Psychophysiologic Disorders

Diagnosis and Treatment of Medically Unexplained Symptoms and Chronic Functional Syndromes

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Abstract

Psychophysiologic Disorders, which present themselves to physicians as medically unexplained symptoms and chronic functional syndromes, are common. Unfortunately, few healthcare professionals have had formal training about their connection to psychosocial issues. A systematic approach to diagnosis and treatment is described that is based on published evidence and detailed interviews with over 7000 of these patients. This approach is designed to meet the needs of primary care teams using techniques for assessing and treating current life stresses, the prolonged impact of adversity in childhood and somatic presentations of depression, post-traumatic stress, and anxiety disorders.

Learning Objectives

- Understand the connection between psychosocial stresses, medically unexplained symptoms and chronic functional syndromes.
- Learn how to assess for sources of stress linked to physical illness.
- Learn techniques for relieving physical symptoms by treating the underlying stresses.

Approximately one in six adults, with double that prevalence in primary care, suffer from medically unexplained symptoms, chronic functional syndromes or (in Europe) bodily distress syndrome (MUS, CFS or BDS) (Kroenke,2003; Landa, 2012). Clinicians have struggled to define these conditions for many years (Aronowitz, 2001) and the cost is $256 billion annually in the United States alone (Barsky, 2005).

In these patients, pain or other symptoms (often more than one) can affect almost any structure, organ system or body region. The variety of symptoms includes but is not limited to Headache, Dizziness, Dyspnea (difficulty breathing), Cough, Tinnitus (ringing in the ears), Globus (lump in the throat), TMJ (upper joint of the jaw) pain, Visual Disturbances, Pseudoseizures (appearance of a seizure with normal EEG), Fibromyalgia, Chest Pain, Spine Pain, Joint Pain, Repeated Shoulder Dislocations, Irritable Bowel Syndrome, Dyspepsia, Abdominal Pain, Diarrhea, Constipation, Interstitial Cystitis, Pelvic Pain, numbness/tingling in the extremities, itching of the skin and others. The more symptoms a patient reports (particularly if six or more), the more likely they have PPD. Symptoms that migrate from place to place are also much more common in PPD than in patients with diseased organs. Surprisingly, the majority of these patients does not appear to be particularly stressed.

Symptoms that are not physiologically consistent also suggest a diagnosis of PPD. For example, a patient who reports back pain while standing at work who does not get back pain while standing elsewhere likely has PPD.

Another common presentation is the patient who is perceived as "difficult", patients whose medical clinicians find themselves looking for a way out of the exam room. Though

most medical practitioners identify only about 15% of their patients this way, they contribute disproportionately to clinician job dissatisfaction.

There is growing evidence from controlled trials that addressing psychosocial problems in this population leads to significantly improved outcomes (Escobar,2007; Guthrie, 1993; Hsu, 2010; Laird, 2016; Powers, 2013; Speckens,1995). These studies imply a benefit from systematically uncovering psychosocial issues. Unfortunately, that benefit is not reflected in the labels MUS, CFS or BDS. These terms also fail to take into account functional MRI studies of fibromyalgia (Kim, 2015), somatoform pain disorder (Gundel, 2008) and irritable bowel (Drossman, 2003) showing pain is processed with brain circuits that differ from those of healthy people. A more accurate and informative diagnosis that incorporates the concepts of stress and altered neuro-anatomy is Psychophysiologic Disorder (PPD). (The word psychophysiologic is taken from the initial description of the biopsychosocial model that emphasized the importance of "psychophysiologic responses to life change.") (Engel, 1977).

Most patients with PPD referred to a Behavioral or Mental Health Professional (BMHP) are treated with techniques devised for patients whose primary concern is a mental health issue. But PPD patients typically deny psychological problems and tend to resent any implication otherwise. As a result, outcomes often are unsatisfactory.

