

# Somatization: Diagnosing it sooner through emotion-focused interviewing

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## Practice recommendations

- Obvious anxiety in a patient with physical complaints should prompt an evaluation for somatization.
- Become familiar with the 4 patterns of somatization and their manifestations.
- Learn how to conduct an emotion-focused interview, which, when applied appropriately, will help rule somatization in or out.

A 42-year-old man has chronic fatigue and fibromyalgia that has led to a 13-month disability leave from work. The reason for his current office visit is longstanding pain in his shoulders. As you take his history, he is sitting with hands clenched and he generally appears tense.

A 38-year-old woman with severe incapacitating gastroesophageal reflux disease, irritable bowel syndrome, and depression has been too disabled to work for 2 years. At the time of your interview, her posture is relaxed and she shows no signs of anxiety.

These 2 very different patients (whose cases I will review in detail) share a common problem:

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somatization, the translation of emotions into somatic problems or complaints. It is well documented—though still largely unrecognized in practice—that somatization accounts for a large proportion of office visits to primary care physicians as well as specialists,<sup>1,2</sup> leading to unnecessary testing, treatment, and hospitalization, disability and corporate financial loss,<sup>3</sup> likely earlier mortality,<sup>4</sup> and frustration for patients and physicians.<sup>5</sup>

## No longer a diagnosis of exclusion

Despite the burden somatization places on the medical system, the diagnosis is often made by indirect methods such as checklist, speculation, or exclusion when other problems are ruled out.<sup>6</sup> The common position, even in recent reviews, is that somatization should be treated by non-specific measures, such as frequent office visits to increase the patient's and physician's ability to cope with what is often seen to be a chronic and incurable disorder.<sup>7-11</sup> Such a position is no longer warranted.

Based on recent quantitative and extensive case-based research, specific emotion-focused brief therapies and videotape-based research have clarified how emotions are experienced in the body and how somatization of emotions occurs (see **The physiology of emotions**). These methods, including short-term dynamic psychotherapy (STDP) have been used to diagnose and treat somatization effectively since the 1980s. Somatization, with its morbidity and chronicity,

## The physiology of emotions

**To diagnose and manage somatization** we must know how emotions are experienced and how they may become somatized. Davanloo discovered through studying several hundred case videotapes that specific emotions manifest in specific ways regardless of gender, age, or ethnicity.<sup>12</sup> This emotion physiology constitutes a norm to compare with a patient who somatizes emotions.

For example, rage is experienced as an internal energy sensation, heat, or “volcano” that rises from the lower abdomen to the chest, neck, and finally to the hands with an urge to grab and do some form of violence. Guilt about rage is experienced with upper chest constriction or even pain, intense painful feeling with waves of tears and with thoughts of remorse about experiencing the rage.<sup>13</sup> When feelings are experienced consciously, by definition they are not being somatized at that moment.

### Why somatization occurs

When feelings are intense, frightening, or conflicted, they create anxiety and defense mechanisms to cover the anxiety (see the **Figure** on page 234). If these feelings are unconscious to the patient, the subsequent anxiety and defenses may also be outside of awareness.

This is the finding common in people who have been traumatized by someone close to them: feelings of rage toward a loved one are unacceptable, frightening, and avoided through somatization and other defenses.<sup>14</sup> Diverse research has found that patients with hypertension, migraine, irritable bowel syndrome, and other conditions internalize anger and thus increase their somatic problems.<sup>15-17</sup> Blocking and inhibiting of emotions, including anger, is a common finding in somatizing patients.

need no longer be diagnosed by exclusion nor treated palliatively without specific diagnostic testing.

