

Beverly J. Field · Robert A. Swarm

Chronic Pain



Advances in
Psychotherapy

Evidence-Based Practice

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Chronic Pain

About the Authors

Beverly J. Field, PhD, is Assistant Professor in the Departments of Anesthesiology and Psychiatry, Washington University School of Medicine, St. Louis, Missouri. She is cofounder and director of the STEPP program, a cognitive-behavioral program for patients with chronic pain. In addition to her clinical and teaching responsibilities, she lectures regularly on psychological therapies in multidisciplinary pain management.

Robert A. Swarm, MD, is Associate Professor and Chief, Division of Pain Management in the Department of Anesthesiology, Washington University School of Medicine, St. Louis, Missouri. He is also the Director of the Pain Management Fellowship Training Program at Washington University, and Director of the Barnes-Jewish Hospital, Washington University Pain Management Center. His clinical work is exclusively focused on the multidisciplinary management of acute, chronic, and cancer pain.

Dr. Field and Dr. Swarm have been colleagues at the Barnes-Jewish Hospital, Washington University Pain Management Center since 1994.

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Beverly J. Field

Washington University School of Medicine, St. Louis, MO

Robert A. Swarm

Washington University School of Medicine, St. Louis, MO

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Foreword

Chronic pain is highly prevalent with one third of Americans experiencing frequent or persistent pain. Of those who have pain, function or quality of life is significantly impacted. Chronic pain is also extraordinarily complex, at times associated with progressive damage to virtually any tissue, or occurring in the absence of an explanatory lesion. Some patients are highly disabled by their pain, whereas others function well despite similar pathology.

From a clinical perspective, it is useful to classify pain as nociceptive or neuropathic pain, acute or chronic, cancer or noncancer, in the back or in the abdomen. Classification leads to treatment guidelines and best practices yet these distinctions are an extreme simplification. Chronic pain is better understood as the integration of related processes – biomedical and psychological – that may sustain pain and predispose individuals. Chronic pain is, in fact, many diseases only now being defined, classified, and analyzed. For many patients chronic pain becomes the disease itself with the sensory experience of pain and the adverse effects on mood and function. This understanding of pain as illness is one of the foundations of the modern approach to pain management.

There is substantial documentation that many, if not the majority of patients suffering pain remain vastly underdiagnosed and undertreated. Even with evidence-based consensus, best-practice approaches are not being followed for most patients, and access to specialists is very limited. Chronic pain has become a major public health problem with annual costs in the United States estimated at \$100 billion.

Chronic Pain presents up-to-date information to the provider who has been overlooked in the treatment of pain. In the attempt to look for pathology and treat symptoms, the role of psychology has been underestimated. Any chronic illness is best treated with a patient-focused, integrated approach relying heavily on patient self-care. Patients need to learn management skills, controlling symptoms while maintaining meaningful and active lifestyles. Psychology is uniquely positioned to help in this treatment. This volume joins an ever-growing number of books, journals, and other sources of information that document these advances and educate the health care giver about pain and its management.

Progress comes slowly and treatment can be controversial. The debate often reaches into the area of public policy with mandated pain education and prosecution of providers for over- and underprescribing of opioids. Nonetheless, the advances in research and the increasing number of consensus views within the professional community provide the means to help many patients. Pain is complex and ever-changing. Treating patients requires time and patience. Perhaps it will someday be possible that every patient will have access to competent care for the potentially devastating illness of chronic pain.

Bill H. McCarberg, MD
Chronic Pain Management Program, Kaiser Permanente, San Diego
School of Medicine, University of California, San Diego

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1

Description of the Disorder

1.1 Definitions

Pain is a basic biological warning mechanism signaling tissue damage and physiological harm. It was described by Albert Schweitzer (1931, p. 62) as "...a more terrible Lord of mankind than even death itself." In *Paradise Lost*, Milton (1910, p. 47) wrote that, "Pain is perfect misery, the worst of evils, and excessive, overturns all patience." Webster's dictionary (1983) defines pain as: (1) The sensations one feels when hurt mentally or physically, especially distress, suffering, great anxiety, anguish, grief, etc.: opposed to pleasure. (2) A sensation of hurting or strong discomfort in some part of the body. These descriptions and definitions speak to both the sensation of pain and to the suffering that accompanies it.

