

# Mirroring Exercise: Dance/Movement Therapy for Individuals with Trauma

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**Abstract:** *This literature review assesses dance/movement therapy techniques that could be an effective treatment for the victim who is experiencing and witnessing a traumatic event. Traumatic events can hold significant physical, psychological, and neurobiological outcomes for an individual. Since the consequences of concerning trauma-related symptoms have not arisen yet, the application of DMT is required as an alternative for healing therapy. Combining the body into treatment for traumatized individuals relieves somatic symptoms of the trauma. Body movement can be a means to communicate and express painful memories nonverbally. This paper examines the application of mirroring as an exercise routine in DMT to enhance emotional understanding and empathy about a feeling of distress, trauma, helplessness, and fear. It can be sensed and interpreted by moving together. The findings from recent studies show that mirroring practice in DMT may induce advantages in the psychological functioning of a person who suffers from a traumatic experience.*

**Keywords:** *dance/movement therapy, mirroring, trauma, empathy*

## Introduction

The development of technology in the 21st century has no guarantee of avoiding psychological disorders because every event of life has a positive or negative impact. Experiencing traumatic events can cause stresses that interfere with daily life. They counter each situation according to their capacity. They will be able to overcome the traumatic events in their lives and achieve prosperity even with experiencing trauma in the past (Verreault, 2017). However, some people might find it difficult because of painful and unforgettable traumatic experiences. Individuals tend to experience feelings and physical sensations when triggered by traumatic memories. The sensations and emotions are significantly sensed but unable to modify and control the impact of what they feel (Harris, 2007a).

Traumatic experiences are the effects of unpleasant events as a result of experiencing or witnessing traumatic experiences or life-threatening events that cause stress (Iribarren et al., 2005). The phenomenon of trauma is relevant to the impact on the physical, emotional, and psychological (Halprin, 2003). They feel physical sensations in body conditions such as discomfort, muscle tension, and pain. Later exhibit unstable emotional changes and maladaptive anger, pleasure, fear, or sadness. However, they are not able to identify the meaning of physical sensations and tense muscles so that dissociation occurs in the mind and body components, its condition called alexithymia (Dieterich-hartwell, 2017; Pierce, 2014). This condition can cause difficulties in adaptive functions and decrease the ability to focus on the present.

The development of therapy based on somatic

psychology explains that the therapeutic effect obtained from a combination of physical, verbal/intellectual, and psycho-emotional can help investigate and resolve conflicts (Halprin, 2003). For this reason, individuals with trauma need therapy that can be reconnecting the separation of mind and body. Dance/movement is a therapeutic concept which views that the body has a close relationship with the mind, and that the body-mind will not be separated. Because dance/movement therapy (DMT) allows individuals to "be-in-the-world" where the individual can feel his presence in the world and the current time so that he can reunite the physical sensations and also the emotions and thoughts they have (Barratt, 2010). DMT also helps disengaged individuals from feelings of helplessness and pain that were trapped in their body and mind so that they can have control over excessive sensations or emotions and their lives as a whole (Shim, Goodill, & Bradt, 2019).

DMT not only improves the quality of life, social relations, physical health, spirituality, and overall daily life but also reduce stress and somatic symptoms (Bräuninger, 2012a, 2012b, 2014). Excessive sensations and painful emotions can be detrimental to an individual's daily life, and it also makes it difficult to establish healthy relationships with other people. For this reason, mirroring techniques in dance/movement therapy are used so that clients focus on increasing self-understanding due to the trauma they experience and improve the ability to establish relationships with others since the process of mirroring techniques involving other people.

### ***Trauma: A Brain-Mind-Body Problem***

Trauma is the result of an event, a series of events or an event experienced physically as well as emotionally (Levine & Land, 2015). Traumatic events can occur due to physical/emotional/sexual violence, family conflicts, loss/death of the closest person, robbery, neglect, bullying, accidents, natural disasters, chronic diseases, warfare, atrocity, terrorism, or witnessing acts of violence. These events affect distress in their lives and increase the chances of experiencing psychological disorders. For example, a survivor from the life-threatening events has a risk factor for Post-Traumatic Stress Disorder (PTSD) (Cheng et al., 2014). The experience also impacts on the disruption of physical functions and daily life. Therefore, individuals with PTSD can affect the impaired physical, social, emotional, and well being, or can be life-threatening (Iribarren et al., 2005).

