

Commentary

The use of art therapy to introduce acceptance in treatment for pediatric chronic pain

Aimée N. Pugh and Jessica W. Guite

The commentary that follows highlights findings derived from a master's thesis project that utilized a structured, qualitative literature review based on grounded theory methodology (Pugh, 2009). These findings provide the framework for a complementary treatment that uses art therapy as a means of introducing acceptance concepts to enhance pain coping for pediatric chronic pain patients 7 to 12 years of age. We present a targeted review of the literature that informed the development of the proposed art therapy treatment approach and discuss how this approach may provide a clinically useful method for promoting acceptance and mindfulness concepts in the treatment of pediatric chronic pain.

Pediatric chronic pain and treatment options

Chronic pain is a common problem among the general pediatric population that can negatively affect everyday functioning of children and their families. Prevalence rates for self-reported chronic pain range from 22 to 37% (Perquin et al., 2000; Roth-Isigkeit et al., 2005; Huguet & Miro, 2008). Children and adolescents with chronic pain conditions are at greater risk for both emotional and functional problems (Walker et al., 1993; Bursch et al., 1998; Palermo, 2000; Kashikar-Zuck et al., 2001; Gold et al., 2009), with as many as 40% reporting moderate effects of their pain on school attendance, social activities, appetite, sleep, and increased health service utilization (Roth-Isigkeit et al., 2005).

A broad range of treatment options for pediatric chronic pain exist including pharmacologic options, physical therapy, cognitive behavioral therapies, and complementary and alternative medicine (CAM) therapies that include creative arts therapies such as art therapy (Lin et al., 2005). Within this commentary, we have focused our discussion on both acceptance-based approaches that are part of the broader family of cognitive behavioral psychological therapies and art therapy approaches.

A recent systematic review examined the effectiveness of psychological therapies for reducing pain and disability and improving mood in children and adolescents with chronic pain (Eccleston et al., 2009). This review identified good evidence to support that relaxation and cognitive behavioral therapy (CBT) are effective in pain control, but found little evidence to estimate effects of these treatments on disability or mood (Eccleston et al., 2009). Acceptance and commitment therapy (ACT; Hayes et al., 1999) is a relatively recent development within the broader CBT literature that emphasizes the acceptance or willingness to experience pain rather than control or reduce symptoms, in combination with a focus on clarifying personal values as a method of inspiring commitment to an acceptance-based strategy. Research focusing on ACT-based treatment approaches for adults (McCracken et al., 2007; Vowles et al., 2007) and adolescents (Wicksell et al., 2007; Wicksell et al., 2009; McCracken et al., 2010) with chronic pain suggests that acceptance of pain

may play an important role in improving functioning for patients aged 10 years and older. There is currently a lack of research on acceptance-based approaches to treat chronic pain for children younger than 10 years, suggesting that an opportunity exists to adapt acceptance-based approaches for a younger age group.

Acceptance and mindfulness based treatment approaches to chronic pain

An acceptance-based approach to pediatric chronic pain aims to weaken the emotional power of sensations and fearful thoughts by using metaphor and mindfulness principles. The construct of mindfulness can be operationalized as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally, to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p. 145). Mindfulness exercises teach nonjudgmental awareness of the present moment and are part of an acceptance-based approach to treating pediatric chronic pain (Thompson & Gauntlett-Gilbert, 2008; Wicksell & Greco, 2008). An ACT approach encourages engagement in activities deemed valuable by the child, despite the experience of potentially painful sensations, negative cognitions, and emotions. Other components of ACT-based interventions for children aged 10 years and older include pain education and reassurance, values assessment, shifting perspective, exposure, acceptance and defusion, and parental involvement (Wicksell et al., 2007; Wicksell et al., 2009). Shifting perspective involves a process of evaluating previous efforts to reduce pain, while encouraging participation in valued activities and acceptance of pain (Wicksell et al., 2007). Acceptance and defusion principles encourage patients to accept thoughts, emotions and sensations and to turn one’s energy towards engaging in valued activity rather than identifying with negative thoughts, emotions, and sensations (Wicksell et al., 2007).

