Are somatic symptoms or IA occurring exclusively in the context of another neuropsychiatric disorder?**
- **If yes, is the patient in treatment or willing to receive treatment for this disorder? (Guidelines for treating that neuropsychiatric disorder are to be followed, while educating the patient that somatic symptoms are common symptoms of that disorder.)**
- **What is the relative contribution of SSD versus IA? (Columbia Somatic Symptoms Versus Illness Anxiety Ratio [CSSIAR] scale, Table 16.1)**
- **Is the IA patient avoidant of medical tests or care?**
- **What is the patient's current level and stage of BPSA? (See Fig. 16.1.)**
- **Is IA or SS a culturally syntonic mode of affect expression?**
- **Conduct a thorough review of all systems and symptoms, including a symptom checklist (Table 16.1). SS patients often come in with one most distressing symptom (e.g., pain), but when questioned directly reveal other symptoms (e.g., gastrointestinal disturbance, sensitivity to sensory stimuli, fatigue, or insomnia) that significantly contribute to functioning and well-being. This information may also provide additional evidence for a central sensitization syndrome.**
- **Assess which symptoms limit functioning and cause most distress in order to choose the initial focus of treatment.**
- **Schedule regular follow-up appointments (not symptom-dependent).**

While a time-consuming procedure, CSET is both a diagnostic tool and a powerful intervention to enhance BPSA, identify stressors and developmental factors, and engage the patient in treatment planning. Though devoting so much time to one patient is not customary for PCPs in many countries, this investment of time actually proves time saving for future primary care visits.[31] While ideally CSET is done by medical staff (physician or nurse practitioner) and BHS together, in many settings this it is not feasible. In this case, after the physician or nurse practitioner goes over medical aspects of evaluation, the BHS can do the CSET part, making sure that the patient is aware that the medical staff will be informed of the data collected and that the diagnosis and treatment plan will be made by the multidisciplinary team.

CSET consists of plotting all somatic symptoms and life experiences on a whole-life timeline in order to explore, together with the patient, the patterns of temporal relationships between them (see details in Box 16.3). CSET helps unaware patients discover links between somatic symptoms and stressors, which is a fundamental step in treatment of somatic symptoms and IA.

CMDE involves continuous exploration of the biopsychosocial interactions on macro (whole life), intermediate (daily/weekly), and micro (moment-to-moment) levels. Conducting CMDE over several visits allows exploration of changes in somatic symptoms and the patient's thoughts and feelings since the previous appointment. Sharp changes in somatic symptoms (e.g., increase or decrease of pain) during a session should be immediately followed up with exploration of what the patient has been feeling or thinking. The Micro Symptoms and Experiences Timeline (MSET) (see Box 16.3) provides unique in-the-moment opportunities for increasing BPSA insight, which often takes priority over collecting information. Additionally, self-report measures of early life and current life stressors (see examples of measures in Table 16.2, such as the Childhood Trauma Questionnaire,[49] Life Events Checklist,[53] and Parental Bonding Index[54]) can help

BOX 16.3

COMPREHENSIVE SYMPTOMS AND EXPERIENCES TIMELINE (CSET) AND MICRO SYMPTOMS AND EXPERIENCES TIMELINE (MSET)

CSET

- CSET to be completed after a clinical interview (once rapport is established), completed in 2 hours or more (in one or two sessions), by the PCP and a BHS together if possible.
- Collaboratively developed with the patient: "We are going to do this together"
- The interviewer helps the patient feel in control of the timeline process and does not make BPSA interpretations that reveal any preconceived notions. The most profound BPSA intervention is the patient's own discovery of the temporal associations between symptoms and life stressors.
- Together interviewer and patient review the patient's whole life and plot all health problems and life experiences, including early and current environment and relationshipson a chalkboard/dry erase board.
- First the interviewer draws a vertical line symbolizing time from the patient's birth until today.
- Names of important people in patient's early life (parents, siblings, grandparents, nannies) are written above the line, symbolizing importance of familial processes that happened before the patient was born.
- The interviewer asks about these people's health and medical problems now and when the patient was growing up and records this information next to the names.
- All somatic symptoms from early childhood to now are placed on the right of the timeline; the interviewer carefully asks about the onset and ending of each somatic symptom, and about any other health issues through life starting at birth.
- Once onset of a symptom is mentioned, the interviewer may ask: "What was going on in your life at that time?" and record the answer on the other side of the line.
- Both positive and negative life experiences are recorded.
- The patient's own words are used as much as possible. If a word actually has a slightly different meaning or is a metaphor, the interviewer records the words used by the patient and puts them in quotes—for example, "I felt my world was crashing."
- The interviewer pays particular attention to and plots any changes in somatic symptoms or their severity, overall health, life stressors, life transitions, relational changes, and emotional states, always periodically inquiring about others in the patient's life: parents, siblings, romantic relationships, friendships, community, and social roles (e.g., engaged with church, left football team, started peer-support group, moved to different town).
- Usually the patient starts noticing temporal patterns. The interviewer clarifies these observations, makes a note of them, and continues exploration.
- If this does not occur spontaneously, the interviewer invites the patient to look at the full timeline together and to notice any patterns, first by asking, "What do you see? What jumps out at you?"
- The timeline is always a work in progress.
- At the end of the session the interviewer makes a photo of the timeline, sends it to the patient, and invites the patient to refer to it during treatment.

