Chapter 14
Engagement of Patients in the Self-Management of Pain

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Chronic Pain and Its Impacts

Chronic pain is a prevalent physical condition that presents serious public health concerns (Institute of Medicine, 2011). A large multinational study (Tsang et al., 2008) found that chronic pain is present in about 40 % of adults. Similarly, a recent large scale analyses of the US adults reports that 47 % of American adults report persistent pain (Brown, 2012). Furthermore, the prevalence of chronic pain appears to be on a rise. For example, chronic low back pain has increased by 64 % between 2000 and 2007 (Smith, Davis, Stano, & Whedon, 2013). It is further expected to grow as the population ages; with more than 50 % of respondents in a large population-based sample of Medicare beneficiaries reported "bothersome" pain (Patel et al., 2014).

The adverse impact of chronic pain is pervasive. Chronic pain disturbs sleep (Onen, Onen, Courpron, & Dubray, 2005) and can compromise physical ability to function (Duque, Parra, & Duvallet, 2011; Latorre-Roman, Santos-Campos, Heredia-Jimenez, Delgado-Fernandez, & Soto-Hermoso, 2014), and affects emotional health (Fishbain et al., 2015; Gerrits et al., 2014), frequently leading to diminished enjoyable life activities (Gatchel & Schultz, 2014), and reduced life expectancy (Andersson, 2009; McBeth et al., 2009; Torrance, Elliott, Lee, & Smith, 2010). But chronic pain does not only impact on patients themselves but their significant others by its effect on social and family relationships causing significant emotional distress

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in these supporters and caregivers (Ojeda et al., 2014; Schwartz, Slater, Birchler, & Atkinson, 1991).

Chronic pain is costly to the society not only due to health care expenditures and disability compensation but also related to loss of productivity and subsequent tax loss. The Institute of Medicine (Institute of Medicine, 2011) estimates that chronic pain, costs the nation up to $635 million annually.

Chronic Pain as a Multifactorial, Biopsychosocial Phenomenon

Historically, pain is assumed to directly reflect tissue damage; that is, the presence and extent of pain should be highly correlated with and explained by the degree of identifiable pathology. When pain cannot be adequately explained by tissue damage, the pain is often considered as “functional” or “psychological,” with the nuances that the pain is a result of either deliberate malingering, drug-seeking, achievement of secondary gains (e.g., attention, avoidance of undesirable activities and responsibilities), or unconscious expression of psychological illness. However, with the advancement of imaging technology, it became abundantly clear that radiographically observed pathology does not necessarily correlate with pain complaints (e.g., Baranto, Hellstrom, Cederlund, Nyman, & Sward, 2009; Blankenbaker et al., 2008; Borenstein et al., 2001; Carragee, Alamin, Miller, & Carragee, 2005; Dunn et al., 2014; Jarvik et al., 2005; Link et al., 2003). In contrast, research has repeatedly demonstrated the significant role of the cognitive, behavioral, affective, and contextual factors in the development and maintenance of chronic pain (Flor & Turk, 2011; Okifuji & Turk, 2012). This has led the field to widen its view on pain as a complex biopsychosocial phenomenon where neurophysiology reciprocally interacts with a range of psychological and social variables (Gatchel, Peng, Peters, Fuchs, & Turk, 2007).

Treatment of Patients with Chronic Pain

There are a wide range of treatment options available for chronic pain. It may involve a single modality focusing on medication management, intervention (surgery, nerve block), exercise, and complimentary therapy (e.g., massage, yoga). Although a single modality may effectively reduce pain in a minority of chronic pain patients they rarely completely eliminate pain and many require more comprehensive approach that addresses the relevant biopsychosocial factors (Turk, Wilson, & Cahana, 2011). Such comprehensive approach typically assumes that (1) patients are autonomous and active participants to their own rehabilitation and (2) the ultimate benefit of the treatment comes from patients’ acquiring skills and concepts of self-management to regulate their symptoms, stress, mood, and health-related quality of life. Such comprehensive approaches often require consolidated efforts by multiple clinicians with expertise in medicine, exercise, psychology, nursing, and pharmacy (Loeser & Turk, 2004). It has been repeatedly shown that although the comprehensive pain programs treat more complicated and treatment resistant patients, they are more cost-effective than unimodal medical management or intervention treatment (Gatchel & Okifuji, 2006; Kamper et al., 2014; Turk, 2002).

In contrast to traditional pharmacological and medical interventions, comprehensive biopsychosocial interventions emphasize self-management and involve skill-training and activation therapy. Since the primary focus of these programs is on rehabilitation rather than cure, they require active patient participation. In order for patients to enjoy the long-term benefit of such programs, they need to internalize what they learn, integrate it as a new habit in their daily lives, and continue their efforts at self-management for extended periods of time. However, failure to adhere with regimen and premature termination of rehabilitative treatments are common, and present significant barriers to successful treatment (Turk & Rudy, 1991). Unfortunately, research addressing adherence in chronic pain treatments is scarce. In the following section, we will review the available data on adherence with medical management, exercise, and multimodal approaches.

