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# **Perceived Control, How it Impacts Pain and What Does This Mean for Recreational Therapists?**

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## **Abstract**

The American Chronic Pain Association (ACPA; 2007) estimates that one in three Americans (approximately 50 million people) suffer from some type of chronic pain, and that it is the number one cause of adult disability in the United States. One can ascertain that having control over pain will improve the overall health and well-being of a person with chronic pain. **Objective:** To complete an integrative review of the literature on perceived control in people with chronic pain with a focus on how perceived control influences pain perception and intensity and coping skills. **Method:** Literature was accessed using a university's aggregate database tool that searches multiple research databases at once. **Conclusions:** The literature supports the claim that if a person has a high level of perceived control, then their pain intensity and frequency is less.

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**Keywords:** chronic pain, perceived control, coping strategies, recreational therapy

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Chronic pain has been defined as pain that persists beyond expected healing time (Bonica, 1985 as cited in Jensen & Karoly, 1991). Experiencing pain for three months or more is an accepted time in diagnosing chronic pain. Chronic pain affects individuals physically, socially, emotionally, familial, vocationally, and economically. The American Chronic Pain Association (ACPA, 2007) estimates that one in three Americans (approximately 50 million people) suffer from some type of chronic pain and that it is the number one cause of adult disability in the United States. Pain costs the United States an estimated \$100 billion in lost productivity every year, according to a Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) report (ACPA, 2007). Chronic pain has become a notable health concern in the United States. While each person who experiences chronic pain has individualized needs, the basic goal for each person is to be able to control the pain. While chronic pain is not curable, it can be controlled with a variety of interventions including pharmacological and non-pharmacological treatments.

Chronic pain can provide more than physical pain for a person; it also produces psychological pain through emotional and affective components. Hansen and Streltzer (2005) present the numerous components of psychological pain including (a) attention, (b) anxiety, (c) learned pain, (d) expectations and (e) beliefs and coping. These aspects of psychological pain demonstrate how a person's perception of pain can contribute to the severity of pain and how they manage their pain symptoms.

For the person living with chronic pain, the pain becomes the focus of his or her life (Turk, Wilson & Swanson, 2012). As pain is the focus of a person's life, a sense of loss of control is to be expected. As McCracken and Eccleston (2003) state, a person diagnosed with chronic pain has to decide to learn to live with the pain or to learn to manage pain.

However, clients may ignore this and try to find a cure. It is this struggle to find a cure that affects the person's perception of control as they feel that they no longer have the control to alleviate the pain. By not being able to control the pain, a person may become frustrated, have an increased chance of being diagnosed with depression, and experience feelings of helplessness and hopelessness. It is these feelings that contribute to a decrease in physical, psychological, and social functioning.

### **Perceived Control**

Perceived control over pain refers to the belief that a person can exert influence on the duration, frequency, and intensity of pain (Turk, Wilson, & Swanson, 2012). It is this thought that has motivated psychological research of perceived control and its components (coping, attention, and beliefs) in people with chronic pain. Numerous studies have considered the impact of perceived control on pain management and controlling the pain. Tan and colleagues (2002) question the rationale for trying to gain control over the pain itself, when it may be more reasonable to control the effects of pain in one's life rather than the pain.

Shapiro, Schwartz, and Astin (1996) have identified two self-directed pathways to increase and maintain a sense of control: controlling oneself and exerting control over the environment. The two pathways exemplify the conceptualization of perceived control over chronic pain. Clients with chronic pain believe either that they can control the pain or the pain controls them.

Control has also been shown to play a role in physical and mental health. Mental well-being has typically been defined by the level of control individuals feel they have internally (over their thoughts and feelings) and externally (over their behaviors) (Austin, 2002). Psychologically, typical individuals tend to have a higher level of perceived control than do clinical populations (Austin, 2002; Shapiro et al., 1996). This means that the typical person overestimates the amount of control they

have; they believe they have the skills and knowledge needed to tackle situations. In the literature, Shapiro et al. (1996) state that their findings strongly support the importance of control in physical and mental health. They give credence to the dominant psychological paradigm regarding control, which includes (a) having an active, instrumental control is positive, and (b) the more control you have or believe you have, the better.