MSET

- **Apply principles of CSET to moment-to-moment or hours-to-days changes in somatic symptoms to assess BPSA and alexithymia, and clarify the diagnosis.**
- **If the patient describes changes in somatic symptoms severity since the last visit, the interviewer asks what the patient was thinking or feeling when the changes occurred. If the patient has difficulty recalling it, the interviewer can help the patient recall the experience by further questioning (e.g., when, where, who were you with), and by exploring feelings and thoughts.**
- **If changes in somatic symptoms occur during the session the interviewer can ask about thoughts and feelings (e.g., "What else are you feeling in your body right now? Show me where you feel it in your body."). This may help identify emotions that were preceding the change in somatic symptoms.**

assess stressors and convey the importance of these factors for health.

The team case conference for consensus diagnosis and treatment planning is followed by a feedback and treatment planning session with the patient. Presenting SSD and IA diagnoses to a patient in a BPSA-sensitive way is challenging. In addition to BPSA-informed communication (previously described), the following components of feedback session are recommended:

1. Validation of symptoms (somatic symptoms and/or anxiety regarding somatic symptoms)
2. Delivery of the diagnosis with a clear explanation of the meaning of SSD or IA labels
3. Asking the patient to explain his or her understanding of the diagnosis to catch any misunderstanding (repeat this during treatment, as relapses in misunderstanding are common)
4. Conveying that treatments exist and getting better is possible, though it may take time
5. A metaphor coined by Dr. Stanley Fahn, a neurologist at Columbia University, of "computer hardware problem versus software problem" is helpful in explaining to a patient that his or her symptom is a result of a problem in the functioning ("software") of the nervous system versus structural ("hardware") damage or disease.
6. Communicate the team's commitment to help the patient and highlight the value of a multidisciplinary approach.

Interactive treatment planning facilitates the patient's commitment to the plan. Practical steps might include the following:

1. Writing out the patient's goals (e.g., decrease pain and loneliness)
2. Clarifying known ways to achieve these goals (e.g., increase activity, decrease opioids, learn to cope with interpersonal stressors)
3. Describing treatments that can help achieve the goals (e.g., favorite physical activity; medication adjustment, initiation of psychotherapy)
4. Outlining the specific steps the patient chooses to take

Treatment for Somatic Symptoms and Illness Anxiety

Treating Somatic Symptoms

Though challenging to treat, somatic symptoms can be alleviated. The quality of life of patients can be improved by multidisciplinary care, specialized individual and group psychotherapies, and medications.[2] Effective pharmacologic interventions focus on central sensitization and regulation of related neurotransmitter systems.[25] Medications that target noradrenergic pathways, such as the tricyclics (e.g., amitriptyline [10–150 mg/day] or cyclobenzaprine [immediate-release 10 tid or extended-release 15–30 mg/day]) or serotonin–norepinephrine reuptake inhibitors (SNRIs; e.g., venlafaxine [150–225 mg/day], duloxetine [60–120 mg/day], or milnacipran [100–200 mg/day]), have been shown to be helpful for fibromyalgia, chronic pain syndromes, and/or neuropathic pain. Medications that target GABA pathways (e.g., pregabalin [300–600 mg/day] and gabapentin [900–3,600 mg/day]) have also been shown to be helpful in reducing centrally mediated pain. Opioids should be avoided as

they are not helpful for central pain and can lead to opioid-induced hyperalgesia.[55] There is no unbiased consistent evidence to support the use of selective serotonin reuptake inhibitors (SSRIs) for the treatment of chronic pain syndromes.[56]

