

INTERDEPENDENCE OF PAIN AND STRESS: PRESENTATION OF A CLINICAL CASE

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ABSTRACT :

The scientific literature shows that chronic pain and stress are interdependent. However, the association between these two entities remains a concept that is often neglected in patient treatment. Based on a clinical case involving chronic pain and associated stress, we propose to shed light on some aspects of the complicated relationship that characterizes the bidirectional link between chronic pain and stress. Following the application of an intervention based on cognitive-behavioral techniques for managing stress and chronic pain, the results obtained reveal new ways of thinking and behaving that demonstrate significant change, reflected in a new perception of painful sensations and the adoption of new coping strategies oriented towards de-dramatization and problem-solving.

Key words: chronic pain, stress, coping, dramatization, problem-solving.

INTRODUCTION :

Several studies have shown that pain and stress interact and sustain each other, creating a vicious circle that is difficult to break (Bachelart & Bioy, 2010; Delrue & Plagnol, 2016; Margot-Duclot, 2013; Radat, 2014; Vachon-presseau, 2013). Only a global and integrated approach, taking into account the physical and psychological aspects of the subject, can provide an understanding of the complex mechanisms of interdependence between these two entities, which are mutually capable of influencing each other.

Pain generates contrasting medical responses:

Lorin (2015) states that pain is always interpreted in two ways, at the boundary between the psyche and the soma. It is impossible to quantify pain biologically or objectively in terms of sensitivity or intensity, hence the frequent use of metaphors to refer to it. In addition, the involvement of the social framework conditions the relationship with the cultural community or the generational specificity of affiliation (Denizeau, 2012). Often appreciated as the early sign of a pathology, the International Association for the Study of Pain (IASP) describes pain as ‘an unpleasant experience, both sensory and emotional, related to an existing or potential tissue lesion or simply described in terms of the evocation of such a lesion’ (Radat & Koleck,

2011, p 173). Moreover, Fondras points out that pain is both ‘an unpleasant sensation and emotion, not univocally linked to a physical lesion’, and explains that the notion of perception is biased concerning the meaning of pain "Nociception allows us to recognize stimuli that cause physical damage, but the meaning of pain and suffering goes beyond this ability to discern by itself" (F2007, p. 67). In the context of pain, perception plays a crucial role in our ability to understand and manage it. Pain is also a personal emotional experience. In this sense, Canguilhem notes that “Man experiences pain in the same way that he experiences illness or mourning ... rather than receiving or undergoing it” (in Denizeau, 2013, p 13). In other words, people do not create pain but construct it through their own experience of the world and the meanings they choose to give it.

PAIN CHRONICIZATION PROCESS:

Under normal circumstances, pain is supposed to disappear or at least fade away when the stimulus that triggered it has dissipated, but this is not always the case (Raffaelli, 2015). It is now established that the risk of chronicization increases with the patient's pessimism, fear, and anxiety. This process is proportional to the patient's focus on symptoms, negative thoughts (unrealistic beliefs), pain, and hypervigilant attitude (Margot-Duclot, 2013; Roussel et al., 2017). In addition to amplifying the pain phenomenon, fearmongering contributes to the maintenance of depressive symptoms, which further complicates treatment (Radat & Koleck, 2011). Even if the pain is initially strictly somatic, psychosocial factors play a full part in triggering and perpetuating the chronicization process (Angle, 2014). In addition, psychosocial factors generate demotivation, which leads to avoidance and the inability to think and act positively, encouraging the chronicization of pain, which is influenced more by the level of disability than by the intensity of the pain experienced (Acapo et al., 2017).

DRAMATIZATION, ANOTHER DIMENSION OF INTEREST TO THE THERAPIST:

Depending on the painful experiences they have experienced, patients develop their own coping strategies (Irachabal et al., 2008; Rosenstiel & Keefe, 1983), depending on the moment, their psychosocial environment, their interpretation of the pain, their relationships with the world and the associated cognitive behaviors. Certain logical behaviors are understandable in the acute phase; however, they can become harmful when the pain, under the influence of emotions, intensifies and persists. In this case, self-talk and misconceptions about the symptoms emerge. When facing pain that is resistant to conventional therapies, patients tend to improvise pathologies that they try to discover and monitor on their own (Monestès & Serra, 2006). This pain-related thought process is often the source of anxiety and discouragement, obstructing tolerance of the pain and contributing to its exacerbation, or at least its maintenance in terms of

