Chapter 22
Managing Chronic Pain in Primary Care

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Introduction and Background

Because pain is one of the primary reasons for an individual to visit their primary care provider (PCP; [77]), a great deal of work has been done to assess the efficacy of integrating pain management into primary care settings. This is especially true since musculoskeletal pain is the second leading symptom prompting all primary care visits [15]. The most common medical setting a clinical psychologist is likely to work with chronic pain patients is within primary care settings, which will be the focus of this chapter. However, many of the topics discussed in this chapter are applicable to any medical setting dealing with chronic pain patients. This chapter's recommendations are particularly well suited to a medical home model of primary care (covered in Chap. 14).

Defining "chronic" pain can be deceptively difficult and there are numerous inconsistencies in research and clinical domains regarding when pain actually becomes chronic. Researchers tend to define "chronicity" as a set duration of pain since the time of onset or expected wound healing. Some of the most commonly used durations defining chronic pain range from 3 to 6 months. Treatment providers seem to prefer either an absence of demonstrable pathophysiology or recalcitrance to medical interventions. Though rarely endorsed in the research, the most sensible way to identify a complex problem like chronic pain is to designate it as chronic as soon as symptom complexity is noted. For example, an individual with a broken arm will certainly experience some endured pain with fleeting emotional distress.

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However, if the arm eventually heals without significant emotional distress, cognitive distortions about the quality or meaning of the pain, or severe functional deactivation due to concerns about reinjury, then the pain was never really chronic regardless of how long it took the arm to set and the pain to remit. If, however, a person stubs a toe and has alarming emotional and cognitive responses to the injury resulting in quality-of-life impairment and functional limitations, then that could reasonably be called “chronic pain.”

There are various theories that try to elucidate pain chronicity by explaining how and why acute pain transitions into chronic pain. While the literature discusses many potential attributes for the transition of acute to chronic pain, none fully explains the complexities that lead to chronic pain. Regardless of how acute pain transitions into chronic pain, chronic pain continues to be a significant problem in primary care. Chronic pain is a complex phenomenon, and attempts to define chronic pain vary significantly. The primary requirement for a chronic pain condition is a patient’s subjective report of enduring pain. It is unclear, however, how long pain must persist before it is considered chronic. Research initiatives define chronic pain as pain lasting anywhere from 3 to 6 months, though more clinical definitions require pain lasting beyond the expected healing time for an injury. Unfortunately, none of these definitions adequately captures the true breadth of chronic pain, which can manifest through musculoskeletal, neuropathic, or inflammatory physical pathways. Examining the overlap and divergence of chronic versus acute pain can be a good starting point for better understanding chronic pain, especially for those who are unfamiliar with chronic pain. Acute pain is familiar to the vast majority of people, while chronic pain is familiar to only a few. Though some acute pain can last for weeks, it is reasonable to expect that the pain will completely ameliorate with medical intervention. Chronic pain, on the other hand, is less responsive to medical treatment and eventually begins to frustrate the patient who may lose hope in a cure. Acute pain is clearly tied to a specific etiology and patterns in the pain are reflective of aggravations of the pain associated with additional harm (e.g., overexertion of a strained muscle that causes additional pain). At times, there can be no clear etiology for the onset/maintenance of chronic pain and variations in chronic pain may not reflect additional harm at all. Finally, acute pain dissipates quickly enough for the patient to return to full functioning with minimal suffering while chronic pain endures long enough for psychosocial distress to set in and contribute to the pain experience.

The best clues for differentiating between chronic and acute pain may lie in theories underlying how pain transitions from acute to chronic. One of the earlier theories of physical factors contributing to chronic pain development focuses on the role of physical deconditioning in response to acute pain development [31]. According to this theory, an individual suffering from short-term pain responds to the pain by significantly decreasing physical activity in order to allow an injury to heal and to avoid the experience of pain related to the injury (a phenomenon closely tied to recommendations of bed rest after injury). When a person becomes overly reliant on rest to avoid pain and possible reinjury, they experience a decrease in muscle mass (i.e., atrophy), skeletal density, and connective tissue strength. All of these sequelae result in multiple physiological weak links that prevent the body from adequately compensating for an injured part. Activity must be carefully balanced to ensure that the patient is active enough to maintain strength throughout the body but not so active that additional injury is incurred. Overexertion can complicate healing and perpetuate the experience of pain, while overreliance on rest may contribute to atrophy that weaken other support structures in the body that can help support an injury (e.g., deconditioning). Deconditioning will sometimes occur because an individual misattributes soreness and pain during healing as symptoms of additional injury and harm and responds through underactivity in order to minimize the perception of pain. This phenomenon, commonly referred to as kinesiophobia or fear avoidance, ultimately results in an acute pain sufferer who adopts an almost permanent patient role that disallows them from adequately rehabilitating an acute injury and progressing on to chronic pain [24].

Recent data suggest that acute pain conditions that are poorly treated and present with intense pain are significant risk indicators for the development of chronic pain. Sinatra [68] examined the consequences of inadequate acute pain management through a comprehensive literature review and found that poorly treated acute pain can have significant impacts that may contribute to the development of chronicity. He noted significant decrements in quality of life, sleep quality, and physical functioning as well as stressful economic costs associated with increased health care utilization among poorly treated acute pain sufferers. According to Sinatra, intense acute pain and the consequences of poor pain treatment are likely contributors to a transition to chronicity. Conversely, Sinatra found that effective acute pain control mitigates these risks and actually reduces the risk of chronic pain development.

Increased body weight (due to decreased physical activity) may contribute to chronic pain development. It makes sense that increased body weight can add to musculoskeletal burden that can impact orthopedic pain experience. Unfortunately, many pain sufferers may be at increased risk of gaining weight through decreased physical activity and the use of some pain treatment medications with a weight gain side effect (e.g., steroids). Though subtle weight gain has not yet been directly tied to chronic pain development (with the exception of heel pain, see [33]), obesity has been clearly linked to chronic pain development through various proposed mechanisms. Obesity commonly occurs in musculoskeletal pain with some prevalence estimates ranging up to 50% [54]. A study of fibromyalgia sufferers revealed that obesity contributes to increased tender point and visceral pain sensitivity [54]. The authors note that the relationship between pain and obesity is unclear but posit that physical deconditioning due to decreased physical exercise capacity and altered endocrine and endogenous opioid processes are likely contributors. Vincent et al. examined fear avoidance in obese and nonobese chronic low back pain sufferers and found that obese low back pain patients are more likely to experience decreased quality of life and increased fear avoidance that significantly predict self-reported disability compared to nonobese patients. Ray et al. [64] found that obesity doubled the risk of chronic pain development in an elderly sample, and they confirmed that the contribution of obesity to chronic pain is strong and independent of obesity-related conditions like insulin resistance, inflammation, osteoarthritis, and diabetic neuropathy.

Psychosocial factors like learning, emotional distress, and pain-related catastrophic beliefs have been implicated in the transition between acute and chronic pain. A comprehensive review of these factors is beyond the scope of this chapter, but recent data continue to support the significant role of psychosocial and behavioral contributors to chronic pain development. Some researchers posit that the roots of chronic pain begin well before acute pain is incurred. Goubert et al. [28] suggest that simply observing others responding to pain in an alarming or resilient fashion can make the observer vulnerable or resistant to developing chronic pain later. The authors suggest that a clear understanding of how observational learning contributes to development and maintenance of chronic pain would greatly add to pain management and prevention efforts. In support of this, operant conditioning models of pain in which pain report was punished or reinforced have shown an effect of learning on pain perception (see [36]).

