Using Acceptance and Commitment Therapy in the Rehabilitation of an Adolescent Female With Chronic Pain: A Case Example

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This case example illustrates how Acceptance and Commitment Therapy (ACT) within a behavior medicine approach was used in the rehabilitation of an adolescent with debilitating chronic pain. For chronic pain with unclear etiology (idiopathic pain), pharmacological therapy alone is often insufficient. Psychological treatment strategies have been developed and evaluated for adults with chronic pain. However, few such studies have been conducted with youths. To date, there is limited empirical evidence regarding the effectiveness of psychological treatment for generalized musculoskeletal pain syndromes in children and adolescents. This patient was a 14-year-old girl severely disabled by idiopathic generalized pain. It was hypothesized that avoidance of pain and pain-related stimuli was central to the subject’s disability. ACT, a development of cognitive behavior therapy, was used as the treatment model in this study, focusing on building the behavior repertoire in valued life directions rather than emphasizing reductions in pain and distress. As the subject moved in valued directions, exposure to avoided pain stimuli took place naturally. Following treatment, improvements in valued life activities and functional ability was seen, as evidenced by increased school attendance, lower pain ratings, and individual goal achievement. The outcome of this treatment indicates that ACT and a behavioral medicine approach can be useful in the rehabilitation of young people with chronic disabling pain. Empirical studies are needed to investigate the clinical effectiveness of this approach.

Cognitive or recurrent pain without any known organic origin (idiopathic pain) is common among children and adolescents, with a point prevalence of approximately 15% (Goodman & McGrath, 1991). For the most part, assessment and reassurance are sufficient interventions. However, for a number of children and adolescents, pain symptoms develop into a refractory state leading to severe disability (Kashikar-Zuck, Graham, Huenefeld, & Powers, 2000; Palermo, 2000). Pharmacological treatment for young persons with chronic idiopathic pain is often insufficient. In adults with chronic pain, a multidisciplinary approach combining cognitive behavior therapy and physical therapy has been suggested as the treatment of choice (Forseth & Gran, 2002). While a substantial amount of clinical studies have been conducted on adults with chronic pain (Morley, Eccleston, & Williams, 1999), there is a lack of corresponding research for young persons with similar symptoms.

Recently, a series of review articles were published indicating the importance of psychological therapies in pediatric chronic pain management, indicating effectiveness for CBT interventions for headache (Holden, Deichmann, & Levy, 1999), recurrent abdominal pain (Janicke & Finnek, 1999), and disease-related pain (Walco, Sterling, Conte, & Engel, 1999). Eccleston and co-workers have reviewed 18 randomized controlled trials (Eccleston, Morley, Williams, Yorke, & Mastroyannopoulou, 2002). Of these, 15 concerned children with headaches. Relaxation was performed in 15 trials, including biofeedback (4 trials), and 10 were described as “cognitive behavioral interventions.” Although this review suggests the effectiveness of psychological strategies for managing chronic pain, only 2 out of 3 of the included trials took place in clinical settings and the length of the treatment contact was relatively short (mean duration of 3 hours). Regarding idiopathic musculoskeletal pain, few trials have been reported. Recently, an interdisciplinary 3-week residential program based on CBT was evaluated, reporting significant improvements for disability and physical functioning (Eccleston, Malleson, Clinch, Connell, & Sourbut, 2003). In a frequently cited study of seven girls diagnosed with fibromyalgia, progressive muscle relaxation and guided imagery were applied with a favorable outcome (Walco & Ilowite, 1992). Thus, although a number of articles have presented findings on nonpharmacological interventions for pediatric chronic pain, there is limited empirical evidence so far regarding the effectiveness of psychological treatment for generalized musculoskeletal pain in children and adolescents.
Several models of chronic pain and related disability have extended the analysis to also include external factors, such as the biobehavioral model of pediatric pain (Varni et al., 1996) or the conceptual model of recurrent abdominal pain by Walker (1999). In line with such conceptualizations, we have adopted a behavior medicine approach to pain. Although organic factors are taken into account, the emphasis is on the interaction between triggering stimuli, pain behavior, and reinforcing consequences (Dahl, 1999). The behavior analysis and intervention is furthermore based on functional contextualism, the theoretical perspective underlying Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999).