## ■ THE 4 PATTERNS OF SOMATIZATION

Videotaped case-series research shows 4 main patterns of somatization: 1) striated muscle unconscious anxiety, 2) smooth muscle tension 3) cognitive-perceptual disruption, and 4) conversion.<sup>18</sup>

**Striated muscle tension** due to unconscious anxiety manifests through hand clenching, sighing, and even hyperventilation that the patient is not aware of. These patients may report panic attacks, chest pain, headache, fibromyalgia, and other musculoskeletal complaints. These conditions are often frustrating to family, employers, and physicians since conditions like chronic pain respond to treatment slowly or not at all.

**Smooth muscle tension** due to unconscious anxiety causes acute or chronic spasm of blood vessels, GI tract, airways, and the bladder. Patients exhibiting smooth muscle tension may present with GI symptoms, migraine, hypertension, urinary frequency, and upper airway constriction mimicking asthma. They often report histories of depression, panic, substance abuse, personality disorders, and past sexual or physical abuse.

**Cognitive perceptual disruption** due to unconscious anxiety typically involves visual blurring, tunnel vision, loss of train of thought, and “drifting,” wherein the patient is temporarily mentally absent from the room. These patients have chronically poor memories and concentration. They are commonly victims or perpetrators of partner abuse, have frequent accidents, and have transient paranoia. They often end up seeing neurologists and undergoing expensive testing. Most have histories of dissociative disorders, personality disorders, or childhood abuse. In the family doctor’s office they frequently forget what was said and call back after the appointment. They appear confused and easily flustered and either avoid physical examinations entirely or endure them with great anxiety.

TABLE 1

### Examples of diagnosable somatization patterns

Somatization format	Observations during emotion-focused diagnostic assessment	Examples of related health complaints or health problems
<b>Striated muscle tension</b>	Progression from hand clenching, arm tension, neck tension, sighing respirations to whole-body tension	Fibromyalgia, headache, muscle spasm, backache, chest pain, shortness of breath, abdominal (wall) pain, fatigue
<b>Smooth muscle tension</b>	Relative absence of striated muscle tension. Instead activation of smooth muscles causes, for example, cramps in the abdomen or heartburn.	Irritable bowel symptoms, abdominal pain, nausea, bladder spasm, bronchospasm, coronary artery spasm, hypertension, migraine
<b>Cognitive-perceptual disruption</b>	Relative absence of striated muscle tension. Instead patient loses track of thoughts, becomes confused, gets blurry vision	Visual blurring, blindness, mental confusion, memory loss, dizziness, weakness, pseudo-seizures, paresthesias, fainting, conversion
<b>Conversion</b>	Relative absence of striated muscle tension. Instead patient goes weak in some or all voluntary muscle	Falling, aphonia, paralysis, weakness

**Conversion** manifests as muscle weakness or paralysis in any voluntary muscle. Patients with acute conversion describe dropping items or even dropping to the floor as muscles give way without explanation. They will often report histories of witnessing or experiencing violent abuse.

#### One pattern usually predominates

The total amount of somatized emotion is distributed over the 4 pathways (**Table 1**). One pathway generally prevails at any given time, though different pathways may come into play as anxiety waxes or wanes. When anxiety is expressed primarily through smooth muscle tension, cognitive perceptual disruption, or conversion, the striated muscles are relatively relaxed.

This finding of apparent calm while somatizing has been noted elsewhere in research of patients with hypertension. This is the “belle indifference” a patient expresses as they are temporarily relieved of muscle tension through somatization elsewhere.<sup>19</sup>