Emotional distress is an undisputed consequence of pain, and some evidence seems to suggest that acute pain with comorbid emotional disturbance results in chronic pain development. McMahon et al. [47] emphasize a strong etiological role of psychosocial distress in chronic pain development, which is a significant concern due to estimates of comorbid pain and depression/anxiety ranging from 10 to 100 % [57]. One hypothesis concerning the increased rates of psychopathology among chronic pain patients is based on a “diathesis-stress model” [75]. Dersh et al. [13] suggest that there may be a diathesis or substrate for the development of psychopathology for these individuals existing before their injury in which “semi-dormant psychological characteristics…are then activated by the stress (associated with chronic pain and disability)” (p. 466). Another hypothesis set forth by Gatchel [24] explains the high rate of psychiatric conditions among chronic pain patients as the result of “worn-down” defenses depleted by one’s ongoing struggle in coping with chronic pain and disability. The lack of emotional defenses makes the individual unusually susceptible to the development of psychopathology, including depression and anxiety, which can “overlay” or intensify one’s pain thereby depleting them further in a vicious cycle. To date, the true nature of the link between emotional distress and chronic pain has yet to be fully understood, and attempts to identify a “chronic pain personality” have been largely unsuccessful [70]. Despite the mysteries that remain about the exact nature of emotional distress in chronic pain, the patient’s reported suffering is real and should be taken seriously [58].

Recent evidence strongly supports the role of depression and anxiety in chronic pain development and maintenance. Depressive disorders are common among chronic pain sufferers with an estimated prevalence of up to 65 % [60]. High chronic pain severity has been independently associated with increased levels of depressive symptoms [35], and the presence of chronic pain has been identified as a risk factor for higher symptom severity, suicide risk, and general psychosocial functioning among depressed individuals [59]. Poleshuck et al. [60] suggest that pain and depression impact one another reciprocally and note that comorbid pain and depression ultimately result in poor treatment outcomes for either condition, making treatment difficult for this population. Asmundson and Katz [2] offer a comprehensive review of the role of anxiety in chronic pain. The authors site multiple epidemiological studies of anxiety disorder comorbidity in chronic pain with a prevalence of around 30 %, though some estimates for specific anxiety disorder diagnoses are much higher (e.g., post-traumatic stress disorder, PTSD). They note that there is little evidence to support the theory that anxiety disorders cause chronic pain to occur; however, they do offer a description of a mutual maintenance model in which symptoms or characteristics of chronic pain and anxiety maintain and exacerbate symptoms between the two conditions.

Review of the Evidence

Pain management services are frequently requested within primary care settings. Despite its frequency, PCPs often find pain management challenging and may not be as satisfied with their ability to treat chronic pain compared to other chronic health conditions [76]. Furthermore, despite the existence of several chronic pain practice guidelines, provider approaches to pain management appear to be variable with little consensus on which treatment options are best [56]. For example, Phelan et al. surveyed 382 general internal medicine physicians on their preference among multiple, specific clinical treatment options for chronic pain management. The investigators found wide variation in the preferred treatment for pain among the physicians surveyed including varying attitudes about the etiology of chronic pain symptoms, the role of opioid medications in pain treatment, the applicability of the biopsychosocial model to pain care, and the extent to which the physician needs to engage in treatment with the patient. Matthias et al. [44] interviewed 20 primary care physicians about their experiences treating chronic pain. They found that many providers found pain treatment (or the patients with chronic pain) difficult. The physicians indicated a need to better understand their pain patients and their treatment needs. Matthias et al. point out that chronic pain providers need help developing empathy for their patients and are vulnerable to burn out that can result in erosion of the quality of patient care. For these reasons, a clinical psychologist working in a primary care clinic is a strong resource for helping PCPs better understand their patients, manage their own work-related stress, and, ultimately, provide better pain care.

Studies examining patient attitudes about chronic pain management in primary care also paint a similarly distressing picture. Upshur et al. [76] note that most patients are dissatisfied with chronic pain management in primary care, citing a number of other studies in which fewer than 20 % of patients treated rated their care as helpful or “excellent.” The investigators used focus groups of primary care nonmalignant pain sufferers to more thoroughly assess patient perceptions of chronic pain treatment in an independent primary care environment. Most of the focus-group patient reported dissatisfaction with their pain treatment, citing provider-related barriers to care (i.e., not feeling respected by their provider, being labeled by providers as hypochondriacs, and being accused of drug seeking) and medical system barriers (i.e., limited provider access to comprehensive assessments of pain and the perception that a pain sufferer is a “burden to the system”) as primary factors in poor care. This study emphasized the vital need for PCPs to gain a comprehensive understanding of the difficulties faced by chronic pain patients and the significant benefit potential of developing a stronger relationship with their patients allowing for clearer communication.

It is obvious that a transition to a patient-centered medical home (PCMH) model of primary care (see Chap. 14 for core principles of the PCMH) could allow for much needed improvements in medical management for most pain sufferers. Furthermore, a collaborative care environment in which multiple disciplines (including clinical psychology) are able to interact in developing a comprehensive assessment and treatment approach may offer the best solution to maximizing the benefit of primary care pain treatment. A number of collaborative care pain models have been examined and one of the best examples of these efforts is the Study of Effectiveness of a Collaborative Approach to Pain (SEACAP), undertaken to evaluate the integration of collaborative pain care in the veterans affairs primary care system. The SEACAP typically involves the integration of an internist and clinical psychologist pain care manager (and sometimes a physical therapist) into primary care as chronic pain management consultants. In this model, the psychologist pain care manager conducts initial and follow-up assessments, provides patient education and functional activation, gathers data for PCPs, helps develop treatment goals, and assists with referrals [17]. Preliminary studies of this collaborative model have shown moderate treatment effects [17, 18], while subsequent research has shown a significant improvement in the number of pain disability-free days for SEACAP patients compared to those who receive treatment as usual [16]. The SEACAP investigators aptly point out that maximizing the effectiveness of primary care pain treatment is vital not only to improve patient care but also limit the high costs associated with pain treatment. There is some cost increase attributable to introducing additional pain treatment resources into primary care, though these costs likely pale in comparison to relying on medical management alone. Turk [74] has noted that opioid medication management of chronic pain can cost more than US$ 4,000 per year and surgeries can result in tens of thousands of dollars in additional costs. In contrast, the SEACAP intervention was found to add an additional US$ 2,300 in treatment cost with the added benefit of decreased disability and improved health-related quality of life.

Other collaborative care programs have focused on providing multidisciplinary pain care to primary care patients in a group format. The Pain Day Program was developed as a single-session, 75-minute group medical visit focusing on psychoeducation and behavioral health consultation for chronic pain sufferers. Moitra et al. [50] developed the program in response to widespread complaints among primary care physicians about the difficulty of treating chronic pain patients. The Pain Day Program curriculum offers education about the physiological mechanisms of pain and medical pain treatment options as well as cognitive and behavioral interventions aimed at helping pain patients overcome dysfunctional thinking and behavior related to pain. Collection of outcome data is under way for this program, though the investigators do note that pain care providers appreciate the single-session program and feel as though referring patients to the program lessens the burden they feel in caring for their complex patients.

A strong case can be made that the integration of clinical psychology pain management in any setting is beneficial for the patient as well as the medical provider. The skilled clinical psychologist should work closely with treating providers to develop a comprehensive understanding of the patient and to convey this understanding to the medical provider. This could be accomplished through assessments and working collaboratively (with the patient and provider) to develop treatment goals. When done correctly, this kind of collaboration can help providers gain a stronger understanding of factors contributing to the patient's pain experience and acquire greater empathy for the suffering of the patient (which is more noticeable in a comprehensive psychosocial evaluation versus a physical exam). Furthermore, close interaction with the medical pain care provider will allow the clinical psychologist ample opportunity to informally assess for provider burnout and offer intervention or advice when necessary. It also may be beneficial to develop treatment aims for the patient that include learning how to effectively communicate treatment needs to their providers in order to promote the best understanding of their needs, which ultimately allows for better clinical outcomes for the patient.

