Pain, attachment, and meaning making: Report on an art therapy relational neuroscience assessment protocol


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A B S T R A C T

The experience of pain presents a complex interaction of neurological, emotional, cognitive, social, and cultural factors. A major public health concern, chronic back pain calls for adapted, short-term approaches as chronic patients may find lengthy assessments or long-term treatment a burden. An art therapy relational neurobiology (ATR-N) brief assessment protocol is proposed that demonstrates advantages for the assessment of the multiple psychosocial dimensions of pain experiences. As pain experiences are experienced in the body non-verbal visual approaches are often used for the assessment of pain. The shared neuropathways of sensory pain and emotional experiences suggest the advantages of employing a non-verbal sensory assessment and treatment approach. The sequential visual expressions of sensory, emotional, and cognitive pain assist in revealing coping skills and the potential for symptom reduction. Interpersonal neurobiology perspectives of the art from a protocol of a woman suffering from back pain further demonstrates how the interface of stress responses and adult attachment styles affect each individual’s unique pain experiences. Understanding the shared neuropathways of pain also suggests the value of including attuned interpersonal interventions such as supportive witnessing of the art making. The role of strengths, such as awareness and creativity, in mitigating pain experience are underscored in the protocol’s structure. Finally, the protocol approach holds the potential for future development of reliable art therapy measures of change providing a framework for advancing ATR-N research and clinical approaches.

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Introduction

Acute back pain can frequently be traced to a single cause and is easier to treat than chronic back pain, which is affected by multiple causes and often requires specialists and/or alternative therapies (Huffman, 2007; Kabat-Zinn, 1990; McCarberg, 2004). Around 50–80% of American adults experience lower back pain at some time in their life with significant physiological, social, and financial implications (Apkarian et al., 2004; Luo, Pietrobon, Sun, Liu, & Hey, 2004; National Center for Health Statistics, 2007).

Back pain may originate from the network of nerves, ligaments, tendons, and joints in the spine. Large nerves from the spine can spread pain to the extremities. Neuropathic, i.e., acute, pain is a physiological response to an intense stressor. In contrast, neuropathic or chronic pain results from a lesion and/or a dysfunction in the peripheral or central nervous system (Brunton, 2004). Chronic back pain contributes to fatigue, helplessness, and depression (Achterberg, Dossey, & Kolkmeier, 1994; Hass-Cohen, 2003).

Risk factors for pain development and for poor treatment outcomes include stressful experiences, disturbing emotions, and pessimistic belief systems (Brunton, 2004). Therefore, patients’ meaning making of pain may provide the only connections between physical aspects and emotional-psychological function (Trauger-Querry & Haghighi, 1999), Assessment of the frequency, intensity, duration, and onset (FIDO) of pain symptoms and their dimensions—provocative or palliative, quality versus quantity, region and/or radiation, and severity and timing (PQRST; Brunton, 2004)—also provide clues as to interpersonal and cultural contributing factors. However, assessment needs to be quick and effective as lengthy interventions may cause pain. The clinician should also consider whether cultural-religious upbringing prohibits or encourages expression of pain and the purgatory role pain may have according to various religious beliefs (Coakley, 2007; Scarry, 2007). Accordingly, understanding the intersection of the neurophysiologic mechanisms and the cultural, interpersonal, and
emotional contexts relevant for pain assessment and management are invaluable for clinicians working with chronic and acute pain sufferers.

Expressive arts therapies have been used successfully alongside medical treatment, physical therapy, and cognitive behavioral approaches to treat arthritis, migraine, and cancer pain (Camic, 1999; Malchiodi, 1999). The visual arts also sustain positive meaning making, mindfulness, relaxation, and interpersonal attunement to support pain management (Camic, 1999). Moreover, a recent empirical study reported that art therapy significantly reduced pain-related fatigue for hospitalized cancer patients (Nanis et al., 2006).

The current authors seek to demonstrate how the application of art therapy relational neurobiology (ATR-N) principles such as creativity, relational resonance, and adaptability (Hass-Cohen, 2008b) illuminate the palliative potential of art therapy approaches. To that end, an ATR-N based medical arts protocol is described that can be used for the assessment of pain and that can be adapted for intervention purposes (Clyde Findlay, 2008). The media consists of oil pastels, markers, and water color dry blocks. The protocol includes four specific art requests adapted from Achterberg et al. (1994):

1. “If you were to draw the problem, what would it look like?”
2. “Draw an image of yourself.”
3. “Draw an image or symbol for internal and external resources that help with the problem.”
4. “Draw yourself as you see yourself now,” or “Draw yourself without the problem.”