Pain is a complex, subjective experience with no objective tests or physiological markers

The International Association for the Study of Pain Subcommittee on Taxonomy (Mersky, 1979) defined pain as:

An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.

This definition recognizes the complexity of pain, its sensory and emotional aspects, and its subjective nature. There are no reliable tests or consistent physiological markers of pain, and it is not always referable to any objective findings. To understand another person's pain, it is necessary to rely on the subjective narration of his or her personal experience. The subjectivity of pain is acknowledged in the International Association for the Study of Pain (IASP) definition, as is the recognition of pain in the absence of tissue damage, which discounts previously held distinctions between somatogenic (or "real") pain and psychogenic (or "imaginary") pain.

1.2 Terminology

It will be helpful to have a working knowledge of pain-related terminology and classifications. Some of the more common terms are listed below. A more comprehensive list of terms may be found in Merskey and Bogduk's *Classification of Chronic Pain* (1994).

Table 1
Terminology and Definitions

Term	Definition
Allodynia	Pain resulting from a stimulus that would normally not produce pain, such as a light touch or a breeze.
Analgesia	Absence of pain in response to stimulation that would normally be painful.
Central pain	Pain initiated or caused by a lesion or dysfunction in the spinal cord or brain.
Hyperalgesia	Increased sensitivity to a stimulus that is normally painful.
Hypoalgesia	Diminished sensitivity to a stimulus that is normally painful.
Neuralgia	Pain in the distribution of a nerve.
Neuropathy	A disturbance of function or pathological change in one or more nerves.
Nociceptor	A receptor preferentially receptive to a noxious stimulus.
Noxious stimulus	A stimulus that is damaging to normal tissue.
Pain threshold	The lowest stimulus intensity at which a person can recognize pain.
Pain tolerance	The greatest stimulus intensity causing pain that a person is prepared to tolerate.

1.2.1 Classification of Pain

Pain may be classified along various dimensions, the most common of which are:

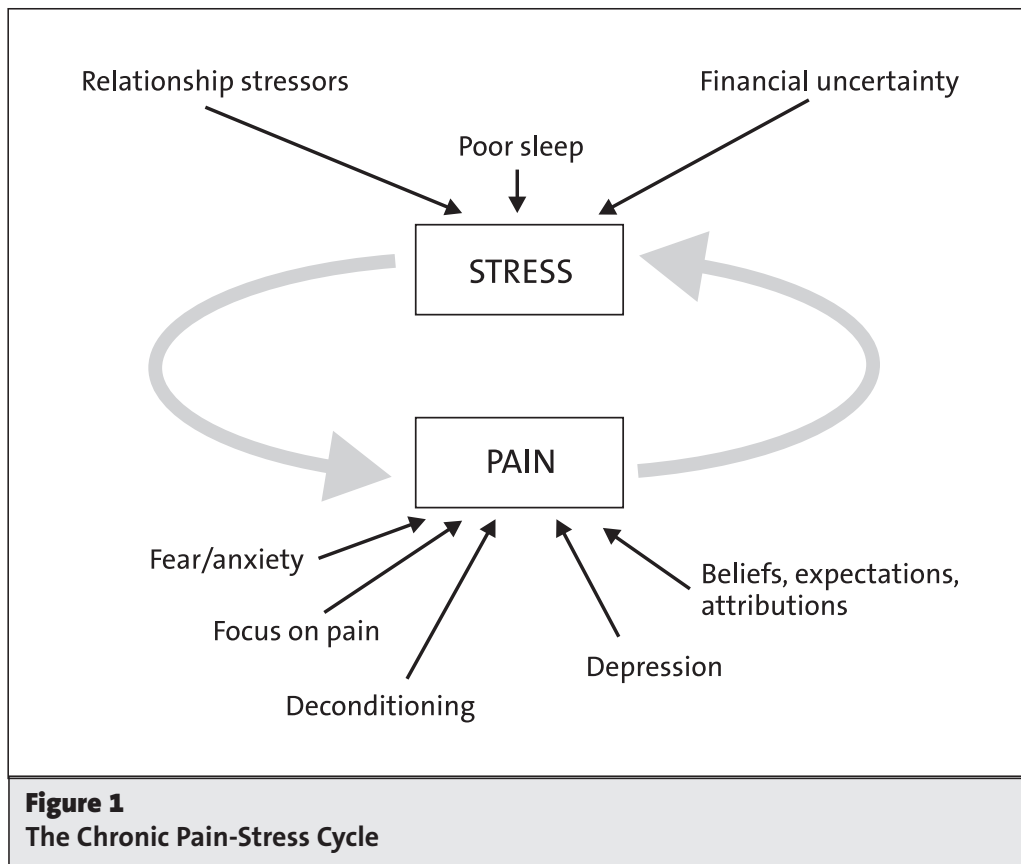
- Temporal (acute, chronic, and episodic)
- Mechanism of transmission (nociceptive, neuropathic, central)
- Disease state causing the pain (arthritis, diabetic neuropathy)
- Anatomical site (low back pain, neck or knee pain)