Assessment

The evaluation of chronic pain conditions is a primary concern for all treatment practitioners, though the assessment of pain can pose unique challenges including inconsistency in how pain is defined. As noted, chronic pain has been linked to several etiological factors, including physical stress, psychosocial variables, job strain, social variables, and even smoking, all of which should be considered in assessment [6]. Accordingly, Price et al. [62] indicated that a "good" pain assessment strategy should target specific aspect(s) of the complex pain concept in a valid and reliable way. This strategy represented a significant change in the way in which pain assessment was conceptualized. The earliest measure of pain was based on the patient's subjective report upon presentation for medical treatment, often consisting of a simple and unidimensional assessment of the construct [37]. Because pain is one of the most common reasons people seek medical treatment, pain has been added as the fifth vital sign [51]. The fifth vital sign requires the use of a numerical rating scale (0 = no pain, 10 = worst pain possible) at clinical encounters. Any patient report of a 4 or higher should trigger an in-depth assessment and prompt intervention. The use of the fifth vital sign stresses the importance of assessment that leads to better pain treatment. Contemporary pain assessment strategies need to tap multiple domains that comprise a comprehensive biopsychosocial conceptualization. These domains should include demographics, emotional factors related to pain, self-report of pain quality and intensity, quality of life, cognitive factors, behavioral factors, and perceived disability.

Demographics

Although they are not generally modifiable, pain-related demographic factors are a foundational component of pain assessment. Chronic pain symptoms have shown systematic variance along demographic dimensions such as age, gender, race, and socioeconomic status (SES; [38]). The incidence of chronic pain increases with age, with older adults more likely to report musculoskeletal pain, and pain coping strategies seem to differ as one ages [69]. Studies of gender have shown systematic differences in low back pain prevalence across the two genders. For example, males have shown a higher rate of low back pain related to workman's compensation, likely due to a higher concentration of males in jobs requiring greater physical exertion [38]. Low SES and African American ethnicity have been correlated with an increased frequency of chronic pain symptoms (including disability), though the exact nature of this relationship seems to be complex and difficult to clearly discern [23, 27]. Racial differences, in particular, may impact chronic pain through racially based differences in health care utilization and attitudes toward health care. Green et al. [29] found that African American ethnicity may impact chronic pain treatment based on differences in health care coverage and the overall ability to pay for health care services for pain.

Emotional Factors

McMahon et al. [47] stress that psychological factors (depressed mood, anxiety, stress) play a major role in the development and maintenance of chronic pain and it has become evident that chronic pain assessment must include the assessment of comorbid or contributing emotional states or psychopathology [13]. Gatchel [24] explains that emotional disturbance is common, but may be a cause or maintenance rather than a by-product of pain. Research confirms that emotional factors are substantively implicated in chronic pain onset, maintenance, and course (to some extent), which is concerning based on reports that show an estimated comorbidity of emotional disturbance in the chronic pain ranging from 10 to 100 % [57]. It can be difficult, however, to identify a single focus for emotional assessment in pain. The mere assessment of general emotional distress may not be enough to fully describe the complex relationship between emotions and pain due to differences in pain interference across emotional disturbances. For example, individuals with depression and anxiety diagnoses differ according to the amount and nature of intrusion the psychopathology has on pain. Polatin [57] states, "…patients with an anxiety neurosis tend to have a lower pain threshold, whereas depressed patients' thresholds may vary" (p. 152). Furthermore, some forms of psychopathology, notably anxiety, may deteriorate one's ability to cope with pain, thereby "greasing the wheels" for the development of chronic pain.

Assessment tools for emotional distress are plentiful and each scale offers unique advantages and drawbacks. A full review of emotional assessment is beyond the scope of this chapter, so the reader is referred to Worzer et al. [84] for more information, though we will use the example of depression scales to illustrate how and why certain options may be used. Commonly used measures of depression in chronic pain include the Beck Depression Inventory (BDI-2; [4]), the Hamilton Depression Rating Scale [30], and the Center for Epidemiological Studies Depression Module (CES-D; [63]). Some prefer the CES-D over the BDI due to a decreased reliance of somatic items on the CES-D. However, alternative scoring and interpretation guidelines have been offered for the BDI-2 which limit the spurious impact of somatic items on depression assessment with pain patients [61]. Additionally, the CES-D lacks an item assessing suicide risk in pain, which is a particularly important factor to include in a medical setting where personnel, who do not routinely assess for suicide risk by interview, often carry out screening.

Pain Quality and Intensity

In clinical practice, the assessment of pain quality is an important assessment parameter and entails the words one uses to describe pain [83]. Self-report measures of pain intensity are among the most commonly used measures of pain quality and intensity and there a number of ways to measure the fifth vital sign. Scott and Huskisson [66] observed that “the measurement of pain must always be subjective since pain is a subjective phenomenon—only the patient can therefore measure its severity” (p. 184). In order to accomplish this, the majority of pain intensity measures utilize either a numeric rating scale (NRS) or visual analog scale (VAS). NRS, in which a pain sufferer is asked to rate his or her pain on a numerical scale (often ranging from 1 to 10 or 1 to 5), are widely used due to the possibility that they could generate interval or ratio data (which allows for a more sensitive measure). Some argue, however, that VAS for pain assessment, described as “a straight line, the ends of which are defined as the extreme limits of the sensation or response being measured” ([66] p. 175), allow for a more continuous, and therefore reliable, scale of pain intensity. A good VAS or NRS should specifically define the sensation being evaluated, with definite cutoff points at the median response thought to occur in the exact center of the line [66]. Captions at either end of the scale should be behaviorally worded (e.g., a pain rating of 10 on a 0–10 scale should be labeled “pain bad enough to seek treatment at the emergency room” instead of “extreme pain”), and descriptors should be short and easily understood. These guidelines allow for a more reliable measure.

Health-Related Quality of Life and Cognitive Factors

There are a number of social and cognitive variables to consider when assessing chronic pain. In the social domain, primary consideration is often given to the measurement of quality of life and approaches to coping with a chronic musculoskeletal pain condition. Health-related quality of life is a significant concern for any individual struggling with a chronic health condition. Quality of life can be a difficult concept to assess and multiple options are available to capture this concept. The World Health Organization has developed a model of quality of life specifically for chronic pain with six major facets including physical health, psychological health, level of independence, social relationships, environmental concerns, and spirituality [43]. Most practitioners who work with patients with chronic pain choose to assess quality of life using the Medical Outcomes Survey, Short Form (SF-36; [82]), a comprehensive health survey of 36 items originally created for clinical and research use in the assessment of health-related quality of life. Mason et al. express some concerns that the SF-36 is a research tool that lacks sensitivity for some of the specific concerns associated with chronic pain (e.g., sleep concerns), so other options should be explored before settling on a quality-of-life measure (e.g., the World Health Organization Quality of Life-Pain, WHOQOL-Pain; [42]). Ultimately, the SF-36 is the most widely researched and consistently used tool for measuring health-related quality of life in chronic pain and its use is recommended in most cases due to the excellent access to scoring interpretations for numerous pain-related conditions.

Although a number of cognitive domains contribute to chronic pain experience, the concepts of fear avoidance, pain acceptance, and pain catastrophizing are starting to receive a great deal of attention. Briefly, the term “fear avoidance” refers to a purposeful decrease in functional activity due to concerns about harm that may result from the activity, even when these concerns are not substantiated. Fear avoidance accompanies a confusion regarding activity-related increases in pain intensity. Pain sufferers who experience an increase in pain during physical activity may confuse this pain increase as harmful, when, in fact, the pain increase represents natural muscle soreness due to physical deconditioning or other nonharmful activity-related pain. Activity may be unnecessarily decreased due to these concerns, further contributing to deconditioning and removing the pain sufferer from access to external coping resources that may help him better manage his pain. Commonly used measures of fear avoidance include the Fear Avoidance Beliefs Questionnaire (FABQ; [81]) and the Tampa Scale for Kinesiophobia (TSK; [39]).