The first two directives call for a representation of the sensory experiences and the emotional and cognitive perceptions of the problem. The therapist asks participants about any increased pain symptoms after making the first self-portrait and may propose a brief relaxation exercise, such as taking a few deep breaths or imagining a safe and/or painless place. The third drawing brings coping strategies and resources into awareness and permits the therapist and participant to discuss these strengths. The fourth request assesses whether the person can now envision the problem or perceive herself differently. If the participant questions that she has already drawn a self-portrait, the therapist gently repeats the request, emphasizing the word now: “Now that we have explored your resources…” At the end of the protocol the therapist and client may deconstruct the art and the experience.

Exploratory interviews with persons with and without an art background have been used to develop this protocol (Bridgham & Hass-Cohen, 2008; Clyde Findlay, 2008). Intended for a brief 1–2 h assessment, the protocol art requests can also be adapted for short term treatment (Clyde Findlay, 2008). There is a need to develop brief assessment and intervention protocols for the medical arts therapies as people challenged with pain, illness, and stress often find it hard to make it to long-term therapy sessions and may often need to be seen in the hospital (Malchiodi, 1999).

The current study consisted of a one-time assessment meeting with a follow-up interview 2 years later. The purpose of the follow-up was to look at the viability of repeated applications of the protocol over time. A baseline of visual representation of the chronic pain and resources for helping the pain can be obtained in the first protocol, and subsequent protocols can indicate post-treatment influences. Here the visually rich art protocol and expressive narrative of Erica, a 64-year-old Caucasian artist, assists in understanding the neurophysiology of pain, the connections between fear and the stress response and pain, the role of attachment in pain, and the cognitive and emotional factors in the modulation of pain. Erica’s noted and self-reported positive changes also suggest the potential value of the ATR-N pain assessment protocol as a treatment intervention. The integrated description of the relevant clinical neuroscience research and interpersonal neurobiology concepts with an art therapy analysis of the Erica’s imagery clarifies the complex information and provides a brain based approach to art therapy case conceptualizations.

The Mother Vulture of Pain: a chronic back pain experience

Erica completed the art therapy protocol in two interviews of 2 h each. An artist, she was curious as to how art making could help with her constant pain and volunteered to participate in the interviews. Erica reported triple scoliosis and chronic back pain, describing the “anguish” in her middle upper back. Erica initially said that her disabling back pain started in her early 30s. She attributed it to what she called a body culture of physical fitness and isolation: “I lived alone as a single mother with two kids; I’d have to crawl, in seizure, on my hands and knees to prepare food.” She also attributed the problem to a grueling media career and inappropriate romantic relationships. She stated that her pain corresponded to “chewing the cud, dwelling on mistakes and grievances. … sometimes it is so hot, like being burned at the stake. …” Burning sensations are often reported with neuropathic pain (Scholz & Woolf, 2002).

Erica found little relief in conventional medical care, refused surgery, and reported taking up to 10 aspirins at a time for pain relief. However, she reported helpful sessions with a Sikh masseuse in the past. Originally attributed to the function of fast and slow pain pathways (Melzack & Wall, 2004), the current understanding is that the pathology of pain involves a dynamic interface of reactive systems rather than a single route (Deleo, 2006; review). Such complex reports are typical for sufferers of neuropathic pain. Pain, normally a functional warning, can become chronic and non-functional.

Erica described her pain as “something menacing and fearful in my world. … it is really black with radiant pain at the center,” and in response to the first request drew an image with a bursting orange and red center surrounded by black scribbles (Fig. 1).

The convergent interpersonal neuroscience of pain experiences

Processing pain involves three convergent experiences. The first is the sensory processing of pain, the second is emotional-cognitive bottom-up processing of pain, and the third is cognitive-affective top-down modulation of pain. Sensory pain sensations are transmitted to the spinal cord dorsal horn and from there to the brain by afferent, i.e., incoming nerves (Melzack & Wall, 2004). Pain sensory neurons, nociceptors, do this by releasing the excitatory

Fig. 1. If you were to draw the problem what would it look like: “The Mother Vulture of Pain”.