Both psychodynamic/interpersonal psychotherapy[36,57,58] and cognitive-behavioral therapy (CBT)[59] have been shown to alleviate somatic symptoms to various degrees,[25] with some evidence pointing to psychodynamic therapies in particular leading to functional improvement.[60] Psychotherapeutic strategies shown to be most helpful are those that focus on emotions and interpersonal relationships, teaching the individual to read somatic emotion cues from the body and to express and regulate emotions in the interpersonal environment. Working through developmental traumas and stress has also been shown to be a key element of treatment.[60] Initial engagement might employ expressive psychotherapies, such as music, art, and/or dance/movement psychotherapies, as these are powerful ways to engage the patient's emotions at a nonverbal level, enhancing the development of self-awareness, symbolization, expression, and regulation of emotions. Because patients with somatic symptoms often have a detached relationship with their own bodies, therapeutic techniques that help develop nonthreatening bodily awareness can be particularly helpful, such as relaxation techniques, breathing therapies, mindfulness meditation (e.g., Mindfulness-Based Stress Reduction), or biofeedback. The combination of individual and group psychotherapy may be particularly helpful for those who suffer from somatic symptoms. Patients with more severe somatic symptoms may require intensive multimodal day-treatment or inpatient programs that incorporate these approaches.[25,61,62] These programs were shown to be effective and to help normalize the functioning of neural circuits in patients with somatic symptoms, as measured by functional magnetic resonance imaging.[61,63]

Treatment Approaches to IA

Optimal treatment consists of integrated care, psychotherapy, and pharmacotherapy.[14] Both individual CBT and group CBT have been shown to be effective in number of studies.[64] A dose–response relationship was observed in CBT treatments, with a greater number of sessions associated with greater improvement. This suggests that the relationship with the therapist might be an important factor that facilitates change.[64] Acceptance and commitment group therapy can reduce IA symptoms.[65] Mindfulness-based interventions, such as deep breathing, progressive muscle relaxation, and meditation, are helpful in reducing symptoms and learning new ways to relate to one's body.[66] SSRIs (fluoxetine, paroxetine) can alleviate IA,[67,68] with higher doses of fluoxetine (40–80 mg) and of paroxetine (40–50 mg) considered to be more effective than lower doses. While there haven't been any controlled trials comparing the efficacy of an SSRI versus an SNRI for illness anxiety, one study of depressed patients[69] that compared an SNRI and an SSRI revealed that the SNRI duloxetine had greater efficacy for symptoms of psychomotor retardation, general somatic symptoms, and sexual problems, while the SSRI sertraline led to greater improvement in agitation, anxiety symptoms, and hypochondriasis. Long-term follow-up studies suggest that improvement in IA is sustained comparably for those treated with either CBT or SSRI therapy.[70]

Organization of Treatment of SSD and IA in Integrated Care Model

For patients with mild somatic symptoms or IA, for those resistant to psychosomatic care, or if there are no BHS/psychosomatic providers in the area, multidisciplinary SSD/IA treatment can be arranged in integrated care settings. Regular (as opposed to symptom-based) appointments, as determined by individual patient needs, are recommended.[2,25] A team of clinicians relevant to the patient's somatic symptoms and level of BPSA is assembled (e.g., PCP, individual and/or group psychotherapists, physical therapist, expressive psychotherapists, mind–body psychotherapists; nutritionist and sleep specialists, if needed). A group intervention conducted by the PCP and BHS/psychosomatic specialist together was shown to be effective for somatic symptoms[31] and is an efficient way of using clinicians' time. Ideally, treatment would involve a combination of individual and group treatment. Continuous psychoeducation delivered in a BPSA-sensitive way is an integral component of treatment. Psychoeducation has to be both general (up-to-date evidence-based information about SSD and IA should be given to all these patients) and personally tailored (information relevant to the patient's current concerns and level of readiness). The following

are examples of psychoeducational resources that may be used throughout the treatment:

1. Bodily Distress Syndrome Brochure for Patients. The Research Clinic for Functional Disorders and Psychosomatics at Aarhus University Hospital. http://funktionellelidelser.dk/fileadmin/www.funktionellelidelser.au.dk/patient_Pjecer/7_BDS_information.pdf. Published 2011. Accessed May 25, 2016
2. Educational videos. New South Wales Ministry of Health for and on behalf of the Crown in right of the State of New South Wales. http://www.hnehealth.nsw.gov.au/Pain/Pages/Educational-videos.aspx Accessed May 25, 2016.
3. FibroGuide. Chronic Pain and Fatigue Research Center (CPFRC) at the University of Michigan. http://fibroguide.med.umich.edu Accessed May 25, 2016
4. Retrain Pain Foundation. http://www.retrainpain.org/ Accessed May 25, 2016.

The care manager keeps the treatment team in communication with one another, helps the patient stay engaged in treatment, and tracks the patient's symptoms in a practice registry.