The approach to PPD described below is based on detailed interviews with over 7000 adult or adolescent PPD patients and on relevant studies (Burton,2003; Edwards,2010; Kroenke,2000; Rasmussen,2006; Smith,2003). Initial assessment should be by a medical clinician. Depending on the needs of the patient, the clinician's training and experience, and the care setting, collaboration with a BMHP often is appropriate to

complete the process. The BMHP can, if necessary, also refer for specialty mental health consultation.

Collaboration

Regrettably, PPD patients usually fall into a blind spot in the healthcare system. They have pain or other physical symptoms, they have psychosocial issues that are usually not fully recognized and they rarely comprehend the connections between these two classes of problem. When they bring their somatic complaints to physicians, relief is often limited because medical diagnosticians typically have little or no formal training in psychological assessment.

Case 1. A medical specialist evaluated migrating abdominal pains in a 37-year old woman. Numerous diagnostic tests failed to detect the cause. It was only during evaluation by a second consultant that inquiry was made into stress, revealing the patient was suffering domestic violence that corresponded closely to the time of her illness. Ending the abusive relationship quickly led to relief of the pain. When informed of this outcome, the first consultant responded: "It is reassuring to know I didn't miss anything important."

The first consultant's failure to consider PPD led to needless suffering on multiple levels: the abdominal pain, the patient's self-doubt about the cause of the pain, undetected domestic violence and the inconvenience, discomfort, cost and risk of unnecessary diagnostic tests.

A second reason physicians can be reluctant to inquire into stress is that patients tend to be skeptical and even resentful toward any suggestion pain or other symptoms might have a psychological component. There are parallel problems in mental health care

when clients mention physical symptoms, because many psychologists feel unqualified to assess them. It is no surprise that healthcare professionals find this population of patients to be the most difficult and frustrating in their practice.

The solution to this dilemma is collaboration. Establishing a mutually educational referral relationship between medical and psychological clinicians provides the best opportunity to achieve success for PPD patients. Even a small number of good outcomes achieved by psychologists in clients referred from just one sympathetic physician can lead to a virtuous cycle of other PPD patients appropriately referred from ever more doctors.

Once a good, collaborative physician-psychologist relationship is established, it is reasonable for them to discuss another area of concern. Published studies recommend caution about attributing pain to an abnormality on an imaging study if the abnormality is prevalent in asymptomatic people. These are unlikely to be responsible for pain or to respond to intervention with more than placebo benefit. (If many people with no symptoms are found to have an abnormality then that abnormality is unlikely to be causing symptoms in people who happen to have pain in that area.) Common examples include spinal disc bulge or protrusion (Jensen, 1994), endometriosis, ovarian cysts, and pelvic adhesions (Harrop-Griffiths, 1988). Also common are abdominal symptoms that persist after surgery for gallstones, particularly when the pre-operative pain was not typical for gallstone colic. For these patients, assessment for PPD prior to invasive treatment of the structural abnormality is usually appropriate.

Addressing Skepticism

The first step in evaluating PPD is to address patients' reluctance to consider stress as a cause of physical symptoms. Several techniques can alleviate this concern.

- The earlier in the diagnostic evaluation you discuss stress affecting the brain as one possible etiology for symptoms, the more patients will accept this as part of a thorough assessment (Drossman, 1999).
- Point out that physical responses to stress are common. Examples include tension headache, a "knot" in the abdomen in threatening situations and blushing with embarrassment (Peters, 1998).
- Clarify there is no suspicion that symptoms are imaginary, self-inflicted or due to deficient coping skills, malingering, or hallucination.
- If a BMHP collaborates, inform the patient they are helping evaluate effects of stress on the brain.

The Stress Evaluation

Stress Evaluation is a non-stigmatizing term for the six-part process of diagnosing PPD. The information can be gathered over several appointments concurrent with thorough diagnostic testing for organic/structural causes. If no significant stresses are found or treatment of psychosocial issues fails to relieve the physical symptoms then further evaluation for an organic/structural etiology should be considered.

Part I. Illness Chronology

Begin by acquiring a detailed chronology of the patient's illness including the symptoms' onset and pattern over time. Then ask about life stresses that coincide with (or immediately precede) the start of the illness or flares of symptoms.