Recent research efforts have examined the role of acceptance in treatment for adults with chronic pain (McCracken et al., 2007; Vowles et al., 2007). Vowles et al. (2007) reported that changes in acceptance of pain accounted for significant

variance in factors that play a role in everyday functioning such as depression, pain-related anxiety and physical disability. Acceptance-related coping skills (e.g. activity persistence) are also reported to be associated with better functioning than control-oriented approaches (e.g. use of pain medication) over time (McCracken et al., 2007). While there is a limited amount of research involving acceptance-based interventions for children and adolescents (Wicksell et al., 2007; Wicksell et al., 2009), studies suggest that the incorporation of acceptance into cognitive behavioral treatments for chronic pain improves participants’ ability to cope. Specifically, results of a randomized controlled trial with participants aged 10 to 18 years showed significant improvement in the experimental group’s perception of their functional ability after treatment (Wicksell et al., 2009) and a pilot study for slightly older participants reported improvements in functional ability, school attendance, catastrophizing, and pain, after individualized ACT-based treatments (Wicksell et al., 2007).

Also contributing to this area of research are two studies that aimed to evaluate the validity and reliability of self-report questionnaires that directly measure acceptance (McCracken et al., 2010) or related constructs (Greco et al., 2008). Specifically, McCracken and colleagues have recently reported on the reliability and validity of an adaptation of the Chronic Pain Acceptance Questionnaire (CPAQ; McCracken et al., 2004) for adolescents (CPAQ-A; McCracken et al., 2010). These findings validate the CPAQ-A and also show its substantial correlation with mood and functioning, specifically disability, psychological distress, and developmental and family functioning (McCracken et al., 2010). Greco et al. (2008) report preliminary support for the reliability and validity of the Avoidance and Fusion Questionnaire for Youth (AFQ-Y), a child-report measure that assesses the psychological processes of cognitive fusion and experiential avoidance. *Cognitive fusion* is a process in which thoughts and/or emotions are viewed as accurate descriptions of reality versus automatic phenomena that may have limited meaning or usefulness to the child. *Experiential avoidance* is defined as an unwillingness to experience private events, and attempting to manage or control them by changing

their content, rate of recurrence, or contexts in which they are experienced (Greco et al., 2005; O'Brien et al., 2008). The recent development of the CPAQ-A and the AFQ-Y will help facilitate future research efforts involving acceptance in treatment approaches for children with chronic pain.

Art therapy

The creative arts therapies of art, music and dance/movement are included within the larger category of CAM therapies (Lin et al., 2005). Art therapy may benefit children and adolescents by providing a means of exploring emotions and/or serving as a concrete method of problem solving (Wadeson, 1980; Landgarten, 1981; Rubin, 2005). Art therapy with children often focuses on supporting emotional expression and creativity, and facilitating awareness of relationships and behavior. In art therapy, the patient's art productions are used as a starting point for verbal communication. Examples of practice include individual or group therapy provided in outpatient, inpatient, or residential settings. The patient who participates in art therapy does not need any special training or ability in art. The use of art expression to begin the therapeutic process may be particularly helpful for children, who may be less able and/or less comfortable using traditional verbal methods.

There is a small but growing literature that considers how creative arts therapies can be applied as complementary treatment for chronic pediatric pain (for a review of this literature see Pugh, 2009). Case studies in dance/movement therapy (DMT) and music therapy (MT) for pediatric chronic pain patients have described benefits such as improvement in level of activity (Goodill, 2005) and increased awareness of the experience of pain (Christie et al., 2006). Loewy et al. (1997) reported that participation in MT helped children to identify emotions that were part of their experience of pain. One of the ways in which art therapy may be helpful for school-aged children with chronic pain is by providing a concrete means of communication through the use of art media. Several articles — a study with a limited sample size, (Barton, 1999), a family case study (Palmer & Shepard, 2008), and a brief collection of case histories (Savins, 2002) — describe the beneficial use of art therapy with

children in this age range. There is also a larger body of work that documents the use of art therapy in medical settings (see Pugh, 2009).

Introducing acceptance to pediatric patients through art therapy

The art therapy process may provide a way for children with pediatric chronic pain to explore and benefit from the concept of acceptance (Pugh, 2009). At present, there is no research to directly inform an absolute age threshold for incorporating acceptance concepts into treatment. From a developmental standpoint, there is some evidence to support that children in the concrete operational stage of cognitive development (approximately age 7 to 12 years) are able to verbally describe concepts related to pain and symptoms through the use of analogy and metaphor (Beales et al., 1983; Gaffney & Dunne, 1986; Whaley, 1994; Kortessluoma & Nikkonen, 2006). Available research provides some preliminary support that 7- to 12-year-old children are able to compare a feeling or internal bodily activity to familiar objects in their environment. Although additional research is needed to better understand children's use of metaphor in art therapy, the existing research provides a rationale for the use of metaphor to explore acceptance and the experience of chronic pain. Existing research includes children's use of metaphor in either verbal or visual form.