The role of classical and operant conditioning in chronic pain and disability was emphasized as early as 1976 (Fordyce, 1976). In accordance with learning theory, avoidance of pain-eliciting situations results in short-term relief (Philips & Jahanshahi, 1985). Although adaptive in acute pain, this reinforcing effect does not lead to comparable symptomatic improvements in chronic pain. These types of behavior are considered to be functional in maintaining, or exacerbating, the chronic pain problems (Philips, 1987). Following the principles of learning theory (i.e., classical conditioning), desensitization through exposure can potentially decrease the experience of fear, distress, and pain (Philips & Jahanshahi, 1985). Although commonly used as a component in multidisciplinary CBT programs (Morley et al., 1999), in vivo exposure has been used as the main therapeutic intervention for chronic pain patients in only a few studies (Linton, Overmeer, Janson, Vlaeyen, & de Jong, 2002; Vlaeyen, de Jong, Geilen, Heuts, & van Breukelen, 2001; Waddell, Newton, Henderson, Somerville, & Main, 1993). These studies focused on fear of pain as a central part of disability.

CBT for managing chronic pain encompasses a wide variety of interventions, including self-monitoring exercises, differential reinforcement of competing activities, relaxation, imagery, and self-control strategies (Sanders et al., 1989). The term “broad spectrum cognitive behavior therapy” has been used to illustrate that most therapists use several interventions in addressing chronic pain and related disability (Gatchel, 1999). Although interventions emphasizing activation and reinforcement of adaptive behaviors (as opposed to pain behaviors) are commonly included, the main focus seems to be on symptom reduction (i.e., reducing or controlling pain, altering the pain experience) (Morley et al., 1999; Walco & Ilowite, 1992).

ACT, a development of CBT, provides a different approach to human suffering. An ACT approach seeks to assist the patient in identifying a valuable and meaningful life and to provide the patient with support to achieve this. Avoidance of unpleasant experiences is emphasized when describing the functional relationship between symptoms and disability. The patient often reports a need to control symptoms (such as anxiety, anger, fear, and pain) in order to attain a valuable life, and this experienced need to control is considered a core problem. In focusing on symptom reduction, the patient becomes engaged in activities that produce short-term relief but also are less active, stimulating, and (potentially) meaningful than before the symptoms occurred. Over time, the behavior pattern becomes narrow and inflexible. In a values-based exposure process, a wider and more flexible behavior repertoire is emphasized. In this process, acceptance of what cannot be changed (pain) is emphasized as a means to recognize and change the things that can (valued life) (Hayes et al., 1999). Thoughts (“If I work out, my pain gets worse”) are powerful and tend to point in a direction away from the expressed values (“playing soccer, being part of the team”). By helping the patient to recognize and acknowledge private events (pain, fear) for what they are (i.e., thoughts are thoughts), the therapist helps the patient to defuse the thoughts, not by discussing whether or not they are correct but by analyzing the consequences of acting upon them. The expressed goal of ACT, in contrast to a symptom reduction approach, is to help clients consistently choose to act effectively in concordance with their values, in the presence of difficult or interfering private events. Thus, emphasizing values and acceptance of symptoms in a process of exposure and defusion provides a different, but promising, perspective for rehabilitation.

Although empirical support is still limited, a recently published review illustrates an emerging body of research suggesting that an ACT approach might be beneficial for a wide variety of human suffering (Hayes, Masuda, Bissett, Luoma, & Guerrero, 2004). Controlled trials have shown ACT to be effective in the treatment of, for example, panic disorder (Eifert & Heffner, 2003; Levitt, Brown, Orsillo, & Barlow, in press), depression (Zettle & Hayes, 1986), generalized anxiety disorder (Orsillo, Roemer, & Barlow, 2003), psychosis (Bach & Hayes, 2002), and work-site stress (Bond & Bunce, 2000).