Case 2. A 37 year-old woman had irritable bowel symptoms just three times in her life: at age 22 during a stressful first job over 1000 miles from home, at age 31 during a divorce and currently during her second divorce.

Listen for clues that symptoms are highly unlikely to have an organic or structural cause.

Case 3. A 40 year-old man had abdominal pain only while driving to work and not when driving home or on days off work.

Case 4. An administrative assistant had diarrhea five to ten times daily but only every other day. On the remaining days her bowel habit was normal despite no significant variations in daily diet or lifestyle.

Case 5. An older man had over twenty-five years of daily lumbar spine pain, but no symptoms during his annual two-week fly-fishing vacation even when helping to clear brush from around the lodge.

Case 6. A 29 year-old woman had brief, severe attacks of abdominal cramps and diarrhea two-three times per week for nine months but not one episode at home.

Part II. Current Stresses

A range of life stresses can be associated with physical symptoms (Burton,2009; Barakovic,2013; Hatcher,2008; Miranda,1991; Tomenson,2012) . Ask if there is a personal crisis, issues with religious faith, problems with a spouse or partner, Lesbian/Gay/Bisexual/Transgender concerns, difficulty with children or parents, workplace stress, financial problems or a dilemma involving a friend or neighbor. Remember to inquire about stressful events that link chronologically to symptom flares. In

Case 3 above, for example, his symptoms coincided closely with a time of greatly increased pressure at his workplace. These links are not always present, but when they are found the likelihood of PPD is higher.

Another common theme is a lack of self-care skills. Good questions that loved ones can help answer are:

- Do you care for those close to you but have difficulty finding time for yourself?
- What do you do for enjoyment and how often?

For most of these patients, their only relief from endless obligations is when symptoms force them to rest. A majority suffered a challenging childhood that diverted them from attending to their own needs. They were left with little experience taking time for personal fulfillment and recreation.

Case 7. A 32-year-old woman in the Emergency Department is receiving intravenous opiates for acute abdominal pain. Diagnostic tests are unrevealing. She was a competitive springboard diver from age 4-18, practicing before and after school and on weekends. Currently she is working full-time as is her husband. She coaches her two daughters and others, drives children long distances to competitions and volunteers as swim club director. Personal time is rare. Her symptoms moderated after discussion about how much she had missed as a child. She was discharged with analgesic tablets and a plan to take regular time focused on personal enjoyment. Her pain resolved eight to ten weeks later after discovering great pleasure in piano lessons.

Part IIIa. Adverse Childhood Experiences (ACEs)

ACEs increase the risk for many types of poor health outcome (Felitti, 1998) including PPD, which can begin during childhood, adolescence or well into mid-life. Symptoms can be mild or severe, single or multiple, and can persist for years or even decades. A good sequence of questions is:

1. Were you under stress as a child?
2. On a scale of 1-10, 10 being worst, how stressed were you as a child?
3. Please tell me what leads you to choose that number.
4. How have you been affected later in life?
5. If you learned that a child you care about was growing up exactly as you did, how would that make you feel? (Patients often minimize the adversity they suffered. This question can help them to a more accurate assessment.)

After each question, listen for mistreatment capable of causing enduring harm to self-esteem and/or anger, fear, shame, grief or guilt. This suffering often proves to be the source of unresolved emotions that are then expressed somatically. This is the fundamental cause of PPD in ACE survivors. Common forms of childhood mistreatment in this population have been characterized as Chronic Unpredictable Toxic Stress (Nakazawa, 2015). These include abuse, neglect, lack of praise or emotional support, excessive responsibilities, bullying by peers and parental violence or substance abuse.

Most children suppress their emotional reaction to chronic adversity (Miller, 2008; Kirkengen, 2010). Consequently, as adults they might recall only a fraction of the distress associated with their mistreatment. Detailed questioning (particularly question five above) combined with empathy skills often is needed to comprehend the full depth of emotion in

people who don't perceive it themselves. Patients who are unable to recall their childhood are more challenging to assess but will often remember details of adversity as treatment progresses.