Adherence

Analgesic medications are one of the most commonly provided treatment approach for treating chronic pain (White, Arnold, Norvell, Ecker, & Fehlings, 2011) and has grown significantly in recent years (Vowles et al., 2015). Nonadherence with opioid analgesics, in particular, is a serious concern because this class of drugs can produce significant adverse physical effects as well as the potential for misuse and abuse which appear to be prevalent (e.g., Chou, Fanciullo, Fine, Passik, & Portenoy, 2009; Hojsted, Ekholm, Kurita, Juel, & Shogren, 2013; Vowles et al., 2015).

Recent reports show that self-reported adherence with medication regimen in chronic pain is disappointingly low, about 38–52 % (Broekmans, Dobbels, Milisen, Morlion, & Vanderschueren, 2010a, 2010b). In the elderly for whom polypharmacy tends to be more common due to the presence of a number of medical diagnoses, non-adherence can be as high as 75 % (Salzman, 1995). Rosser, McCracken, Velleman, Boichat, and Eccleston (2011) found that although 76 % of their patients with chronic pain reported to yes to the question “do you take your medication exactly as prescribed?” the patients admitted that nonadherence was greater in response to more specific questions; for example, 52 % reported that they “sometimes miss doses” and 30 % reported that they “sometimes take an extra dose.” Moreover, when addressing the question of what might be underlying the nonadherence; their results suggest that the actual pain level may not direct the under- or overuse of medications, but rather, it was associated with certain beliefs about withdrawal (underuse) and about need for further analgesics (overuse). Of course, we should not be surprised by the high prevalence of non-adherence by chronic pain patients. Non-adherence is high for treatments of most medical problems as lifestyle modification programs (Meichenbaum & Turk, 1987).

For comprehensive, rehabilitation programs, adherence rates may vary greatly depending upon the type, intensity and complexity of the treatment demands. Typically, the greater the efforts expected from patients, the poorer the patient adherence. In an early study, Lutz, Silbret, and Olshan (1983) found that at 8-month follow-up fewer than 13 % of patients successfully treated in a rehabilitation program indicated on mailed questionnaires that they continue to practice all of the recommended self-management behaviors prescribed (e.g., relaxation, activity pain, exercise). A more recent report found self-reported adherence report suggests that although patients are fairly adherent to taking new medications and returning to the clinic for follow-up visits (93–99 %), others including discontinuing medications, physical therapy, and home programs generally yielded much poorer adherence rates (39–48 %) (Robinson et al., 2004). A regimen that requires patients to exert effort and spend time tends not to fare well. For example, minutes engaged in aerobic and stretching exercise decline linearly with time following the treatment (Dobkin, Abrahamowicz, Fitzcharles, Dritsa, & da Costa, 2005).

Similarly, attrition rates in clinical trials examining the efficacy of exercise and/or multimodal pain treatment tend to be high. Reviews on the effect of exercise programs (by itself as well as in combination with other modality) (Busch, Schachter, Overend, Peloso, & Barber, 2008; Jones, Adams, Winters-Stone, & Burckhardt, 2006) suggest a wide range of attrition rates, from 0 % to 67 %, with the average rate of 20–27 %. A systematic review of the mindfulness- and acceptance based intervention, focusing on stress reduction and acceptance commitment therapy for chronic pain patients show a wide range of attrition rates, from 0 % to 49 % (Veehof, Oskam, Schreurs, & Bohlmeijer, 2011). Of course, we should not be surprised by the high prevalence of non-adherence by chronic pain patients. Non-adherence is high for treatments of most medical problems as lifestyle modification programs (Meichenbaum & Turk, 1987).

Adherence clearly has an impact on treatment outcomes. Poor adherence may lead to minimize the clinical benefit and increase the chance of relapse (Turk & Rudy, 1991). On the other hand, good adherence may have benefit enhancing effects for the treatment. For example, a study following the 2435 patients undergoing multimodal therapy (Curran, Williams, & Potts, 2009) showed that multi-aspects of adherence to exercise, behavioral, and cognitive treatment skill training appeared to have small, but significant contributing factors for greater sense of well-being at 1-month follow-up; however, the relationship was greatly enhanced when adherence was combined with treatment outcomes at the post-treatment. A recent study evaluating the effects of the structural, multimodal day program in over 550 patients (Nicholas et al., 2012) demonstrated the incremental benefit of adherence for improving pain, disability, and mood.