In all modalities of care, the main components of treatment are as follows:

1. Increasing BPSA and understanding of the diagnosis

BOX 16.4
SUMMARY OF RECOMMENDED TREATMENT APPROACHES AND RELEVANT EVIDENCE

Strength of recommendation taxonomy (SOR A, B, or C)

- **Patients with *mild* somatic symptoms/IA can be treated in primary care or integrated care environments. (SOR A).[25,71–75]**
- **Patients with *moderate* somatic symptoms/IA can and should be treated by primary or integrated care and outpatient psychosomatic treatments. (SOR A)[25,26,59,74–81]**
- **Patients with *severe* somatic symptoms/IA benefit from a multimodal inpatient or day-treatment program. (SOR B)[25,26,61,62,82–85]**
- **Close collaboration between all multidisciplinary clinicians is valuable at all steps of care. (SOR A)[25,32,75,86]**
- **The collaborative team care should be coordinated by the primary care providers following a structured treatment plan. (SOR B)[25,87]**
- **Shared decision making regarding treatment planning is helpful. (SOR B)[88]**
- **An attentive, accepting, and empathic stance in verbal and nonverbal communication with a somatic symptoms patient is therapeutic. (SOR A)[89,90]**
- **Ordering additional medical tests for the purpose of reassuring patients with IA is not helpful. (SOR B)[91]**
- **Specialized psychotherapy is an effective treatment for SSD and IA. (SOR A)[25,92]**
- **Patients with somatic symptoms particularly benefit from multimodal treatments that have a developmental approach and focus on emotions, interpersonal relationships, and the association between somatic symptoms and psychosocial distress—for example, psychosomatic psychodynamic psychotherapies (SOR A),[36,57,58,93,94] psychotherapies that change the patient's relationship with his or her body (mind–body progressive muscle relaxation, mindfulness meditation) (SOR A),[95–97] psychoeducation (SOR A),[86] glutamatergic medications for chronic pain (SOR A), and SSRIs or SNRIs (SOR A).[25]**
- **IA patients benefit from CBT (SOR A)[64,98] and SSRIs (SOR A).[68,99]**
- **SSD and IA patients benefit from both individual and group treatments. (SOR A)[25]**

2. Helping the patient change the relationship with his or her body from fear and avoidance to awareness and acceptance
3. Increasing emotional awareness and learning effective ways of emotional expression and regulation
4. Learning to recognize emotional cues from the body
5. Increasing level of physical activity (in physical therapy, mind–body groups, and so forth)
6. Improving functioning and interpersonal well-being, and decreasing isolation

Psychosomatic interventions can continue beyond symptom alleviation to minimize the risk of somatic symptoms/IA relapse. When somatic symptoms flare up, previously successful treatments may be restarted.

For patients with moderate to severe somatic symptoms/IA, referral for specialized outpatient or inpatient psychosomatic treatment is warranted. In the multidisciplinary approach, the primary care team stays involved, following up with the patient and participating in the psychosomatic center case conferences.

CONCLUSIONS