There are two approaches to dealing with control that can be linked with chronic pain and perceived control. The first approach is yielding. This involves giving in to the stressor and learning to cope with the feelings of stress. The other is to strive to regain a sense of control (Austin, 2002). Yielding strategies allow clients to understand and accept what is not within their control. For clients with chronic pain, this would include increasing their understanding of their diagnosis (chronic pain is not curable), as well as understanding that there is a lack of direct control over their pain. With yielding strategies, the therapist would use cognitive behavioral techniques, such as relaxation techniques, guided imagery, or autogenic training, to assist the client in achieving calmness. In addition, diversion activities may be incorporated into treatment (Austin, 2002). The above interventions provide the person with chronic pain coping strategies that will increase his or her sense of perceived control over the pain.

The second approach to dealing with control is helping the client strive for a sense of control. This approach is taken when clients experience demoralization (Austin, 2002). Therapists can help clients gain and maintain feelings of control through cognitive processing when the client feels that there is no control.

Another aspect of control is locus of control. Williams and Koocher (1998) define locus of control as the set of beliefs an individual holds. They list three sets of beliefs: (1) internal locus of control, in which personal action influences outcomes; (2) external locus of control, in which outcomes are

controlled by others; and (3) external locus of control, in which outcomes are controlled by chance. The concept of locus of control is important in perceived control, as seen in Burton, Kline, Hargadon, Shick, Ong and Cooper (1998). They explored the relationship between perceptions of control and pain behavioral experiences in chronic pain patients, and hypothesized that patients with an internal locus of control would report less pain and have better coping skills. Clients were assessed as having either an internal locus of control or an external locus of control. The results of this study confirmed their hypothesis. The results of the study indicated the internal locus of control group had better coping skills, less pain and satisfaction with their level of functioning (Burton, et al., 1998). This study demonstrates how “life control orientation is associated with chronic pain patients’ physical, emotional and social well-being” (Burton, et al., 1998, p.39). By perceiving that one has control over their pain (internal locus of control) people living with chronic pain had a healthier psychological ability to cope with their diagnosis. What does this mean for the field of recreation therapy? It is imperative that recreational therapists working with clients with chronic pain be able to identify if their client has as internal or external locus of control. By doing so, recreational therapists are then able to support their clients in developing an understanding of pain management.

It has been proposed that people with chronic pain can develop coping skills and increase control to assist in reducing pain severity. Toomey, Mann, Abashian, and Thompson-Pope (1991) studied the relationship between perceived control of pain, pain description, and functioning. They hypothesized those patients who have greater personal perceived control of pain will report lower levels of pain than patients who have less personal control. The results of the study supported their hypothesis as a consistent relationship was found between pain control ability, pain intensity, and frequency. This

supports the concept that perceived control over pain, whether it is being able to cope with the pain or being able to reduce the pain, ultimately improves the well-being of the person living with chronic pain.

If one in three Americans (ACPA, 2007) are living with chronic pain one can assume that recreational therapists will be providing services to clients experiencing chronic pain. It is our ethical responsibility to understand our client's diagnosis whether it is a primary, secondary or tertiary diagnosis. Individuals living with chronic pain "receive inadequate pain prevention, assessment, and treatment" (Institute of Medicine, 2011, p.8), is this due to a lack of knowledge and competence on the part of the health care professional. As recreational therapists, do we have a thorough understanding of chronic pain, to be a vital part of the health care team in treating clients with chronic pain? It has been suggested that the role of the clinician is to guide, coach and assist clients with self-management of chronic pain (Institute of Medicine, 2011). As an important member of the health care team, recreational therapists need to foster their understanding of chronic pain, how it affects their clients, as well as understanding concepts and theories such as perceived control to ensure that we are supporting our clients.