Approaches to Enhance Patients' Engagement in Treatment

Given the serious impact of chronic pain on overall quality of life, one may assume that all treatment-seeking patients should have strong motivation and intention to commit to treatment. Poor adherence that is commonly seen in chronic pain treatments might appear to be contradictory. It is often assumed that having a strong intention leads to successful execution of the behavior (goal attainment) (Ajzen, 1991). Intention to perform a behavior is the decision to act in a particular way and an indication of how much effort people are willing to exert to perform the behavior. Intention is typically expressed: "I intend to do X." However, having a good intention on its own often fails to produce successful goal attainment. The degree to which strength of intention leads to successful goal attainment is quite modest: it typically explains 20–35 % of the variance in goal achievement (Gollwitzer & Sheeran, 2006). The common wisdom of the past behaviors predicting the future goal attainment is similarly modest, about 26 % (Sutton & Sheeran, 2003). The failure to attain a goal is usually not due solely to the lack of strong intention but failure to act on it (Sheeran, 2002). Variables other than the strength of goal intention affect the intensity of goal striving behaviors and attainment. A longitudinal study (Reuter, Ziegelmann, Lippke, & Schwarzer, 2009) following individuals undergoing orthopedic rehabilitation, for instance, showed that intention to engage in physical regimen shows a slight decline in the first 6 months but stays constant afterwards, whereas actual behavioral engagement shows initial increase followed by a decrease after 6 months. Thus, when significant behavioral change and maintenance is the goal (e.g., exercise), we need to consider factors that may strengthen the relationship between the intention and goal attainment.

What may be the potential factors weakening the relationship between intention to engage in treatment and goal of actually engaging in therapeutic behaviors? There are several studies trying to delineate factors contributing to poor adherence or attrition. As was the case with adherence with medical management regimen, patients' thinking patterns seem to be an important factor in achieving high level of adherence with self-management. In particular, a sense of self-efficacy, a personal conviction that the person can effectively do something to produce a desired outcome in a given context, appears to contribute to the person's ability to maintain efforts to acquire such self-management skills (Thompson, Broadbent, Bertino, & Staiger, 2015). Similarly, predictors for long-term exercise adherence appear to include belief about the health benefit of the regimen (Burton, Shapiro, & German, 1999), self-efficacy belief to continue the regimen (Litt, Kleppinger, & Judge, 2002), and in-treatment efforts (Dobkin et al., 2005). Interestingly, symptom severity of chronic pain at the pretreatment per se seems to have very little to do with how patients adhere or stay on with the treatment. Analyses of the dropouts in a trial evaluating the cognitive-behavioral treatment (CBT) for chronic pain (Glombiewski, Hartwich-Tersek, & Rief, 2010) revealed that contributing factors of attrition were not related to pretreatment pain level or disability factors, but rather, those with high level of psychological distress tended to drop out. Pain response to treatment (i.e., exercise) however may influence adherence. A number of studies suggest that symptom flare in response to exercise leads to nonadherence (e.g., Richards & Scott, 2002; Schachter, Busch, Peloso, & Sheppard, 2003; van Santen et al., 2002).

There are other barriers that may contribute to nonadherence with physical regimen. According to the CDC report (Centers for Disease Control and Prevention, 2011), the most commonly reported barriers to physical activity include perceived lack of time, fear of injury, limited or unfamiliarity with resources, lack of motivation, lack of enjoyment with exercise, low self-efficacy for exercising, and lack of support. For people with chronic pain, additional pain-related factors such as fear of pain exacerbation and perceived physical limitation may need to be considered (Bair et al., 2009; Vlaeyen & Linton, 2000). Incorporation of treatment approaches that address these factors that seem to lead to compromise patient adherence are needed to improve patients' engagement in therapies and improve outcomes of chronic pain treatments. We will now review three types of approach that can improve treatment engagement of chronic pain patients: Education, Implementation Intensions, and Motivation Enhancement Therapy (MET).

Education

Active participation in treatment process required in chronic pain rehabilitation is quite different from the general medical care, where patients tend to be a passive recipient of treatment. Thus, it is perhaps not surprising that some patients hold an expectation that treatment should consists of something being *done to them* by clinicians, rather than *their taking initiative* to acquire skills and actively engage in the therapeutic process. This paradigm shift is critical in fostering patients' willingness to commit and actively engage in the treatment program. Such chronic pain education includes a range of materials but it generally targets (1) pain and related symptoms are not something to be cured but to be managed, (2) "hurt" is not the same thing as "harm" (i.e., tissue damage), and (3) self-management approach is effective. Clinicians can present research findings in layman's terms to help patients understand how chronic pain differs from acute pain. In particular, many patients (the lay public, and many health care providers as well) believe that pain reflects the presence and progression of physiological damage. It may be particularly helpful for patients to lean that pain severity and degree of structural damage are not necessarily correlated (Baranto et al., 2009; Blankenbaker et al., 2008; Borenstein et al., 2001; Carragee et al., 2005; Dunn et al., 2014; Jarvik et al., 2005; Link et al., 2003). Establishing appropriate expectations and goals provided through information serves as a foundation of successful pain rehabilitation. Some examples of educational materials for chronic pain patients are listed in Table 14.1.

