

Insight-motivated Learning: A Model to Improve Stress Management and Adherence in Chronic Health Conditions

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Abstract

Patients' nonadherence to prescriptive behavioral changes presents a frequent limitation in the treatment of chronic illness and serves as a focal point for educational programs and clinicians' support of patients' self-management. Recurrent emotional stress can compromise adherence. Insight-motivated learning (IML) is a holistic model in which personal insights form a basis for understanding recurrent stressors and related responses. Case examples, derived from coaching

clients toward healthy lifestyles and monitoring the progress of patients with fibromyalgia, suggest that explorations of the physical, mental, spiritual, and emotional dimensions of wellness and insight-inspired solutions enhance self-efficacy and improve stress management. The field needs empirical studies to assess the capability of IML to improve self-management of treatment-resistant health conditions and promote long-term, healthful lifestyle change.

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Chronic disease poses an increasingly heavy burden on health-care resources, and general agreement exists that faulty lifestyles are a major contributor to this crisis. Paradoxically, most people visiting a clinician's office are well-aware of health risks associated with habits such as smoking, a sedentary lifestyle, and imbalanced diets, yet they resist changing their routines. This resistance manifests as nonadherence to treatment-directed goals and actions, a response that drastically curtails good clinical outcomes on a global scale. In developed countries, only 50% of patients with chronic illness follow treatment recommendations.¹ Examples include diabetes, metabolic syndrome, breast cancer, and HIV treatment. Less than 50% of US adults follow dietary recommendations.²

Adherence is a more general and less pejorative term than

compliance or *noncompliance*. A recent Cochrane review indicates that "Current methods of improving adherence [to treatments] for chronic health problems are mostly complex and not very effective; so the full benefits of treatment cannot be realized."³ Because nonadherence is so pervasive, strategies to improve adherence may improve patients' health and well-being significantly.

Why do patients resist prescriptive actions? Clearly their reasons are complex, reflecting intentional as well as unintentional factors. Behavioral research suggests that people fail to follow prescriptive actions when they do not understand potential benefits, when they do not believe they can change, or when they lack an effective plan and reliable social support. Patients may feel uncomfortable about clinicians' recommendations because they do not feel understood⁴ or they feel they do not have the time or energy to make the necessary lifestyle changes due to recurrent work-family daily pressures.⁵

Limitations of Traditional Education Programs for Patients

Systems-oriented chronic care now considers patients' self-management and support of that self-management to be key elements of that care,^{6,7} and it is logical to focus on self-management education to improve clinical outcomes. Beyond the didactic presentation of information and a disease focus, patients' education can emphasize learning strategies and improved self-management.⁸ Key elements in self-management of chronic disease include a strong sense of self-efficacy, a feeling of empowerment, and effective emotional functioning including management of negative emotional states.⁹ Indeed, the education will have limited impact unless it addresses patients' immediate concerns and reflects their lifestyles.^{7,10} The vast array of information available to the public and the multiple resources available to clinicians have not been

enough to alleviate nonadherence.¹¹ Clinicians may not appreciate how difficult it is to change behavior. Upon encountering patients' resistance, a temptation exists to repeat information or advice "until they get it." Not only is this response ineffective, but it also predicts negative clinical outcomes.⁴ Patients' psychological stress can make a significant contribution to refractory health problems and unhealthful lifestyles.¹² It is worthwhile to examine how stress can impact patients' adherence.

Chronic Stress: A Barrier to Behavioral Change

Beyond its role as a risk factor for multiple diseases, studies indicate that chronic psychological stress (distress) presents a barrier to patients' compliance and self-management. For example, researchers found high levels of stress and medication nonadherence to be risk factors for stroke.¹³ Stress contributed to nonadherence for patients with a history of hypertension.¹⁴ In managing rheumatoid arthritis, patients' perceived stress levels, rather than pain intensity, were more accurate predictors of the degree of negative orientation to their illness.¹⁵

Although the impact of repeated stressors can be highly heterogeneous, challenges of day-to-day living frequently become recurrent energy drains. Unless effectively managed, chronic stress can prevent adoption of more healthful activities. Medical practitioners have used extensive research and behavioral theory to develop and amplify strategies to manage the stages of the stress response. Addressing routine stressors directly interrupts the stress response upstream.¹⁶

Multidisciplinary education programs for patients often recommend stress management techniques, including physical exercise, progressive relaxation, mindfulness, meditation, prayer, and social support. Assertiveness and effective communication skills are also beneficial. Though their efficacy is well-established, these modalities often do not acknowledge patients' immediate concerns or improve their innate problem-solving skills to resolve recurrent life issues that initiate chronic stress patterns. It is noteworthy that these education programs rarely explore the spiritual dimension in discussions of stress.¹⁷ To have a lasting impact, effective stress management needs to address the interaction of body, mind, spirit, and emotions, in which the combined effects exceed that of a single wellness domain.¹⁸ In this context, personal insights offer a practical approach to improve management of chronic stress while encouraging patients' self-efficacy through mind-body explorations.