SSD and IA are challenging yet possible to treat. See Box 16.4 for a review of the evidence which support our approach. Integrating primary care and psychosomatic/mental health treatment, using a stepped-care approach, helping patients develop full BPSA, meeting their relational needs, and changing the culture of the primary care clinics to promote full BPSA can lead to significant relief of patients' suffering. Implementation of this approach within health care systems will also decrease burnout and increase the sense of fulfillment among health care professionals. Reorganization of health care systems to adopt the BPSA-informed multidisciplinary model is needed to improve treatment of SSD and IA and to increase the cost-effectiveness of health care at both hospital and societal levels. These approaches have been used successfully in several countries. Given the personal and financial burden of SSD and IA on individuals, health care providers, and society, and the fact that integrated care has been demonstrated to be feasible and effective, it behooves health care policy planners and health care system leaders to accept the challenge to reshape the approach to care of those with SSD and IA.

REFERENCES

1. Barsky AJ, Orav E, Bates DW. Somatization increases medical utilization and costs independent of psychiatric and medical comorbidity. Arch Gen Psychiatry. 2005;62(8):903–910.
2. Creed F, Henningsen P, Fink P. Medically Unexplained Symptoms, Somatisation and Bodily Distress: Developing Better Clinical Services. Cambridge, UK: Cambridge University Press; 2011.
3. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Arlington, VA: American Psychiatric Publishing; 2013.
4. American Psychiatric Association. Diagnostic and Statistical Manual, text revision (DSM-IV-TR). Arlington, VA: American Psychiatric Association; 2000.
5. Haller H, Cramer H, Lauche R, Dobos G. Somatoform disorders and medically unexplained symptoms in primary care: A systematic review and meta-analysis of prevalence. Dtsch Arzteblatt Int. 2015;112(16):279–287.
6. Borenstein DG, O'Mara JW, Jr., Boden SD, et al. The value of magnetic resonance imaging of the lumbar spine to predict low-back pain in asymptomatic subjects: a seven-year follow-up study. J Bone Joint Surg Am. 2001;83(9):1306–1311.
7. Jensen MC, Kelly AP, Brant-Zawadzki MN. MRI of degenerative disease of the lumbar spine. Magn Reson Quart. 1994;10(3):173–190.
8. Landa A, Peterson BS, Fallon BA. Somatoform pain: A developmental theory and translational research review. Psychosom Med. 2012;74(7):717–727.
9. Schildkrout B. Masquerading Symptoms: Uncovering Physical Illnesses That Present as Psychological Problems. Hoboken, NJ: Wiley; 2014.
10. Löwe B, Spitzer RL, Williams JBW, Mussell M, Schellberg D, Kroenke K. Depression, anxiety and somatization in primary care: syndrome overlap and functional impairment. Gen Hosp Psychiatry. 2008;30(3):191–199.
11. Dworkind M, Yaffee M. Somatization and the recognition of depression and anxiety in primary care. Am J Psychiatry. 1993;150(5):734–741.
12. Weck F, Richtberg S, MB Neng J. Epidemiology of hypochondriasis and health anxiety: Comparison of different diagnostic criteria. Curr Psychiatry Rev. 2014;10(1):14–23.
13. Tyrer P, Cooper S, Crawford M, et al. Prevalence of health anxiety problems in medical clinics. J Psychosom Res. 2011;71(6):392–394.
14. Starcevic V, Noyes R. Hypochondriasis and Health Anxiety: A Guide for Clinicians. New York: Oxford University Press; 2014.
15. Gramling SE, Clawson EP, McDonald MK. Perceptual and cognitive abnormality model