Acceptance of chronic pain is described as living a meaningful life despite feeling sensations of pain [79]. Pain acceptance can play a significant role in how an individual responds to pain and engages in pain treatment. Those with a newly diagnosed chronic pain condition may experience initial difficulty accepting that the condition is chronic and focus on treatment with a short-term view, often with the hope of finding a “cure” or “fix.” This can result in a hesitancy to engage in chronic pain treatment modalities that are aimed at long-term management and improved quality of life, resulting in unnecessary suffering. There is growing evidence that failure to treat chronic pain adequately within 6 months after chronicity sets in leads to an increase in pain intensity and depression that may be attributable to maladjustment associated with poor pain acceptance [45]. The Chronic Pain Acceptance Questionnaire (CPAQ; [26]) is one of the most notable measures designed to assess the acceptance of chronic pain.

Pain catastrophizing is best defined as “an exaggerated negative mental set brought to bear during actual or anticipated painful experience” [72]. Sullivan et al. [73] suggest that there is a link between catastrophic thinking and the development of chronic pain. He stated that catastrophic thinking contributes to higher levels of pain and emotional distress, increasing the likelihood that a pain condition will persist over an extended period of time. The Pain Catastrophizing Scale (PCS) was developed in 1995 by Michael Sullivan et al. at the University Centre for Research on Pain and Disability [71]. It is one of the most widely administered scales to examine the impact of catastrophic thinking on pain symptoms. Developing a sense of pain acceptance contributes to motivation to engage in pain management treatment and may have an impact on catastrophic thinking about pain. Little is understood about the specific relationship between these phenomena, though studies are currently under way to explore the relationship between catastrophic thoughts about chronic acceptance of chronic pain.

Behavioral Factors and Perceived Disability

The assessment of behavioral symptoms associated with chronic musculoskeletal pain can add significantly to one’s understanding of how a chronic pain condition is developed and maintained [80]. Evidence of muscular bracing (evidenced through static postures or other purposeful limitations of movement) suggests increased muscle tension, which can add to pain intensity through pulling at a pain site. Though easy to spot, pain behaviors are difficult to interpret. Main and Waddell [41] suggest that pain-related behaviors (like changes in gait or posture) should be interpreted in light of subjective disability and functional ability data to best describe the impact of pain on functioning. Furthermore, these authors argue that some behaviors that are believed to be a sign of malingering or symptom exaggeration are actually evidence of real suffering. In other words, a patient who exaggerates a pain symptom may be doing so more to convince others about the severity of their pain rather than trying to achieve some other secondary gain. This kind of phenomenon is understandable in chronic pain because the primary symptom is subjective (i.e., not outwardly notable to others, especially if the patient is working hard to appear “normal”). Audible utterances in response to pain exacerbation may be a sign of distress or a way of eliciting help when it is needed. All pain behaviors are relevant to chronic pain assessment and should be documented. Some behaviors may even help a treating practitioner identify the role of emotional distress in functional impairment (cf [41]). Pain behaviors can be easily assessed through observation of the patient, though some formal scales do exist (e.g., The UAB Pain Behavior Scale; UAB, University of Alabama).

Pain disability can be quantified functionally (through an assessment of physical impairment) and behaviorally (through an assessment of psychological impairment), but assessing the subjective component is also important. De Souza and Oliver Frank [14] interviewed 11 chronic pain sufferers about the impact of chronic pain on their daily functioning. They identified multiple themes associated with the impact of pain on daily functioning including concerns about being a burden to loved ones, the need to push through physical and emotional symptoms in order function normally at work, as well as the ultimate fear of unemployment if unable to persist at work. The thorough assessment of these concepts can help to improve a behavioral health practitioner's understanding of the impact of pain on a patient's daily living and provide meaningful targets for treatment and treatment outcomes. Fortunately, there are good self-report measures available that can contribute to assessment of subjective disability. Two of the most commonly used measures include the Oswestry Disability Inventory (OSI; [20]) and the Million Visual Analog Scale (MVAS; [49]).

Evidence-Based Practice

Primary Care Treatment

There is a vital need to enhance the quality of treatment provided in primary care [65]. Improved primary care treatment can reduce inequities in health care through more accessible treatment, greater accountability for care, and the integration of evidenced-based processes of care into practice [34]. DeGruy and Etz [12] caution, however, that adequately addressing psychosocial issues in primary care can be time consuming and, consequently, prohibitive. There are multiple models of primary care integration that may help overcome the time burden of addressing psychosocial concerns, including a transition in the role of the PCP to that of a multidisciplinary collaborator and care integrator. To emphasize the difficulty of accomplishing this, however, Hollingsworth et al. analyzed 2007 data from the National Ambulatory Medical Care Survey and found that PCPs who assume responsibility for specialty care of patients with chronic pain would need to work an additional 3 weeks per year in order to account for the extra time needed in treatment. Hollingsworth et al. suggest that care responsibilities can actually be offset to nonphysician clinicians (i.e., clinical psychologists) to help account for the additional treatment need in primary care and take treatment burden off of the beleaguered medical provider. Runyan provides a brief overview of data supporting the efficacy of providing behavioral health consultation in primary care as well as helpful guidance for transitioning nonmedical providers into a medical environment. For more detailed information about integration of psychologist in primary care, please see Chap. 14 in this book.

A number of variables influence how chronic pain patients access treatment in primary care and the eventual outcome of medical treatment. In a detailed analysis of cost associated with a multidisciplinary pain management consultation model, Dickinson et al. [16] note that age, depression, and chronic disease burden can all impact health care utilization and costs. They found that a 1-year increase in age was associated with a 0.9 % increase in treatment costs while one-unit increases in depression and disease burden were associated with 2.1 and 7.9 % increases in treatment costs, respectively. An additional study by Dunn et al. [19] examined prognostic indicators for poor outcome in primary care treatment for low back pain. The investigators found that low back pain treatment failure was predicted by a number of factors including high levels of pain intensity, comorbid upper body pain, functional disability, pain episode duration, anxiety, self-rated health, and employment. Some of these factors are amenable to medical treatment (e.g., opioid management of severe pain intensity) while others require psychosocial intervention best provided by a clinical psychologist. Moitra et al. [50] found that depression is directly correlated with emergency department visits in the past 3 months. They also revealed that depression and general acceptance of pain were directly related to more severe symptoms as measured by numerous measures of pain.

Relaxation

There is also evidence to support the use of discrete, short-term pain self-management interventions in primary care [78, 7]. Relaxation has been widely supported as an effective chronic pain management tool for pain relief and decreased disability associated with relaxation for chronic pain [52] and is an intervention that is possible to implement in primary care in a single appointment. Austrian et al. [3] found that relaxation therapies are not frequently used by physicians in primary care due to barriers including time constraints and concerns about efficacy; however, relaxation therapies are ideal for use by a clinical psychologist in primary care. They suggest that relaxation should be introduced to primary care patients along with an assessment of potential barriers to relaxation practice. Identified barriers should be addressed to ensure that relaxation can and will be utilized to maximum benefit.

Cognitive and Behavioral Therapies

Cognitive and behavioral therapies (CBT) have also been widely supported in the successful management of chronic pain. Typically, CBT treatments take place in a behavioral health treatment environment and can require numerous sessions to obtain maximum benefit. These characteristics of CBT call into question the likelihood of successfully translating CBT interventions into primary care. Heapy et al. [32] examined the efficacy of a primary-care-based CBT treatment protocol for chronic pain (PRIME CBT) in a sample of 89 chronic pain sufferers with either neuropathic or musculoskeletal pain. Patients were asked to identify self-management goals to improve pain management and treatment adherence was compared to typical CBT treatment delivered in a behavioral health clinic, and a no-CBT treatment control. PRIME CBT was associated with significantly greater rates of treatment goal accomplishment compared to those who did not receive CBT, and there was no difference in treatment adherence between the standard CBT and PRIME CBT treatments. The authors conclude that, regardless of the setting of treatment delivery, skill practice (i.e., homework) outside of the treatment session mediated the relationship between readiness to change and pain management outcomes.