Fig. 2. Ascending neural pathways communicate the pain sensory experience, and descending neural pathways modify the pain and inform the person how to act on it.

neurotransmitter glutamate at their synapses. From the spinal cord, the next level of neurons sends information through spinothalamic pathways to the thalamus, the brain's sensory gateway (Kalat, 2004). From the thalamus, pain sensations are transmitted to both the primary (SI) and secondary somatosensory cortices (SII), which are located between the parietal lobe and the frontal lobes (Price, 2000). The SI holds a map of the body (Kalat, 2004) and it identifies the pain's physiological location (Schnitzler & Ploner, 2000) and intensity. The SII is implicated in the recognition of the nature of the stimulus and is involved in neociceptive learning and memory (Timmermann et al., 2001; Fig. 2, ascending arrow).

Bottom-up processing of pain is both emotional and cognitive. It overlaps with the neural pathways of sensory pain processing. As the signal is carried through the spinal-thalamic route to the somatosensory cortices, it also engages the limbic amygdala, the anterior cingulate cortex (ACC), and the insular lobe (Ostrowsky, Magnin, & Rydin, 2002; Rhudy & Meagher, 2001). The amygdala is associated with emotional experiences of pain, including fear and the stress response, while the insular lobe mediates bodily feelings. The ACC is the front part of the cingulate cortex, which is located between the higher cortical areas and limbic structures. It plays an instrumental role in affect regulation and conflict resolution as it bridges body and limbic information through cognitive processing (Carter, 1998). Attachment experiences have also been associated with the functions of these same structures (Insel, 1997; Panksepp, 1998, 2005; Fig. 3).

Finally, the insular lobe receives afferents from the S-II and projects to the amygdala and hippocampus, where tactile and pain-related learning and memory experiences are evoked (Lenz, Gracely, Zirh, Romanoski, & Dougherty, 1997; Fig. 2, ascending arrow).

Pain, fear, the stress response, and bodily reactions

Sensory pain is an immediate warning signal, whereas chronic pain represents an ongoing threat to the self and future survival. This combined threat to one's body and future well-being has the most negative effect. An immediate threat of pain contributes to a fear reaction and may evoke a short-term stress response. The fear of pain may therefore activate the flight or fight response within the autonomic nervous system, enacting cardiovascular, respiratory, gastrointestinal, renal, and endocrine changes. Survival needs often organize how pain is experienced. When in mortal peril—such as in a war situation—pain may be dampened to enhance the success of the fight or flight response, thus increasing the likelihood of survival. In contrast, during times of low threat, the likelihood of survival is increased if pain is enhanced, so that a response can occur to minimize tissue damage (Koyama, Mchaffie, Laurentti, & Coghill, 2005).
In a flight or fight response the fear of pain sets off the brain’s alarm, the amygdala, and activates the sympathetic adrenal medulla (SAM) system short term stress response. Activation of these structures most likely occurs in the early phase of pain, when immediate fear-defensive behaviors arouse autonomic responses. The arousal of the sympathetic response is beneficial when it helps cope with stressors and when followed by the protective response of the parasympathetic nervous system (Sapolsky, 1998; Barlow, 2001). The parasympathetic nervous system process assists the autonomic nervous system in establishing a new allostatic balance that represents an adjustment to new situations (Sapolsky). The activation of the SAM may help the person feel in control if he can remove, mitigate, or move away from the pain trigger. The SAM response also releases adrenaline and noradrenaline, endogenous pain inhibitors, which contribute to control the degree of pain (Kalat, 2004). Adrenaline rapidly prepares the brain and body for action and increases the supply of oxygen and glucose to the brain and muscles. Fear of pain may also, however, result in a parasympathetic nervous system freeze response. The freeze response is survival based as it decreases heart rate in order to save energy through a state of immobility (Scaer, 2001). In childhood, attachment problems are revealed in the face of separation threat, pain, fatigue, and failure to maintain closeness (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1988). The quality of attachment in the first year of life is associated with lifelong consequences for emotional, cognitive, and social competence, because the infant’s brain development may be affected (Heim & Nemeroff, 2005). Specifically, an insecure attachment style was linked to difficulties coping with pain (Main, 2000; Meredith, Ownsworth, & Strong, 2008; review). The adult who, as an infant, did not receive unconditional secure protection from her environment may develop an insecure mental self-representation (Siegel, 1999). Thus, in addition to relational insecurity and possible social pathologies, the client, mobilizing strengths, and revealing emotions and thoughts that might be explored.