The purpose of this paper is to complete an integrative review of the literature on perceived control in people with chronic pain, with a focus on how perceived control influences pain perception, intensity, and coping skills. It is postulated that people who experience a high level of perceived control within their lives will have less pain intensity and better coping skills. In addition, how can recreational therapists incorporate the concept of increasing a clients' perceived control into their clinical practice resulting in assisting our clients in coping effectively with chronic pain?

### Method

An integrative literature review method was conducted as it "allows for the inclusion of diverse methodologies" (Whittemore & Knaf, 2005, p. 547). A search of the literature was conducted using a university's aggregate database, which searches multiple research databases at once and identifies recommended subject-specific resources. The aggregated database was used as it provided access to books, journals and periodicals, as well as other databases. Additional searches included the archives of the *Therapeutic Recreation Journal*. The *Therapeutic Recreation Journal* was specifically searched to ascertain if the topic of perceived control and pain has been researched by professionals within the field. The search utilized keywords "perceived control" and "control therapy" in combination with "chronic pain" and "recreational therapy." Articles were screened first by their title and then by the abstract. If the information within the abstracts discussed perceived control on chronic pain, pain intensity, and pain frequency, the articles were included in the literature review.

The electronic search resulted in 244 articles; of those, ten empirical studies were chosen for review. Upon review of the cited material, an additional four resources were obtained. The empirical studies were chosen based on the review criteria. Empirical studies were chosen if the study participants were adults diagnosed with chronic pain and if standardized assessments were used to assess perceived control (e.g. The Multidimensional Pain Scale and the Pain Control Scale). Studies were excluded if the method involved manually manipulated painful stimuli on study participants. As this was an integrated literature review, theoretical articles were considered as well. From the 244 articles identified, 9 theoretical articles were chosen based on the review criteria. Theoretical papers were reviewed using the methodology previously discussed and if articles discussed perceived control on chronic pain, pain intensity, and pain frequency.

The search of the Therapeutic Recreation Journal resulted in zero articles, suggesting the field of recreational therapy may not have researched this topic. The final empirical studies and theoretical papers selected for review are seen in Table 1.

### **Results**

A loss of control is often an overwhelming source of psychological stress for clients with chronic pain (Williams & Koocher, 1998). By understanding how this loss of control affects the client, strategies can be developed to help the client restore a sense of self-efficacy and control (Williams & Koocher, 1998). It is through this restoration that the client may be able to manage pain with effective coping strategies. It is this ability to cope with the pain that will increase a client's perceived control over their pain. The results of the literature review support that having a strong sense of perceived control over the pain will improve a person's pain symptoms.

### **Self-Efficacy**

Pain sufferers often develop negative, maladaptive appraisals about their condition and a decrease in personal efficacy in controlling their pain (Turk & Burwinkle, 2006). In contrast, people who believe they are able to control situations that contribute to pain flare-ups are more resourceful and are likely to develop effective coping strategies (Turk & Burwinkle, 2006). The literature supports the concept of self-efficacy as one that is related to a sense of control (Jensen, Turner, Romano & Karoly, 1991; Turk & Burwinkle, 2006; Turk et al., 2012; Wells, 1994). This sense of control is interrelated to a person's belief about how they can cope with pain. Jensen et al. (1991) defines self-efficacy beliefs as a judgement regarding one's ability to perform a specific behavior. Having a high sense of self-efficacy is thought to play an important role in successful chronic disease management, maintaining

overall health, and effective coping (Bandura, 1997 as cited in Elavsky & Doerksen, 2010; Williams & Koocher, 1998).

Jensen et al. (1991) reviewed two longitudinal studies examining the relationship between self-efficacy beliefs and the ability to adjust. It was found that having a higher level of self-efficacy beliefs results in an improvement in pain, disability, and depression. These results can be interpreted as improving the person's functional abilities as well as social abilities. Overall self-efficacy and self-efficacy beliefs are associated with coping strategies for people with chronic pain.