Research evaluating the effect of patient education for improving treatment engagement by chronic pain patients is limited, because education is typically a part of the more comprehensive rehabilitation program. However, available evidence is encouraging for education helping adherence in chronic pain patients. For example,

Table 14.1 Educational components

• Concept of chronic pain
– What is chronic pain?
– How is chronic pain different from acute pain?
– "Gate control model": Pain isn't just one thing!
– Hurt vs. Harm
– Common myths about chronic pain
• Treatment options for chronic pain
– Medications
– Procedures
– Information
– Exercise
– Coping skill training
– Rationales for multimodal approaches
– How effective are they?
– Can we "cure" chronic pain?
• Strategies to cope
– "but I hurt too much" what to do?
– Pain vs Suffering
– Habit change
Goals
What to expect

an education program that aimed to help patients understand their pain condition and "demedicalize" their pain has been found to reduce pain-related fear and catastrophizing tendency (de Jong et al., 2005). When patients with neck and low back pain received information regarding nonpharmacologic information, they showed greater adherence with physical regimen (Escolar-Reina et al., 2009). Setting expectations and goals prior to starting exercise program for low back pain patients also appears to promote adherence with the regimen (Coppack, Kristensen, & Karageorghis, 2012). Further studies are needed to delineate the effects of provider-patient collaboration in setting expectation of active engagement on treatment adherence.

Volitional Approach: Implementation Intentions (IIS)

The idea of implementation intentions (IIS) aims to address how to fill the gap between peoples' intentions and goal attainment, that is, the imperfect relationship between intentions to perform a certain behavior and actual behavioral engagement (Gollwitzer, 1993). The gist of IIS is that successful goal achievement is facilitated by a second act of willing that furnishes the goal intention with an if-then plan specifying when, where, and how the person will instigate a response that promotes goal realization. Stated in another way, IIS involves action plans with practical "if-then" contingencies that spell out in advance how one may strive for attaining the behavioral goal. Thus, IIS encompasses a process of identifying potential barriers and situations and planning potential responses via resource findings and problem solving (Gollwitzer & Sheeran, 2006).

Implementation intensions are not the same as goal intention; goal intention is the focal point of the pre-decisional phase (e.g., "I want to do physical exercise"), whereas implementation intensions refer to the action and the post-decisional phase (Gollwitzer, 1993). IIS typically involves two types of planning: action and coping (Belanger-Gravel, Godin, & Amireault, 2013). Action planning involves determining when, where, and how to do the target behavior, and coping planning offers a series of problem-solving exercises that work by teaching common barriers, identifying potential barriers to maintain the physical activity, and then explore options to overcome them. As noted earlier, common barriers that lead to poor engagement in becoming more active include (Centers for Disease Control and Prevention, 2011) (1) beliefs that there is not sufficient time, (2) pain flares up after exercising, (3) family/friends are viewed as not understanding or are not supportive, (4) exercise is boring, and (5) no resources are available to perform exercise. IIS can utilize the problem-solving strategies or skill trainings that are commonly provided in the CBT aspect of the rehabilitation.

As a first step, patients can learn a general strategy pattern of problem-solving (Nezu & Perri, 1989) by addressing some simple example problems. In this exercise, patients are asked to specify and clarify specific problems. For each problem, patients are asked to generate as many potential options as they can, no matter how implausible or ridiculously impossible they may seem. Then the patient in collaboration with the therapist can systematically evaluate the feasibility and potential consequence of each approach. Based upon the evaluation, the patient rank orders the options and is encouraged to start trying one at the time from the highest ranked solution.

Similarly specific behavioral skill training may help address barriers. For example, self-management skill training for pain flare-ups, communication, and social skills training, and stress management are commonly provided as a part of the multimodal pain rehabilitation (Okifuji & Turk, 2013). IIS can take advantage of such skill training by helping patients to apply them to specific barriers by adding the skills to develop various if-then scenarios, using the problem-solving approach, and developing action plans.

Knowing available resources and feeling comfortable using them also may aid expanding patients' ability to engage in activation. Therapist and patient can work together to identify what resources are available and accessible for the patient. Then, various if-then situations can be applied to help the patient develop action plans; for example, patients may develop a plan for going to a certain indoor facility to walk when it is snowing, or ways to combining chores and walking to save time.

Table 14.2 Examples of IIS Outlines for specific barriers to activation therapy

Barriers	Outline
Time Management	• Clarifying values of exercise • If-then problem solving and action plans – If there is not enough time to exercise because… – Apply problem solving – Develop action plans • Combating procrastination – How procrastination happen – Apply problem solving – Develop action plans
Flare-ups	• Flare-up Management – What can we do – Skill training for flare-up management – If-then exercise – Develop action plans
Support from others	• Interpersonal Effectiveness – Effective communication training – Interpersonal effectiveness to improve relation with others – If-then exercise – Develop action plans
Resource management	• Available Resources – What are available within 10 min from home Parks, Recreation centers, Shopping area, Trails • Things that make difficult to stick with regimen – Weather, Pain, Stress, Time, Low motivation – If-then exercise • Develop action plans using available resources

Each person likely has unique barriers to his or her situation. Those unique barriers also need to be identified and addressed in advance, anticipating the most likely difficulties they will encounter in trying to implement planned behavior. Clinicians should work collaboratively with patients to explore emotional, cognitive, and physical cues that are associated with barriers. Examples of IIS outlines are described in Table 14.2.