In comparison to arousal responses, passive fear coping responses further inhibit active coping (Blair, Tinkelman, Moita, & Ledoux, 2003; Miller & McEwen, 2006). Art therapy directives and activities can be an antidote to inert responses. For example the third protocol request calls for the client to actively represent her experience of control and movement. In addition, experiencing positive emotions, such as in pleasurable art making, also lead to pain reduction as long as a minimal threshold of arousal is maintained during their processing (Greenberg & Pascual-Leone, 2006). Finally, balancing strong negative emotions with strong positive emotions reduces the impact of negativity.

Attachment and pain

In childhood, attachment problems are revealed in the face of separation threat, pain, fatigue, and failure to maintain closeness (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1988). The quality of attachment in the first year of life is associated with lifelong consequences for emotional, cognitive, and social competence, because the infant’s brain development may be affected (Heim & Nemeroff, 2002; Panksepp, 2005). Specifically, an insecure attachment style was linked to difficulties coping with pain (Main, 2000; Meredith, Ownsworth, & Strong, 2008; review). The adult who, as an infant, did not receive unconditional secure protection from her environment may develop an insecure mental self-representation (Siegel, 1999). Thus, in addition to relational insecurity and possible social pathologies, the client, mobilizing strengths, and revealing emotions and thoughts that might be explored.

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isolation, she may doubt her ability to cope with the threat to survival posed by the pain.

“Gutter,” Erica’s second drawing, represents her childhood longing for her mother. Erica was asked to draw herself. She drew a lonely child in a wash of grey and said: “When I was 5 or 6 years old... I was always left in some girls’ school... without another life, thrown in prison and died... I felt so forgotten. I wanted to be with my mother, yet she was untrustworthy. If I walked that way, I’d get to her. This is the gutter, the sidewalk, the mundane houses of reality” (Fig. 6).

She added, “The picture tells me to get off my ass and hit the road.” Erica’s words suggest that she believed that as a child she could have been stronger and further imply that as an adult she berates herself. This kind of unresolved and preoccupied adult response to the memory of her mother and their relationship is characteristic of an insecure attachment type. The therapist also noticed Erica’s physical discomfort as she shifted her position and asked if she wanted to move or rest. Offering Erica a choice as to how to manage her discomfort enabled an attuned reparative response on behalf of the therapist. Such repetitive attuned responses may contribute to repairing attachment ruptures.

There are two main insecure adult attachment types: preoccupied and dismissive (Hesse, 1999; Main, 2000; see Clyde Findlay, Lathan, & Hass-Cohen, 2008 for art therapy examples). The preoccupied/ambivalent is characterized by relational anxiety and a negative mental self-representation. The dismissive/avoidant is characterized by relational avoidance and negative mental representations of others (Siegel, 1999). An insecure attachment style can contribute to strained relationships, create relational dependency, and limit the ability to seek comfort from others (Meredith et al., 2008; review). As a result, insecurely attached individuals often have difficulties regulating their emotional reactions to pain. They may be overly vigilant in anticipating their pain and make each event a catastrophe. For the purpose of pain management it is therefore important to try to ascertain the client’s attachment pattern.

The current authors have found that asking clients to draw the self after drawing the problem often brings forward interpersonal issues and can lead to forming ideas about the person’s attachment style and interpersonal relationships. Exploring the relational self is central to chronic pain treatment, as pain and negative self-other schemas may mesh and become an obstacle to acceptance of therapeutic interventions (MaCracken & Eccleston, 2003; Pincus & Morley, 2001). Support for Erica’s implied attachment style and difficulties were seen in a follow-up interview, when she was again asked to draw herself (“Plans”; Fig. 7).

Here Erica explicitly related her back pain condition to her relationship with her mother, who had recently passed away. She realized that her back started hurting at 8 years old when she fell out of a tree. She said that she had never told her mother about the fall, as she perceived her mother as “a tyrannous person” and feared her constant judgment and criticism. As in the title “Mother Vulture of Pain,” the meaning of pain has been associated with mother; the therapist reflected on how the relationship between Erica’s attachment pain and back aches are repeatedly illustrated in the art. Both self-images, the abandoned waif in “Gutter” and the older adult woman in “Plans,” are bent over and are drawn as if from the left to the right. Metaphorically, the backbone, where the spinal cord and the pain are located, does not provide support. The haunting images are supported by Erica’s verbal descriptions of an extremely difficult relationship with her mother that started at an early age.