Acceptance of pain has received increasing attention in recent years. In two studies by McCracken and colleagues, acceptance of pain was associated with lower pain-related avoidance, anxiety, depression, physical and psychosocial disability, and pain intensity. Acceptance was also found to reliably predict return to work as well as other aspects of well-being when controlling for pain intensity (McCracken, 1998; McCracken & Eccleston, 2003). In two related studies, acceptance of pain predicted mental health beyond pain severity (Viane et al., 2003).

The effects of ACT in pain management have been evaluated in a few clinical trials. In a noncontrolled study, an acceptance-based program for 108 patients with chronic pain was administered within an interdisciplinary treat-
The use of acceptance strategies for experimentally induced pain has been investigated in several studies. Repeatedly, acceptance has been demonstrated to be more effective than strategies aimed at controlling the pain (Gutiérrez, Luciano, & Rodríguez, in press; Hayes et al., 1999; Keogh, Bond, Hammer, & Tilston, 2004). In a study attempting to evaluate the effects of both acceptance and valuing, participants in the acceptance condition demonstrated greater pain tolerance and lower believability of experienced pain than those receiving a control strategy. For the group in which the importance of participation was emphasized, the pain levels were reported to be significantly higher during the post- than during the pre-intervention task (Johnson, 2004). Thus, studies using experimentally induced pain indicate that the integration of acceptance strategies appears promising in enhancing interventions aimed at increasing activities and restoring a high level of functioning in the presence of intractable pain and related discomfort.

Regarding the application of ACT to youths, clinical experience still exceeds empirical support. Two intervention studies with adolescents have been presented, both reporting favorable outcomes: an RCT using ACT to reduce high-risk sexual behaviors (Metzler, Biglan, Noell, Ary, & Ochs, 2000) and a case study demonstrating the use of ACT in anorexia (Heffner, Sperry, Eifert, & Detweiler, 2002). To date, however, there is no study evaluating the effects of an ACT approach to adolescents with chronic pain.

Considering the level of abstraction, certain age-appropriate adaptations obviously have to be made when working with younger populations. In this case it involved adjustments with regard to language, repetition of important topics, and more concrete discussions of concepts such as values and fusion with thoughts. Metaphors were invented or adjusted to better match this adolescent’s context. An important adaptation was the inclusion of parents in the treatment.

In the present case example, it was hypothesized that avoidance of pain-related stimuli constituted a behavioral strategy central to suffering and increasing disability. In addition, it was hypothesized that avoidance had led to an increase in the patient’s vulnerability to pain-related stimuli. Based on this, we conducted a rehabilitation program focusing on exposure to activities and settings related to pain and distress. Values, the functions of avoiding negative private events, and the matter of taking action were emphasized in the exposure process. The purpose of this case example was, thus, to illustrate how an ACT-model of treatment can be applied within a behavioral medicine setting, in the rehabilitation of an adolescent with chronic idiopathic debilitating pain.

**Case Description**

The subject was a 14-year-old girl, living with her parents and a younger brother outside Stockholm, referred to the Pain Treatment Service from the unit of pediatric rheumatology. With an older cousin similarly afflicted with rheumatoid arthritis, the family initially assumed a similar cause of the pain.

Except for an ear operation in 1999, a borrelia infection in 1997, and asthma, the patient was previously healthy. She was vaccinated against measles, parotitis, and rubella in March 2000 in routine pediatric health care. A month later she started experiencing stiffness and pain located in different joints, including fingers, feet, knees, shoulders, and hips. However, except for some swelling of the joints, no objective signs of inflammatory disease were seen. She was referred to the unit of pediatric rheumatology in December 2000 and was diagnosed with probable juvenile idiopathic arthritis. Blood tests for ANA, rheumatoid factor, HLA-B27 and inflammatory parameters were negative. Thereby a rheumatic disease could not be confirmed. Investigations of hands and feet with magnetic resonance imaging (MRI) were performed in May 2001, including gadolinium enhancement. These results were also negative, without evidence of any inflammatory process. Treatment consisted of the following pharmacological interventions: naproxen, rofecoxib, codeine, prednisolone, steroids intraarticularly, methotrexate (orally and parenterally). No positive lasting effects of drug therapy were seen. However, several adverse side effects appeared. In August 2001, amitriptyline 10 mg was administered and pediatric psychiatrists were consulted. This dosage was later increased to 25 mg (December 2001). In the absence of positive signs and laboratory findings, the Pain Treatment Service (PTS) was consulted. After the referral, the amitriptyline dosage was optimized.