Exercise

Exercise can be one of the most beneficial treatments for chronic pain management, especially for pain of musculoskeletal origin [52]. There are limited studies examining the efficacy of exercise-based interventions in primary care, though the few existing studies are encouraging. Angstrom et al. [1] examined a primary care-based exercise protocol delivered to 122 chronic musculoskeletal pain patients being treated in primary care. Participants with musculoskeletal pain received eight to ten sessions with a physical therapist that focused on structured physical exercise based upon exercises individually adapted for the participants based on physical impairment. The authors found significant improvement in pain-related disability for those who received the exercise intervention, and gains were maintained for at least 2 years. Additionally, those receiving the exercise intervention showed continued (though nonsignificant) improvement in symptoms for the 2 years after treatment concluded. However, when compared to a primary care-based tailored behavioral health treatment protocol, the exercise-alone intervention appeared to offer lesser benefit compared to behavioral health treatment.

Enhancing Patient–Provider Communication

Because of its subjective nature, communicating with others about chronic pain can be quite difficult. Nilsen and Elstad [53] found that patients with pain feel as though their pain experience is poorly understood by their health care providers, resulting in disappointment in care and poor treatment effectiveness. Similar results were found among women with chronic pelvic pain. McGowan et al. [46] surveyed 32 women seeking treatment for chronic pelvic pain. Some of the women expressed emotional distress in response to negative consultations with physicians, especially when the pain was difficult to explain through demonstrable pathophysiology. The authors explain that such negative consultations leave a patient with pain doubting her own understanding of her pain, which creates significant difficulties in communicating pain concerns and treatment needs to others. Furthermore, perceptions that others do not believe in one's pain can result in feelings of rejection and withdrawal from care. McGowan et al. emphasize the importance of instilling empowerment for chronic pain patients who do not feel as though they are being taken seriously in medical treatment. This can be accomplished through a thorough biopsychosocial assessment aimed at comprehensive assessment of pain experience as well as communication training in which a patient is taught how to assertively pursue treatment and avoid passive responses to perceived poor care.

Lifestyle

Chronic pain conditions have been shown to have a high comorbidity with overweight and obesity [40]. The mechanisms underlying this comorbidity are not well understood, though existing research sheds some light on how overweight and chronic pain impact one another. Wright et al. [85] reviewed records from 3,645 twins in the University of Washington Twin Registry. Data analyses revealed a clear link between chronic pain and obesity that was greatly mediated by depression, though the authors acknowledge the likely role of inactivity and sedentary lifestyle that can exacerbate both pain and weight issues. Another study examined the impact of a weight loss intervention on pain symptoms using a sample of overweight and obese women diagnosed with fibromyalgia [67]. Women who received the weight loss intervention lost approximately 9 pounds over the 20-week intervention, and weight loss was associated with significant improvements in multiple pain outcomes including pain interference and quality of life. Based on these results, weight loss may be a promising adjunctive treatment to specialty medical care. Currently, there is no available research data exploring the chronic pain benefit of a brief weight loss intervention that could reasonably be implemented in primary care. However, there are data available to support the efficacy of brief weight loss interventions delivered in primary care (cf [11]), which supports the notion that primary care weight loss interventions could benefit chronic pain patients. Future research examining ways to deliver efficient weight loss interventions through primary care would be of benefit.

In Practice

Most available evidence strongly supports the benefit of integrating clinical psychology services into primary care in order to best serve chronic pain patients. The following section includes practical tips for the clinical psychologist to succeed within a primary care setting. The evidence-based assessment and treatment options already covered in this chapter should serve as a framework for the use of the following recommendations.

For a number of reasons, the integration of the clinical psychologist into the medical practice can be perilous (e.g., it can be difficult to offer psychosocial services to a pain patient who did not expect to see a mental health provider during a medical visit). One of the best ways to begin this process is to collaborate closely with the treating medical professional (i.e., physician, nurse practitioner, physician's assistant) and clarify the role that the psychologist will have in pain treatment. Medical pain care providers may also vary in the extent to which they would like to interact with the clinical psychologist. For example, the psychologist could be asked to function as either an interdisciplinary collaborator (who works in unison with the medical provider to develop treatment plans) or a multidisciplinary consultant (who may independently manage a patient's psychosocial distress and self-management targets without collaborative input from a physician). Although a collaborative role is preferred, clarifying these roles can be beneficial for the provider (who gains the desired level of access to the psychologist's services), the patient (who receives more integrated care), and the psychologist (who is able to function as a valued part of the team).

As the clinical psychologist becomes involved in the medical home environment, she should start to learn basic information about the various medical treatment options available to her pain patients. Common medication classes, pain relief injections, implantable devices, and even surgical options should be discussed with the medical provider. Understanding these options not only imbues the psychologist with a greater level of legitimacy in the eyes of the patient and the medical provider but also allows the psychologist to better understand the realistic benefits and limitations (i.e., side effects) associated with each treatment. Familiarity with medical treatments helps the psychologist serve as a valuable resource in determining a patient's psychosocial suitability for certain treatment options (especially implantable technologies and surgeries) and provides the patient with an accessible source of basic information as well as an advocate if more detailed information is desired. One of the pitfalls of increased knowledge about medical treatments is the possibility that the patient (and sometimes PCPs as well) may begin to rely on the psychologist as a medical consultant (i.e., ask for opinions or advice about medical treatment options). It is vital that the psychologist maintain clear boundaries with the medical team and function solely within the scope of her or his practice. One way to accomplish this is to try to maintain balance in the flow of information by exchanging medical information received from providers with psychosocial education to improve the doctor's understanding of pain. This allows both sides to improve their practical understanding of pain and continually emphasizes the psychosocial role of the clinical psychologist in conceptualization and treatment. It is also recommended that the psychologist maintain contact with professional organizations dedicated to clinical psychology and clinical health psychology practice in order to avoid feeling separated from their professional roots and to have easy access to colleagues who can provide guidance and consultation if difficulties arise.

Engaging in treatment for chronic pain can be difficult in the primary care setting because of the high pace of care, limited time for intervention, and likelihood that intervention may be limited to a few (or even a single) sessions. As a result, assessment and treatment should be as brief and organized as possible and the use of educational materials as supplements for self-care or emotional management interventions should be provided as often as possible. A common repertoire for brief pain management typically includes a short, multidimensional assessment, psychoeducation about mechanisms of pain, a review of the biopsychosocial model of pain, teaching relaxation and stress management interventions, brief CBTs to address emotional distress and cognitive factors contributing to pain experience, and/or communication skills training.

Due to the complexity of chronic pain, brief assessment of pain can be a significant challenge. A short battery of measures tapping multiple dimensions of the chronic pain experience is ideal, but a high number of self-report measures may deprive the clinical psychologist of time for a clinical interview. In order to balance the needs for interview and self-report assessment, the psychologist should begin with an interview touching briefly on the multiple domains of chronic pain including demographics, emotional distress, pain course/severity/duration, modifiable behavioral factors contributing to pain experience, social support, perception of disability, and the patient's history of interactions with the health care system for pain management. Once the interview is complete, the clinical psychologist may select self-report measures that target specific domains of interest. It is highly recommended that a measure of depression and suicide risk be provided regardless of the perceived need based on the interview. There are ample data to support an increased risk of suicide in the chronic pain population, attributable to characteristics of pain experience per se as well as the relatively high frequency of known suicide risk factors among pain sufferers [21]. As measures are being selected, the clinical psychologist should keep in mind that measures may be simplified or abbreviated to save time as long as validity and reliability are maintained. Some data are available to support single-item assessment of concepts like depression, suicide, pain intensity, and occupational factors (see [55], for an example). A wealth of information can be gleaned from a single NRS measure of pain intensity [25], which may negate the need for a more comprehensive evaluation of pain-related disability and coping. Pain behaviors can be observed and documented throughout the course of interaction with the patient and the assessment of cognitive variables contributing to pain could be accomplished as part of CBT treatment. Finally, information from the medical provider and support staff should be solicited before meeting with the patient to save time and help focus the interview.