Conversely, “Plans” also represents Erica’s positive search for security and hope for warmth. The old woman is bending over, reaching out for two streaks of gold. Erica explained, “I wanted to put a little something under my hands, a little flake of gold. I’m going to use my feeling of being old and not so far from the grave, fears and worries, and... shocking surprise this has happened to me, to discover this yellow streak of gold? This warmth of a true fire?” “Plans” revealed how in the intervening period Erica changed, how she no longer saw her self as a child, but as an older woman searching for meaning. Therefore, reviewing the art two years later allowed the therapist and client to compare how Erica’s experience of self has evolved.

Narrating the art can be an expression of meaning making and contribute to affect regulation (Hass-Cohen, 2008b). Naming, titling, and talking to the image may help modulate the symbolic meaning of pain and assist clients in experiencing positive emotions. Erica intuitively narrated her self insights and art to ameliorate pain. Labeling and contextualizing emotions supports the development of regulatory self-soothing coping abilities (Greenberg & Pascual-Leone, 2006; review). Emotion regulation engages the right orbital frontal cortex (OFC; Schore, 2007) located just above and behind the eyes, at the bottom of the prefrontal cortex (Fig. 4). The function of the OFC is influenced by the quality of early dyadic relationships (Schore, 1999). In therapy, developing stronger self-regulation abilities may help achieve an earned secure attachment (Hesse, 1999; Schore).

Asking clients to read aloud, sing, and/or cry out the titles of the art may contribute to the regulation of emotions related to difficult memories. Tolbert (2007) describes a Finnish lamenting ritual as “crying with words” (p. 155). She conceptualizes it as a somatic interpersonal technique. Ethnic and cultural lamenting are traditional stylized rites that can effectively express, regulate, and link personal and collective trauma. Erica named her pain the “Mother Vulture,” a creature that feasts on another’s death. Her-iconographic metaphors deepened the therapist-client empathic exchanges, because they clearly communicated the extent of her fear. Erica’s use of rich symbolic imagery created a vivid sense of
her connections to her past, present, and future. Linking memories and increasing therapeutic rapport contributes to autobiographical coherence, a necessary ingredient for mending adult disrupted attachment (Siegel, 1999).

**Descending pathways: the modulation of pain**

Bottom-up ascending pain signals can be modulated by descending, top-down frontal cortex projections associated with cognition and awareness because of the convergence of ascending and descending neuropathways. For example, the anterior cingulate cortex (ACC) associated with bottom-up detection of pain-related unpleasantness is also involved in the top-down modification of pain experiences (Mohr, Binkofski, & Erdmann, 2005). It is involved in the integration and regulation of pain responses in accordance with cortical meaning-making activity (Rainville, Duncan, Price, Carrier, & Bushnell, 1997; Schnitzler & Ploner, 2000).

The notion of cerebral cortex activity altering the experience of pain is central to the previously mentioned Melzack and Wall's, 1965 “gate theory of pain.” They proposed that psychological processes from higher brain centers could functionally close the pain gate through descending neuropathways, and hence modulate pain (Deleo, 2006; Melzack & Wall, 2004). It is also proposed that the connections between the amygdala and the ACC can also trigger prefrontal regulation of endogenous mechanisms of pain modulation (Rainville, 2002). This inhibition of pain happens through the release of the body's natural hormones or analgesic chemicals (Meng, Manning, Martin, & Fields, 1998; Peyron, Laurent, & Garcia-Larrea, 2000; Rainville, 2002). Positive expectations about decreased pain have been shown to produce a reduction in perceived pain similar to the effects of an analgesic dose of morphine (Koyama et al., 2005). These findings may explain why when Erica was excited and positive about her art making, she reported a decrease in her pain sensations.

Erica also reported that ruminating about pain as well as talking about her experiences made her back hurt. Memories of previous pain can impact current experiences of pain (Fields, 2007; Fig. 3; descending arrow; Fig. 5). Paying attention to one's pain has also paid attention to one's pain has also been shown to increase sensory cortex activity, responsible for the detection of pain (Bushnell et al., 1999). Hypervigilance can either increase or inhibit the sense of pain (Babiloni, Brancucci, Arendt-Nielsen, Del Percio, & Babiloni, 2004; Bushnell et al., 1999; Drevets et al., 1995; Price, 2000). According to neuroimaging studies, people suffering from chronic pain have exaggerated anticipatory responses and selectively attend to even a mild and predictable pain stimulus (Vlaeyen & Linton, 2000). These cognitive-emotional factors, especially predispose subjects to chronic pain suffering (Dehghani, Sharpe, & Nicholas, 2003; Roelofs, Peters, Patijn, Schouten, & Vlaeyen, 2006).