IIS: Outcomes

The IIS approach has been used to promote the patient engagement to achieve better management in various health-relevant behaviors including eating habits (Adriaanse, Vinkers, De Ridder, Hox, & De Wit, 2011), addictive behaviors (Webb, Sniehotta, & Michie, 2010), smoking (Armitage, 2008), cancer screening behaviors (Browne & Chan, 2012), vaccination (Milkman, Beshears, Choi, Laibson, & Madrian, 2011), and dental flossing (Schuz, Wiedemann, Mallach, & Scholz, 2009). A meta-analysis of 94 studies (Gollwitzer & Sheeran, 2006) found that implementation intention formation had a medium-to-large effect on goal attainment ($d+=.65$). IIS have also been incorporated in a number of trials aiming to activate people with or without health concerns. IIS has been shown to be effective for improving physical activity levels in healthy young adults (Prestwich, Perugini, & Hurling, 2010), sedentary women (Arbour & Martin Ginis, 2009), obese elderly people (Belanger-Gravel, Godin, Bilodeau, & Poirier, 2013), cardiac patients (Sniehotta, Scholz, & Schwarzer, 2006), and diabetic patients (Thoolen, de Ridder, Bensing, Gorter, & Rutten, 2009). The meta-analytic review of the implementation intentions on physical activity from 24 studies shows encouraging results with a pooled effect of .31 at post treatment and .24 for follow-up visit with a higher effects shown with a program involving specific barrier management (Belanger-Gravel, Godin & Amireault, 2013).

An interesting question is then, what is it about planning that helps patients to actively engage in therapeutic effort? The studies investigating this question, in regard to physical activity, consistently suggest that improved self-efficacy for the target behavior is one of the most critical factors (Barg et al., 2012; Darker, French, Eves, & Sniehotta, 2010; Fleig, Pomp, Schwarzer, & Lippke, 2013; Koring et al., 2012; Lippke, Wiedemann, Ziegelmann, Reuter, & Schwarzer, 2009). Additionally, IIS also seems to aid in making the target behaviors more habitual (Verplanken & Faes, 1999). When behaviors are newly adopted, it requires active monitoring and regulation; if a behavior is performed frequently, then its execution becomes less resource intensive (Verplanken & Melkevikb, 2008). Being able to problem-solve barriers seems to increase the habit strength, thereby enabling people engage in the target behaviors more frequently. Although there is no study yet to show the effectiveness of the IIS approach for chronic pain patients, the available evidence strongly suggests that the approach should be beneficial for improving their ability to actively engage in the treatment and maintain their effort to perform self-management skills and is worth systematic investigation.

Motivation Enhancement Treatment

Motivation Enhancement Therapy (MET) is a therapeutic method that targets patients' motivation, originally developed by William Miller and his colleagues (Miller, 1983) for treating people with problem drinking to enhance their motivation to change their problem behaviors. MET is a problem-focused, therapist-directed approach aiming to help patients enhance their commitment and motivation for treatment. MET offers a collection of therapeutic techniques to help patients (1) clearly recognize their problems, (2) perform a personal cost-benefit analysis of their therapeutic or counter-therapeutic behaviors, (3) develop consistency between their therapy goals and motivation, and (4) internalize motivational thoughts via improved self-efficacy. Indeed, that self-efficacy beliefs play an important role in motivation is not new. Over 30 years ago, Bandura and Cervone (1983) demonstrated that greater self-efficacy led to greater efforts for goal attainment. The improvement in self-efficacy for the target behaviors appears to play a key role in promoting behavioral change via MET (Chariyeva et al., 2013; Walpole, Dettmer, Morrongiello, McCrindle, & Hamilton, 2013).

A major goal of MET is to help patients attain a self-driven motivation to commit and engage in treatment. The primary steps of the MET include (1) clarification of problems and goals, (2) understanding of the pro vs con balance in their choices, and (3) development and internalization of self-motivational statement. These steps will be provided in the supportive and empathetic therapeutic environment. MET is broadly grounded in the Rogerian tradition of psychotherapy (i.e., empathy, reflection, therapist unconditional positive regard) in conjunction with behavioral analyses. It is inherently patient-centered, requiring clinicians to maintain nonjudgmental, nonconfrontational demeanor. Clinicians create the empathetic therapeutic environment where patients feel that they are heard and understood. It is important to define empathy here, as empathy is sometimes misunderstood as having to agree at all cost. Empathy should be expressed as understanding and acceptance without any influence of clinicians' own view on the matter. Empathetic listening, one of the most important approaches for MET, is achieved with reflective comments to patients' thoughts and feelings, even if they reflect maladaptive behaviors and cognitions. Value judgment by clinicians often leads to defensive responses from patients who may discount the importance of their problems. When patients cannot appreciate the need to do something about their problems, it is impossible to motivate them to engage in necessary treatment process. It is worth considering each of the MET steps and expand our discussion of approaches to create a productive therapeutic environment.