Temporal

Acute pain is one of the most frequent reasons for seeking medical care

Acute pain is of brief duration, generally less than six months, and is usually associated with tissue damage. In the case of injury, acute pain is an adaptive and necessary biological signal of tissue damage and physiological harm. It serves to increase awareness and calls for an action or response such as withdrawing a limb from danger. In most cases of acute pain, the cause is known and adequate treatment is available. When healing is complete, the pain resolves. The initial emotional responses to acute pain, such as fear and anxiety, can serve to motivate care seeking and limitation of movement. Examples of acute pain include bony fractures, sprains, puncture wounds, childbirth, various acute disease states, and postsurgical pain.

Chronic pain persists for an extended period of time. It is usually defined as pain lasting longer than six months or pain that persists beyond the expected time for healing. Unlike acute pain, the signal of chronic pain does not serve as a warning of further tissue damage and generally serves no adaptive purpose.



The cause or causes of chronic pain may or may not be known in any given case. If the cause is known, it may or may not be amenable to a cure. Chronic pain interferes with normal functioning and daily living, and can be detrimental to overall health. It is often associated with loss of employment, inability to participate in recreational activities, financial distress, and changes in relationships, personal identity, and feelings of self-worth. Chronic pain is often referred to as chronic noncancer pain, in distinction from cancer pain, which may be caused by tumor invasion into tissue, obstruction of organs, compression or infiltration of nerves, painful procedures, or antitumor therapies such as radiation or chemotherapy.

In the transition from acute to chronic pain, psychological factors play a changing and increasingly important role in pain perception and coping. Chronic pain is complex, and is associated with changes in physiological responses, dysphoric mood states such as depression, helplessness, guilt, and apathy, increased preoccupation with pain, and a general eroding of internal resources. In addition, chronic pain is accompanied by a multitude of behavioral responses including severely restricted activity, sleep deprivation, and social withdrawal. Examples of chronic noncancer pain include chronic low back pain, postherpetic neuralgia after shingles, osteoarthritis, and fibromyalgia.

Recurrent, intermittent, or episodic pain is acute, in that each episode is of limited duration, but also chronic in that the episodes occur over a period of time lasting longer than six months. Although persons with episodic pain do not suffer from pain continuously, repeated episodes of pain may disrupt normal functioning at school, work and/or in personal relationships. Examples of episodic pain include migraine headache and sickle cell crises.

Chronic pain is now recognized as an independent disease state

Throughout this manual, references to pain will mean chronic noncancer pain unless otherwise noted. Although acute, cancer, and episodic pain present their own unique challenges, it is the extended time frame of chronic pain that brings about the life changes and emotional responses that result in its complexity and resistance to management.

Neurophysiology of Pain Signal Transmission

Nociception is the process of detection and transmission of pain signals from the site of injury to the central nervous system (CNS). The details of how nerve signals are transmitted, and ultimately perceived as pain, are not fully understood, although several processes are known to underlie nociception. In the process of transduction, energy from a noxious stimulus (thermal, mechanical, or chemical) is converted into nerve impulses by receptors called nociceptors. These nerve impulses, or pain signals, are then transmitted from the site of injury to the spinal cord and brain. The signals or nerve impulses are perceived as pain after reaching the brain. Pain signal transmission is continuously modulated by factors that either facilitate or inhibit transmission throughout the nervous system.