The structure of the human brain consists of two left and right hemispheres that have their respective functions. The left brain functions are to control logic, analytic thinking, language, mathematics, and short-term memory. Meanwhile, the right brain manage creativity, abstract thinking, art/music, intuition, and long-term memory. PTSD shows abnormalities in the brain structure that regulates stress and responses to fear, such as the amygdala, ventromedial prefrontal cortex, and anterior cingulate cortex. During the exposure of the stimulus associated with trauma, one shows an increase in nerve activity in the amygdala and a decrease in the medial prefrontal cortex at the same time (Mazza et al., 2015). Trauma experience affects the middle prefrontal layer that connects the prefrontal and limbic area. It interferes and affects cognitive processes (Levine & Land, 2015). Therefore, traumatic experiences which stored in long-term memory disrupts the individual's consciousness and causes a disturbance in the cognitive process and sensations in the body (Levine, et al., 2015; Pierce, 2014). Hence the person has difficulty in balancing mind and body.

### ***Dance Movement Therapy and Trauma***

Whitehouse develops the concept of dance therapy based on the Jungian psychoanalytic theory that emphasized five main points: 1) Kinesthetic awareness is an internal sense of one's physical self built, developed, and strengthened through movement; 2) Polarity is a state of one to exert pressure on the desired way while disguising the painful experiences into the subconscious world as defends mechanism; 3) An active imagination is an attempt to release the conscious and unconscious material through a process of relaxation in spontaneous self-expression; 4) An authentic movement

allows one to move their body and express their true feelings or thoughts; 5) Therapeutic relationship/intuition is the therapist's ability to strengthen the client to dance/move according to their judgment and intuition. The therapist directs the client without giving any instructions that could weight the client (Levy, 1988).

Several studies have demonstrated about how DMT used as a treatment for trauma. Somatic problems are an appropriate concept for explaining the effects of trauma. The body becomes a mediator in responding to the fear and stress through developing pain and muscle tension (Martinec, 2018). When the mind encounter a stimulus associated with traumatic experiences, it tends to stress out and frightened. It affects the body like trembling, sweating, fast-beating heart, or fainting due to triggers of abnormal stress hormone levels such as catecholamine, cortisol, and adrenaline. Therefore, the application of DMT can ease the weight of stress and improve the quality of life (Bräuninger, 2006). Stress-triggering hormones reduce over the activities conducted, which increase feelings of calm and pleasure. This activity increases hormones dopamine, serotonin, and oxytocin in the body that rises to divert hampered thoughts by negative experiences in his/her lifetime (Martinec, 2018).

The American Dance Therapy Association (2014) defines DMT as a psycho-therapeutic therapy that involves physical, emotional, cognitive, and social in the process. DMT itself creates new emotions that are more positive because the movement is a symbol that represents repressed emotion, feeling, or condition from the traumatic events. The therapeutic approach with DMT is permissive, flexible, and individuals oriented that allow the imagination and creativity to develop because they can loosely express a feeling, create dances, movements, or stories (Levine & Land, 2015). Through dance therapy, they gain an understanding of "self" and get an experience to express their thoughts, emotions, and feelings (Schmais & White, 1986). Hence, DMT is a more comfortable way to express themselves about what they actually felt through nonverbal communication. Furthermore, the therapeutic dance movement can promote mental and physical health because DMT increases self-esteem, coping abilities, and feelings of pleasure, as well as social and communication skills needed in life (Takahashi, et al., 2019). The DMT serves as healing and treatment for individuals with trauma.

### ***Mirroring and Dance Movement Therapy as Treatment***

Mirroring is one of the essential techniques in DMT and appears nearly in every session. Mirroring

techniques involves individuals with a therapist or individuals with group members. This technique improves the emotional understanding of themselves or others (Fitzpatrick, 2018). In the mirroring process, they create movements in accordance with expressions of emotions or stories about traumatic experiences. Then the therapist or group reenacted and strengthened the client's movement while witnessing others reenacted the movement embodies self- and body-awareness (McGarry & Russo, 2011). The positive impact of this process is to build a relationship between individuals with therapists and groups. Therefore, according to Gro & Weibull (2005), mirroring improve social understanding, trust, and therapeutic relationships between individuals and others despite using nonverbal communication.