Step 1. Recognition of problems and clarification of goals: Patients' expectations for pain treatment vary greatly. Some people may have unreasonable expectation, for example, to have a complete resolution of pain that they have lived with for decades. Some hope to manage pain reasonably so they can do things they have not been able to, or participate in life activities they would like to. Some are not sure what to expect. Although expectations may differ from person to person, most people commonly have very little idea of what should happen to fulfill their expectation. Thus, in this step, clinicians guide patients to understand their current status and what they expect to achieve via treatment. Such directed questions can help them see the discrepancy between how they are now and what they want. For example, a patient may want to feel better by becoming more able to do housework, whereas he spends most of his day reclining and resting because he is afraid of making his pain worse. Realizing that there is a gap helps patients start thinking what they need to do to achieve what they want. Furthermore, it provides an opportunity to develop a specific plan. It is not uncommon to see patients, after years of deactivated lifestyle and disability, feel helpless and not know what they can do. Clarification of expectation and goals help explore options as to what can possibly be done.

It is important to note that open-ended questions are much more effective in highlighting the individualized phenomenology of chronic pain and their goals. Although open-ended questions are more time consuming than pointed yes/no questions, the former tend to help patients to have deeper understanding of the issues at hand. Examples of questions to address problems and goals are listed in Table 14.3.

Table 14.3 Example questions to help patients identify problems and goals

Problems
• How is your life now different from your life you had before your pain began?
• How is your pain impacting your ability to do things you want and enjoy life?
• What do you miss most about your life before the pain began?
• What change would you like to see most?
Goals
• What are you doing now that may help you make things better for you?
• What do you think you or others could do to help your goals come true?
• What change would you like to see most?
• What would your life look like if your pain is managed batter?

Step 2. Decisional Balance: Understanding the need for behavioral change does not necessarily lead to the willingness to commit oneself to do the necessary things. It is particularly difficult for patients with chronic pain facing the multimodal, interdisciplinary rehabilitation. Activating rehabilitation requires acquisition of various pain management skills that needs to be practiced daily. This further requires modification of lifestyles and habits; it takes a lot of time and effort; despite an onerous "investment," improvement is typically slow and gradual. Thus, a sense of frustration that treatment requires the upfront "cost" with very little immediate return is common and can reduce the initial excitement that patients may have had for the treatment. The decisional balance is an exercise in which patients explore "all sides of the story" by developing a personal "balance sheet" comparing both advantages and disadvantage of committing to therapy as well as not committing. Each therapeutic activity has both pros and cons; for example, activating exercise can help one become stronger, toner, and fitter, although it takes time and effort and may make one feel sore afterwards. So there are both pros and cons of committing to exercise. How about not doing exercise? The advantages of not doing exercise would include being able to rest more, not having to take time, and not having to worry about a flare-up in response to exercise. They may also identify some "cons" of not doing exercise, such as not gaining health benefit and maintain body weakness (see Table 14.4 for more comprehensive example). The decisional balance can be extended for a range of life domains that are affected by chronic pain and benefit from change. By clarifying the pros and cons of their own therapeutic efforts vs not putting efforts can help diminish the sense of ambivalence about their commitment. Furthermore, understanding the "cons" aspect, can help the clinician to identify their particular needs and weakness and see what areas of coping and other supportive care may be necessary to help patients achieve their goals.

Table 14.4 Decisional balance

Not trying to become active (status quo)		Trying to stay active (treatment engagement)	
Good things	Not so good things	Good things	Not so good things
• I won't get tired or sore • I don't have to spend time	• I don't feel that good anyway even if I don't exercise • I may get even more deconditioned • I will have greater chance of staying disabled • Can't participate in social things • More depression • May gain weight • Will never be able to go back to work	• I will gain physical strength • The stronger I get, the more I can do things with friends and family • I feel better about myself • I feel more independent • I may become less disabled and less burden on family • I may be able to lose weight • Eventually, it will help my pain	• Pain may get worse right after • I may feel time pressure

Step 3. Eliciting Self-Motivational Statements: Self-motivational statements are statements prompted from patient, helping them reflect on their intention to commit to action. They act as a consistent match between their predetermined goals and their motivation to engage in needed tasks to achieve the goals. Developing this consistent pattern can be a big challenge particularly for chronic pain patients whose dysfunctional cognitive and behavioral styles have become habitual as their standard mode due to the chronicity of the problem. For those people, it is important that therapy guide them first to start seeing the connection between engaging in treatment and therapeutic benefit. For example, a question like "What will make engaging in exercise easier for you?" "What do you think would work for you if you decide to try the therapy?" may serve as the beginning point. Additionally, therapists can direct patients' attention to the past achievement in successfully committing themselves to engage in something—by asking them "What was it like when you tried ….?" "What do you remember when you were able to ….?"