of hypochondriasis: Amplification and physiological reactivity in women. Psychosom Med. 1996;58(5):423–431.
16. Van den Heuvel O, Mataix-Cols D, Zwitser G, et al. Common limbic and frontal-striatal disturbances in patients with obsessive compulsive disorder, panic disorder and hypochondriasis. Psychol Med. 2011;41(11):2399–2410.
17. Fallon BA. Pharmacotherapy of somatoform disorders. J Psychosom Res. 2004;56(4):455–460.
18. Landa A, Fallon BA. Columbia Somatic Symptoms & Illness Anxiety Ratio Scale. Unpublished Scale. 2014. Contact Dr. Alla Landa at AL2898@cumc.columbia.edu
19. Engel GL. The clinical application of the biopsychosocial model. J Med Phil.1981;6(2):101–124.
20. Prochaska JO, DiClemente CC. Toward a Comprehensive Model of Change. Berlin/Heidelberg: Springer; 1986.
21. Barsky AJ, Wyshak G, Latham KS, Klerman GL. Hypochondriacal patients, their physicians, and their medical care. J Gen Intern Med.1991;6(5):413–419.
22. Sarinopoulos I, Hesson AM, Gordon C, et al. Patient-centered interviewing is associated with decreased responses to painful stimuli: An initial fMRI study. Patient Educ Couns. 2013; 90(2):220–225.
23. Lane RD, Waldstein SR, Chesney MA, et al. The rebirth of neuroscience in psychosomatic medicine, Part I: Historical context, methods, and relevant basic science. Psychosom Med. 2009;71(2):117–134.
24. Lane RD, Waldstein SR, Critchley HD, et al. The rebirth of neuroscience in psychosomatic medicine, Part II: Clinical applications and implications for research. Psychosom Med. 2009; 71(2):135–151.
25. Schaefert R, Hausteiner-Wiehle C, Häuser W, Ronel J, Herrmann M, Henningsen P. Non-specific, functional, and somatoform bodily complaints. Dtsch Arzteblatt Int. 2012;109(47):803–813.
26. van der Feltz-Cornelis CM, Hoedeman R, Keuter EJ, Swinkels JA. Presentation of the Multidisciplinary Guideline Medically Unexplained Physical Symptoms (MUPS) and Somatoform Disorder in the Netherlands: Disease management according to risk profiles. J Psychosom Res.2012;72(2):168–169.
27. Konnopka A, Schaefert R, Heinrich S, et al. Economics of medically unexplained symptoms: A systematic review of the literature. Psychother Psychosom. 2012;81(5):265–275.
28. Schade N, Torres P, Beyebach M. Cost-efficiency of a brief family intervention for somatoform patients in primary care. Fam Syst Health.2011;29(3):197–205.
29. Luciano JV, Sabes-Figuera R, Cardenosa E, et al. Cost-utility of a psychoeducational intervention in fibromyalgia patients compared with usual care: An economic evaluation alongside a 12-month randomized controlled trial. Clin J Pain. 2013;29(8):702–711.
30. Abbass A, Campbell S, Hann SG, Lenzer I, Tarzwell R, Maxwell R. Cost savings of treatment of medically unexplained symptoms using intensive short-term dynamic psychotherapy (ISTDP) by a hospital emergency department. Arch Med Psychol. 2010;2(1):34–44.
31. Schaefert R, Kaufmann C, Wild B, et al. Specific collaborative group intervention for patients with medically unexplained symptoms in general practice: a cluster randomized controlled trial. Psychother Psychosom. 2013;82(2):106–119.
32. van der Feltz-Cornelis CM, van Oppen P, Ader HJ, van Dyck R. Randomised controlled trial of a collaborative care model with psychiatric consultation for persistent medically unexplained symptoms in general practice. Psychother Psychosom. 2006;75(5):282–289.
33. Rittenhouse DR, Shortell SM, Fisher ES. Primary care and accountable care—two essential elements of delivery-system reform. N Engl J Med. 2009;361(24):2301–2303.
34. Fink P, Rosendal M. Functional Disorders and Medically Unexplained Symptoms: Assessment and Treatment. Aarhus, Denmark: Aarhus University Press; 2015.
35. Rothermund E, Kilian R, Hoelzer M, et al. "Psychosomatic consultation in the workplace"—a new model of care at the interface of company-supported mental health care and consultation-liaison psychosomatics: Design of a mixed methods implementation study. BMC Public Health. 2012;12(1):780.
36. Sattel H, Lahmann C, Gündel H, et al. Brief psychodynamic interpersonal psychotherapy for patients with multisomatoform disorder: Randomised controlled trial. Br J Psychiat. 2012;200(1):60–67.
37. olde Hartman TC, Borghuis MS, Lucassen PL, van de Laar FA, Speckens AE, van Weel C. Medically unexplained symptoms, somatisation disorder and hypochondriasis: Course and prognosis. A systematic review. J Psychosom Res. 2009;66(5):363–377.
38. Spitzer RL, Kroenke K, Williams JB. Validation and utility of a self-report version of PRIME-MD: The PHQ primary care study. Primary Care Evaluation of Mental Disorders. Patient Health Questionnaire. JAMA. 1999;282(18):1737–1744.
39. Rief W, Hiller W. A new approach to the assessment of the treatment effects of somatoform disorders. Psychosomatics. 2003;44(6):492–498.
40. Budtz-Lilly A, Fink P, Ornbol E, et al. A new questionnaire to identify bodily distress in primary care: The "BDS checklist." J Psychosom Res. 2015;78(6):536–545.
41. Pilowsky I. Dimensions of hypochondriasis. Br J Psychiat. 1967;113(494):89–93.
42. Wolfe F, Clauw DJ, Fitzcharles M-A, et al. Fibromyalgia criteria and severity scales for clinical and epidemiological studies: A modification of the ACR Preliminary Diagnostic Criteria for Fibromyalgia. J Rheumatol. 2011;38(6):1113–1122.