In using this art therapy approach in a clinical context, ongoing assessment of the child's emotional and cognitive developmental level is important in order to determine whether introducing acceptance through metaphor is an appropriate intervention. Children operating at an earlier, preoperational level of cognitive and emotional development (approximately age 2 to 6 years), may use more literal interpretation of metaphor (Beales et al., 1983) and the therapist would want to intervene to ensure that the process serves to decrease rather than unintentionally increase feelings of fear or anxiety. This can be particularly important to monitor when working with children in the context of medical environments, where potential stress and anxiety associated with the setting (Guite & Kazak, 2010) may be related to signs of some transient developmental regression.

In artwork, an example of regression may appear as scribbling by an 8-year-old who at other times is capable of more advanced representation. In the art therapy process, noticing regression in a patient's artwork informs which tasks and materials are appropriate to use at a given time.

An example of how this art therapy approach to introduce acceptance may work is described for a typically developing 8-year-old patient. The art therapist may begin by asking a question such as, "What kind of animal does your pain feel like [or act like] today?". The therapeutic process may involve creating a representation of pain as an animal with the child elaborating on qualities of the experienced pain. The therapist may ask questions that support development of the image such as "What color is it?", "Is it big or small?", "Is it soft or rough?". The choice of media offered to the patient is based on the therapist considering which media may best support a balance of emotional expression and organizational ability. If for example, a patient is having difficulty expressing affect with colored pencils, a therapist may introduce looser, more expressive media such as pastels, which may facilitate greater emotional expression. In contrast, if a child is using paint and has trouble depicting intended forms and relationships between forms, the therapist may introduce a more structured medium like crayons.

An advantage of art therapy is that children may find it easier to explore emotions related to their experience of chronic pain by talking about their drawing (or sculpture or painting) rather than responding to direct self-reported questions. In the process of creating art and talking about themselves through their art, children may gain a greater awareness of the emotions and sensations related to chronic pain. Once an initial metaphor for the chronic pain is created, the therapist can encourage that it be revisited and developed over time (e.g. making a series of drawings that tell a story about the experience).

The process of making a drawing (or other art object) may help the child to gain greater awareness of the thoughts, emotions, and sensations related to the experience of chronic pain. Developing greater awareness is an initial step in the process of acceptance. Through creating an image, and then

dialoging about it, the possibility of shaping a different response to chronic pain may be introduced. Promoting acceptance and mindfulness of chronic pain through this art therapy approach necessitates that the intention of the therapist be to help the child describe the qualities of his image and experience without assigning value to them. For example, suggesting that the child create an image in which both the child and the metaphorical representation of pain are present during a favorite activity may provide a simple impetus to consider different ways of relating to chronic pain.

Conclusion

The potential value of the art therapy approach described in this commentary is that it can provide an innovative, child-friendly extension of acceptance and mindfulness-based approaches to the treatment of pediatric patients with chronic pain. The approach is intended to be a complementary treatment used in conjunction with other interventions. Moreover, the approach may provide a way for a currently overlooked population of younger children aged 7 to 12 years to benefit from the positive effects of acceptance and mindfulness which are often introduced to adults through abstract, verbally-communicated metaphors. Future research is necessary to examine the efficacy of this art therapy approach. Studies that incorporate this approach might aim to measure change in participants' level of acceptance of chronic pain, functional disability, and emotional functioning. It is our hope that an art therapy approach to introducing acceptance and mindfulness concepts may be considered as an additional treatment resource to support the challenges faced by children with chronic pain, their families, and caregivers.

Aimée N. Pugh, MA
Department of Creative Arts Therapies, Drexel University, Philadelphia, PA, USA
email: aimeepugh@msn.com

Jessica W. Guite, PhD
Assistant Professor of Anesthesiology and Critical Care, University of Pennsylvania School of Medicine; Psychologist, Pain Management Service, Department of Anesthesiology & Critical Care

Medicine, The Children's Hospital of Philadelphia, PA, USA

Acknowledgments

The authors would like to thank Nancy Ellen Gerber, PhD, ATR-BC, LPC, Thesis Chairperson/Advisor and Director of Art Therapy Programs, Drexel University, for her expertise in methodology and in formulating a theoretical approach.