Experienced psychologists will routinely recognize attachment issues in ACE survivors. An additional perspective is to understand what the client learned about themselves as a child that isn't true. For example, many come to assume they are of lesser quality than others, that it is their duty to support other's needs regardless of detriment to themselves, that the boundaries of their bodies need not be respected or that they must be continually watchful of minor details that might threaten harm to themselves or loved ones.

Part IIIb. Stages of ACE Recovery

In PPD patients with ACEs, a majority experiences up to three overlapping stages of recovery. Finding manifestations of this during a Stress Evaluation improves understanding of the patient's healing process. PPD can begin at any time, even in Stage Three when, outwardly, life appears less stressful.

Stage One. Personality traits that develop in response to ACEs include poor self-esteem, stressful personal relationships, perfectionism, detrimental levels of self-sacrifice and increased vigilance. Anxiety and depression often are present. Also common are behaviors that support coping such as eating disorders, addictions (alcohol, drugs, nicotine, exercise, work, sex, gambling, shopping), and self-injury. Additional coping characteristics include reliability, attending to details, a capacity for hard work and compassion for others in need.

Stage Two. Negative traits from Stage One diminish and the positive traits generate supportive feedback from friends and colleagues. This leads to steady growth in self-esteem. ACE survivors eventually recognize they deserve to be treated far better than they were as children. For the first time they feel worthy of mutually supportive relationships.

Stage Three. Declining stress, improving self-esteem and feeling worthy of better treatment contrasts with and generates emotion about adversity suffered as a child. But because of years spent suppressing emotional reactions, patients lack conscious awareness of anger, fear, grief, shame or guilt even when an ACE perpetrator is still active in the patient's life. The result is emotion that is expressed somatically (causing symptoms) rather than verbally or via behavior. (It is not uncommon for symptom onset to coincide with the first supportive relationship, which I refer to as the Good Partner/Bad Illness syndrome). Recovery results from conscious recognition of these emotions followed by converting their somatic expression into verbal expression (see Treatment below).

It is remarkable how frequently ACE survivors are unaware of emotions powerful enough to cause illness. The following patient's illness was unexplained after consultation by more than a dozen specialists including a psychiatrist.

Case 8. A 50 year-old woman was admitted to a university hospital about four times annually for fifteen years for days-long attacks of nausea, vomiting, and vertigo (dizziness). Symptoms resolved rapidly and permanently after discovery that nearly all the attacks were directly linked to episodic interactions with her verbally abusive mother (although most ACE survivors with PPD need months or years to fully recover).

In Case 8, anger was the dominant emotion. Other negative emotions can play the principal role, however, as the next case illustrates.

Case 9. A 24-year old woman is pregnant at seven months gestation. She is admitted to a hospital after weeks of vomiting. She grew up with her single mother in a strongly Christian home. Father lived 20 miles away but had no contact with her. Pregnant at age sixteen, she gave up the baby for adoption but felt severe religious guilt. Now happily married and pregnant for the second time, she is intensely fearful that the baby will be deformed due to divine retribution for the 'sin' of the first pregnancy. After discussion, she accepted there were parallels between the sacrifice of giving up her first child and that of God giving up His Son to humanity. Her guilt moderated and the vomiting stopped. She delivered a healthy baby two months later.

Part IV. Depression

In primary care patients with depression, somatic rather than emotional symptoms predominate (Kroenke, 1994). A large majority of my patients with depression denied feeling depressed though most of them felt stressed or frustrated. This is why depression often is unrecognized by physicians, which is yet another reason to encourage collaboration between medical clinicians and psychologists.

A vague, non-specific description of the symptoms and desperation to find relief that is out of proportion to findings on physical exam are clues to depression. It is not unusual to hear phrases such as "I'm all worn out," "I can't take this any longer," or "I'm at the end of my rope." Confirmation usually follows from inquiry into early morning awakening, anhedonia, fatigue, anorexia, tearfulness, thoughts of self-harm, and loss of hope for the future.