frequency, duration and intensity. This cognitive distortion is found in the majority of pain patients (Monestès & Serra, 2006). It manifests itself as avoidance/apprehension, very similar to catastrophism and hypervigilance, which leads to pessimism and resignation, resulting in under-use of the cell's potential for self-regulation. It also produces a reluctance to resist or engage in any therapeutic process, a kinesophobia that drives them back to their initial state of suffering (Monestès & Serra, 2006). On the other hand and given that all chronic pain is preceded by an acute phase (Katz, 2009; Linton et al., 2011), the switch to chronicity follows a complex *neurophysiological chronicization process*.

CAN WE PREVENT A PAINFUL PATIENT FROM BECOMING CHRONIC?

Current knowledge of the pathophysiological mechanisms of pain and the complex processes involving central and peripheral regulation suggests that the patient's emotional history remains in memory imprints (Aaron Beck quoted in Morel-Fatio, 2007). Any painful alarm is encoded by the brain based on previous memorised experiences, which can re-appear at any time (Zimmers, 2022). The trigger is activated when a real or supposed danger is announced, according to a well-established neurophysiological schema involving the somatosensory cortex via relay neurons and sensory neurons (Fortin-Fournier, 2014; Radat, 2003) and the limbic system involved in olfaction, memory and emotion regulation (Calvino, 2009). This leads to the activation of false beliefs, which in turn generate a chain of inappropriate responses partly responsible for the incapacity (Guillemet & Guy-Coichard, 2016; Hess, 2018; Zimmers, 2022). The subject's *unrealistic (dysfunctional) beliefs* about his pain and its impact on his social and emotional life are conditioned by the emotional turbulence that prevents him from decoding the painful phenomenon. They generate a false belief that their pain is beyond their control and that it is doomed to stay with them for a long time (Morel-Fatio, 2007). This situation leads the patient into a state of emotional distress that tends to focus their thoughts on aversive events, which in turn reactivate stress factors and make it difficult to break the vicious circle. This automatically leads to a loss of control over the pain, which becomes persistent and unmanageable. This process suggests that the combination of emotional distress and negative thoughts leads to an exacerbation of symptoms and, by extension, an amplification of the feeling of incapacity, which reduces the ability to move and the skill to invest in positive tasks (Morel-Fatio, 2007). This leads to a series of thoughts and behaviors that expose the patient to greater vulnerability, a depreciation of their ability to regulate their pain, and, ultimately, denial of the therapy. Having experienced previous failures, all these elements come together to sustain unrealistic beliefs and lead to depression, a pattern of toxic behavior and thoughts that

are found in the cognitive model of chronic pain. For Roussel et al. (2017), the subject's inability to modulate his or her pain feelings is amplified by the specific fear of pain.

STRESS AND CHRONIC PAIN: A CONTINUOUS SPIRAL :

In fact, if there is one aspect of particular interest to our study, it is the complex interaction mechanisms between stress and chronic pain as related to our clinical case.

Cannon (in Goldstein & Kopin, 2014) and then Selye (1955) conceptualized stress in terms of a linear reaction simultaneously involving the stressor and the immediate or delayed response of the organism aimed at preserving homeostatic balance, insisting on the non-specific nature of this stereotyped reaction developed according to a process that unfolds in successive phases. This type of thinking has been succeeded by the transactional model, which takes into account the specific nature of the subject and the environment in which he is evolving (Lazarus & Folkman, 1984). At the same time, another approach is emerging highlighting the subjective sensory, emotional and behavioral aspects (Legand et al., 2019; Radat & Koleck, 2011). Stress, anxiety, anger, fear and depressive signs that can lead to confirmed depressive symptomatology are frequently found among the many emotional and cognitive factors. The subject refocuses on his body, amplifying the perception of his sensations (Sullivan & Katon, 1993). This leads to neurovegetative manifestations, with increased sensitivity to pain (Turk, 1995), exasperation with physical perceptions, difficulty in distancing oneself from sensations, and a tendency to favor unrealistic beliefs. This phenomenon is exaggerated by the fear and anticipation of pain (Crombez et al., 2005), which leads to maladaptive protective and avoidance behaviors, sometimes encouraged by the medical profession and family and friends (Monestès & Serra, 2006). These fears fuel the feeling of powerlessness in the face of pain that is becoming increasingly severe and lasting. The worst strategy to be feared is to dramatize the pain, a factor which predicts incapacity, intensification of the pain and its becoming chronic (Monestès & Serra, 2006; Sullivan et al., 1995, 2001).