43. First MB. User's Guide to Structured Clinical Interview for DSM-5 Disorders-SCID-5: Clinician Version. Arlington, VA: American Psychiatric Association; 2015.
44. Wing JK, Babor T, Brugha T, et al. SCAN. Schedules for Clinical Assessment in Neuropsychiatry. Arch Gen Psychiatry. 1990;47(6):589–593.
45. Sheehan DV, Lecrubier Y, Sheehan KH, et al. The Mini-International Neuropsychiatric Interview (M.I.N.I.): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. J Clin Psychiatry. 1998;59(Suppl 20):22–33; quiz 34–57.
46. Daut RL, Cleeland CS, Flanery RC. Development of the Wisconsin Brief Pain Questionnaire to assess pain in cancer and other diseases. Pain.1983;17(2):197–210.
47. Skritskaya NA, Carson-Wong AR, Moeller JR, Shen S, Barsky AJ, Fallon BA. A clinician-administered severity rating scale for illness anxiety: Development, reliability, and validity of the H-YBOCS-M. Depress Anxiety. 2012;29(7):652–664.
48. Landa A. Columbia Stages of BioPsychoSocial Awareness Scale 2015 Contact Alla Landa at AL2898@cumc.columbia.edu.
49. Bernstein DP, Fink L, Handelsman L, et al. Initial reliability and validity of a new retrospective measure of child abuse and neglect. Am J Psychiatry. 1994;151(8):1132–1136.
50. Parker G, Tupling H, Brown LB. A parental bonding instrument. Br J Med Psychol. 1979;52(1):1–10.
51. Blake DD, Weathers FW, Nagy LM, et al. The development of a clinician-administered PTSD scale. J Trauma Stress.1995;8(1):75–90.
52. Russell DW. UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. J Pers Asses.1996;66(1):20–40.
53. Blake DD, Weathers FW, Nagy LM, et al. The development of a clinician-administered PTSD scale. J Trauma Stress. 1995;8(1):75–90.
54. Parker G, Tupling H, Brown L. A parental bonding instrument. Br J Med Psychol. 1979;52(1):1–10.
55. Mao J. Opioid-Induced Hyperalgesia. Boca Raton, FL: CRC Press; 2009.
56. Walitt B, Urrútia G, Nishishinya MB, Cantrell SE, Häuser W. Selective serotonin reuptake inhibitors for fibromyalgia syndrome. São Paulo Med J. 2015:133(5):454–454.
57. Abbass A, Kisely S, Kroenke K. Short-term psychodynamic psychotherapy for somatic disorders. Psychother Psychosom. 2009;78(5):265–274.
58. Monsen K, Monsen JT. Chronic pain and psychodynamic body therapy: A controlled outcome study. Psychother Theor Res Pract Train. 2000;37(3):257.
59. Kroenke K. Efficacy of treatment for somatoform disorders: A review of randomized controlled trials. Psychosom Med. 2007;69(9):881–888.
60. Koelen JA, Houtveen JH, Abbass A, et al. Effectiveness of psychotherapy for severe somatoform disorder: meta-analysis. Br J Psychiat. 2014;204(1):12–19.
61. de Greck M, Scheidt L, Bölter AF, et al. Multimodal psychodynamic psychotherapy induces normalization of reward related activity in somatoform disorder. World J Biol Psychiatry. 2011;12(4):296–308.
62. Beutel ME, von Heymann F, Bleichner F, Tritt K, Hardt J. [Efficacy of psychosomatic inpatient treatment for somatoform disorders: results of a multicenter study]. Z Psychosom Med Psyc. 2014;60(1):17–24.
63. De Greck M, Bölter AF, Lehmann L, et al. Changes in brain activity of somatoform disorder patients during emotional empathy after multimodal psychodynamic psychotherapy. Frontiers Hum Neurosci. 2013;7:410. doi:10.3389/fnhum.2013.00410.
64. Olatunji BO, Kauffman BY, Meltzer S, Davis ML, Smits JA, Powers MB. Cognitive-behavioral therapy for hypochondriasis/health anxiety: A meta-analysis of treatment outcome and moderators. Behav Res Ther. 2014;58:65–74.
65. Eilenberg T, Fink P, Jensen J, Rief W, Frostholm L. Acceptance and commitment group therapy (ACT-G) for health anxiety: A randomized controlled trial. Psychol Med. 2015:1–13.
66. McManus F, Surawy C, Muse K, Vazquez-Montes M, Williams JMG. A randomized clinical trial of mindfulness-based cognitive therapy versus unrestricted services for health anxiety (hypochondriasis). J Consult Clin Psychol. 2012;80(5):817–828.
67. Greeven A, van Balkom AJ, Visser S, et al. Cognitive behavior therapy and paroxetine in the treatment of hypochondriasis: A randomized controlled trial. Am J Psychiatry. 2007;164(1):91–99.
68. Fallon BA, Petkova E, Skritskaya N, et al. A double-masked, placebo-controlled study of fluoxetine for hypochondriasis. J Clin Psychopharmacol. 2008;28(6):638–645.
69. Mowla A, Dastgheib SA, Jahromi LR. Comparing the effects of sertraline with duloxetine for depression severity and symptoms: A double-blind, randomized controlled trial. Clin Drug Investig. 2016:1–5.
70. Greeven A, van Balkom AJ, van der Leeden R, Merkelbach JW, van den Heuvel OA, Spinhoven P. Cognitive behavioral therapy versus paroxetine in the treatment of hypochondriasis: An 18-month naturalistic follow-up. J Behav Ther Exp Psychiatry. 2009;40(3):487–496.
71. Hoedeman R, Blankenstein AH, van der Feltz-Cornelis CM, Krol B, Stewart R, Groothoff JW. Consultation letters for medically unexplained physical symptoms in primary care. Cochrane Database Syst Rev. 2010;12.
72. Reid S, Wessely S, Crayford T, Hotopf M. Frequent attenders with medically unexplained