### **Implications for Recreational Therapists**

While the literature is limited on perceived control, chronic pain and recreational therapy, recreational therapists do have a role in increasing clients' perception of control over their pain by increasing their coping strategies. Austin (2002) discusses how a basic philosophical principle of recreational therapy is allowing clients as much control as possible and assisting clients in regaining their control. Recreational therapists strive to leave as much control as possible with their clients by allowing choices in recreation and leisure. Once engaged in true leisure, clients experience a profound sense of control (Austin, 2002). He also stresses the importance of recreational therapists understanding perceived control and how it relates to their clients. The literature has shown that clients who have perceived control over their pain experience less pain severity (Haythornthwaite, Menefee, Heinberg, & Clark, 1998; Jensen et al., 1991; McCracken & Turk, 2002; Turk & Burwinkle, 2006) and depression (Turk, Okifuji, & Scharff, 1995). Therefore, it is imperative that recreational therapists allow clients with chronic pain the freedom to make choices, and to have control over certain decisions.

Table 1

*Selection of empirical and theoretical studies reviewed*

<u>Category</u>	<u>Author</u>	<u>Relevant Findings</u>	<u>Subjects</u>
Chronic Pain and Control (Including locus of control, perceived control and life control)	Burton et.al, 1998	Patients with an internal life control orientation as opposed to external life control have a higher quality of life.	Adults
	Haythornthwaite et. al, 1998	Certain coping strategies are associated with greater perceptions of control.	Older adults
	Turk, Okifuji & Scharff, 1995	Older patients feel less control over their lives when their pain intensity is high. Younger patients relationship between pain intensity and life control was not strong.	Teens, Adults
Chronic Pain and Control Beliefs	Jensen & Karoly, 1991	Patient's pain beliefs in perceived control over pain and their coping strategies are related to their well-being and activity level.	Adults
	Toomey, et.al, 1991	Relationship found between pain control ability and pain intensity and frequency, decreased pain intensity and frequency are associated with perceived ability to control pain.	Adults
	Wells, 1994	Results support the relationship of control beliefs to distress and disability in patients with chronic pain.	Adults
Theories of Control	Austin, 2002	Discusses the concept of control and how it relates to the field of recreational therapy.	
	Shapiro, et.al, 1996	Examines the psychological contributions to understanding positive contributions of control in mental and physical health.	
	Williams & Koocher, 1998	Review of the concept of locus of control in health illnesses, looking at the relationship between locus of control and health. The relationship between loss of control and a chronic illness is complex. Because of this interventions need to be based on clients past experiences and present perceptions.	
	Jensen, et.al, 1991	Literature review of empirical research examining the relationship between beliefs, coping and adjustment to chronic pain. A complex relationship exists among pain appraisals, coping strategies and adjustment to chronic pain.	
	McCracken & Eccleston, 2003	Study showed a greater acceptance of chronic pain was associated with less pain, disability, depression, and pain relates anxiety.	Adults
Coping Strategies	McCracken & Turk, 2002	Literature review of behavioral and cognitive-behavioral treatment for chronic pain. Results indicate behavioral and cognitive-behavioral treatment reduces patients' pain, distress, and pain behavior and improves daily function.	
	Kwekkeboom, et.al, 2010	Significant reduction in pain, fatigue and sleep disturbance was found after using cognitive-behavioral strategies.	
	Turk & Burwinkle, 2006	Discusses the cognitive-behavioral perspective on chronic pain. Cognitive-behavioral perspective focuses on the person not the symptom. The authors provide an overview of treatment strategies.	
	Turk, et.al, (2008)	Review of psychological models used to conceptualize pain. Concluded that psychosocial and behavioral factors play a significant role in the experience, maintenance and exacerbation of pain.	Adults

Cognitive behavioral therapy (CBT) is a widely accepted and effective intervention for clients with chronic pain (Austin, 2002; Haythornthwaite et al., 1998; McCracken & Turk, 2002; Turk & Burwinkle, 2006; Turk et al., 1995). Cognitive behavioral programs can assist clients in developing positive coping strategies, which will increase self-efficacy and perceived control over their pain, ultimately achieving the goal of pain management. Recreational and leisure programs such as relaxation training, deep breathing, guided imagery, yoga, meditation, and positive self-talk are interventions that can be implemented within the field of recreational therapy. These programs provide the client with alternative methods for coping with pain. A recommendation for the field of recreational therapy is to continue to study the effects of cognitive behavioral interventions with clients and to develop evidence-based practice and protocols for these programs, specifically for clients with chronic pain.