Regardless of the chosen assessment strategy, all assessment should be conducted against a biopsychosocial backdrop. Thus, the clinical psychologist would benefit from beginning treatment with a brief (i.e., 10 min or less) discussion of the biopsychosocial model of pain and how this model informs assessment and treatment. One way to accomplish this is to provide the patient with a "pain quiz" and a diagram illustrating the biopsychosocial model of pain (an example of each is provided in the Appendix). After allowing the patient to complete the pain quiz, the clinical psychologist should discuss the results and use the discussion as a way to illustrate the biopsychosocial model of pain. Once the model has been discussed, the patient and the psychologist can use it to identify aspects of the patient's own pain experience that fit into the model and review how those components interact with one another to contribute to pain experience. For example, if a patient mentions that a bad night's sleep results in waking up in a bad mood the next morning, the psychologist can help the patient trace how a bad mood leads to negative social interactions and increased physical stress to result in increased pain experience (which, in turn, contributes back to the bad mood). Tracing connections between the domains of the biopsychosocial model in this way is a vital step because it serves as a rationale for how modification of one domain (e.g., emotional) can result in beneficial changes in other domains (e.g., social and physical). When done well, this brief interaction not only provides a solid rationale for the interventions to follow but also offers rich opportunities for assessment and helps the patient feel "understood" by the psychologist.

Once assessment is complete, simple interventions focused on pain management can be used in any order the patient or psychologist prefers. Many pain psychologists begin with simple relaxation exercises. This is a good place to start because relaxation interventions promote an immediate benefit that can help the patient buy in to other treatments and relaxation is familiar enough to most patients to be readily approachable. Some common, empirically supported relaxation interventions for pain management include diaphragmatic breathing, autogenic relaxation, progressive muscle relaxation, and imagery (worksheets for each of these relaxation strategies are provided in the Appendix). Most patients will benefit from a short explanation of the myriad benefits associated with relaxation for chronic pain. Once again, this can be accomplished by using connections between the domains of the biopsychosocial model of pain or through a discussion of the "fight or flight" model of stress response (a supplemental handout for which is included in the Appendix). Once a solid rationale for relaxation is given, the clinical psychologist can lead the patient through a short relaxation exercise and allow the patient to try it once or twice on their own before ending the session. After practice, it is helpful to review the patient's experience and identify benefits of relaxation and any difficulties the patient had in using relaxation. Because experience and aptitude for relaxation techniques vary across techniques and across patients, the clinical psychologist should be open to trying different techniques if one does not work well and to encourage the patient to practice the skill at home to improve its effectiveness and ease of use. A relaxation log can be helpful for promoting practice (see Appendix for an example).

Cognitive and behavioral interventions (CBT) for pain management can be difficult to implement in short-term therapy, but these should be used if behavioral and cognitive factors (e.g., catastrophic or unrealistic thoughts about pain or pain treatment) are strongly implicated in pain experience. It is highly recommended that CBT interventions wait until a strong rapport has been established between the patient and the clinical psychologist (i.e., after assessment and relaxation interventions). These techniques require a greater level of commitment from the patient and a greater openness to treatment suggestions, especially because cognitive restructuring focuses strongly on psychological concepts that may either be foreign or unwelcome to a patient seeking medical treatment in a medical environment. CBT should begin with another review of the biopsychosocial model of pain (with particular focus on cognitive, behavioral, and emotional components) along with a brief review of the gate control theory of pain [48], which provides a physical foundation for the role of emotional factors in pain experience and treatment. Because there may not be ample time for a thorough assessment of each patient's unrealistic or alarming thoughts about pain, it is recommended that the clinical psychologist start with a review of some of the more common (and common sense) alarming and reassuring thoughts associated with pain (a handout reviewing some of these is included in the Appendix). A structured worksheet or dysfunctional thought record (similar to that used by [5]) can help the patient learn how to identify, interpret, and restructure troublesome cognitions and track the consequences of addressing these thoughts (an example worksheet can be found in the Appendix).

Communication skills training is a highly beneficial and often overlooked treatment option for chronic pain patients. There is ample evidence to suggest that interactions in one's social environment can have a significant impact on pain experience. For example, a husband who punishes expressions of pain-related distress in his wife can actually contribute to emotional distress and isolation that can worsen pain. This punishment may take the form of a spouse telling his wife who is experiencing pain that she needs to stop talking about her pain and move on while refusing to help her physically. Conversely, a husband who is overly solicitous when his wife expresses pain can reinforce her pain behaviors and make it difficult for her to become independently functional. Helping a pain patient learn how to effectively communicate their needs to others can improve the social support that they receive and help avoid distressing social interactions that can lead to emotional disruption, stress, and subsequent worsening of pain. An additional benefit of communication training is that a pain patient can use those tools to better communicate treatment needs to their medical providers. Not only does this open the door to more effective medical management, it also benefits the provider by helping a frustrated patient learn how to express treatment concerns to the provider in an assertive (instead of aggressive) manner. There are a number of ways to teach communication skills in the medical home, and a few worksheets are provided in the Appendix covering some brief methods focusing on the discrimination between aggressive, passive, and assertive communication and specific considerations when communicating with health care providers.

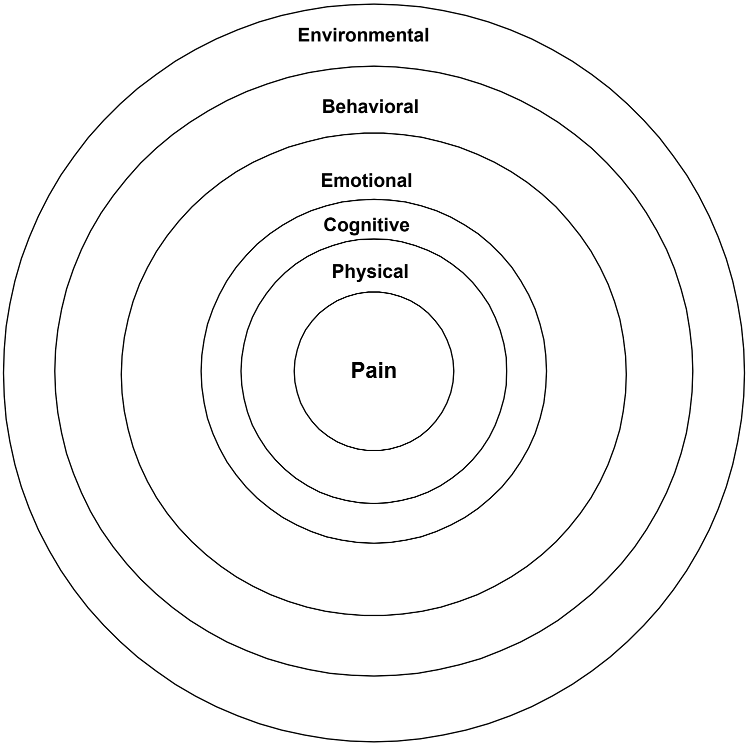
Exercise can be one of the most beneficial recommendations in chronic pain management. There are a number of ways in which a clinical psychologist can greatly contribute to the benefit of exercise including increased adherence to exercise activities, improving motivation to exercise, overcoming unrealistic thoughts or expectations about exercise, and tracking the benefits of exercise activity. Unfortunately, exercise interventions for chronic pain patients can be difficult because patients may have mobility restrictions based on the mechanism of their pain and deconditioning that may have occurred due to underuse. To complicate things further, cognitive constraints like fear avoidance can make it difficult for the patient and the psychologist to adequately identify a patient's true functional capacity. Fear avoidance causes a patient to avoid certain activities (such as social or physical activities) in fear that these activities will cause an increase in pain [10]. For example, a patient with low back pain whose health care providers have cleared them for light lifting may still avoid lifting at all costs if they erroneously interpret lifting-related back pain exacerbations as signs of harm to their back. The patient may need help to plan and adhere to an exercise program that is safe, effective, and designed to help them gradually increase functional activity without using pain as guide, which should only be done with input from a medical care provider to ensure that no true harm will befall the patient. Ideally, the exercise program should be developed in collaboration with the patient, PCP, and/or physical therapist (who is a good judge of which activities are likely to be safe and beneficial). If other options are not available, the patient may be able to identify exercise activities in which they are already engaged that can serve as a starting point for an exercise program. Care should be taken, however, to ensure that the program is safe and medical consultation should be solicited before exercise begins. Interventions like exercise diaries (an example of one exercise diary is available in the Appendix) and motivational interviewing can help improve motivation and adherence for exercise. If activity pacing is difficult for the patient (i.e., either they have a hard time finding an activity level that does not result in significant increases in pain or they have difficulty increasing activity to achieve benefit), then a pacing model similar to that offered by Fordyce [22] can be very beneficial.