Nociceptive pain results from tissue damage, the source of which may be mechanical, thermal, or chemical. Nociceptive pain occurs when pain-specific neurons are activated in response to noxious stimulation. Nociceptors are specifically sensitive to pain-enhancing substances associated with inflammation. Depending on its etiology, nociceptive pain may be described as dull and aching, sharp and burning, or cramping and pulling. Examples of nociceptive pain include: burns, cuts, and bruises, bony fractures, appendicitis, and pancreatitis.

The processes of pain signal transduction, transmission, and perception are dynamic and may vary greatly within an individual over time, as well as between individuals. Factors that may facilitate pain signal transduction and transmission include nociceptor activity itself (due to positive feedback mechanisms), tissue injury and inflammation, damage to nerves as in neuropathic pain (see below), and chronic opioid use (opioid tolerance hyperalgesia). Inflammation, which induces the swelling and erythema that are often associated with tissue injury, is an integral component of the normal tissue response to injury that leads to healing. Inflammation also markedly affects the function of nociceptors to facilitate the transduction and transmission of pain signals. Inflammation-induced facilitation of nociceptor function is one of the principal causes for the extreme severity of pain associated with tissue injury (e.g., surgery), infection (e.g., boils), and inflammatory disease (rheumatoid arthritis). Hyperalgesia, an increased response to normally noxious (painful) stimuli, and allodynia, the perception as painful of normally nonnoxious stimuli, are common clinical findings that suggest the activation of mechanisms of pain signal facilitation. In many cases in which a person seems to be experiencing pain “out of proportion to that expected,” the explanation lies not in undiagnosed psychopathology but in mechanisms of neural facilitation of pain signal transduction/transmission.

Neuropathic pain results from damage to a peripheral nerve or to dysfunction in the central nervous system, and it often occurs in the absence of ongoing tissue damage. A remarkable example is phantom limb pain, in which pain continues despite the absence of the physical structure, e.g., phantom pain in

Signal transmission from injury does not result in pain until the information reaches the brain

Factors that facilitate/inhibit pain transmission can influence sensation and/or unpleasantness

Table 2
Disorders and Treatments Associated with Neuropathic Pain

Diabetes
Herpes zoster (shingles)
Spinal cord injury
Cancer
Chemo- or radiation therapy
Tumor compression or infiltration of nerves
Complex Regional Pain Syndrome
Type I (reflex sympathetic dystrophy)
Type II (causalgia)
Limb amputation
Multiple sclerosis
Stroke, especially those involving the thalamus
Trigeminal neuralgia
HIV infection
Sciatica
Trauma with injury to peripheral nerves

the “hand” of an amputated arm. In phantom limb pain, the nervous system continues to generate pain signals perceived as pain in the missing limb. Neuropathic pain can result from direct damage to nerves such as from cutting, stretching, or crushing injuries, inflammation, pressure (such as may result from tumor infiltration), or compression or entrapment by damaged spinal disks, joints, or scar tissue.

Neuropathic pain is usually described as sharp, shooting, burning, or lancinating (stabbing) and is often associated with abnormal sensations such as “electrical shocks” or “pins and needles.” The presence of chronic hyperalgesia, and/or allodynia, in the absence of tissue injury or inflammation, should raise the suspicion that nerve injury or disease (i.e., neuropathy) is the cause of the pain.

Common Disease States Associated with Chronic Pain

Arthritis. The term arthritis refers to over one hundred conditions, the best known being osteo- and rheumatoid arthritis. Arthritis is not curable, but is often manageable with patient education, medical management, and nonpharmacologic treatment.

Osteoarthritis, also called degenerative joint disease, most commonly affects older adults although it can develop in younger individuals following injury or with repetitive stress. In osteoarthritis, the cartilage, which protects bone and allows joints to move easily, becomes damaged through persistent low-grade inflammation and degeneration. The cartilage damage results in bones rubbing against one another, causing pain and swelling. Osteoarthritis most frequently affects weight-bearing joints and can result from excessive

Obesity is associated with knee pain and hip osteoarthritis

loading-bearing activities, obesity, or aging. Osteoarthritis commonly affects the feet, ankles, knees, hips, low back, neck, and fingers. It is experienced as stiffness, particularly in the morning, which usually improves with movement. Pain can increase over the course of the day with weight bearing and activity. Treatment for osteoarthritis includes: patient education; cognitive behavioral approaches; low-impact physical therapy aimed at improving flexibility, range of motion, muscle conditioning, and aerobic fitness; weight loss (in obese patients); medications (acetaminophen and nonsteroidal anti-inflammatory drugs [NSAIDs]); cortisone injections; use of assistive devices (canes, crutches, walkers); pain medication; topical treatments (heat, ice, menthol and capsaicin ointments), and surgery.