Learning Through Insights

As a starting point, it is important to realize that self-management is inevitable; the patient is already dealing with her or his condition on a daily basis. Insight learning can augment this task because insights are personal constructs by which individuals can discern and resolve problems. Patients' education, however, generally neglects this powerful problem-solving strategy.

Chu and MacGregor recently reviewed the current status of insight problem solving.¹⁹ In addition to analytical problem solving (monitoring, planning, evaluating, processing), insight learning represents a second, major problem-solving strategy. Most people have experienced flashes of insight, as the result of

which they have solved previously baffling problems.²⁰ Insight problem solving progresses through (1) an impasse where familiar problem-solving solutions do not work; (2) an incubation period without further conscious work on finding a solution (postimpasse restructuring); and (3) conscious awareness of new solutions, characterized by a subjective "Aha!" experience.²⁰ During the incubation phase, the subconscious evaluates weak or diffuse associations. Different neural processes characterize each of these stages, along with preferential right hemisphere activation.^{20,21}

Mechanistic studies typically employ highly structured environments, and researchers have done little work to study insight learning in a clinical setting. Nonetheless, certain findings are relevant. Insight learning occurs when problem solvers stimulate neural pathways that permit them to tap elusive new connections.²⁰ Mental preparation can improve insight problem solving, such as directing attention inward and reducing visual input to increase the brain's readiness to detect weakly activated solutions.²² Thus a positive state of mind favors insight problem solving.²³ This state, in contrast to externally focused attention, is characterized by looser connections between single words and concepts or visual perceptions and by an increased readiness to detect remote connections.^{22,24} Studies suggest that reduced anxiety and positive affect (possibly enhanced by relaxation and adequate sleep), and humor may promote this process as does reduced visual attention for details (big picture).^{23,25,26} Directing attention to a particular aspect of a problem with cues (environmental hints), possibly provided by a clinician or case manager, also can improve success with insight solutions.¹⁹

INSIGHT-MOTIVATED LEARNING: A MODEL TO ENHANCE PATIENTS' ADHERENCE THROUGH STRESS MANAGEMENT

The Principles of Insight-motivated Learning

The authors propose that insight learning provides a viable approach to augment a patient's daily self-management of her or his health condition, especially with regard to stress management. This hypothesis, illustrated by the case examples described below, awaits empirical testing. Insight-motivated learning (IML) derives from the authors' experience: 12 years of coaching women

Table. Principles of Insight-motivated Learning

1. Acknowledge that patients have the innate capacity to discover insights.
2. Promote insights as a motivation for behavioral change via insight-inspired solutions.
3. Provide guidance for insights and self-determined goals rather than advice or solutions.
4. Emphasize empathy, support, and acceptance of patients' choices and discovery process.
5. Employ active listening, reflecting patients' thoughts and feelings.
6. Support patients' evaluation of actions without judgment.
7. Encourage patients to explore ramifications of energy drains within the physical, mental, spiritual, and emotional dimensions of wellness.

toward healthy lifestyles and formerly monitoring progress of patients diagnosed with fibromyalgia at a fibromyalgia rehabilitation center during 4 years as a consultant.

The Table summarizes the key principles of IML. Based on observations of how patients and coaching clients with fibromyalgia successfully change their behavior, the authors suggest that these principles can support patients' self-inquiry and help them deactivate stressors beyond those that they first acknowledge. Insights, as fresh perspectives and new understandings, are prerequisites for insight-based solutions because they provide an avenue for transformative thinking.