Neuroimaging findings have provided experimental evidence linking the effect of frontal lobe activities, such as attention and concentration, with pain (Rainville et al., 1997). Prefrontally situated meaning such as thoughts about the negative consequences of enduring pain over time can increase the sensory experience of pain (Price, 2000). According to neuroimaging, negative expectations increased pain when the following conditions were met: (1) the pain affects the person's past, present, and future; (2) the pain is a mental representation of expected pain triggers; and (3) the expectation is supported by evidence (Koyama et al., 2005; Ploghaus et al., 1999; Wager et al., 2004). Therefore, helping clients examine and consciously explore their thoughts, expectations, and coping resources may contribute to new positive expectations and possible reduced pain experiences.

The third art request asks the participant to draw external and internal resources that help with the problem. In order to increase awareness, the art therapist may want to encourage clients to explore verbally the differences between internal and external resources. This process differs from the first art request (draw the problem), in which the therapist refrains from any further explanation encouraging an emotional response. In response to the third art request, Erica spontaneously completed two drawings (Fig. 8a and b).

She first drew an embodiment of the “Mother Vulture of Pain,” a one-handed, footless female body bleeding profusely from the vagina (Fig. 8a). Erica said that under the heart is a golden light that “could save the child from bleeding to death,” but that the light is not catching the blood. The light, a golden chalice in the shape of a half moon under the left breast, is barely visible. She reflected that she thought it might be possible to heal a broken heart. In response to this kindled hope, she drew a radiant sky-blue female stepping forward. The figure is holding the chalice that now tips yellow light into her breast (Fig. 8b). Erica said she felt happy and she was glad to be working together with the therapist. She declared, “I was going to make the vulture flying away, but he has gone… the chalice is pouring molten gold into my heart.” It is likely that the presence of a supportive therapist contributed to this positive shift and allowed for a corrective shared attachment experience.

The discussion of Erica’s external and internal resources focused on her spiritual guide, associated with the blue color. She reported that she had recommended that during her daily yoga practice, she envision a golden light surrounding her. Erica said that the art making helped her understand that she could use the light internally to cradle her heart. Previously she had seen the light as external. It is striking that the second human figure has hands that can hold the chalice, whereas the first embodied pain figure presents with only one passive hand. The emergence of hands, considered a symbol of empowerment, is a hopeful response. For the first time in the protocol, Erica is able to identify coping strengths: her spiritual belief system and mindfulness practices. Mindfulness meditation and the relaxation effect it promotes have been associated with reduction in pain (Benson, 1996; Lazar et al., 2000).

The drawing of internal or external resources calls for the depiction of significant relationships. This is because when humans experience a threat to their sense of security they seek out significant others (Mikulincer, Gillath, & Shaver, 2002). Even more than men, women tend to look for the support of other women during stress experiences (Taylor et al., 2000). When there is no significant other to turn to, attachment becomes even more disrupted. While Erica mentioned her relationship with her spiritual leader, she did not directly portray this relationship and/or any other close relationships in the protocol art. This is crucial, as researchers suggest that spiritual-religious guides can enhance the palliative qualities of the relaxation response (Coakley & Shelemay, 2007). This is not unexpected as chronic pain can cause the sufferer to isolate and their significant others to withdraw in order to avoid seeing their beloved suffer. However, it is the representational absence of any significant others throughout Erica’s protocol that is suggestive of attachment difficulties.

**Integration**

The last art request asked Erica to represent what she learned about herself through the protocol. The request calls for the reconstruction of the self-body, implies the possibility of change, and aims to instill hope that pain reduction is possible. The therapist can ask the person either to “draw yourself as you see yourself now,” or to “draw yourself without the problem.” Because of the chronic nature of Erica’s difficulties, the therapist decided to use the first option (Fig. 9).