The Arthritis Foundation can be an excellent patient resource

Rheumatoid arthritis is a systemic inflammatory disease. It is a chronic autoimmune disorder that begins with inflammation in the lining of the joint. The inflamed joint fluid produces a chemical response, which results in destruction of bone and cartilage. Manifestations of rheumatoid arthritis include pain, swelling, warmth, and tenderness in affected joints. The joint damage often leads to loss of function and disability.

Rheumatoid arthritis affects more women than men, in a ratio of 5:1 (Simon et al., 2002). Although the onset of rheumatoid arthritis generally occurs between the ages of 30 and 50, children can be affected by juvenile rheumatoid arthritis. Rheumatoid arthritis should be treated early and aggressively in an effort to limit permanent joint damage. Treatment for rheumatoid arthritis includes: medications (disease-modifying antirheumatic drugs [DMARDs], acetaminophen, and NSAIDs); patient education; cognitive behavioral approaches; low-impact physical therapy to improve flexibility and range of motion, muscle strength, and aerobic conditioning; weight loss (in obese patients); cortisone injections; use of assistive devices (canes, crutches, walkers); pain medications; topical treatments (heat, ice, menthol and capsaicin ointments), and surgery.

Excellent sources of information are the Clinical Practice Guidelines published by the APS

Fibromyalgia is a chronic pain syndrome accompanied by widespread tenderness, poor sleep, fatigue, cognitive dysfunction, and emotional distress. The criteria specified by the American College of Rheumatology for a diagnosis of fibromyalgia include: (a) a history of widespread pain and (b) excessive tenderness in at least 11 of 18 muscle-tendon sites (Burckhardt et al., 2005). Fibromyalgia is a syndrome, not a disease, and the cause is not known. It is associated with other features such as headache, disrupted and/or nonrestorative sleep, chronic fatigue, and irritable bowel syndrome. Current research suggests that fibromyalgia may be a pain syndrome of the central nervous system that includes aberrant pain signal transmission and pain processing. It is more prevalent in women than in men. Treatment includes education, medications, sleep hygiene, slowly progressive low-impact exercises, stress reduction, trigger point injections, and coping skills training.

Anatomical Sites

Low back pain is one of the primary causes of absence from work

Low back pain is common in industrialized countries. It is one of the most frequent presenting complaints among people seeking primary medical care, second only to symptoms of the common cold. In the United States, back disorders are the leading cause of worker disability. These disorders are associated with high direct costs such as medical care and disability payments, and indirect costs such as lost wages and diminished productivity. Approximately

70–85% of adults will experience at least one episode of low back pain during their lifetime. Most will recover within one month with 80–90% showing recovery without functional loss within 12 weeks. However, of patients disabled from back pain longer than 6 months, fewer than half return to work and, after 2 years of absence from work due to low back pain, the return to work rate approaches zero (Andersson, 1999). In 85% of these cases, the cause of the back pain is unknown (Deyo & Weinstein, 2001). Low back pain can arise from numerous sources including:

- Muscle tightness (spasm)
- Muscle or ligament strain or tear
- Degeneration, herniation, or rupture of the intervertebral disks
- Narrowing of the spinal canal (spinal stenosis)
- Fractures of the spine due to osteoporosis
- Abnormal curvature of the spine (scoliosis or kyphosis)
- Infection
- Trauma

1.3 Epidemiology

1.3.1 Prevalence of Chronic Pain

It is difficult to obtain accurate epidemiological data on the prevalence, severity, and impact of chronic pain. Because there are no objective tests for pain, and because self-reported pain is subjective, it is often difficult to obtain consensus about whether or not a specific condition is present. Classification of low back pain could be based on objective findings, such as disk herniation on MRI, or on functional status and disability. The use of one or the other, or both classifications, would influence prevalence rates. Of cases of low back pain in the general population, it has been reported that as many as 85% have no objective findings. On the other hand, many individuals with abnormal findings on spinal imaging deny having any back pain. The multiple dimensions of chronic pain conditions lead to highly diverse presentations of its biological, psychological, and social components. In addition, multiple disease states and syndromes often contribute to the larger picture of chronic pain.