Four fundamental themes determine practical methods that indicate the integral of body-oriented interventions to produce a therapeutic effect are by a) enhancing awareness of mind and body connection, b) improving mobility and variety of movement, c) creating healthy physical relationships with oneself and others, and d) building new relationships with enacting movements (Levine & Land, 2015; Martinec, 2018). DMT exercises routines such as mirroring, reflexion, body symbolization, and exploration of various body experiences are used to generate movements as a reflection of feelings. The therapist guides a client to restore feelings and memories in the subconscious and define a particular movement symbolization or story. In that case, one acquires insight and understanding about oneself (Martinec, 2018).

In the process of mirroring exercise, individuals often feels difficulty creating a movement because of the defense mechanism they created and the fear-freeze response of trauma. Nevertheless, they enhance self-aware while reenacting movement deliberately and completing the story of a traumatic experience with desired outcomes. The therapist embody self-awareness by reflecting the movement originated by the client and strengthening the physical potential to improve self-empowering and resilience. In the group setting, mirroring renders opportunities to establish a secure relationship with others (Levine & Land, 2015).

## **Discussion**

Some of the benefits obtained from the application of DMT as a treatment for individuals who are traumatized are: a) the client can release the tension felt by his body, DMT can be a relaxation method for the parasympathetic nervous system; b) provide a clear picture or memory of an event; c) facilitate self-expression through the symbol of the movement; d) find

new ways to interact; e) activate the connection between oneself and the inner self and/or body self; and f) know how to stay in the present time (Martinec, 2018). In addition to those mentioned, the essential elements of DMT based on mirroring techniques are therapeutic effects involving the body (neuro and sensory-motor), mind (emotional expression), social (social and communication skills in building relationships with others), and cognitive (verbal ability and self-development) which will be explained as follow (Lykou, 2018).

### ***Body-Awareness***

Trauma is the impact of mind and body split that affects how individuals respond to traumatic events. The body reacts to a trigger that emerges in the form of fear, muscle tension, and a confused mind (Martinec, 2018). The purpose of body awareness is to give an understanding of what happens to their body and mind. Body-awareness helps to reunite minds and bodies dissociation by understanding their body, emotions, and actions (Levine et al., 2015).

DMT is designed to give an understanding of the body and sense of oneself through mirroring exercise. Mirroring techniques are used to get feedback and insight into their physical conditions and feelings based on an interpretation of the underlying meaning of the movement. It allows a person to accept their past as part of their lives in a healthy manner (Levine & Land, 2015). In consequence, an individual increases the kinesthetic awareness, sensitivity to sensory, intrapsychic, imaginal and emotional expression, which are useful for achieving body/self-awareness and self-regulation (Dominguez, 2018; Lucchi, 2018). Therefore, they can freely express feelings and trauma stored in the body and connect the body to the world as a whole again with the help of the mirroring process (Serlin, 2017). This way, they revive the repressed body sensation in the subconscious world that is considered as life-threatening experience (Shim et al., 2019).

### ***Emotional Empathy***

Individuals who experience PTSD tend to show difficulties in emotional and cognitive compassion (Mazza et al., 2015). Compassion is the ability to empathize and respond to the emotions of others. Emotional empathy refers to affective empathy, the ability to respond to people's mental states appropriately, while cognitive empathy is a consciously controlled drive to recognize and understand another emotional state (McGarry & Russo, 2011). When observing others, a person needs to activate the mirror nervous system to empathize with the emotions, sensations, and

movements of other people (Bastiaansen et al., 2009).

A research found that adults with traumatized experiences since childhood tend to show empathy while witnessing other's suffering (Greenberg et al., 2018). In that case, the mirroring method allows a person to perceive a similar feeling with others. They acknowledge the feeling and interpret symbolical actions or emotions that emerge when experiencing a traumatic event (Wondra & Ellsworth, 2015). Mirroring techniques enhance emotions understanding and foster emotional connections (Goggin, 2018). This understanding cultivates empathy and builds a healthy relationship between an individual with a group or therapist during collaboration in mirroring exercise (McGarry & Russo, 2011).