Negative thinking is common in chronic pain patients who may devalue the importance of their past accomplishment. Playing up the value of past success with positive reinforcement can be a powerful tool to foster self-efficacy for greater engagement in self-management of pain. Similarly, it is important that any statement relevant to the self-motivational framework, however trivial it may be, is recognized and reinforced. Questions to elaborate further such as "How were you able to do that?" "How did you overcome…?" can be asked to provide the basis of reinforcing the past success whereas questions such as "How do you think you could start trying…?" "How do you think you can enjoy this commitment?" can further clarify the motivational statement. It is also important to remember that clinician's encouraging responses can significantly impact patient's motivation.

Simple comments such as “I think it’s a wonderful idea,” “I see how important this is to you,” and “You have a point there,” can help the process of eliciting self-motivational statements conclude in a positive and productive manner.

Developing and Maintaining Productive Therapeutic Environment for MET

As we discussed above, supportive and empathetic environment is critical to succeed in MET. However, such environment should not be mistaken as a synonymous to blindly supporting patients’ wishes and beliefs. Rather, such an environment should serve as a basis to help patient argue for engaging in therapeutic effort. It is unfortunately too common to see that clinicians argue for the importance of their committing in therapy whereas patients resist by presenting excuses or arguing why it should not work. Although well intended, arguing against patients for therapy rarely works. The critical stance of MET therapist is that he or she stands on the same side of the argument, thereby supporting patients’ motivation to get better.

To reiterate, engaging in the rehabilitative effort for chronic pain patients is not easy. It requires a lot of time commitment, conscious effort to change the way they appraise the pain and associated dysfunction, maintenance of exercise, and repeated practice to develop adaptive coping skills. Sometimes, the program may involve tapering of medications that patients relied on for many years, leading to increased anxiety. Thus it should not be surprising to see patients’ resistance to treatment. Such resistance may come in many forms. Examples of common forms of resistance are listed in Table 14.5.

Table 14.5 Examples of resistance presentation

Presentation	Examples
Arguing	Challenges the validity of information or therapist’s expertise “Every physical therapy I did made my pain worse, so it can’t possibly help. You are a psychologist, so you can’t really know if it works”
Denying	Denys or refuse to admit problems “I don’t know why you think I can’t relax. I lay down on a sofa and watch TV all day”
Minimizing	Minimizes the benefit of engaging treatment “I can now walk 15 minutes in the water but my pain is still awful and I can’t do anything”
Blaming	Blames others for the problem and does not acknowledge any responsibility for him/herself “My sister just stressed me out so bad that I felt totally sick. I couldn’t do anything for 3 days”
Disagreeing	Disagreeing with a treatment direction with “yes, but” response “Yes I know I should practice the skill, but it’s just so boring”

One of the hallmarks of MET is that a clinician does not fight resistance but rolls with it. There are several specific techniques that a clinician can employ to work with resistance.

Reflection

When using the reflection technique, clinicians express their acknowledgement of the patients' comments that reflects resistance in a nonconfrontational manner. The simplest way is to rephrase what the patient said in a way that assures the patient that she is heard and understood without any value judgment. For example, a patient may argue that she is too tired to do the home exercise program after coming home from work, the clinician may simply responds "It is hard for you to work out after a long day."

Alternatively, the clinician may use the exaggerated form of reflection by intensify the hardship of the comment to help her reevaluate her own statement. For example, the clinician may respond to the above comment, "I understand that you feel it is absolutely impossible to do the exercise after work." One must note a caution here; such amplification may, depending on how it is said, sound ridiculous or sarcastic criticism ("Geez, you really can't do it, can you?"). If the patient cannot feel the empathetic support from the clinician about her struggle, the amplified reflection will simply encourage further resistance and be counterproductive.

Another way to use the reflection technique is to present two sides of the difficulty raised. The assumption here is that the patient's statement represents the conflicting feeling that the patient has trouble engaging in treatment effort even though he or she really wants to get better. Double-sided reflection points to both of these underlying feelings with one ends of the reflection to support the motivational side. With the example above, the clinician may respond, "On one hand, you find it very difficult to do the exercise after work, and at the same time, it's frustrating because you really want to do it."

Clinician may also use the reflection technique and then add a little twist by reframing the patient's statement. Initial reflection is typically presented as an empathetic agreement, affirming that the patient is well heard. Then the clinician offers a reframed perspective on the same subject in a non-threatening manner. For example, the clinician may respond to the above statement: "You have a point there. It is really hard to work out after a long day. It's so frustrating for you not to be able to do the exercise, even though you want to find a way to do it and move forward with your program." This subtle change in the direction can help the patient move further towards change while maintaining the therapeutic relationship.