#### Major types of defense

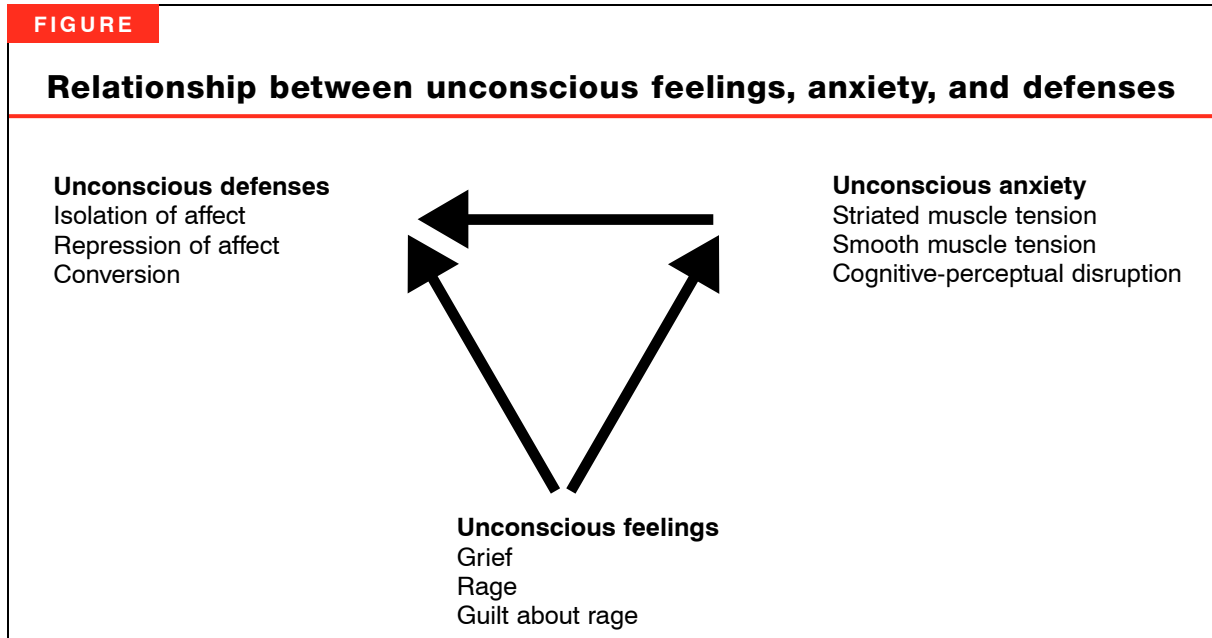
Two important categories of defense include *isolation of affect* and *repression*.

**Isolation of affect** is awareness of emotions in one’s head without experiencing them in the body. Intellectualization is a form of isolation of affect.

**Repression** is the unconscious process by which emotions are shunted into the body rather than reaching consciousness at all. For example, strong emotions, including rage, may directly cause sighing and a panic attack without the person being aware of either the emotion or the sighing.<sup>20</sup>

#### Experiencing the emotions overcomes somatization

Videotaped research also shows that if a person can experience true feelings in the moment, somatization of these feelings is weakened and overcome. The feelings being experienced push out the anxiety and somatization (**Figure**). Thus, somatization can be reduced or removed by helping a patient feel emotions being stirred by recent events or from past events. Through this process



one may diagnose somatization and also produce a therapeutic effect for a patient.

### ■ DIRECT DIAGNOSIS OF SOMATIZATION

#### An objective assessment

Because the process of somatization is unconscious to the patient, diagnosis is based on objective findings during examination rather than on a patient's report. This is similar to evaluating a patient with abdominal pathology: we would not expect the patient to report an abdominal mass, even though we could detect it and train the patient to palpate it. The somatizing patient believes the problem is physical, so the history reported is more likely to lead to physical testing and medical treatments than to a direct examination of the emotional system. Although clues in the history may suggest a patient is somatizing,<sup>20</sup> the definitive test, like that of an abdominal examination, is "hands on," observing the patient's direct response to an emotion-focused interview.

#### Actively exploring emotions

Examination of the emotional system is analogous to a physical examination of other systems, and

progresses from observation to "palpation" or "percussion" (**Table 2**).

Observe the patient for visible unconscious anxiety. Then, in the context of a supportive patient-doctor relationship, explore emotionally charged situations that generate symptoms.

Alternatively, one may ask in what way strong emotions like anger affect the patient's physical problems. Asking about specific recent events and feelings that were triggered usually mobilizes emotions, giving you and the patient a direct look at how emotions affect them physically.