References

- Barton J. Comparisons of pain perceptions between children with arthritis and their caregivers. In: Malchiodi C, editor. *Medical art therapy with children*. London: Jessica Kingsley, 1999. pp. 153-172. www.worldcat.org/oclc/40648835
- Beales JG, Lennox-Holt PJ, Keen JH, Mellor VP. Children with juvenile chronic arthritis: their beliefs about their illness and therapy. *Ann Rheum Dis* 1983;42:481-486. www.pubmed.gov/6625698
- Bursch B, Walco GA, Zeltzer LK. Clinical assessment and management of chronic pain and pain-associated disability syndrome. *J Dev Behav Pediatr* 1998;19:45-53.
- Christie D, Hood D, Griffin A. Thinking, feeling and moving: drama and movement therapy as an adjunct to a multidisciplinary rehabilitation approach for chronic pain in two adolescent girls. *Clin Child Psychol Psychiatry* 2006;11:569-577. www.pubmed.gov/17163225
- Eccleston C, Palermo TM, Williams AC, Lewandowski A, Morley S. Psychological therapies for the management of chronic and recurrent pain in children and adolescents. *Cochrane Database Syst Rev* 2009; Apr 15;(2):CD003968. www.pubmed.gov/19370592
- Gaffney A, Dunne EA. Developmental aspects of children's definitions of pain. *Pain* 1986;26:105-117. www.pubmed.gov/3737225
- Gold JI, Mahrer NE, Yee J, Palermo TM. Pain, fatigue, and health-related quality of life in children and adolescents with chronic pain. *Clin J Pain* 2009;25:407-412. www.pubmed.gov/19454874
- Goodill SW. *An introduction to medical dance/movement therapy: health care in motion*. London: Jessica Kingsley, 2005. www.worldcat.org/oclc/475290317
- Greco LA, Blackledge, JT, Coyne LW, Ehrenreich, J. Integrating acceptance and mindfulness into treatments for child and adolescent anxiety disorders: acceptance and commitment therapy as an example. In: Orsillo SM, Roemer L, editors. *Acceptance and mindfulness-based approaches to anxiety: conceptualization and treatment*. New York: Springer, 2005. pp. 301-322. www.worldcat.org/oclc/318292449
- Greco LA, Lambert W, Baer RA. Psychological inflexibility in childhood and adolescence: development and evaluation of the Avoidance and Fusion Questionnaire for Youth. *Psychol Assess* 2008;20:93-102. www.pubmed.gov/18557686
- Guite JW, Kazak AE. Anxiety symptoms and disorders. In: Shaw RJ, DeMaso DR, editors. *Textbook of pediatric psychosomatic medicine*. Washington: American Psychiatric Publishing, 2010. pp. 101-119. www.worldcat.org/oclc/608692915
- Hayes SC, Strosahl KD, Wilson KG. *Acceptance and commitment therapy: an experiential approach to behavior change*. New York: Guilford Press, 1999. www.worldcat.org/oclc/41712470
- Huguet A, Miro J. The severity of chronic pediatric pain: an epidemiological study. *J Pain* 2008;9:226-236. www.pubmed.gov/18088558
- Kabat-Zinn J. Mindfulness-based interventions in context: past, present, and future. *Clin Psychol Sci Pract* 2003;10:144-156.
- Kashikar-Zuck S, Goldschneider KR, Powers SW, Vaught MH, Hershey AD. Depression and functional disability in chronic pediatric pain. *Clin J Pain* 2001; 17:341-349. www.pubmed.gov/11783815
- Kortesluoma RL, Nikkonen M. 'The most disgusting ever': children's pain descriptions and views of the purpose of pain. *J Child Health Care* 2006;10:213-227. www.pubmed.gov/16940344
- Landgarten HB. *Clinical art therapy: a comprehensive guide*. New York: Brunner/Mazel, 1981. www.worldcat.org/oclc/6762070