IML seeks to improve adherence by supporting patients in addressing recurrent, stressful issues (energy drains) before focusing on therapeutic goals. On one hand, immediate entrenched stress patterns will affect the degree to which patients can focus and act on clinical advice and recommendations; for example, dealing with spousal recriminations or overwork. On the other hand, patients can move beyond this limitation as they derive new awareness of a stress-behavior chain, the nature of a given stressor, associated perceptions, recurrent thoughts/emotional patterns, and their habitual responses.¹⁶

IML supports the wellness paradigm. When patients identify energy drains, they frequently focus on overt stress-response symptoms (eg, overeating, a physical domain issue). With encour-

agement, they gradually can trust their abilities to explore the rich world of thoughts (mental domain), life purpose and meaning (spiritual domain), and feelings (emotional domain). Wellness combines all of these factors, and changing an issue in the physical plane, without addressing other dimensions, drastically curtails results.¹⁸

The IML model comprises a cyclic process that provides multiple opportunities for patients to obtain new insights within the wellness paradigm as presented in the Figure. A case example focused on weight loss illustrates the six steps as follows.

Step 1: Identify an Immediate, Recurring, and Specific Issue Blocking Progress Toward the Presenting Problem

For effective self-management support, health care professionals do not define the patient's immediate problems, goals, and outcomes. They are the patient's prerogative.²⁷

Case Manager (CM): What is one recurring issue that is blocking your progress?

Patient (P): I stop at a convenience store and eat junk food in my car on the way home from work. I have no self-discipline.

Step 2: Acknowledge and Evaluate Prior Strategies to Generate New Awareness (New Insights)

Acknowledging positive actions previously used to resolve the self-selected problem can prove to individuals that they are capable of taking action to improve their lives. Evaluating without judgment why those strategies were ineffective can reveal new possibilities when personal intuition, wisdom, and creativity come into play.

CM: What are previous strategies you used to deal with this issue? What worked? What didn't work?

P: I tried to take a healthy snack to eat on the way home but I ended up eating it at work.

Step 3: Consider the Possibility That Even a Small Fraction of the Immediate Problem Is Not Due to a Lack of Willpower

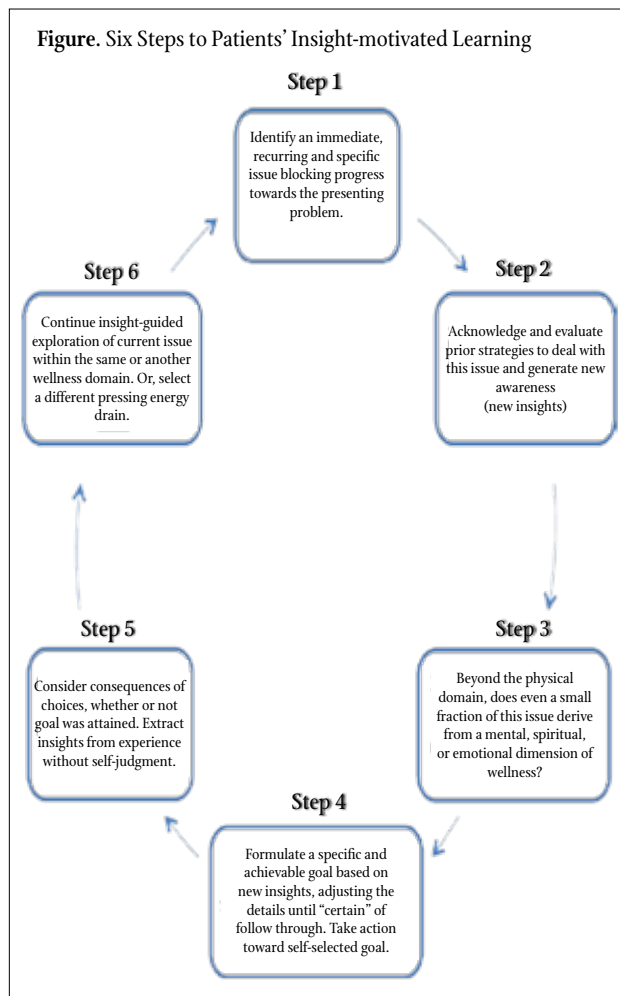
Could an underlying factor to this issue exist that the patient has overlooked? This inquiry can help the patient see the situation in a new light (further insight building). Beyond the physical domain (eg, nutrition, physical fitness, rest, and sleep), do other wellness domains come into play: (1) mental—negative thoughts, assertiveness, issues around self-esteem, and self-care; (2) spiritual—life meaning or connection to a higher power; or (3) emotional—recognizing emotions—anger, fear, guilt, or loneliness—or expressing them appropriately?

CM: Even if just 1% of this issue is not about your weight, willpower, or self-discipline, what could it be about?

P: I have a lot of stress in my job. I am expected to do the work of three people. It's exhausting just trying to keep up.