In spite of these limitations, epidemiologic surveys undertaken over the past 30 years have identified the prevalence, risk factors, and management of chronic pain. In Western countries, prevalence estimates of chronic pain in the general population range from 10% to 55%, with slightly higher rates among females (Harstall & Ospina, 2003). Approximately 70 million Americans report chronic pain, with 10% having pain for more than 100 days per year (Von Korff & LeResche, 2005).

1.3.2 Economic Impact of Pain

Chronic pain exacts tremendous costs from patients, employers, and the health care system. A study by Stewart, Ricci, Chee, Morganstein, and Lipton (2003)

The prevalence of chronic pain is the proportion of individuals with chronic pain at a specified period of time

Second only to colds and flu, pain is the foremost reason for visits to physicians

Table 3
Period Prevalence Rates (One Year or Less) of Common Chronic Pain Conditions in Adults.

Pain Condition	Median Prevalence Estimate (%)	Range of Prevalence Estimates (No. Studies)	Sex Differences in Prevalence Rates
Headache	69% in females 46% in males	3–99% (F) 3–93% (M) (33 studies)	More common in women
Low back pain	37%	10–63% (11 studies)	No differences by sex in most studies
Knee pain	18%	10–29% (11 studies)	More common among women but sex differences reduced at older ages
Neck pain	16% in females 12% in males	10–40% (F) 3–29% (M) (4 studies)	More common in women
Migraine	15% in females 6% in males	10–40% (F) 0–46% (M) (32 studies)	More common among women
Chronic wide-spread pain	8%	0.66–10.7% (8 studies)	More common in women
Temporo-mandibular pain	9% in females 5% in males	5–14% (F) 3–10% (M) (10 studies)	More common in women
Shoulder pain	7%	2–61% (5 studies)	Sex difference are inconsistent

From Von Korff, M., & LeResche, L. Epidemiology of Pain. In: Merskey H., Loeser, J. D., & Dubner, R. (2005) (Eds.). *The Paths of Pain 1975-2005*. IASP Press: Seattle. Page 341, used with permission.

Chronic pain is not itself curable

used data from the American Productivity Audit, from August 2001 to July 2002, to estimate productivity losses to employers over a two-week period. They estimated that 13% of the work force lost productive work time due to common pain conditions including headache, back pain, arthritis, and other musculoskeletal conditions. This lost productivity cost employers \$61.2 billion per year, 77% of which was attributed to reduced performance while at work rather than work absence.

1.4 Course and Prognosis

Chronic pain is, by definition, persistent, and is expected in many cases to last indefinitely. It is usually not expected to completely resolve either with or without treatment. The goal of treatment, in most cases, is not to cure or “fix” the pain, as the underlying injury is either unknown or impossible to cure. Typically, the primary treatment goals are to reduce pain severity and improve function. Chronic pain and physical limitations can result in devastating changes in all areas of a person’s life, and there are large individual differences in adjustment to these life changes. As the underlying source of the pain is usually not amenable to treatment, pain management and life adjustment are addressed in treatment instead.

The manner in which patients with chronic pain respond emotionally and behaviorally to pain varies considerably, depending on individual characteristics and external resources. Individuals with a broad repertoire of coping skills, flexibility of responses to adverse circumstances, and supportive family and friends may be able to make an adaptive adjustment to living with pain. For individuals with limited, passive, or rigid coping skills, or with inadequate social support, adjustment to living with pain is more likely to be poor and maladaptive.