It is vital that the clinical psychologist discuss the circumstances under which each intervention tool is most likely to be beneficial. For most pain sufferers, chronic pain is a variable experience and the applicability of pain intervention strategies will likely vary as pain changes. For example, a cognitive restructuring exercise that helps decrease stress and improve pain may be very beneficial when pain is at a manageable level already and the patient is able to concentrate on the work of identifying and changing thoughts. When pain spikes, however, it can be difficult for the patient to engage in complex pain management strategies, so simpler strategies might be preferred. Helping the patient to best understand not only how but also when to use various pain management strategies can significantly improve the effectiveness of what is being taught. The pain experience should be broken down into various phases or stages and a separate plan for pain management should be developed for each stage. An example of the stages of pain is available in the appendix.

Conclusion

Chronic pain is a significant concern in the USA, and the majority of individuals with chronic pain needs are seeking treatment in primary care clinics. PCPs, on the other hand, feel ill equipped to manage the tremendous burden of chronic pain care and experience significant frustration in their work with these suffering, complex individuals. As noted in Chap. 14, the medical home model of care is an attractive option for improving pain care and the consulting clinical psychologist has a vital role in maximizing the benefits of care. When done correctly, the patient feels more understood by providers, providers feel less frustrated in their care provision, and chronic pain symptoms improve. Though data supporting the role of behavioral health care treatment of chronic pain in standard primary care or the medical home are sparse, preliminary evidence provides some real hope that this can be achieved. There is ample evidence supporting the use of individual chronic pain management tools in a primary care environment, and treatment effects will likely grow as clinicians and researchers alike find more manageable ways to combine self-management and medical treatments into a primary care-based approach tailored to the needs of each patient. Clinical practice guidelines do exist for chronic pain care (targeted mostly for back pain, cf [9]), but guidelines describing the translation of care into the primary care settings are nonexistent. This chapter sought to highlight the problem of treating chronic pain in the primary care setting, using many concepts of the medical home model, and shed light on possible solutions. Though not exhaustive (i.e., an entirely separate chapter could have been written about the role of the clinical psychologist in identifying and managing possible opioid dependence; see [8] for an excellent overview), it is hoped that the information and clinical guidance herein will aid clinical psychologists who have taken on the worthy challenge of collaborating in chronic pain management through primary care.

Appendices



INFLUENCES AND EFFECTS OF PAIN

PAIN MANAGEMENT QUIZ

1. As pain persists over time, it can easily affect and be affected by:
   - a. how we feel physically
   - b. how we think
   - c. how we feel emotionally
   - d. how we act - our lifestyle habits
   - e. how others treat us
   - f. all of the above

2. Most chronic pain problems seem to have no known physical explanation for their starting
   True or False

3. One physical way a person can complicate a muscle-related chronic pain problem is to
   ____

4. Which of the following do you think would be a healthy use of thinking to manage an ongoing pain?
   - a. Concentrate on exactly where and how it hurts.
   - b. Think the pain must mean it's cancerous.
   - c. Put mind onto a task like a card game or hobby.
   - d. Think "I can't do anything as long as I have this pain."

5. People who are experiencing an ongoing pain problem are at greater risk to develop feelings of:
   - a. depression?
   - b. worry?
   - c. guilt?
   - d. anger?
   - e. They're at no greater risk for any emotion.

6. Some ways we can change our lifestyle or habits to try to manage our chronic pain include
   ____

7. Others will only do and say things that will encourage us to go on with life in spite of pain.
   True or False

Diaphragmatic Breathing

1. Sit in a comfortable position

2. Take 3 deep cleansing breaths

3. Place one hand on your stomach and the other on your chest

4. Try to breath so that only your stomach rises and falls.

As you inhale, concentrate on your chest remaining relatively still while your stomach rises. It may be helpful for you to imagine that your pants are too big and you need to push your stomach out to hold them up. When exhaling, allow your stomach to fall in and the air to fully escape.

5. Take some deep breaths, concentrating on only moving your stomach.

6. Return to regular breathing, continuing to breathe so that only your stomach moves.

Note: It is normal for this healthy method of breathing to feel a little awkward at first. With practice, it will feel more natural.

Autogenic Phrases

Step 1: Find a quiet place, away from distractions, and get into a relaxed posture, either sitting or lying down.
Step 2: Close your eyes.
Step 3: Imagine yourself in a comforting, pleasant environment.
Step 4: Say each of these phrases to yourself, imagining the sensations as you focus on each phrase. Repeat each phrase 3 times and allow about 30 s between each repetition to give yourself time to experience the sensations.

1. My arms are heavy and warm
   (repeat 3 times)
2. My face is heavy and warm
   (repeat 3 times)
3. My chest is heavy and warm
   (repeat 3 times)
4. My legs are heavy and warm
   (repeat 3 times)

Step 5: End the exercise with this suggestion:
When I open my eyes, I will feel refreshed and alert.

Progressive Muscle Relaxation (8 Muscle Groups)

For each muscle group, tense the muscles involved about 1/3 to 2/3 of the maximum tension possible (enough to feel tension but not any pain). Hold in the tensed position for about 4 seconds, then let the muscles relax in their natural resting positions for about 40 seconds.

Both Legs: Lift both legs off of the ground, straighten your knees, and point your toes toward your head.

Abdomen: Tighten these muscles as if you were about to be hit in the stomach.

Chest: Take a very deep breath (through your upper chest, not your diaphragm) and hold it.

Both Arms: Turn your palms up, then make a fist. Bring your fists up to your shoulders while tensing the biceps.

Shoulders: Lift both shoulders up toward your ears.

Back of Neck: Tuck in and lower your chin toward your chest.

Forehead: Raise your eyebrows.

Eyes: Squint.

THE FIGHT OR FLIGHT RESPONSE

AREA OF BODY RESPONSE	**STRESS RESPONSE**	**RELAXATION**
Adrenal Gland	increase adrenaline	decrease adrenaline
Heart	beats faster and stronger	beats slower and normally
Lungs	breathe faster & more shallow	breathe slower and
deeper		
Muscles	become tighter, more tense	become more loose and relaxed
Stomach	decreases digestion	increases digestion
Sweat Glands	increase perspiration	decrease perspiration
Immune System	becomes suppressed	functions normally
Blood Flow	away from extremities	towards extremities

Relaxation Exercise Log

Week of: ________________________

GUIDELINES: Use this log to help plan and track your progress with the relaxation training exercises. Plan the times and exercises you will do in the coming week and then just check off the exercises as you do them. You may use the rating scale at the bottom of the page to evaluate the effectiveness of the exercises to help you get yourself relaxed and to monitor your progress.