Step 4: Formulate a Specific and Achievable Goal Based on Reflection and New Insights

Patients use new insights and a fresh perspective to develop a goal unique to their experiences and their self-discoveries. Self-



selected lifestyle goals encourage personal commitment because they help promote self-efficacy.²⁸

CM: Do your insights suggest a new approach to deal with this immediate problem?

P: I didn't realize how exhausted I was with the demands of my work. Overeating can't be helping. . . it's adding pounds. . . and the stress is still there.

CM: With your new insights what would you like to focus on going forward?

P: I'd like to focus on my stress level.

CM: How do you think you could do that?

P: My friend does slow breathing to relax. I plan to do a few minutes of slow breathing in my car when I leave work and before I head home—twice this week.

Patients can adjust specific details of a goal (eg, shorten the time or the frequency of the activity) to help them become confident.

CM: On a scale of 0-10, with 10 being "absolutely certain" and 0 being "not certain at all," how certain are you that you will follow through?

P: I'm an "8" for this goal.

Step 5: Follow-up: Consider Consequences of Choices and Whether or Not the Goal was Attained

Patients evaluate results of their action or inaction because they can derive useful insights from either outcome. This step entails a "guilt-free" evaluation. No "right" or "wrong" choice exists. Such an evaluation of consequences assists patients in moving beyond the limitations of self-criticism, fear of failure, and "nonadherence," which connotes an external judgment.

The CM's follow-up at the end of the contracted interval can provide additional encouragement.

CM: How did you do with your goal? Remember our discussion does not recognize an "apparent" failure; it only provides feedback. We are looking for new insights to help you move forward.

P: On the two days I did the slow breathing, I felt much calmer and didn't need to eat as much junk food on the way home. But I still ate some. I realized that I am very angry and am trying to stuff my anger with food.

Step 6: Insight-guided Exploration of Current Issue

Following a self-evaluation based on insights gained, patients may choose either to explore a different aspect of the same issue (in another wellness domain) or to select another lifestyle problem. An insight-inspired exploration may not resolve a persistent problem; however, new awareness derived from insights serves as a springboard for exploring a wide range of possible solutions.

CM: You got some powerful insights from following through on your goal. What will you commit to do next week?

P: I am committing to do the slow breathing in my car five days this week. I also want to explore my angry feelings.

Self-Efficacy As an Insight-motivated Learning Goal

As a modality to enhance behavioral change, IML emphasizes new insights that foster new awareness and deeper understanding of choices and their consequences. Self-management to reduce psychological stress promotes self-efficacy, a belief in the ability to make positive lifestyle changes.¹⁶ Thus progress in attaining goals contributes to increased self-confidence and sets the stage for forming additional goals. Furthermore, understanding that actions are the direct consequence of personal choices enhances personal empowerment, a cornerstone for collaborative care and self-management.²⁹

The authors' experience with coaching clients and patients with fibromyalgia suggests that insights can increase self-worth as well as self-efficacy. The IML model acknowledges the creative ability of each individual to discover new understandings of recurring personal problems that act as barriers to health-promoting activities. Insights offer a route to manage stress and counter negative self-perceptions without reliance on external direction. With new awareness, the patient can choose to take a new action beyond self-criticism or self-blame. A growing sense of self-worth can enhance self-efficacy.³⁰

Potential Applications of Insight-motivated Learning

IML may be useful as an adjunct to multidisciplinary approaches for treatment-resistant conditions in which psychological stress is implicated, including functional somatic syndromes (FSS) and long-term weight loss/weight management.

Functional Somatic Syndromes. This cluster of syndromes includes fibromyalgia, chronic fatigue syndrome, and irritable bowel syndrome (IBS), among others. The etiology of FSS is apparently multifactorial. Nonetheless, recent findings suggest that patients with FSS experience an increased incidence of prolonged psychological stress.³¹ Psychosocial factors, including anxiety, persistent personal problems (relationships, employment, legal, and financial problems), and disturbed sleep are independent risk factors for IBS in individuals previously free of it.³² Patients' negative attitudes can impact dramatically the continuation and even worsening of chronic pain.³³ Among patients experiencing widespread musculoskeletal pain, life's prior events altered the hypothalamic-pituitary-adrenal axis, setting the stage for "trigger events," including psychological stressors, that promote symptoms.³⁴ Consequently, IML may play a useful role in ameliorating this response.