If a patient is anxious in the office, it will be most meaningful to examine the feelings they experience during the interview.

#### Managing defenses

At times, the defenses used to avoid feelings must be pointed out before the patient can see and interrupt these behaviors. If the process is too detached or intellectual, then feelings will not be activated and the system cannot be assessed. The physician's rapport allows him or her to clarify the process and the need for the patient to try to approach and experience feelings when speaking about them. This is analogous to the process of

TABLE 2

### Exploring emotions in a patient-centered interview

Action	Example
<b>Observation</b>	Note any signs of unconscious tension, somatic distress, or defensiveness from the start of the interview
<b>Ask about emotions</b>	Can you describe a situation when the symptoms get worse? What feelings do you have when you talk about that? How do you experience the feeling of anger in your body when it is there?
<b>Distinguish feelings from anxiety or defenses</b>	The tension you had was anxiety, but how did the anger feel? Becoming quiet was what you did but how did you feel inside?
<b>Observe physical responses</b>	Observe the physical and behavioral responses in the patient when the emotional system is activated
<b>Give feedback and plan</b>	Review all findings with the patient. Verify the patient agrees with what you have observed. Plan any further treatments or referral

examining a sore abdomen when a patient is guarding: the patient must relax for examination to take place, and we help them do this by explaining the process.

Patients who are defensive and insist the problem is not related to emotions are managed differently. These patients usually are quite tense and already emotionally activated. An open examination of feelings the patient has about coming to see you that day is a good way to begin. Through this focus one can see the patient's somatizing patterns directly as well as develop a working rapport.

#### Managing anxiety

If the patient becomes anxious when asked about emotions, introduce a calming step by asking the patient to intellectualize about the specific bodily anxiety symptoms. This reduces the anxiety by using the defense of intellectualization.

#### Recap and planning

The interview is concluded by reviewing the findings with the patient in the same way one would share findings of a blood test. Management options would depend on the findings and may include another interview, further

medical investigations, referral for treatment, or follow-up to gauge the patient's response to the interview itself.

#### ■ INTERPRETING THE PATIENT'S RESPONSES

With the focused assessment, the somatic symptoms will transiently increase or decrease, disappear, or not change at all (Table 3).

An **increase** in symptoms with emotional focus suggests that emotions aggravate or directly cause the problems. A **decrease** in symptoms during the test also suggests a linkage to emotions. **Disappearance** of the symptoms by bringing emotional experiences to awareness is the best direct evidence that somatization of these emotions was causing the patient's symptoms.

**No change** in a patient's symptoms or signs—provided there was adequate emotional activation—suggests no somatization of emotions. In these cases, other physical factors must be sought. For example, a woman with chronic left leg weakness and numbness had no shift in symptoms with this test: she was found to have neuropathy due to multiple sclerosis. We have found

TABLE 3

<b>Interpretation of responses to emotionally focused assessment</b>		
<b>Response</b>	<b>Interpretation and action</b>	<b>Beware of</b>
<b>Response 1:</b> Symptoms go up with emotional focus then down after focusing away from emotions	The diagnosis is likely somatization. Prescribe emotion-focused psychotherapy and monitor for gradual symptom removal	False positives due to coincidental symptom changes in interview  Health problems unrelated to the somatization could always be present
<b>Response 2:</b> Symptoms are improved or removed by emotional focus or emotional experience in the office	The diagnosis is (was) somatization of those emotions. Follow-up to see if gains are maintained	
<b>Response 3:</b> No change in symptoms	Somatization is unlikely to be the cause of the symptoms. Look for physical causes.	False negatives due to high defenses, sedation, lack of cooperation, inadequate focus by physician
<b>Response 4:</b> Unclear response	May or may not be an emotion-based component in the symptoms. Repeat test, consider other diagnostic tests or referral for emotion-focused diagnostic testing	

that 5% to 10% of patients referred to our diagnostic clinic have physical problems that were mistaken for somatization.