Chronic pain taxes even the best coping resources; illness behaviors can develop and become increasingly ingrained, as do feelings of depression, apathy, and hopelessness. Consequently, the point at which treatment is initiated influences the course and outcome of pain management. A person seen early in the course of a pain condition may have a better response to treatment, or require less intensive treatment, than a patient who has been struggling with pain, depression, and deconditioning for many years. Without treatment, a number of factors can negatively influence the course and prognosis of adjustment to chronic pain. Among these factors are depression, catastrophizing, continued pursuit of a medical cure, and limited coping skills. However, each of these factors, when addressed within a cognitive-behavioral treatment paradigm, can show improvement and help facilitate adjustment.

Successful treatment can be defined by various outcome measures

Prognosis for successful treatment is influenced by temporal, individual, and environmental factors

As pain moves from acute to chronic, psychological factors play a greater role

1.5 Differential Diagnosis

Somatoform disorders are among the most common differential psychological diagnoses in the chronic pain population. The somatoform disorders include: somatization disorder, undifferentiated somatoform disorder, conversion disorder, pain disorder, hypochondriasis, body dysmorphic disorder, and somatoform disorder not otherwise specified. Too often, somatization, conversion, and hypochondriasis function as “catch-all” diagnoses that are made when pain and/or physical symptoms are of unknown etiology or when pain is considered to be “in excess of that expected.” Patients may be referred to as “somatizers,” even if they do not meet the DSM-IV diagnostic criteria for a somatization disorder. “Somatizing” may suggest that the patient is exquisitely attuned to even minor somatic symptoms, seeking attention or reassurance, or expressing emotional distress as physical complaints.

Somatization disorder is considered to be an unconscious process

Malingering is the conscious production or exaggeration of physical symptoms for secondary gain

The somatoform diagnoses most often encountered in the chronic pain population are somatization and pain disorders. The diagnostic criteria for somatization disorder are quite stringent and require more than the presence of pain of unknown etiology. This diagnosis usually requires an extensive record review, and the disorder may not become apparent until the doctor–patient relationship has been established over an extended period during which the patient’s full medical history unfolds.

The comparisons below are not meant to suggest that somatization disorder never occurs in chronic pain populations. The caveat is that the criteria for somatization disorder, including lack of physical findings, may appear as part of

Table 4
Comparison of Somatization Disorder and Chronic Pain

Somatization Disorder	Chronic Pain
Begins before the age of 30.	Can occur at any age.
Many physical complaints.	Not uncommon in older patients.
Treatment sought or significant impairment in social, occupational, or other important areas of functioning.	A history of multiple specialist visits and impairment in functioning are often seen.
Four pain symptoms.	Not uncommon in various pain disorders attributable to the disorder itself, e.g., arthritis, or to secondary pain areas resulting from guarding, or gait abnormalities.
Two gastrointestinal symptoms.	Common side effects of NSAIDs and other medications. [Symptoms resulting from medications are not considered as criteria for somatization disorder.]
One sexual symptom.	May result from the pain disorder, e.g., low back pain, abdominal pain, and/or adverse effects such as decreased libido and impotence associated with chronic opioid therapy. [Symptoms resulting from medications are not considered as criteria for somatization disorder.]
One pseudoneurological symptom.	Impaired balance can occur secondary to loss of sensation with a pain disorder such as peripheral neuropathy.
Not explainable by a known medical condition or substance (drug of abuse or medication).	See below.
If a medical condition is present, the complaints or impairment are in excess of what would be expected from history, physical, and lab findings.	Both peripheral and central sensitization can be found in chronic pain disorders due to facilitation of pain signal transmission from multiple sources. See Section 1.2.2.

a larger picture of chronic pain. It is important to be particularly careful in diagnosing somatization disorder in older patients, as multiple medical problems are not uncommon with aging. Two rules of thumb regarding the diagnosis of somatization disorder: (a) in most instances, avoid diagnosing somatization disorder solely on the basis of an initial evaluation because of the extensive medical history review usually required to make the diagnosis, and (b) unless the presence of somatization disorder can be established with certainty, it is better for the patient to include it only as a Rule out, since a diagnosis of somatization disorder can influence future medical treatment. The same cautions pertain to making a diagnosis of factitious disorder or malingering both of which entail the intentional production of pain symptoms for the purpose of assuming the sick role, obtaining financial compensation or drugs, avoidance of duties, criminal prosecution, or incarceration. However, it is important to recognize and diagnose somatization disorder when it is in fact present, as patients with this problem are often harmed by iatrogenic complications from unnecessary surgeries, invasive tests, and treatments.