Chronic pain associated with persistent stress: how should it be treated?

In such situations, the therapeutic tendency is towards cognitive-behavioral therapy, which is primarily aimed at improving functional rehabilitation rather than alleviating pain (Dunstan & Covic, 2007). The goal is to identify and then eliminate or modify all maladaptive thoughts that are an obstacle to recovery. In this context, the therapeutic alliance and therapeutic education play a key role in the effectiveness of the therapy put in place (Prkachin et al., 2001). In the same way, optimizing the treatment of patients with pain also involves making a wise and appropriate choice of medication, which requires an accurate assessment of the benefit/risk ratio of cognitive and emotional distortion (Pickering & Margot-Duclot, 2006).

METHOD :

Our study aims to use a clinical vignette to highlight the bidirectional relationship between chronic pain and stress. This approach will enable us to understand, explore, and attempt to answer the questions raised by this complex issue. The choice of the clinical vignette as an instrument for evaluating the quality of practices seems to us to be judicious and relevant. Our case study was inspired by our contribution to the doctoral thesis on stress and chronic pain. To assess stress, we used the Perceived Stress Scale (PSS 10). To assess chronic pain, we used the chronic pain assessment questionnaire (Questionnaire d'Évaluation de la Douleur Chronique: QEDC), recognized as a powerful multidimensional tool for assessing all aspects of chronic pain. It incorporates several measurement instruments, each corresponding to a specific dimension of chronic pain. The QEDC includes a *body chart*, a sketch on which the subject indicates the anatomical area(s) in pain. It also includes a section that measures the intensity of pain in different situations, using subjective evaluation scales (on a range from 0 to 10). On the other hand, to qualitatively evaluate chronic pain and the case's subjective perception of it, the Saint-Antoine Questionnaire, which assesses the emotional perception of chronic pain, was highly revealing. Similarly, the Pain Coping Strategies Questionnaire provided us with some very interesting responses on an essential dimension: dramatization as a coping strategy in the presence of chronic pain, measured by items (3, 6, 7, 14, 21, 24) out of a total of 6 to 30. Among the therapeutic techniques used, psychoeducation played an important role. It consists of providing the subject with reliable information about stress and pain, while at the same time providing her with education suited to her history of pain. Following the model of the Cognitive-Emotional Spiral of Stress, the first step was to identify and assess the stressful situations experienced by the subject, which were at the root of her current attitude and reactionary thoughts. The assessment of the subject's reactionary state in terms of somatic state, thoughts, and behaviors can be summed up in three hierarchical levels according to the degree of stress developed in response to an unexpected event: manageable, problematic, or destabilizing. To deal with this, we have opted to use breathing techniques to manage stress and cognitive techniques to manage stressful thoughts. The goal is to teach our subject how to create links between her beliefs, automatic thoughts, and their impact on mood and emotional state. To move towards a change in thinking and behavior, starting with the modification of misperceptions. This necessarily involves becoming aware of our biases in judging stressful situations and learning to adopt new ways of analyzing stressful events and managing our emotions. To achieve this, it's not a question of rejecting all feelings and personal interpretations but rather of investing in emotional rebalancing. This involves highlighting positive emotions

through actions that are rewarding and attractive. We also know that people under a great deal of stress become inactive and incapable of considering or undertaking any therapeutic solution. To reverse this tendency, the therapist helps the subject to develop new strategies by encouraging her to focus on problem-solving. The first step is to identify, assess, and prioritize the sources of stress. In the second phase, it is important to make an inventory of the resources and means likely to be used to formulate objectives and possible therapeutic alternatives applicable to each source of stress, prioritizing the most accessible and assessing their levels of effectiveness, strengths, and weaknesses. The final stage is application. At the end of the re-adjustment program for the subject's thoughts and reactionary attitude, a reassessment of the stress and chronic pain should be carried out, noting the changes that have occurred in terms of cognitions, emotions, and behaviors, and concluding on the interdependence between these two entities, which are so intricate in reality, as described in the scientific literature.