When referred to PTS, 36 months after initial pain symptoms were presented, the pain was described as generalized, and was located in both lower (feet, ankles, knees, and hips) and upper extremities (wrists, elbows, hands, and fingers). In some locations the pain intensity was constant, in others it varied. She reported higher
intensity and stiffness mornings and evenings. Physical activities (e.g., walking, biking, skiing, using stairs) were generally related to an increase in pain intensity. She described herself as being unable to perform activities for longer periods of time, frequently stopping activities due to severe pain. Heat and relaxation were strategies she used to “get the pain back to a normal level.”

When referred to PTS, she had experienced headaches persisting for up to a week at a time. Her mother described them as being of “migraine-type.” She associated the headache, as well as increases in musculoskeletal pain, with stressful situations. In addition to pain, she reported severe fatigue and significant problems with sleep. Commonly, it took her 2 to 3 hours in bed with pain and anxiety before falling asleep and frequently she woke up in pain during the night. Shortly before referral to the PTS, she also started experiencing repeated symptoms of panic attacks which she associated with stressful situations and experiences of being “out of control” because of pain-related incapacity. We conceptualized her symptoms as idiopathic musculoskeletal pain syndrome.

Several pain-related disabilities were seen. Due to difficulties in using the stairs she had to move from her room on the first floor to the basement. Her pain-related difficulties resulted in increased absence from school. Installing an elevator, moving her classes to the ground floor, and providing her with a laptop computer gave only minor improvements in school attendance. Although she enjoyed schoolwork as well as teachers and friends, when referred to PTS she had been absent from school for 10 weeks, with only a few exceptions. This resulted in a decision from the school and her family to drop out of school and repeat this last year after she recovered. In addition, she had stopped playing basketball, and spent markedly less time with friends due to pain and related difficulties. Any activities outside school were, at this point, almost always together with her family. Because of problems related to pain she needed assistance in many daily activities. Consequently, her difficulties had a major impact on the whole family and its functioning. In March 2002, an ACT-based intervention program was initiated.

Method

Data were collected during 2 to 3 week periods pre- and posttreatment as well as 3 and 6 months following treatment. Functional ability, as measured by the Functional Disability Inventory (FDI), experienced valued life, measured by degree of goal achievement (concrete goals derived from the values assessment), and school attendance were considered primary outcome variables. Experiences of pain (intensity and interference) and strategies to cope with the pain were also assessed. In addition, measures of depression and parental support were administered pre- and posttreatment and at 3- and 6-month follow-ups.

Functional ability. FDI is a 15-item instrument designed to be used with a broad range of illnesses and levels of severity (Walker & Greene, 1991). For the chronic pain patients seen at the clinic, not all items in the FDI reflect the difficulties presented. By summarizing the pretreatment assessments for each consecutive patient at the clinic, 6 items (“walking to the bathroom,” “doing something with a friend,” “eating regular meals,” “riding the school bus or traveling in the car,” “reading or doing homework,” “watching TV”) were not found to be sensitive to the difficulties experienced by these patients. Thus, a revised 9-item version was used to assess disability and outcome for the patients at the clinic (see Table 1). However, psychometric data are not yet available on the 9-item version.