GOAL: __________________________________

PLAN: ___________________________________

	Planned day and time	What I will do to relax	How relaxed I felt before after	Time spent	Comments/difficulties
–	–	–	–	–	–
–	–	–	–	–	–
–	–	–	–	–	–
–	–	–	–	–	–
–	–	–	–	–	–
–	–	–	–	–	–

	Planned day and time	What I will do to relax	How relaxed I felt before after	Time spent	Comments/difficulties
–	–	–	–	–	–
–	–	–	–	–	–
–	–	–	–	–	–
–	–	–	–	–	–

Rate how relaxed you feel:
1 = Deeply and completely relaxed throughout my body
2 = Generally relaxed in most of my body
3 = Somewhat more relaxed than usual
4 = Neither tense nor relaxed. My usual resting state
5 = Somewhat tense in some areas of my body
6 = Very tense in some areas of my body
7 = Extremely tense throughout my body

Types of Alarming Thoughts

Demandingness: Thoughts or beliefs in which we expect ourselves, others, or life in general to live up to some type of standard, goal, or rule which is unrealistic

Musts About Self
“I should be able to get rid of this pain!”
“I must be pain free or my life will be miserable!”
Musts About Others
“She should treat me better!”
“He should understand I hurt!”
Musts About the World/Conditions
“Improving my pain condition should be easier!”
“It isn’t fair that my sleep is disrupted!”

Hint

Look for words such as “Should”, “Must”, “Ought”, and “Have to” in order to detect demandingness.

Awfulizing: Rating the quality of a person (ourselves or others) or events in extreme terms. Often involves words such as “awful” “terrible” or “disaster.”
“My life has turned into a total disaster because of pain!”
“I had a bad day yesterday, this program must not be working anymore!”

I Can’t Stand It Itus: Convincing yourself that you will not be able to tolerate unfortunate or frustrating occurrences.

“If I don’t get rid of this pain soon, I’ll go crazy!”

“I hurt so bad, how can I be expected to work today?”

Faulty Evidence/Assumptions: You accept a belief without considering the evidence against that belief.

“I need to stay in bed until I feel better.”

“There has to be a pill that would help me.”

Reassuring Thoughts

Preferences (even strong preferences), but with the realization things might not turn out like I’d prefer them. For example:

“I hope I don’t hurt tonight, but if I do, I’ll cope okay. No reason to make myself crazy about it.”

“I wish my boss was more understanding, but she isn’t. That’s the way she is going to act.”

“No one can prove that my life *has to be* hassle free and it is almost certain not to be.”

Reassuring thoughts avoid **AWFULIZING** and **I CAN’T STAND IT ITUS (LFT)**.

“Having pain is a real hassle, but it is not 101 % bad.”

“This headache is difficult to manage, but I’ve gotten through many headaches in the past, I’ll get through this one.”

Reassuring thoughts carefully examine the **evidence** for a belief.

“I may not have perfect control over my sleep, but there are things I can do.”

“Staying in bed when awake only leads to frustration.”

Remember, Reassuring Thoughts Are REALISTIC Thoughts.

They are not unbelievable positive thoughts. Aiming for Positive Thinking places you at risk for constructing thoughts which are as unrealistic as alarming beliefs.

Examples of Unrealistic, Positive Thoughts:

“Life is fair, I’ll always get what I deserve.”

“People will always look out after my best interests.”

“Soon I’ll be pain free all the time.”

“My marriage will last forever.”

“I know I’ll be able to alleviate my pain in seconds after this program.”

“Good things always happen to good people.”

“This treatment will finally get rid of my pain.”

A-B-C Monitoring Sheet

Date: ______________ Name: ___________________

ACTIVATING EVENT **A** “Something Happens”	**BELIEF OR SELF-TALK** **B** “I tell myself something”	**CONSEQUENCES** **C** “I feel and do something”
	Alarming Beliefs	Unhealthy Consequences
	Reassuring Beliefs	Healthy Consequences

Healthy Thinking Leads to Better Pain Management

Healthy Thinking Leads to Better Pain Management

Types of Communication Responses

Assertive Response

Honest
Appropriate (time and place)
Respectful/Responsible
Direct

> Assertive behavior promotes equality in human relationships, enabling us to act in our own best interests, to stand up for ourselves without undue anxiety, to express feelings honestly and comfortably, and to exercise personal rights without denying the rights of others.

Non-Assertive Response

Indirect
Dishonest

Aggressive Response

Inappropriate
Disrespectful

> Important!! What is considered assertive, non-assertive or aggressive depends upon the persons involved and the circumstances of the situation.

Communicating Effectively with Physicians

There are Two Types of Communication Styles Which Often Work Well With Physicians:

1. **Partnership Statements**—“How can we work together so that my blood pressure doesn’t go so high?”

2. **Simple Assertive Statements**—"When I take this medication my stomach becomes upset. Is there an alternative medication which does not have this side effect?"

Other Helpful Tips

- Keep in mind your physician's point of view. They are trained to "Fix" the problem—often they become very frustrated if they cannot figure out or fix a pain problem. Have some tolerance for their struggle.
- Keep a list of physical complaints to review with your physician. Remember they might have time to only concentrate on the one or two most important complaints. However, when they review your list they may put things together which you might not have thought of, so it's good to list all the complaints you have. Just don't expect your provider to be able to address all of them in one appointment.
- Write down anything important that you want to tell your provider. Sometimes patients can get anxious or flustered around physicians and forget what they wanted to say. This interferes with assertive communication.
- Remember you have your rights and that physicians are fallible humans. Express your concerns in an assertive or tactful manner. Communicating Effectively with Physicians

Exercise Summary Sheet

1. Start by getting a baseline measure of your ability. On the baseline pay close attention to your body and any pain you feel. Count the repetitions or watch the time until you notice a "just noticeable difference" in (a) increase in pain, (b) fatigue, or (c) weakness.
2. Record your baseline time or number or repetitions.
3. Each day after the baseline very gradually increase your repetitions or time by no more than 5% (see example). Remember, you want to continue to build up your exercise even if there is pain, weakness, or fatigue. Only cut back if you experience an unfamiliar pain or are concerned you may fall. If increasing your exercise feels too much, stay at the same rate as the previous day and increase tomorrow.

Type of Exercise: Baseline Average: Goal to Increase: Date:				
Baseline				
Baseline				

Stages of Pain and Healthy Thinking and Behaving

1. **Anticipating/Preparing for Pain Episode:** Come up with a plan and several alternatives for when the pain hits. Use diaphragmatic breathing.
   - Sitting and worrying about the pain doesn't help. What else can I do that will help – let me do that now.
   - I'm not hurting as much now. By thinking about and doing other things I can make this good feeling last longer.
   - I don't have to scare myself about the pain; I'll get through the next episode whenever it comes.
   - I'm glad it's not intense now; it does increase and decrease, doesn't it?
2. **Confronting the Start of Pain Episode:** Begin to use tools that you can implement to manage pain while still going about your day. Try cue-control relaxation and IRMA.
   - Alright, I'm feeling tense. That reminds me to take some slow, deep breaths and relax.
   - I won't get overwhelmed. I'll just take it one step at a time.
   - It doesn't help to lie here and hurt. Let me get involved in something.
   - Here's the episode. It will be like the others and gradually decrease; I don't need to be alarmed.
3. **Dealing with Pain at Its Peak:** Use your plan and alternatives, if necessary. Try combining IRMA strategies, PMR, and diaphragmatic breathing.
   - The episode is running its course like I expected. I can get through this.

  - It will be decreasing before I know it, especially if I can put my concentration onto something else.
  - I don't want to make this worse for myself. Let me follow my plan – let me switch my activities.
  - Don't panic. I've been through this before.

4. **Reflections as Pain Decreases:** Review how well your plans worked. Give yourself credit where credit is due and revise plans, if necessary.
   - Good, I did it. Next time I'll do even better in managing it.
   - I'm doing better at putting the pain in the back of my mind; I can use my attention and thinking to work for me.
   - I'm not hopeless and helpless with this. I can limit the effects the pain has on my life.

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