CLINICAL CASE :

Our case (Sihem) is 44 years old, a university graduate, and the mother of three teenage daughters (triplets aged 16). She entered the world of work before her marriage. She spends most of her time at home now, looking after her daughters. Meticulous and idealistic, she has an obsessive personality. Her sense of organization, order, cleanliness, and discipline is often misunderstood by those around her, leading to frequent disagreements and clashes of opinion with her daughters and husband, which sometimes end in violent verbal confrontations. She cultivates an anxious mindset when it comes to the education and safety of her daughters (she sees threats everywhere and, in all circumstances). She lost her mother under difficult circumstances to Covid in 2020, it was a tragic event that turned her life upside down. The experience was painful and unbearable, she was unable to grieve normally. Another stressful event occurred and acted as a trigger; her daughter was exposed to a bathroom boiler room explosion. Sihem considered that as a *warning from God* and that she had to resign herself to blessing His will by accepting her mother's death. But she still can't forgive her brothers and sisters for not allowing her to visit her mother at the hospital.

As for her health matter, she reports having suffered constant chronic pain since the birth of her daughters. At the same time, she claims to have had idiopathic hyperalgesia attacks during her adolescence. She now complains of low back and neck pain that refuses conventional treatment, often accompanied by chronic headaches. She also suffers from irritable bowel syndrome (IBS) and idiopathic hypertension. Sihem also complains of recent pain in her wrists, diagnosed after exploration as a *carpal syndrome*. As a matter of fact, her attention and fears are focused on this acute pain, which she dramatizes to the point of fearing the loss of the use of her hands.

She develops the idea of having to put up with this new pathology in addition to her chronic pain. Although it was a trivial condition that could easily be repaired surgically, she persisted in her psycho-rigid attitude, rejecting all therapeutic initiatives out of hand. With disconcerting pessimism, she continues to believe that her wrist pain can only be a logical extension of her usual chronic pain. However, she is desperate to find a solution, telling us that she has to get rid of them because there is no way she can put up with them for long.

Although she remained skeptical about the benefits of psychotherapy on her stress and pain, Sihem was relatively motivated while cultivating her limiting thoughts. Nevertheless, she remained skeptical about the positive effects of psychotherapy on her pain, while at the same time feeling lucky to be able to benefit from psychological support. Sihem showed serious attention about carrying out her exercises face-to-face and at home. As we made progress in our psychotherapeutic techniques, in which she showed increasing interest, she gradually moved away from her restrictive thoughts and adopted a less pessimistic attitude and discourse towards psychotherapeutic approaches.

RESULTS :

The results collected before and after the program were analyzed in terms of: stress levels, dimensions of chronic pain, perceived impact, coping strategies to deal with stress, and those to deal with the pain caused by stress. Based on the scales used to assess the various dimensions and how they operate, we observe that Sihem's high pre-test stress level (down from 27/40 to 12/40), with its maladaptive reactions, was considerably reduced by her adopting more appropriate responses to stress. The subject developed new coping strategies, redirected towards less emotion (from 72/80 to 56/80), more avoidance (from 22/80 to 29/80), and more investment in problem-solving (from 42/80 to 45/80). In addition, to cope with her chronic pain, she developed coping strategies that were selectively oriented towards de-dramatization (from 27/30 to 24/30), distraction (from 5/20 to 17/20), and self-encouragement (from 6/16 to 12/16). There was also a significant change in the way she described her perception of pain. Before the program, she described them as *extremely exhausting, distressing, obsessive, unbearable, irritating, exasperating and depressing*. At the end of the program, she described her pain as *moderately exhausting, more or less bearable, irritating at times, sometimes exasperating and not very distressing, not very obsessive, and not very depressing*.

Furthermore, at the end of the sessions, we noted a significant improvement in terms of average intensity pain (from 8/10 to 7/10), pain peaks (from 10/10 to 7/10), frequency and duration (from 3 hyperalgesia episodes per month, 3 to 4 days to 0). Initially very affected by the pain-related quality of life, Sihem now admits having partially recovered her mood and her ability

to move. She is also less distressed in her daily tasks, has better relationships with others, and has regained a better sleep quality. She is gradually regaining a taste for life. At the end of our sessions, we noted a significant change in her perception of painful sensations and a readjustment of her coping strategies, in particular the de-dramatization.

Another important observation: Sihem has stopped linking the wrist pain to her usual chronic pain, which she will have to endure for the rest of her life. She has now turned her attention to a considered and reasoned solution of the problem and has finally agreed to have her wrist surgically repaired.