Values-based goals. As part of an individual behavior analysis, a values assessment was performed in session (Hayes et al., 1999). From this, concrete goals were generated (Figure 1) as primary outcome measures. For each of these goals the patient was asked to rate the degree of achievement (“If achieving the goal is 100, at what level are you now, on a scale from 0 to 100?”). These ratings were performed continuously as a therapeutic tool, and goal achievement constituted an important criterion for terminating therapy.

School attendance. School attendance was registered by the patient’s parents on a daily basis during the assessment periods (pre- and posttreatment and at 3- and 6-month follow-ups). The categories were as follows: not in school because of pain; not in school because of other reason; in school part of the day because of pain; in school part of the day because of other reason; in school full day. Results were calculated as number of days for each of these five alternatives. The school was contacted to further assess absence as well as difficulties in school due to pain, prior to and following treatment.

Pain ratings. Pain experience was assessed pre- and posttreatment and at follow-ups, although it was not a primary outcome measure or a target in therapy. Self-ratings were performed four times daily, using a 0–10 numeric analogue scale, to assess experienced intensity, highest/lowest pain during the day, and interference with functioning (i.e., prevented from activities, experiencing bad mood or negative thoughts due to pain).

Coping

The Pain Coping Questionnaire (PCQ; Reid, Gilbert, & McGrath, 1998) addresses different ways of coping with pain and was administered to the patient as a process measure pre- and posttreatment and at follow-ups. Use of 39 coping strategies was rated on a scale from 1 (never) to 5 (very often). Based on factor analyses, the 39 items form eight subscales that are divided into three higher-order scales (subcales in parentheses): Approach (Infor-
Values Assessment

A thorough assessment of the client’s individual values was performed in therapy by the patient and the therapist collaborated to formulate activities, situations, and aspects of life considered important to the patient (Figure 1; Hayes et al., 1999). These values constituted main goals with regard to increases in activity and, as can be seen in Figure 1, the goals are more concrete than what is referred to as “values” in ACT. The concrete goals initially developed were frequently discussed in therapy and related to underlying values, such as “being around friends” and “learning new things.” In addition, the values themselves provided a context for exposure (see below on exposure and defusion). Finally, these discussions served to motivate and facilitate a shift in perspective away from symptom alleviation.

Shifting Perspective

Previous strategies to reduce pain were evaluated in therapy, leading to two important conclusions: (a) strategies used to reduce pain worked fairly well in the short run but not at all in the long run, and (b) these strategies had not led toward, but rather away from, what she considered a valued life. Instead, by accepting a certain amount of pain and distress, it became possible for her to redirect focus from reducing pain to an increase in activities compatible with her own definition of a valued life.

Exposure

Subsequent to formulating concrete goals based on the values assessment (see Figure 1), behaviors aimed at reducing pain or risks of pain that interfered with these goals were identified and conceptualized as avoidance. Following this, the patient performed a gradual values-based exposure aimed at (a) increasing behaviors in alignment with stated values, and (b) expanding, and increasing flexibility in, the behavior repertoire in situations eliciting pain-related discomfort. This included all activities expressed as important but difficult to perform or continue due to experienced discomfort (e.g., walking up and down stairs, engaging in social activities, visiting school as part of a gradual school re-entry). Commonly, talking about values/goals elicited fear (e.g., of pain, failure, never getting better, being alone) that was targeted in therapy as a process of exposure (conceptualized as defusion; see below).

Acceptance and Defusion

In therapy, thoughts, emotions, and “body signals” (i.e., “I can’t do that,” fear, pain) pointing in the direction of symptom alleviation/away from values were addressed. The patient was instructed to acknowledge and accept (as opposed to control, suppress, or avoid) these negative private events without following the content. Thus, acceptance of what cannot be changed (e.g., thoughts and feelings, pain) was emphasized to facilitate acting in alignment with values. Metaphors were sometimes used to illustrate the concepts discussed in therapy. Some metaphors were based on previous descriptions (see Hayes et al., 1999) and adapted to the patient’s age and context. Some metaphors were invented collaboratively in therapy. In helping the patient to distance herself from her thoughts (i.e., including emotions and sen-
sations), we described them as being expressed by “the pain monster.” Together, we could detect relevant thoughts as well as their function by discussing “what the pain monster says” in certain situations. In this metaphor, the pain monster said things like, “You can’t have pain, and walking up stairs will hurt, so you just can’t do that” to make her avoid doing important things when pain might occur or increase. In relation to her thoughts we addressed her values: “Now I understand what the pain monster says you should do. If you also ask the little girl inside, what does she want to do?” Following this, we could address the possibility of choosing how to act—in alignment with her values or in line with the content of her thoughts.