Additionally, Haythornthwaite et al. (1998) conducted a study on pain coping strategies, determining which strategies predict perceived control over pain. Coping strategies that were tested included: coping self-statements, diverting attention, ignoring sensations, reinterpreting pain sensations, increasing behavioral activity, and praying and hoping. Praying and hoping was the strategy that was most often used by people with chronic pain; however, this coping strategy did not show a correlation with increased perceived control over their pain. The coping strategies that were strong predictors of perceived control over pain symptoms were coping self-statements and reinterpreting pain sensations. This information can be used by recreational therapists in developing interventions to assist clients with chronic pain, in identifying their current coping strategies as well as assisting the client in identifying how their coping strategies are effective in controlling their pain symptoms.

Identifying coping strategies would be a component of a leisure education program. It is recommended by the author that leisure education programs, in conjunction with cognitive behavioral interventions such as relaxation or guided imagery, are necessary for clients with chronic pain. As pain relief is a goal for most people with chronic pain, an educational program in understanding the etiology of chronic pain is needed.

Once a client has been able to identify and develop coping strategies for managing pain, feelings of self-efficacy are increased. This may be done through successful recreational and leisure interventions. When a client with chronic pain is able to partake in recreational and leisure activities that they have previously not been able to participate in, they will have the opportunity to experience the benefits of recreation and leisure. By being able to partake in leisure opportunities, the client will experience mastery, and self-accomplishment, which will lead them toward improved self-efficacy (Austin, 2002).

Yielding approaches have been previously discussed in this paper as an approach to addressing chronic pain and perceived control. By yielding to the stressor, in this case chronic pain, clients will be able to develop coping strategies. This approach works best when there is no reasonable opportunity for control (Austin, 2002), which can be the case with clients with chronic pain. Recreational therapists can assist clients in yielding to the pain. By assisting clients in developing and identifying coping strategies that are effective in allowing participation in typical daily activities such as housework, yard work, employment, social activities, and leisure pursuits will allow clients perceived control in overcoming pain. Therapists can have clients complete daily journals tracking their activity levels and the pain intensity associated with each activity. This technique allows clients to identify the activities with low pain intensity, thus



allowing them to have control over the activities that cause high levels of pain intensity.

Recreational therapists can play an important role in the interdisciplinary pain management team. Recreation and leisure activities facilitated by recreational therapists, whether they are CBT, educational programs, self-efficacy programs, or distracting coping strategies, will assist clients with chronic pain in improving their perception of control over the pain.

### Conclusion

Upon review of the literature, there is evidence to support the hypothesis that if a person has a high level of perceived control over their pain or in their lives then their pain intensity and frequency is less (Burton, et.al, 1998; Haythornthwaite, et.al, 1998; Jensen & Karoly, 1991; Toomey, et.al, 1991). Perceived control, internal locus of control, control beliefs, and coping strategies have all been proven to improve the quality of life of the person with chronic pain (Burton, et.al, 1998; Wells, 1994). By demonstrating perceived control over pain symptoms, a person living with chronic pain will be able to complete daily life tasks such as yard work, housework, and employment. In addition, the psychological benefits of perceived control are numerous. These benefits include decreased depression, increased social support, and self-efficacy. Recreational therapists must have an understanding of perceived control related to clients with chronic pain so as to provide successful interventions for their clients. Specifically, understanding the client's control beliefs will allow the recreational therapist to develop specific interventions based on the client's perceived control. Recreational therapists can assist their clients with learning new coping strategies to help the client divert attention from the pain and thus increase perceived control over pain symptoms. Additionally, a need for literature on chronic pain and recreational therapy has been identified by the author. It is

suggested that recreational therapists study the effects of their interventions related to chronic pain and perceived control and to develop evidence-based practice and protocols for the field.

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