The diagnosis of pain disorder encompasses three subtypes that differ in the degree to which the pain is thought to be initiated, maintained, or exacerbated by psychological factors. If psychological factors are considered to play a significant role in the initiation, severity, maintenance, or exacerbation of the pain complaint, the diagnosis of pain disorder with psychological factors (CPT code 307.80) may be made. If psychological factors are considered to play even a moderate role in the pain complaint, a diagnosis of pain disorder with psychological factors and a general medical condition may be made, and mental health CPT code 307.89 used. If psychological factors are thought to play a minimal or no role in the pain complaint, a diagnosis of pain disorder may be made, although this is not psychological diagnosis. The diagnosis of pain disorder is not appropriate if pain is better accounted for by a mood, anxiety, or psychotic disorder. To qualify for any of the three subtypes of pain disorder, the pain must cause impairment in functioning, and must not be intentionally produced as in malingering or factitious disorders.

Pain disorder is a rather problematic diagnosis. Its definition evolved from a previous diagnostic category of psychogenic pain, and its very inclusion within the somatoform disorders implies a dichotomy between somatogenic and psychogenic pain. In addition, this diagnosis depends upon clinical judgment to determine when, and to what extent, psychological factors play a role in the overall picture of chronic pain.

However, as an appropriate use of pain disorder with psychological factors and a general medical condition, consider a person with severe arthritis who is no longer able to maintain many everyday household chores to which the family has responded in an angry and blaming manner. The patient's pain complaints increase, she becomes increasingly resentful, refusing to engage in any activities, and spending the day in bed with the door closed to avoid contact with her family. Although a clinician will have to decide whether, or to what extent, her pain is exacerbated by family dynamics, the diagnosis of pain disorder with psychological factors and a general medical condition would capture the problematic behaviors in this case, and point toward the appropriate treatment.

With the introduction of the health and behavior CPT codes (see Chapter 3), a diagnosis of the Axis III medical condition, e.g., chronic low back pain,

Factitious disorder is the conscious production of physical symptoms to maintain the sick role

Diagnosis of pain disorder includes three subtypes

Health and behavior codes are based on the presenting medical problem, not DSM-IV diagnoses

may now be used as the primary diagnosis. The diagnosis and CPT code often more accurately reflect both the underlying physical problem for which the patient was referred and the focus of treatment.

1.6 Comorbidities

Individuals with chronic pain often have a wide range of physical and emotional problems, either as antecedent conditions or as consequences of the development of pain. These conditions can influence pain perception and adaptive coping. Some of the most common comorbidities in chronic pain are: sleep disorders, depression, anxiety disorders, and alcohol and substance abuse.

1.6.1 Sleep Disorders

Sleep disturbance is a significant problem among patients with chronic pain. Inadequate sleep can lead to a vicious cycle of fatigue, poor energy, and low motivation. This can, in turn, affect the patient's mood state, often by worsening depression and anxiety. Fatigue, poor motivation, anxiety, and low mood can influence pain perception and, continuing the cycle, further worsen sleep. Across studies with various chronic pain populations, the prevalence of self-reported sleep disturbance has ranged from 50% to 88%. The severity and characteristics of pain-related sleep disturbance, including subjective sleep quality, sleep latency, sleep duration, and daytime dysfunction, suggest that

Severe sleep disturbance is common

Table 5
Factors That Contribute to Sleep Disturbance

- Pain intensity
- Depression
 - Sleep disturbance may reflect depression. Sleep disturbance is a symptom of depression, and the prevalence of depression is high in the chronic pain population (Chui et al., 2005).
- Behavioral conditioning and poor sleep habits
 - Sleep may be so disturbed that patients often attempt to “make up” sleep with extended daytime naps or by sleeping late into the day.
- Medications (Onen, Onen, Courpron, & Dubray, 2005)
 - Aspirin and ibuprofen can increase sleep latency and awakenings, and decrease slow-wave sleep.
 - Opioids can decrease REM sleep, and increase sleep latency and nighttime awakening.
- Arousal
 - Associated with pain.
 - Cognitive arousal including rumination, worry, depressive cognitions, and intrusive thoughts (Smith et al., 2000).