Parental Involvement

The parents were seen without the patient on three occasions, focusing on how to coach their daughter toward her values rather than toward symptom reduction. The shift in perspective from symptom alleviation to a valued life was emphasized as well as the principles of exposure and operant mechanisms. The parents’ own negative experiences (“What if this treatment doesn’t work?” “I have to do something to help my child”) made it difficult for them to act as coaches in the most effective way (i.e., in some situations they tended to become overly supportive). To address these difficulties we discussed, from the parents’ own perspective, the workability of previous strategies (i.e., doing things to reduce pain or distress), fusion with thoughts (e.g., “She won’t be able to do that on her own”; “Maybe things will never get better”), and avoidance of their negative experiences by trying to reduce the daughter’s pain and distress.

Therapy consisted of 13 sessions (10 with the patient and 3 with the parents), during a period of 6 months. The main part of therapy (8 with the patient and 2 with the parents) was conducted during the first 3 months. This was followed by a 10-week summer break. We agreed to suspend sessions during that time. Thereafter, therapy continued with the 2 final sessions (and 1 with the parents).

Therapy was conducted by a clinical psychologist. Both the psychologist and the physician were trained in ACT.

Results

Values-Based Goals

Figure 1 shows the patient’s goals and subjective achievement prior to treatment as well as at posttreatment and follow-up. As goal achievement was used as the main criteria for terminating therapy, posttreatment assessments showed 100 (or close to it) on all the different targets. The change in reported achievement of valued goals clearly illustrated a substantial increase in functioning and valued life. Improvements were confirmed in discussions with her parents and in communication with teachers at school. The results were maintained at 3- and 6-months follow-up.

Functional Ability

As illustrated in Table 1, results from FDI-Child form (9-item version) show a substantial increase in functionality, which was maintained at 6-months follow-up.

School Attendance

As reported by parents and the school, the patient had a very high level of absence from school during the previous semester. The last 2 months prior to assessment she was unable to attend school, resulting in the decision to drop out. During the course of treatment, the patient successively increased school activities (e.g., reading books at home) and time spent in school. At posttreatment, as well as at the 3- and 6-month follow-ups, she was back in school, reporting no pain-related absence as measured by the parents’ daily registration. Although records of school absence were not available, teachers reported that no absence and only minor (decreasing) difficulties were seen during the semester following treatment.

Coping Strategies

Results for the three higher-order scales are presented in Table 2. A substantial decrease was seen following treatment with regard to emotion-focused avoidance.
However, no differences were seen in approach or problem-focused avoidance scales. Results are relatively stable at follow-up.

**Pain Assessment**

The results, as illustrated in Figure 2, show a significant decrease in pain intensity as well as in interference. This effect was maintained at 3- and 6-month follow-ups.

Although the patient was emotionally upset, with clinical indications of depression prior to treatment, the CDI did not indicate depression. The pretreatment assessment with IBES-Child form did not indicate a significant encouragement of illness behavior. This score was somewhat reduced, however, during the course of treatment and maintained at 3- and 6-month follow-ups.

**Discussion**

The present case example represents an initial attempt to illustrate how an ACT approach can be incorporated in the rehabilitation of young people with chronic debilitating pain. The interventions were aimed at increasing the patient’s ability to act in alignment with values, in the presence of negative private events (i.e., pain and distress). Important and meaningful activities, previously avoided due to pain and distress, were gradually increased in a process of values-based exposure. For this patient, substantial and stable increases in valued life/goal achievement, functionality and school attendance were seen during the course of treatment. In addition, a gradual decrease in ratings of pain and disability was seen, and continued posttreatment.