Encouraging patients' insights need not require time-consuming interactions with patients. As an example, a 65-year-old female patient, diagnosed with fibromyalgia by a rheumatologist, had experienced intermittent symptoms. She affirmed that she wanted to get better and to experience her former physical well-being. She saw herself as an "organizer" and wanted to return to volunteer work. She noticed that symptoms worsened after "a really bad time" with relatives at a wedding. Her new insight—that her emotional upset was linked to increased musculoskeletal pain and "feeling blue"—helped her recall an insight-inspired solution—that she felt more positive after doing pool exercises. She had stopped the exercises but decided to return to water aerobics to help moderate her stress level and ultimately deal more positively with personal relationships. Her physician had recom-

mended low-impact, moderate physical exercise earlier; however, the patient selected this approach only after she saw it as an effective way to reduce her emotional stress.

Long-term Weight Management. While “overweight” and “obesity” reflect societal, environmental, physiological, and psychological factors, research suggests that psychological stress is associated with long-term risk. Individuals scoring highest for stress and emotion-related eating were over 13 times as likely to be “overweight or obese” compared to those scoring lowest.³⁵ Among women, work-related stress, high job demands, and low job influence were associated with increased weight gain.³⁶ Daily hassles—including work-related problems, interpersonal relationships, and ego-threatening situations—were correlated with increased consumption of high fat/sugar snacks, a reduced frequency of main meals, and reduced vegetable intake.³⁷ In addition, the risk of weight regain increased with weight cycling and eating in response to negative emotions (including depression) and stress.^{38,39} Calorie-restrictive diets and increased physical exercise, in conjunction with behavioral programs, often achieve weight loss for up to 6 months. Nonetheless, eventual relapse and nonadherence are the common experience.⁴⁰ Indeed, after initial success with cognitive behavioral treatment or guided group self-help, most women with excessive weight regained lost weight after 3 years.⁴¹ Ensuing relapses with dieting often lead to feelings of guilt, fear, frustration, or a sense of victimization. Alternatively, health-centered approaches focused on lifestyle attributes that deemphasize eating and food and reveal opportunities for health-promoting behaviors, such as effective stress management.⁴²

Patients need not see themselves as “doing something wrong,” as being “weak willed” or “irresponsible,” after weight regain. IML seeks to minimize self-blame and acknowledges that patients care for themselves as well as possible at a given moment. Using IML, patients use their immediate circumstances as opportunities to obtain new understanding of energy drains rather than focusing on the global issue of weight management/weight loss.

In another case example, a 30-year-old coaching client weighing 250 lbs successfully lost up to 50 lbs using various popular diet plans. She repeatedly regained lost weight, however, when she ended a diet. She confided to “feeling like a failure.” This client was open to exploring an insight-motivated approach to understand and resolve issues around body weight. The client chose to keep an “insight journal” in which she recorded her thoughts, feelings, and any new insights during a 6-day period.

Examples of insights from her 6-day diary included these comments:

I felt guilty about going out to get chocolate; then I felt sad after eating it.

I eat a brownie, a bowl of popcorn, and a helping of spaghetti. I'm not physically hungry at all. I'm eating because I'm vegging out in front of the TV. I'm trying to relax.

Major insights included the following:

Eating is one of the only constants in my life where I can get pleasure.

I eat because I want a break. I have caught myself in the middle of eating and realized I just wanted a break.

From these insights, the patient arrived at these conclusions:
Now I'm beginning to see that food is just something to give me energy. I am not going to make it the only way that I do something special for myself.

I cannot believe the difference in my level of productivity, my ability to listen to myself, my overall attitude, and my ability to know when I'm hungry.

The client had exhausted dieting as a solution to weight management. She sincerely wanted to understand why she could not lose weight and was willing to do the work to find out. The insight journal emphasized thoughts and emotional patterns and became a vehicle for IML. During her introspection, the patient observed how stress triggered overeating. Her insights gave her the opportunity to realize that she was not a failure because she was unable to lose weight on a diet and keep it off. She discovered understandable reasons why she “used” food. This realization was “a huge relief” and gave her the confidence and impetus to continue exploring “real” reasons for her weight issues. With each insight, she became more confident that she could nurture herself in a healthy way.

Potential Benefits of Insight-motivated Learning

Because IML emphasizes patients’ empowerment, it can serve as an adjunct to clinical protocols to strengthen patients’ education. Patients can use IML to augment recommended stress management modalities beyond face-to-face meetings with a clinician. Independent self-exploration with insight learning reflects patients’ increased responsibility for health-related activities and enhances life-long self-management.