Such twist can be applied to defuse a focus on non-self-efficacious belief that is common in chronic pain patients. Often times, those patients feel helpless, overwhelmed, and demoralized by perceived demands made by the treatment program. When this happens, they tend to magnify the difficulties of treatment engagement which become their sole focus when they think about their rehabilitation. Shifting focus can provide the opportunity to defuse such intense focus and start thinking more flexibly about options and being more resourceful and resilient in contrast to being passive, reactive, and helpless in the face of their symptoms and life circumstances. For example, the therapist may respond to the above statement, “I see that it has been very difficult for you. Pain and low energy really impact you there. Tell me more about things you wish to be able to do in your life.”

Emphasis on Personal Choice and Control

In addition to the supportive empathy, respecting personal choice and control for patients is critical in the MET approach. The literature suggests that patients resist therapy when they perceive a loss of, or a threat of losing, personal choice and control (Brehm & Brehm, 1981). Resistance further intensifies as the importance of the threatened freedom is greater, often leading patients to engage in something counteractive to sabotage the therapeutic effort. Needless to say, it is basically up to each patient whether or not he or she wants to take an advantage of therapeutic opportunity. However, it is not uncommon that well-meaning clinicians push the therapeutic agenda and demand their compliance. This approach unfortunately reinforces the passivity of the patient, rather than helping them actively engage in treatment effort. In MET, it is essential that the affirmation of personal choice and control be reminded throughout the course of treatment that it is ultimately their choice to follow through the treatment recommendation. For example:

Patient: All of you keep telling me to do the home program, even though I keep telling you it’s just too hard to do it after a long day at work.

Clinician: It is your choice, of course. It is your health after all. We can only make the recommendations and the rest is up to you.

Such interaction can help the patient understand that the choice is theirs; at the same time, it fosters a sense of responsibility for the patient to commit to the treatment regimen.

MET Outcomes

The accumulated evidence suggests that MET facilitates change to reduce a range of problem behaviors that are chronic and requires self-motivated engagement in treatment, such as smoking (Burris, Perez, Evans, & Carlson, 2013), problem drinking (Foxcroft, Coombes, Wood, Allen, & Almeida Santimano, 2014; Vasilaki, Hosier, & Cox, 2006), problem gambling (Grant, Donahue, Odlaug, & Kim, 2011), eating disorders (Weiss, Mills, Westra, & Carter, 2013), and high-risk sexual behaviors (Rongkavilit et al., 2014). MET has also been shown to help people with various health conditions engage in greater physical activities for their health; the populations include those with heart failure (Brodie & Inoue, 2005), diabetes (Chlebowy et al., 2014), and spinal cord injury (Latimer-Cheung et al., 2013). A recent systematic review (O'Halloran et al., 2014) indicates that the MET approach results in significant improvement in physical activity levels in people with chronic health conditions, reflecting its effect on treatment engagement.

MET is often not a stand-alone treatment but an introduction and motivational facilitator for more intensive rehabilitative treatments. MET principles can be incorporated with more traditional rehabilitative programs. A number of studies have shown that when MET is incorporated into a multimodal rehabilitative program, patients tend to improve their pain and functional status, suggestive of improved treatment engagement (Ang et al., 2013; Tse, Vong, & Tang, 2013; Vong, Cheing, Chan, So, & Chan, 2011). Research specifically investigating adherence in chronic pain treatment is scarce at this time. However, the available evidence suggests that MET helps opioid adherence and reduce the risk of opioid misuse in elderly chronic pain patients (Chang, Compton, Almeter, & Fox, 2015). The results from two studies evaluating the benefit of combining MET with activation exercise therapy for low back pain (Friedrich, Gittler, Halberstadt, Cermak, & Heiller, 1998; Vong et al., 2011) also suggest that it improved exercise compliance and attendance to sessions. There are other trials ongoing that plan to specifically examine adherence with the regimen in various chronic pain conditions (Ang et al., 2011; Mertens, Goossens, Verbunt, Koke, & Smeets, 2013).

Conclusions

Chronic pain is a significant public health problem that adversely impacts millions of people and at huge societal costs. Chronic pain is a complex multifactorial phenomenon that often requires multimodal approach to address the biomedical, psychosocial, and physical domains that interact with one another. One of the critical requirements of such treatment is patients' active engagement in therapy. The paradigm shift from being passive recipients of treatment to active participants in their own self-management is a key for the treatment success; yet it is difficult to achieve. Adherence with treatment self-management regimens in chronic pain is generally poor.

As a means to improve treatment engagement for chronic pain patients, we reviewed education, IIS, and MET. The empirical evidence supporting those approaches in improving treatment engagement is quite promising but still at the preliminary stage. The field is still young and there are a many research needs to better understand the mechanisms underlying these approaches and the characteristics of patients who are most likely to benefit. Furthermore, future research needs to investigate how improving treatment engagement impacts overall clinical benefit. This line of research should help us ultimately develop the optimal clinical strategies to help patients manage their pain effectively.

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