ANALYSIS & DISCUSSION :

The relationship between pain and stress in our case study has given rise to controversial readings and interpretations. These interpretations are in line with Lorin's (2015) perspective on its diplopic reading and Denizeau's (2012) perspective on its elusive nature. For these reasons, we have approached it as a complex entity that is both multidimensional and individual. Sihem's perception of painful sensations was crucial in her choice of coping strategies and the active mobilization of her resources to manage pain. The pain represents a personal emotional experience for Sihem, conditioned by her representations of herself and her complicated relationship with the world; a vision and behavior as developed by Georges Canguilhem (in Denizeau, 2013). Sihem's pain is based on her own experience and the interpretations she associates with it. The idea that it is not always easy to see pain ending once the stimulus that caused it has disappeared (Raffaelli, 2015) is confirmed with Sihem, who suffers from pain whose origin remains problematic. Even though there is a neurosomatic explanation for her carpal tunnel syndrome, she persists in linking it to her initial pain. It is important to explore and identify the mechanisms involved in the chronicization of her pain, as suggested by Katz & Seltzer (2009). In Sihem's case, it was probably her focus on her pain syndrome, her fear, pessimism, and anxiety, which caused her pain to become chronic. Instead of confronting her stressful situation, she resorted to hyper-vigilance and catastrophism, combined with misguided beliefs that amplified and prolonged the pain. Our patient's life history and her emotional crisis certainly helped to trigger the process of chronicization. Even if the onset of Sihem's pain was strictly somatic in origin, the psychosocial factors involved remain a determining factor in the transition to chronicity, as suggested by Casey et al. (2008). In addition to the lesional capacity of the stimuli involved (physical pain), it was also her history of trauma, her depressive tendency, and her negative thoughts about the pain that precipitated the transition to chronicity, as stated in the thesis developed by Fransen et al. (2002). The

excessive devaluation of the injury performance of her stimulus led her to lose motivation and give up in the face of suffering that she describes as *never-ending*.

Unconvinced by her recovery, she has always adopted an avoidance approach, an attitude that has led to the chronicization of her primary pain, preventing her from facing up to her pain (Turk, 1995). This attitude has led her to become disabled, preventing her from considering any possible alternative way out. Before the program, our subject was in a psycho-rigid and unchanging position (kinesophobia). Due to a lack of mental flexibility, she was unable to adapt her behavior to the painful experience, which systematically sent her back to unpleasant episodes she had experienced in the past. Instead of seeing the painful event as a normal, reversible physiological process, she reactivated the failed attempts to control the pain she had experienced in the past. Moreover, Sihem's experience reinforced the links between pain, cognition, emotion, and disability, a consensual thought. On the other hand, the intensity, duration, and socio-psychological impact of her pain were influenced by her unrealistic beliefs. Sihem finally invested in our therapeutic program, so that she gradually managed to reverse this tendency and acquire the readjustment skills required to correct her thoughts and her way of functioning. By gradually distancing herself from her reactions of hyper-vigilance and alarmism, she has ended up gaining in quality of life, although she persists in enduring some more or less damaging psychological and physiological discomforts, as announced by Morel-Fatio (2007) and in line with Turk's thesis (1983, cited in Morel-Fatio, 2007), which deals with the cognitive equivocations in pain control and the capacity, or not, to develop adapted coping strategies. This vision is also found in the work of Fordyce (1976, cited in Morel-Fatio, 2007) who highlighted the need to take into account the contribution of the emotional experience in understanding pain, associated cognitions, psychosocial factors and circumstances that have influenced how the pain phenomenon develops and its evolution in terms of intensity, frequency, and duration. Rather than confronting the problem, she focused her fears on the complications, persistence, and recurrence of her pain, which made her more fragile and vulnerable, as Knapik & Saulicz (2011) explain. By maintaining her fear of pain, Sihem amplified her perceptions and nurtured the feeling of inability to modulate it; an attitude translated into a decrease in physical performance as suggested by Vlaeyen et al, (1995). The prejudice which consists in believing that it is strictly the intensity of the pain that determines disability, is rejected by McCracken, Faber and Janeck in 1998 (in Morel-Fatio, 2007) who showed that it is mainly the unhealthy fear of pain which influences the onset and maintenance of physical disability. This fits Sihem's case.