### False negatives

False negatives occur when the test does not detect the process of somatization when it is present. This will occur if the level of emotion mobilized was too low, if the patient is too sedated, if the defenses the patient used were not sufficiently interrupted, or when the patient is not working collaboratively with the doctor during the test. In each case the patient must allow emotions to be mobilized and the doctor must focus adequately on the emotional experiences to yield an interpretable response.

### False positives

False positives occur when the patient has a rise or fall in symptoms during the test for other reasons—eg, coincidental shifts in episodic conditions like muscle spasm or symptom

reduction due to distraction during the test itself. It is important in these cases to repeat the test more than once and see if the results are reproducible.

### ■ TREATMENT: SHORT-TERM DYNAMIC PSYCHOTHERAPY

#### STDP is clinically effective

#### for patients with somatization

Short-term dynamic psychotherapy (STDP) formats specifically help a patient to examine trauma and loss-related emotions that result in somatization, depression, anxiety, and self-defeating behaviors. Case-series videotaped research over the past 30 years has established the effectiveness of the methods in both short and long term follow-up.<sup>21</sup>

#### STDP is efficacious in controlled trials and meta-analyses

In 1995, Anderson and Lambert<sup>22</sup> conducted a meta-analysis of 26 controlled studies and found



STDP to be superior to minimal treatment controls and wait lists including in samples with somatization. It was found to be as effective in removing anxiety and depressive symptoms as cognitive behavioral therapy. A recent meta-analysis,<sup>23</sup> using more strict inclusion criteria, yielded the same findings. In a recent randomized controlled trial of symptomatic patients with personality disorders, STDP brought significant symptom reduction while cognitive therapy did not, suggesting that STDP may have added benefits in more resistant and complex symptomatic patients.<sup>24</sup>

In our current Cochrane review search,<sup>25</sup> we have found 40 published randomized controlled trials supporting its efficacy with a range of disorders including ulcer disease, irritable bowel syndrome, dyspepsia, and urethral syndrome.<sup>26-29</sup> Our review has likewise found STDP to be superior to minimal treatment or waitlist controls and that the gains are maintained in follow-up averaging over 1 year.

### **STDP is cost-effective and reduces health care utilization**

STDP has been shown to reduce healthcare utilization and to be cost-effective in treating patients with dyspepsia, irritable bowel syndrome, depression, and self-harm and treatment-resistant conditions.<sup>30</sup> Of specific cost figures cited in reviewed papers, 27 out of 34 showed cost savings with STDP including reduction in total costs, medication costs, disability, hospital, and physician use.

## **■ CASE ILLUSTRATIONS**

### **Case 1: Striated muscle anxiety**

This 42-year-old man had chronic fatigue and fibromyalgia which lead to a 13 month disability up to the time of consultation. He came to the office with longstanding pain in his shoulders. His hands were clenched during the interview, and he appeared tense while giving his history.

DOCTOR: Can you tell about a specific time when you had an emotional upset so we can understand

how exactly it affects you?

PATIENT: Yeah, problems at home with my wife.... Saturday she wanted me to do some work on the garage. She started to yell. Every day it's the same thing and I'm getting tired of it...

DOCTOR: So how do you feel toward her?

PATIENT: *[Takes a deep sigh, hands become clenched]* Mad.

DOCTOR: You mean mad ... angry?

PATIENT: Yeah.

DOCTOR: How do you experience the anger inside physically?

PATIENT: Very, very... tense

DOCTOR: That is tension...anxiety?

PATIENT: Yeah.

DOCTOR: How did you experience the anger?

PATIENT: I start to ignore her.

DOCTOR: Is that a mechanism to deal with anger? But how do you experience anger underneath?

PATIENT: It's really hard to put a word on it... I get really mad...it's like a rage.

DOCTOR: So how do you experience the rage?