symptoms: Service use and costs in secondary care. Br J Psychiat. 2002;180(3):248–253.
73. Rosendal M, Blankenstein AH, Morriss R, Fink P, Sharpe M, Burton C. Enhanced care by generalists for functional somatic symptoms and disorders in primary care. Cochrane Database Syst Rev. 2013;10.
74. Burton C, Weller D, Marsden W, Worth A, Sharpe M. A primary care symptoms clinic for patients with medically unexplained symptoms: Pilot randomised trial. BMJ Open. 2012;2(1):e000513.
75. Zonneveld LN, van Rood YR, Timman R, Kooiman CG, Van't Spijker A, Busschbach JJ. Effective group training for patients with unexplained physical symptoms: A randomized controlled trial with a non-randomized one-year follow-up. PLoS One. 2012;7(8):e42629.
76. McBeth J, Prescott G, Scotland G, et al. Cognitive behavior therapy, exercise, or both for treating chronic widespread pain. Arch Intern Med. 2012;172(1):48–57.
77. Henningsen P, Zipfel S, Herzog W. Management of functional somatic syndromes. Lancet. 2007;369(9565):946–955.
78. Kleinstäuber M, Witthöft M, Hiller W. Efficacy of short-term psychotherapy for multiple medically unexplained physical symptoms: A meta-analysis. Clin Psychol Rev. 2011;31(1):146–160.
79. Sumathipala A. What is the evidence for the efficacy of treatments for somatoform disorders? A critical review of previous intervention studies. Psychosom Med. 2007;69(9):889–900.
80. Haggarty JM, O'Connor BP, Mozzon JB, Bailey SK. Shared mental healthcare and somatization: Changes in patient symptoms and disability. Prim Health Care Res Dev. 2015:1–10.
81. Schröder A, Rehfeld E, Ørnbøl E, Sharpe M, Licht RW, Fink P. Cognitive–behavioural group treatment for a range of functional somatic syndromes: Randomised trial. Br J Psychiat. 2012;200(6):499–507.
82. Haase M, Frommer J, Franke G-H, et al. From symptom relief to interpersonal change: Treatment outcome and effectiveness in inpatient psychotherapy. Psychother Res. 2008;18(5):615–624.
83. Huber D, Albrecht C, Hautum A, Henrich G, Klug G. [Effectiveness of inpatient psychodynamic psychotherapy: a follow-up study]. Zeitschrift fur Psychosomatische Medizin und Psychotherapie. 2008;55(2):189–199.
84. Liebherz S, Rabung S. Do patients' symptoms and interpersonal problems improve in psychotherapeutic hospital treatment in Germany? A systematic review and meta-analysis. PloS One. 2014;9(8):e105329.
85. Wunner C, Reichhart C, Strauss B, Söllner W. Effectiveness of a psychosomatic day hospital treatment for the elderly: A naturalistic longitudinal study with waiting time before treatment as control condition. J Psychosom Res. 2014;76(2):121–126.
86. Luciano JV, Martínez N, Peñarrubia-María MT, et al. Effectiveness of a psychoeducational treatment program implemented in general practice for fibromyalgia patients: A randomized controlled trial. Clin J Pain. 2011;27(5):383–391.
87. Pols RG, Battersby MW. Coordinated care in the management of patients with unexplained physical symptoms: Depression is a key issue. Med J Austr. 2008;188(12):S133–S137.
88. Bieber C, Müller KG, Blumenstiel K, et al. A shared decision-making communication training program for physicians treating fibromyalgia patients: Effects of a randomized controlled trial. J Psychosom Res. 2008;64(1):13–20.
89. Anderson M, Hartz A, Nordin T, et al. Community physicians' strategies for patients with medically unexplained symptoms. Fam Med. 2008;40(2):111.
90. Aiarzaguena JM, Grandes G, Gaminde I, Salazar A, Sanchez A, Arino J. A randomized controlled clinical trial of a psychosocial and communication intervention carried out by GPs for patients with medically unexplained symptoms. Psychol Med. 2007;37(02):283–294.
91. Rolfe A, Burton C. Reassurance after diagnostic testing with a low pretest probability of serious disease: Systematic review and meta-analysis. JAMA. 2013;173(6):407–416.
92. Sharma MP, Manjula M. Behavioural and psychological management of somatic symptom disorders: An overview. Int Rev Psychiatr. 2013;25(1):116–124.
93. Selders M, Visser R, van Rooij W, Delfstra G, Koelen JA. The development of a brief group intervention (Dynamic Interpersonal Therapy) for patients with medically unexplained somatic symptoms: A pilot study. Psychoanal Psychother. 2015;29(2):182–198.
94. Fjorback LO, Arendt M, Ørnbøl E, et al. Mindfulness therapy for somatization disorder and functional somatic syndromes—Randomized trial with one-year follow-up. J Psychosom Res. 2013;74(1):31–40.
95. Röhricht F, Elanjithara T. Management of medically unexplained symptoms: Outcomes of a specialist liaison clinic. Psychiatr Bull. 2014;38(3):102–107.
96. Lahmann C, Nickel M, Schuster T, et al. Functional relaxation and guided imagery as complementary therapy in asthma: A randomized controlled clinical trial. Psychother Psychosom. 2009;78(4):233–239.
97. Lahmann C, Röhricht F, Sauer N, et al. Functional relaxation as complementary therapy in irritable bowel syndrome: A randomized, controlled clinical trial. J Altern Complement Med. 2010;16(1):47–52.
98. Barsky AJ, Ahern DK. Cognitive behavior therapy for hypochondriasis: A randomized controlled trial. JAMA. 2004;291(12):1464–1470.
99. Louw K-A, Hoare J, Stein D. Pharmacological treatments for hypochondriasis: A review. Curr Psychiatry Rev. 2014;10(1):70–74.