### ***Trust in Relationships***

Individuals with PTSD have interpersonal limitations because traumatic experiences tend to make individuals have insecure attachments, so they feel anxious and afraid of establishing new relationships with others (Goggin, 2018). They tend to be closed and less active in social interaction, so it is not uncommon for them to show hostility (Sydney Parker, 2018). However, individuals practice trusting their therapist and group as well as their social environment by doing mirroring exercise.

Building trust in positive relationships depends on their confidence to trust, accept, and attach among themselves or others. Again, they would feel involved, understood, accepted, and touched safely by the group in the mirroring process with the circle form (Karampoula & Panhofer, 2018). When individuals begin to open up their state and accept the presence of other people into their personal space, it means they build a relationship by trusting each other. Thus, individuals will tend to imitate other people's movements to improve their social understanding (Van Baaren et al., 2009). When the client has put confidence in a positive relationship with the therapist or the group, they will create a therapeutic relationship to build an expected social interaction. Therefore, mirroring techniques in DMT can foster trust, create social closeness, enhance the ability of social interaction, help them to collaborate or provide social support, and demonstrate predictable actions (Fitzpatrick, 2018; Simon Parker et al., 2008).

### ***Self-Empowerment***

DMT allows individuals to express their feelings and emotions through body language or expressive movements rather than verbal communication. In this expression, individuals can integrate sensation, awareness, willingness, and perception to enhance self-

empowerment that supports self-development and creativity (Awan & Zamir, 2016; Leventhal, 2008). Empowerment is a process that strengthens internal motivation to increase self-confidence and eliminate a sense of disability or distress. Besides, individuals can control themselves if they reduce self-identification as victims and powerlessness in overcoming traumatic events (Levine et al., 2015; Saremi, 2015).

This intervention can rebuild a sense of security, trust, and strength for clients to overcome problems that are occurring or traumatic events that have happened in the past (Harris, 2007a). Empowerment can provide experience as an agent who plays a role in directing and guiding the group in performing dance/movements. New positive experiences as agents are done based on their knowledge and skills obtained during the intervention process. The experience allows for self-empowerment as they learn how to take care of themselves and might also teach others during the process. Likewise, individuals build interpersonal connections with others who are traumatized or diagnosed with PTSD because they can provide mutual support that is urgently needed (Goggin, 2018; Shim et al., 2019; Verreault, 2017). In consequence, individuals can be more resilient in dealing with their life problems and can live their best in the future.

### ***Limitations and Implications***

There are limitations in our recent study, such as the insufficiency of in-depth explanations of how mirroring exercise used as an alternative therapy for dealing with mental illness. The population used in this literature is not restricted to individuals diagnosed with PTSD but also individuals who experienced trauma. During the therapeutic process, clients may show difficulty in moving the body since it is associated with trauma, distress, helplessness, and doubt. The therapist can help them to possess unconstrained self-expression and imagination. Therefore, mirroring exercise allows them to loosely express their feelings or emotions and embody social interaction as we describe stereotypes of individuals with trauma as a person who is emotionless and unsociable. In this sense, mirroring could be more beneficial to practice social skills. Moreover, movement therapy can be an opportunity to gain the skills needed to deal with certain situations.

However, there is a limitation on literature suggesting mirroring techniques that implement a positive impact on individuals with trauma. This literature review explains that DMT can be used for children and adults who have trauma due to violence/torture, family conflict, sexual trauma, chronic pain, natural disasters, refugees, and veterans (Bradt, Shim, & Goodill, 2015; Cheng et al., 2014; Dayton,

2010; Greenberg et al., 2018; Harris, 2007a, 2007b; Lowell & Renk, 2018; Shim et al., 2019; Verreault, 2017). Mirroring techniques emphasize nonverbal communication that guides individuals' understanding of their feelings or others from a new perspective. Moreover, they develop a mind-body connection and show compassion to other's past experiences. Nonetheless, further research is required to provide a convincing viewpoint of mirroring or other DMT techniques for implementing new advantages. As for therapists or clinicians, DMT can help them treat the patient by giving an alternative therapy that provides healing and chances of expressing feelings for individuals with trauma or other psychological problems.