PATIENT: *[Patient takes a big sigh and clenches his hands tightly]*

DOCTOR: Do you notice you sigh and become tense when you talk about the rage.

PATIENT: No, I didn't. I don't feel anxious.

DOCTOR: But, do you notice the sigh and your hands?

PATIENT: I do now, but didn't see it before.

DOCTOR: Is this what is happening to you ... that you are getting all tensed up about these feelings?

PATIENT: Yeah, it must be.

At a later point in the 1-hour session, the patient was able to feel the visceral emotions of rage, guilt about the rage, and sadness over several years of conflict. When the feelings were experienced in the office, he had an abrupt drop in muscle tension and bodily pain: this was further evidence he had been somatizing, or as he said, "bottling up" these complex feelings.

As is typical of patients with primarily striated muscle anxiety, he denies being nervous despite showing obvious anxiety in the inter-

view. He denies anxiety because it has been unconscious to him, thus free to create fibromyalgia pain. Through this single interview a link is made for both patient and doctor between blocked feelings and body pain. With 10 treatment sessions focused on this process, his fibromyalgia resolved; he returned to work and no longer needed antidepressants.

### Case 2: Smooth muscle anxiety

This patient is a 38 year-old woman with severe incapacitating GERD, irritable bowel syndrome, and depression who was disabled from work for 2 years at the time of consultation. This woman had a very relaxed posture with relaxed hands and an absence of obvious anxiety. After 10 minutes of exploring situations and events that make her stomach worse, we arrive at the following point.

DOCTOR: Can you tell me about another time when your stomach felt worse?

PATIENT: Yes. There was once when my sister-in-law did something and it made me angry. Yeah, when people make me angry I don't tell them, I just avoid them.

DOCTOR: Can you describe one of those times, so we can see how that affects you.

PATIENT: Once she was arguing with my brother, like they usually do....

DOCTOR: How did you feel then?

PATIENT: ... Now I just got that again [*pointing to her stomach and chest with upward motion and burps*]

DOCTOR: Heartburn? Just came on?

PATIENT: Yeah, heartburn, just came on.

DOCTOR: Is there anything else you notice? Like in your stomach?

PATIENT: No, just that ... but I can hear my stomach churning.

DOCTOR: So is it when you have anger your stomach churns and you get this acid?

PATIENT: Must be....

DOCTOR: ...because in your approach to talk about anger you got cramps and acid. So is that one way the anger goes?

PATIENT: Yes it must be, but I never thought of that part. [*Stomach stops churning and heartburn stops as we talk about it for few minutes.*] You know, this all started to get worse when my fiancé dumped me. [*She goes onto describe a story of being not only rejected but also feeling humiliated by how it was done. She never felt emotional about it but just got severe diarrhea and was confined to her room for 3 weeks.*]

DOCTOR: How did you feel toward your fiancé when he dumped you that way?

PATIENT: I was just so sick and depressed. I didn't feel any anger. [*Patient burps again this time rubs abdomen due to some discomfort.*]

DOCTOR: Did you get the stomach upset just now again?

PATIENT: My stomach is upset again. Just the noise and acid again.

DOCTOR: So again, when we focus on the feelings, the cramps and acid come back.

PATIENT: For sure. What can we do about that?

DOCTOR: Can we try to help you identify these feelings before they go to your stomach, to try to interrupt that process. Can you tell me about another incident like that?

The patient required 3 one-hour sessions to improve her tolerance of anxiety, so she could intellectualize about feelings rather than have them directly affect her stomach. The feelings of rejection had triggered rage and guilt about rage associated with sexual abuse by her brother and the abandonment she felt from her mother when she told her mother about it. With 12 sessions of therapy, she was able to stop her IBS medication, anxiolytic, and antidepressant.

This vignette is typical for patients with primarily smooth muscle unconscious anxiety. The patient had no visible anxiety but had GI symptoms when focusing on emotions about recent trauma. The symptoms were mobilized and reduced repeatedly, confirming a link with emotions. Note that outwardly she looked calm, but the emotions mobilized were being shunted to her GI tract.