- Lin YC, Lee AC, Kemper KJ, Berde CB. Use of complementary and alternative medicine in pediatric pain management service: a survey. *Pain Med* 2005; 6:452-458. www.pubmed.gov/16336482
- Loewy J, MacGregor B, Richards K, Rodriguez J. Music therapy pediatric pain management: assessing and attending to the sounds of hurt, fear and anxiety. In: Loewy JV, editor. *Music therapy and pediatric pain*. Cherry Hill, NJ: Jeffrey Books, 1997. pp. 45-56. www.worldcat.org/oclc/39254756
- McCracken LM, Gauntlett-Gilbert J, Eccleston C. Acceptance of pain in adolescents with chronic pain: validation of an adapted assessment instrument and preliminary correlation analyses. *Eur J Pain* 2010; 14:316-320. www.pubmed.gov/19477144
- McCracken LM, Vowles KE, Eccleston C. Acceptance of chronic pain: component analysis and a revised assessment method. *Pain* 2004;107:159-166. www.pubmed.gov/14715402
- McCracken LM, Vowles KE, Gauntlett-Gilbert J. A prospective investigation of acceptance and control-oriented coping with chronic pain. *J Behav Med* 2007; 30:339-349. www.pubmed.gov/17447131
- O'Brien KM, Larson CM, Murrell AR. Third-wave behavior therapies for children and adolescents: progress, challenges, and future directions. In: Greco LA, Hayes SC, editors. *Acceptance and mindfulness treatments for children and adolescents: a practitioner's guide*. Oakland, CA: New Harbinger, 2008. pp. 15-36. www.worldcat.org/oclc/226279640
- Palermo TM. Impact of recurrent and chronic pain on child and family daily functioning: a critical review of the literature. *J Dev Behav Pediatr* 2000;21:58-69. www.pubmed.gov/10706352
- Palmer K, Shepard B. An art inquiry into the experiences of a family of a child living with a chronic pain condition: a case study. *Can J Couns* 2008;42:7-23.
- Perquin CW, Hazebroek-Kampschreur AA, Hunfeld JA, Bohnen AM, van Suijlekom-Smit LW, Passchier J, et al. Pain in children and adolescents: a common experience. *Pain* 2000;87:51-58. www.pubmed.gov/10863045
- Pugh AN. Art therapy and acceptance, an approach to treatment for children with chronic pain; a literature-based study. Drexel University, Philadelphia, Master's thesis, 2009. <http://hdl.handle.net/1860/3299>
- Roth-Isigkeit A, Thyen U, Stoven H, Schwarzenberger J, Schmucker P. Pain among children and adolescents: restrictions in daily living and triggering factors. *Pediatrics* 2005;115:e152-e162. www.pubmed.gov/15687423
- Rubin JA. *Child art therapy*. Hoboken, NJ: John Wiley, 2005. www.worldcat.org/oclc/60792533
- Savins C. Therapeutic work with children in pain. *Paediatr Nurs* 2002;14:14-16.
- Thompson M, Gauntlett-Gilbert J. Mindfulness with children and adolescents: effective clinical application. *Clin Child Psychol Psychiatry* 2008;13:395-407. www.pubmed.gov/18783122
- Vowles KE, McCracken LM, Eccleston C. Processes of change in treatment for chronic pain: the contributions of pain, acceptance, and catastrophizing. *Eur J Pain* 2007; 11:779-787. www.pubmed.gov/17303452
- Wadson H. *Art psychotherapy*. New York: Wiley, 1980. www.worldcat.org/oclc/5447934
- Walker LS, Garber J, Greene JW. Psychosocial correlates of recurrent childhood pain: a comparison of pediatric patients with recurrent abdominal pain, organic illness, and psychiatric disorders. *J Abnorm Psychol* 1993;102:248-258. www.pubmed.gov/8315137
- Whaley B. "Food is to me as gas is to cars?": using figurative language to explain illness to children. *Health Commun* 1994;6:193-204.
- Wicksell RK, Greco LA. Acceptance and commitment therapy for pediatric chronic pain. In Greco LA, Hayes SC, editors. *Acceptance and mindfulness treatments for children and adolescents: a practitioner's guide*. Oakland, CA: New Harbinger, 2008. pp. 89-113. www.worldcat.org/oclc/226279640
- Wicksell RK, Melin L, Lekander M, Olsson GL. Evaluating the effectiveness of exposure and acceptance strategies to improve the functioning and quality of life in longstanding pediatric pain-a randomized controlled trial. *Pain* 2009;141:248-257. www.pubmed.gov/19108951
- Wicksell RK, Melin L, Olsson GL. Exposure and acceptance in the rehabilitation of adolescents with idiopathic chronic pain - a pilot study. *Eur J Pain* 2007;11:267-274. www.pubmed.gov/16603393