On the other hand, our case was characterized by hyper-vigilance, catastrophism, and avoidance to get around the problem. This pattern of organization and cognitive functioning raises questions about the dual link between chronic pain and PTSD, which our program alone cannot answer with certitude. Only a more targeted study could elucidate the ambiguous issue of the mutual influence of these two entities and the notion of vulnerability (Clapp et al., 2009). Concerning the bidirectional stress-pain correlation, there is a consensus that the onset of chronic pain syndrome is linked to exposure to stressful situations and events. On another level, through this clinical case, we have explored the complex interactions that characterize pain and associated stress, in order to highlight the convergence of the chronic pain phenomenon with the concept of stress. Among the many emotional and cognitive factors faced by people with chronic pain, including Sihem, we find anxiety, signs of depression, stress, anger, fear, and frustration, to varying degrees.

These elements are part and parcel of the patient's experience of pain and maybe the same time the consequence and the origin of the initial pain phenomenon. In such cases, the pain patient often tends to refocus on his body, amplifying his perceptions and neurovegetative manifestations and increasing his sensitivity to pain (Sullivan & Katon, 1993). On the other hand, anxiety associated with depressive signs can lead to avoidance reactions, as noted by Sihem and discussed by (Pickering & Margot-Duclot, 2006). Since stress is a normal emotional alert reaction to adaptation, it generally leads to an escape or confrontation reaction, which produces strong emotional manifestations even at a distance from the event. This attests to the importance of unconscious processes of psychic elaboration in the aftermath of a stressful situation (Pickering & Margot-Duclot, 2006). Sihem's anger and frustration were omnipresent, and she blamed her own pain and the laxity, incompetence and arrogance of the nursing staff. This singular attentional mode led her to exacerbate the physical sensations, make it difficult to separate herself from the painful sensations, and tend to make biased interpretations of her painful feelings, prejudging them as dangerous and irreversible. This phenomenon, underpinned by fear and anticipation of pain, is very present with Sihem (Crombez et al., 2005). During our interviews, Sihem expressed an overwhelming fear of an underlying serious illness. She harbors her fears of ending her life in a wheelchair or losing the use of her hands. These fears are fueled by a biased understanding of her pain, generating uncertainty and feelings of powerlessness, as described by Sullivan et al (1995).

In the end, Sihem continually cultivated and nurtured anxieties and fears as a result of her emotional experiences. Her constant stress led to over-dramatize her situation. However, her dedication to her cause and her seriousness gradually won over our program, to which she had

previously been resistant. As we progressed with our readjustment sessions, she showed more and more interest in the program, taking an active part in the psycho-education sessions and the techniques and exercises we suggested. With a gradual build-up and a remarkable amount of effort, she was able to overcome her limiting thoughts and move from disbelief to possibility. This triggered a change in her coping strategies, which led to a turnaround in the way she functioned and thought about her stress and chronic pain. Today, she has definitively abandoned her deleterious cognitions and resignation by displaying an attitude firmly oriented towards acceptance and commitment to changing her condition. In short, the visible and tangible change in Sihem's way of interacting and thinking acquired during our treatment program already constitutes a solid foundation for initiating, supporting, and sustaining, in a specialized environment, the specific psychotherapy that our patient has expressed and that we strongly recommend. This consists of targeted psychotherapy.

CONCLUSION :

In the light of the results obtained from a clinical vignette in which the subject (Sihem) suffers simultaneously from chronic pain and stress, we attempted to answer our first question as to whether in reality, as supported by the scientific literature; the bidirectional link between these two entities is effective. At the same time, it was important to confirm or refute our initial hypothesis that the stress management program would have a positive impact on stress and therefore on chronic pain. The results obtained at the end of our readjustment program, which aims to break the influence loop of this complicated relationship, bear witness to the reciprocal link between Chronic Pain and Stress. In the same way, the cognitive-behavioral techniques used and translated into action through new ways of thinking and behaving, demonstrate the effectiveness of the program. It has led to a significant change in the perception of pain. As a result, new coping strategies have been adopted that move away from catastrophism towards acceptance and problem-solving.

Psychotherapy is now an established part of the health care system, and it is, therefore, necessary to take concrete steps to rehabilitate psychotherapeutic interventions in the training of health care providers. To achieve this, we need to work towards better integration of psychotherapy at all levels, particularly in pain rehabilitation facilities which are limited exclusively to medication. Hence the need to invest in the future in more interdisciplinary research.

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