## ■ INCORPORATING EMOTION DIAGNOSTICS INTO PRACTICE

To perform these interview procedures, the physician must understand emotion physiology and the patterns of somatization as outlined above. This is entirely intuitive to many physicians the first time seeing this material: they can readily employ that which they already know. In general, though, physicians reading this will want to ponder it and see how it may apply case by case as they develop skills with it over time. Senior clinicians have usually done these assessments by default, by pressure from patients, or because they learned elements of this over time from various experiences.

### Helpful short-cuts

Family physicians trained in emotion assessment note that abbreviated elements can easily be incorporated into a patient-centered assessment process. For example, one may ask how "stress," "emotions," or "anger" affects the person and their body or ask how the person handles anger in specific incidents.

In an initial patient questionnaire, one can include a few questions that encourage the patient to think about how stress affects them and to describe their body's tendency to experience anxiety. When they later present with symptoms, one can use these baseline data to aid in the new assessment. Thus, a culture of considering emotional factors can be woven into practice, weakening any resistance to the idea that emotions and health, mind and body, are tightly bound.

### Time factors

Based on our experience, family physicians can perform two thirds of these diagnostic assessments during 15 minutes of focused interviewing. More complex cases, such as patients with cognitive disruption or multiple manifestations of anxiety, may take longer to diagnose and generally need more specialized care or referral. If required, a patient could be asked back for a 1 half-hour session later in the day or week.

### Taking care of ourselves

Despite the importance of the emotional system in medicine, medical curricula generally fail to provide sufficient education in this area. At the same time, up to half of our own ranks report emotional burnout.<sup>31</sup> Even with the lack of mainstream medical teaching about emotions and health, it behooves us to learn what we can about the emotional system as it applies to the patient and to ourselves in relation to these most challenging problems. Focused seminars, peer case review, select reading, and videotape training can all help in this educational process.<sup>32</sup>

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### REFERENCES

1. Fink P, Sorensen L, Engberg M, Holm M, Munk-Jorgensen P. Somatization in primary care. Prevalence, health care utilization, and general practitioner recognition. *Psychosomatics* 1999; 40:330-338.
2. Kroenke K, Mangelsdorff AD. Common symptoms in ambulatory care: incidence, evaluation, therapy, and outcome. *Am J Med* 1989; 86:262-266.
3. Barsky AJ, Ettner SL, Horsky J, Bates DW. Resource utilization of patients with hypochondriacal health anxiety and somatization. *Medical Care* 2001; 39:705-715.
4. Engel CC Jr, Liu X, Hoge C, Smith S. Multiple idiopathic physical symptoms in the ECA study: competing-risks analysis of 1-year incidence, mortality, and resolution. *Am J Psychiatry* 2002; 159:998-1004.
5. Bellon JA, Fernandez-Asensio ME. Emotional profile of physicians who interview frequent attenders. *Patient Education & Counseling* 2002; 48:33-41.
6. De Gucht V, Fischler B. Somatization: A critical review of conceptual and methodological issues. *Psychosomatics* 2002; 43:1-9.
7. Righter EL, Sansone RA. Managing somatic preoccupation. *Am Fam Physician* 1999; 59:3113-20.
8. Holloway KL, Zerbe KJ. Simplified approach to somatization disorder. When less may prove to be more. *Postgrad Med* 2000; 108:89-92, 95.
9. Servan-Schreiber D, Tabas G, Kolb NR. Somatizing patients: part II. Practical management. *Am Fam Physician* 2000; 61:1423-1428, 1431-1432.
10. Servan-Schreiber D, Kolb R, Tabas G. The somatizing patient. *Prim Care* 1999; 26:225-242.
11. Noyes R Jr, Holt CS, Kathol RG. Somatization. Diagnosis and management. *Arch Fam Med* 1995; 4:790-795.
12. Davanloo H. Intensive short-term dynamic psychotherapy with highly resistant patients. I. Handling resistance. *International Journal of Short-Term Psychotherapy* 1986; 1:107-133.