The decrease in emotion-focused avoidance without a corresponding change in approach or problem-focused avoidance indicates a relationship between her coping strategies, the intervention, and the improvements seen in functioning and pain experience. Given that emotion-focused avoidance has been associated with emotional distress, less coping effectiveness, and higher levels of pain, it is not surprising that decreases in this particular coping style correlate with increases in functional ability as well as decreases in school absence and pain intensity/interference. While the results of the process measures are tentative, they suggest that the use of values and acceptance strategies contributed to the decrease in emotion-based avoidance and, subsequently, to the improvements seen following treatment.

Although therapy was conducted during a period of 6 months, the patient’s status after the summer break indi-
icated that the period of 3 months (8 sessions) prior to the break would have been sufficient to achieve the same effect.

The need to conduct treatment studies on CBT for children with chronic pain other than headache, as well as for severely disabled patients, has been stressed in several review articles (Eccleston et al., 2002; Walco et al., 1999). Activation and reinforcement of adaptive behaviors are common in most CBT-based rehabilitation models. However, the emphasis on values, the shift in perspective along with acceptance and defusion strategies, as well as the focus on increase in behavioral flexibility when experiencing negative private events is seemingly different in this example.

In this treatment, pain intensity itself was not targeted, in the sense that no intervention (e.g., relaxation, distraction, stress management) aimed at symptom alleviation or pain control. Despite this, the pain experience (i.e., intensity and interference) successively decreased over time. The decrease was therefore conceptualized as a positive side effect of treatment and the magnitude of this effect was somewhat surprising to the authors. The hypothesis that exposure to pain-related stimuli would decrease the vulnerability to these stimuli through desensitization has been addressed in previous studies (Philips, 1987; Philips & Jahanshahi, 1985). Studies on fear-avoidance behavior in chronic pain have also illustrated the use of gradual in vivo exposure (Linton et al., 2002; Vlaeyen et al., 2001; Waddell et al., 1993). In the present case example, the use of exposure is conceptually different from what is reported in previous studies on chronic pain. Although the importance of gradually increasing activities was emphasized, graded hierarchies or behavioral experiments were not used in the treatment. Furthermore, the objective was not to achieve desensitization to pain stimuli. Instead, pain and distress were conceptualized as negative private events that we can choose how to respond to (i.e., to try to avoid them or not). Exposure seems useful in the treatment of chronic idiopathic pain, and the conceptual similarities and differences need to be further investigated.

The role of acceptance in pain management has been illustrated in several studies and thus seems to add an important dimension to the development of an effective pain rehabilitation program. The potential contribution of acceptance strategies to pain management is supported by clinical evaluations and studies on experimentally induced pain, as well as by studies demonstrating that acceptance can increase the tolerance of other aversive sensations (e.g., pain-related symptoms).

The age-appropriate adaptations to a more standard ACT approach made in this particular case included a more concrete discussion of values (starting with regular goals and eventually relating these to more process oriented values) and more focus on behavioral activation. Also, important topics such as the workability (effectiveness) of previously used strategies were emphasized by repeating this more than what is normally done with adults. The integration of parents into the program was another important adaptation, in which we focused on their “coaching role.” Importantly, in addition to instructions regarding standard operant techniques (i.e., only supporting nonpain behaviors), the parents’ own emotional difficulties and avoidance were addressed.

Methodological shortcomings prevent us from drawing any far-reaching conclusions based on the results of this treatment. Instead, this case illustration provides an example of how an ACT model of treatment can be used for an adolescent with idiopathic, debilitating pain. Effective treatments, as well as empirical studies, are greatly needed for this difficult group of patients. The favorable outcome of this approach merits further studies to empirically evaluate the effects of exposure-based interventions and the contribution of ACT in the rehabilitation of young patients disabled by idiopathic pain.

References


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