Part V. Post-Traumatic Stress

Routinely ask about traumatic, terrifying or horrifying life events (Andreski,1998; Gupta,2013; Hoge,2007; Mcfarlane,1994). The link to PPD is clear when symptoms begin soon after the trauma, especially when accompanied by manifestations of Post-Traumatic Stress such as flashbacks, nightmares, avoidance of reminders of the trauma, emotional numbness, and increased vigilance.

PPD that begins long after the trauma is more challenging to diagnose and is not rare. Symptoms usually follow a triggering event linked to the trauma.

Case 10. A 34 year-old woman had a three-year history of episodic nausea, vomiting and right lower quadrant (RLQ) abdominal pain. She indicated the site of pain by forming her hand into the shape of a pistol and pointing the "barrel" at the RLQ. Thirteen years earlier she witnessed the murder of her brother by gunshot to the RLQ. Ten years later, just before the onset of symptoms, she unexpectedly encountered her brother's killer in a store (shortly after his release from prison) though he did not recognize her.

Traumas capable of causing PPD are not always violent as the next case illustrates. This patient baffled the Cardiology Department for well over a year.

Case 11. While away from home to attend the funeral of her abusive mother, a 61 year-old woman found a letter in the family Bible written by the mother and addressed to her. The letter contained a list of "Ten Reasons Why I Hate You." Eighteen months later she returned to her mother's city for the first time since the funeral and experienced an attack of severe chest pain. These attacks continued several times daily for eighteen months until she was questioned about trauma and recalled the letter. The pain episodes resolved after writing her mother a heartfelt reply.

Part VI. Anxiety Disorders

The prevalence of Generalized Anxiety Disorder (GAD) in primary care is 7-8% and most complain of physical symptoms rather than worry or fear (Stein, 2015). A clue to GAD is that the somatic illness tends to be significantly less severe at times when the patient feels safe.

Case 6 above who had diarrhea attacks only away from the safety of her home is an example. Another patient experienced progressive stiffness and discomfort in the neck and shoulders if he left his home but not if he remained there. Most GAD patients will admit to excessive worry about minor matters if asked specifically.

A variant of GAD is Social Anxiety Disorder where symptoms are triggered by social situations such as public speaking or the presence of large numbers of people. Patients often worry about embarrassing themselves or being judged by others.

Case 12. An adolescent had severe diarrhea but only on Tuesdays and Thursdays when she played soccer for her high school team and felt very anxious about her performance. Symptoms responded well to the selective serotonin reuptake inhibitor (SSRI) paroxetine.

Panic attacks also can be misdiagnosed as organic disease. Sudden onset and a rapid peak of intense fear often accompanied by shortness of breath, heart palpitations, chest discomfort, trembling, a choking sensation or nausea should prompt consideration of panic. The diagnosis is likely if episodes abort rapidly after taking a short-acting benzodiazepine.

Treatment

Confirmation of a diagnosis of PPD occurs when treating the causative stress(es) relieves the symptoms. A useful diagnostic technique that also initiates treatment is to have the patient compile a list of all their life stresses past and present. This has value for several reasons.

- During a Stress Evaluation, many patients want to provide more information than time permits. They can be encouraged to add these disclosures to their list of stresses for review during follow-up.
- The number of listed stresses and their tendency to cluster in particular areas (such as workplace or spouse) can be a revelation.
- Often patients feel prompted to find solutions to some items with subsequent improvement in their symptoms.

Patients who lack self-care skills should, ideally, set aside 2-5 hours per week (best as a block) for trial and error in search of an activity whose primary purpose is enjoyment. This process can require months, often induces guilt (at first) and benefits from support by other members of the patient's household. But once people acquire the ability to put themselves on the list of those for whom they care, the improvement in symptoms is gratifying and enduring.

PPD resulting from ACEs often benefits from psychotherapy. However, there are several straightforward techniques a BMHP or medical clinician can implement that are surprisingly helpful. Supportive, non-judgmental listening about ACEs builds trust. It is also therapeutic with a 35% reduction in doctor office visits though this is not sustained

beyond one year without follow-up (Felitti, 2010). Reframing coping behaviors (eating disorders, addictions, self-injury) as normal responses to an abnormal past environment conveys acceptance and compassion.