In “Painting by Pussy Galore” (Fig. 9), a seated naked woman, boldly drawn in full flesh tones, sits with her legs apart holding paintbrushes at her genitals. Framed by golden rays, she smiles with...
Fig. 8. Draw an image or symbol that represents internal and external resources that help with the problem. (a) “Bleeding Kali, Passive Child” (left). (b) “Golden chalice?” (right).

Fig. 9. Draw yourself as you see yourself now. “Painting by Pussy Galore”.

her eyes half open and her face lit in blue. Erica commented that here life and creativity come from her genitals, rather than from blood loss. She noted the woman was “happy with her body, not hiding it.” The painting represents a continuation of the themes begun in the first art request: the black rays from “Mother Vulture of Pain” (Fig. 1) have transformed into yellow rays, representing the internalization of the golden chalice. The treatment of the human body is striking. She sits in a meditative position, hands holding the brushes, facing forward with head and body drawn in proportion. In this last art piece, Erica is able to see herself as a person that is no longer shaded by the black experiences of pain or by the ghostly shadows of relational abandonment (Fig. 6). The seated, elevated position of “Pussy Galore” gives the observer a feeling of relief from the pain. The figure is no longer bent over in “anguish.” She sits upright and maintains a centered position that stands tall in defiance of back pain. The title also reinforces fully sexual, seductive life energies.

From an attachment perspective, the blue lines on the figure’s face may indicate how shadows of an anxious relational style still preoccupy Erica’s mind. Shading of the face has been interpreted as anxiety and as a representation of severe emotional difficulties and/or multiple interpersonal losses (Ogdon, 2001). As face gazing is associated with early experiences of forming attachment (Tronick, 2007) we suggest that the facial shading represents Erica’s insecure attachment.

The human face is an important source of expression (Eckman, 2003). Face-sensitive brain networks converge on affect and pain processing neuro-networks. The anterior cingulate, the insular, the thalamus, and primarily the amygdala (Whalen et al., 1998) are involved. In response to people’s facial expressions, the amygdala establishes the other’s trustworthiness while the thalamic-right somatosensory strip connections create empathic representations of other people’s feelings (Adolphs, 2003; review). In contrast to
Erica’s artistic skills and psychological availability were an asset to her participation and also presented the current study with a unique opportunity for an in-depth exploration of the meaning of each art request and the role of creativity in palliative arts. However, the protocol’s basic directives and media make it an equitable intervention regardless of patients’ art skills. Furthermore, exploratory studies of this medical arts protocol with artists and non-artists (Bridgham & Hass-Cohen, 2008; Clyde Findlay, 2008) have illustrated that representational changes between the second art request, “Draw an image of yourself,” and the fourth art request, “Draw yourself as you see yourself now,” may be diagnostic indicators of positive change. These findings, albeit preliminary, seem to be independent of the person’s artistic skills, psychological capacities, and/or degree of pain and challenges. These impressions are important, as pain, illness, and stress often deplete the person’s psychological coping resources. Future research pairing these impressions with pre- and post-validated measures of change may provide evidence for the efficacy of art therapy interventions. The difference between how people draw themselves before and after treatment is currently also being looked at by additional research studies (Peterson, 2008).

Summary

Comprehending the overlapping neurobiology of pain, stress, affect, attachment, and cognition can guide art therapists in assisting people who suffer the devastating effects of chronic pain. Art therapy relational neurobiology approaches (ATR-N; Hass-Cohen, 2008a) can provide an opportunity to better bridge medical and psychological practices. Art making in the presence of an attuned other, the therapist, can evoke the security of relational attachment significant to the reduction of chronic pain. Furthermore, engaging in pleasurable art activities may encourage an analgesic response and positive meaning making. In this protocol, an ATR-N approach (Hass–Cohen, 2008b) supported a clinical focus on attachment and an appreciation of the individual’s strengths, ability to use symbolic language, capacity for change and introspective work, and openness to spiritual meditative practices. The study suggests preliminary exploratory support for an ATR-N protocol assessment of capacity for change as well as for treatment purposes of chronic pain symptom reduction and pain management. Our report and discussion on the interconnection of chronic pain, interpersonal neurobiology, culture, and spirituality suggest support for the palliative value of art therapy and highlight the need for further experimental studies with the protocol. The differences between using the protocol for assessment and treatment need to be further explored. For example, as an assessment the protocol can be administered as a one-time or two-time measure. In treatment, each request can be extended to a full session. While promising, the use of the ATR-N protocol as a repeated measure requires empirically supported research.

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References