CONTINUED

13. Davanloo H. The technique of unlocking the unconscious in patients suffering from functional disorders. Part I. Restructuring ego's defenses. In: Davanloo H. *Unlocking the Unconscious*. Chichester, England: John Wiley & Sons; 1990:283-306.
14. Katon W, Sullivan M, Walker E. Medical symptoms without identified pathology: relationship to psychiatric disorders and adult trauma, and personality traits. *Ann Intern Med* 2001; 1:917-925.
15. Roter D, Ewart CK. Emotional inhibition in essential hypertension: Obstacle to communication during medical visits? *Health Psychology* 1992; 11:163-169.
16. Venable VL, Carlson CR, Wilson J. The role of anger and depression in recurrent headache. *Headache* 2001; 41:21-30.
17. Whorwell PJ, Houghton LA, Taylor EE, Maxton DG. Physiological effects of emotion: assessment via hypnosis. *Lancet* 1992; 340:434.
18. Davanloo H. Intensive short-term dynamic psychotherapy: Spectrum of psychoneurotic disorders. In Davanloo H. *Intensive Short-Term Dynamic Psychotherapy*. Chichester, England: John Wiley and Sons; 2001.
19. Servan-Schreiber D, Tabas G. Somatizing patients part I: practical diagnosis. *Am Fam Physician* 2000; 61:1073-1078.
20. Abelson JL, W. J., Neese RM, Curtis GC. Persistent respiratory irregularity in patients with panic disorder. *Biological Psychiatry* 2001; 49:588-595.
21. Davanloo, H. *Short-Term Dynamic Psychotherapy*. New York: Jason Aronson; 1980.
22. Anderson E, Lambert M. Short-term dynamically oriented psychotherapy: A review and meta-analysis. *Clinical Psychology Review* 1995; 15:503-514.
23. Leichsenring F, Rabung S, Leibing E. The efficacy of short-term psychodynamic psychotherapy in specific psychiatric disorders: a meta-analysis. *Arch Gen Psychiatry* 2004; 61:1208-1216.
24. Svartberg M, Stiles TC, Seltzer MH. Randomized controlled trial of the effectiveness of short-term dynamic psychotherapy and cognitive therapy for cluster C personality disorders. *Am J Psychiatry* 2004; 161:810-817.
25. Abbass AA, Hancock JT, Henderson J, Kisely S. Short-term psychodynamic psychotherapies for common mental disorders (Protocol for a Cochrane Review). 2004. In: *The Cochrane Library*. Chichester, UK: John Wiley and Sons.
26. Sjodin I, Svedlund J, Ottoson J, Dotevall G. Controlled study of psychotherapy in chronic peptic ulcer disease. *Psychosomatics* 1986; 27:187-200.
27. Creed FLF, Guthrie E, Palmer S, et al. The cost-effectiveness of psychotherapy and paroxetine for severe irritable bowel syndrome. *Gastroenterology* 2003; 124:303-317.
28. Hamilton J, Guthrie E, Creed F. A randomized controlled trial of psychotherapy in patients with chronic functional dyspepsia. *Gastroenterology* 2000; 119:661-669.
29. Baldoni F, Baldaro B, Trombini G. Psychotherapeutic perspectives in urethral syndrome. *Stress Medicine* 1995; 11:79-84.
30. Abbass A. The cost-effectiveness of short-term dynamic psychotherapy. *Journal of Pharmacoeconomics and Outcomes Research* 2003; 3:535-539.
31. *CMA Guide to Physician Health and Well-being*. 2003. Canadian Medical Association.
32. Coombs RH, Perrell K, Ruckh JM. Primary prevention of emotional impairment among medical trainees. *Acad Med* 1990; 65:576-581.