The next step is to facilitate greater conscious recognition of emotions about childhood mistreatment. Even patients who deny these feelings often reconsider when asked to imagine a young loved one enduring the same experience.

Case 13. A 33 year-old man had a 20-year history of multiple PPD symptoms. After his parents' divorce when he was age eight, they continued to live in the same home, sleeping separately, with daily mutual hostility. The patient denied significant impact until asked to imagine observing his beloved 6-year-old niece suffering the same environment for a week. Following a long pause, the patient said, "After that week, I would shoot myself."

Once the patient appreciates the magnitude of their anger, fear, grief, shame or guilt, it is important to help them take pride in the heroic accomplishment of surviving their ACEs. This re-framing, when encouraged by a healthcare professional, can initiate meaningful growth in self-esteem that is fundamental to further progress. Concurrently, the patient can convert the somatic expression of emotion (physical symptoms) into verbal expression by:

- Writing thoughts and emotions in a journal or in a letter to the ACE perpetrator (usually not mailed). (Pennebaker,2016)
- Imagining a child enduring what the patient experienced and writing what they would communicate to that child.
- Regular treatment by an experienced psychologist.

If a patient has ongoing interaction with their ACE perpetrator(s) it is often essential to change the nature of the encounters or set relationship boundaries. This is challenging until self-esteem has grown but can be a key contributor to symptom relief.

Depression, PTSD and the Anxiety Disorders can be managed with counseling and/or medication depending on the patient's preference and local expertise.

Another therapeutic option is self-help books about PPD that are based on published evidence and extensive clinical experience (Table 1). Asking patients if they "like to read" can gauge patients' interest in these and also functions as a screen for literacy. Finally, faith-based or other support groups and/or adjunctive practice of Mindfulness, Relaxation Technique, Meditation or Yoga are helpful to many.

Table 1. Self-Help Books

Alexander J. (2012). *The Hidden Psychology of Pain.* Balboa Press Au.
Anderson F, Sherman E. (2013). *Pathways to Pain Relief.* Create Space
Clarke DD. (2007). *They Can't Find Anything Wrong!* Sentient Publications.
Hanscom D. (2012). *Back in Control.* Vertus Press
Nakazawa, DJ. (2015). *Childhood Disrupted.* Atria Books.
Oldfield, G. (2014). *Chronic Pain: Your Key to Recovery.* Author House UK.
Pennebaker, J and Smyth, J. (2016). *Opening Up by Writing It Down.* 3rd *Ed.* Guilford Press.
Schechter D. (2014). *Think Away Your Pain.* MindBody Medicine Publications.
Schubiner H. (2016). *Unlearn Your Pain. 3rd Edition.* Mind Body Publishing.

The Stress Medicine Group Appointment

A classroom is a non-threatening venue for presenting the ideas above. A significant fraction of attendees will seek individual BMHP support after hearing this information. A six-year experience with this class produced a statistically significant increase in attribution of symptoms to stress, a 22% decrease in medical office visits (Clarke, 1999) and a 50% annual increase in referrals to the class by medical clinicians. The annotated slides used for this class can be downloaded at no charge from http://www.stressillness.com.php5-4.dfw1-2.websitetestlink.com/Lectures.php. (scroll down to find the link).

Conclusion

Millions of patients suffer from PPD, but few health professionals have had formal training in uncovering and managing the psychosocial causes. The result is a large blind spot in the healthcare system. Francis Peabody discussed this failure and its remedies at length in a famous speech in 1925, summarizing many useful ideas by saying: "In all your patients whose symptoms are of functional origin, the whole problem of diagnosis and treatment depends on your insight into the patient's character and personal life..." (Peabody, 1927)

In the ninety years since then, management of PPD patients has not achieved its potential. However, with the diagnostic process and therapeutic measures described above, outcomes in PPD patients can move closer to parity with results achieved for structural abnormalities and organic disease.

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