The long-term objective remains conversion of a new behavior to a life-long practice, and reiteration of IML offers the opportunity for cumulative positive actions. The field, however, needs empirical studies to determine whether insight learning can enhance stress management; improve day-to-day functioning and symptom management; increase psychological well-being (self-esteem, self-efficacy, mood, and energy level); and improve patients’ satisfaction.

Related research is suggestive. For patients with chronic illness, self-determination of lifestyle goals enhanced perceived self-efficacy.^{6,29} Problem solving approaches can enhance symptom management and quality of life for cancer patients⁴³ and alleviate symptoms of anxiety and depression among healthy volunteers.⁴⁴ Individuals apparently solve problems with insights more readily when they are in a positive mood.²³ Increased, nonjudgmental self-awareness can be an effective stress reduction intervention.⁴⁵

Insight-motivated Learning Differs From Motivational Interviewing

IML prepares a pathway to self-efficacy and self-management

and can be contrasted with motivational interviewing (MI).⁴⁶ MI typically focuses on a range of health outcomes; for example, related to smoking cessation, weight loss, or reduction of elevated blood pressure. Using MI, clinicians identify patients' objections to a therapeutic behavioral change, help patients brainstorm ways to overcome those objections, and set goals to meet the treatment objective. With its many tasks, MI may involve multiple coaching sessions.

In contrast to MI, IML focuses on patients' self-selected energy drains and immediate stressors, which may or may not be directly related to presenting complaints or selected therapeutic interventions. IML does not rely on predetermined health outcomes. Using IML, patients can use their innate creativity and insight-generating skills to arrive at new, unique perspectives and fresh understandings that provide new solutions for energy drains. In the cited case examples, IML encouraged patients to see a given stressful situation in a new light and helped them interrupt ingrained stress responses.

How Can a Busy Clinician Use Insight-motivated Learning?

IML's long-range objective is to promote patients' self-management and personal responsibility for health. Success with IML is a function of how safe the patient feels. Patients with chronic health issues can experience frustration and disappointment within the health-care system, creating additional obstacles to open communication. Therefore a trusting and emotionally safe environment would seem to precede optimal use of IML.

Does the patient feel validated? The clinician or empathic staff member can support patients with reflective listening and compassion in discovering unique solutions instead of giving advice. In terms of readiness to change behavior, patients could use IML through the contemplation (thinking about change), preparation (ready to change), taking action and maintenance stages.⁴⁷ Will the patient have the opportunity to define and explore her or his immediate and specific stressors? In the words of a client, "I already know what's sucking out all of my energy." Clinicians need not assign wellness dimensions per se. Instead, encouragement to explore the mental, emotional, or spiritual wellness domains can serve as door openers to discover new perspectives and personal truth about a given situation.

IML turns immediate problem solving over to patients, using their creative insights. Because patients may be unaccustomed to such self-discovery, especially in a medical setting, the clinician serves as an initial facilitator for this process. It should be emphasized that insight learning is not a novel strategy; rather, it is an innate mode of problem solving. Clinicians can encourage patients to recall recent "Aha!" experiences as examples of insight learning. A survey to help patients begin to identify sources of psychosocial stress, has been published.⁴⁸

With trust and safety in place, implementation of IML can occur during a 10-minute extension of an office visit. A follow-up visit is useful to anchor new learning; a brief phone call or an e-mail exchange may suffice. For further guidance, clinical support can take the form of short periodic check-ins; clinicians have found monthly phone calls for up to 6 months to be effective. These calls can be an opportunity to provide support during

relapses, recalling patients' insights and very real successes.

Recurrent social support, together with practice and reinforcement for new activities, are important contributors to success. A helpful option is to use an "insight circle" support group in which participants focus on IML and personal empowerment. Journal writing can be a powerful introspective/problem-solving tool. An insight journal can also function as a record of new perspectives and personal victories. If the patient uncovers deep personal issues through the IML process, referral may be appropriate. It should be emphasized that IML does not replace counseling or standard therapeutic modalities.

SUMMARY

As a model that incorporates insight learning, IML represents a dynamic process. Discovery of personal insights serves as motivation for new actions by patients. Experience with coaching clients and patients with fibromyalgia suggests that subjective outcomes can include enhanced stress management and improved day-to-day functioning in conjunction with improved self-worth and self-efficacy. The field needs research to establish whether IML can improve adherence to treatment protocols and improve stress management, leading to reduced symptom severity and frequency and maintenance of healthful lifestyle changes.

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