### Conclusion

Mirroring exercise is a part of the techniques and strategies in dance/movement therapy (DMT). The routine allows a person to achieve an understanding of each other's perspectives, ways of thinking, and emotions by practicing nonverbal communication. Mirroring lets us reconnect mind-body dissociation and accommodate their actual circumstances to justify a feeling of validation by observing their movements reenacted. They gain awareness through their stories/movements and read others' confirmation through reenacting. Therefore, one can share traumatic experiences and understand how their feelings will empathize with the experience because they had similar emotions and sensations so a person could build trust toward others' existence. A positive relationship with trust can improve one's social communication skills and healthy relationships. Finally, one increases self-empowerment by reenacting and completing the traumatic events and strengthening the physical ability and desired outcomes to be resilient with the problems and strive for a better life.

### References

- American Dance Therapy Association. (2014). *What is dance/movement therapy?* Retrieve from <https://adta.org/faqs/>
- Awan, A. G., & Zamir, A. (2016). Impact of empowerment reward system and self esteemed on employees' creativity. *Global Journal of Management and Social Sciences*, 2(2), 47–58.
- Barratt, B. B. (2010). *The emergence of somatic psychology and bodymind therapy*. New York: Palgrave Macmillan.
- Bastiaansen, J. A. C. J., Thioux, M., & Keysers, C. (2009). Evidence for mirror systems in emotions. *Philosophical Transactions of the Royal Society B Biological Sciences*, 364(1528), 2391–2404. doi: 10.1098/rstb.2009.0058
- Bradt, J., Shim, M., & Goodill, S. W. (2015). Dance/movement therapy for improving psychological and physical outcomes in cancer patients. *Cochrane Database of Systematic Reviews*, (1). doi: 10.1002/14651858.CD007103.pub3
- Bräuninger, I. (2006). Dance movement therapy group process: A content analysis of short-term dmt programs. In S. C. Koch & I. Bräuninger (Eds.), *Advances in dance movement therapy. International Perspectives and Theoretical Findings* (1st ed., pp. 87–103). Berlin: Logos Verlag.
- Bräuninger, I. (2012a). Dance movement therapy group intervention in stress treatment: A randomized controlled trial (RCT). *The Arts in Psychotherapy*, 39(5), 443–450. doi: 10.1016/j.aip.2012.07.002
- Bräuninger, I. (2012b). The efficacy of dance movement therapy group on improvement of quality of life: A randomized controlled trial. *The Arts in Psychotherapy*, 39(4), 296–303. doi: 10.1016/j.aip.2012.03.008
- Bräuninger, I. (2014). Specific dance movement therapy interventions - Which are successful? An intervention and correlation study. *The Arts in Psychotherapy*, 41(5), 445–457. doi: 10.1016/j.aip.2014.08.002
- Cheng, Y., Wang, F., Wen, J., & Shi, Y. (2014). Risk factors of post-traumatic stress disorder (ptsd) after wenchuan earthquake: A case control study. *PLoS One*, 9(5), 1–7. doi: 10.1371/journal.pone.0096644
- Dayton, E. F. (2010). *The creative use of dance / movement therapy processes to transform intrapersonal conflicts associated with sexual trauma in women*. Portland State University.
- Dieterich-hartwell, R. (2017). Dance / movement therapy in the treatment of post traumatic stress: A reference model. *The Arts in Psychotherapy*, 54, 38–46. doi: 10.1016/j.aip.2017.02.010
- Dominguez, K. M. (2018). Encountering disenfranchised grief: an investigation of the clinical lived experiences in dance / movement therapy. *American Journal of Dance Therapy*, 9. doi: 10.1007/s10465-018-9281-9
- Fitzpatrick, M. (2018). *Mirroring, social learning and dance movement therapy with childhood autism spectrum disorder: A literature review*. Lesley University.
- Goggin, C. (2018). *The efficacy of dance / movement therapy for trauma affected youth: A literature review*. Lesley University.
- Greenberg, D. M., Baron-cohen, S., Rosenberg, N., Fonagy, P., & Rentfrow, P. J. (2018). Elevated empathy in adults following childhood trauma.

- PLoS One*, 13(10), 1–13. doi: 10.1371/journal.pone.0203886
- Gro, E., & Weibull, J. (2005). Dance / Movement therapy as an alternative treatment for young boys diagnosed as adhd: A pilot study. *American Journal of Dance Therapy*, 27(2), 63–85. doi: 10.1007/s10465-005-9000-1
- Halprin, D. (2003). *The expressive body in life, art and therapy*. London: Jessica Kingsley Publishers Ltd.
- Harris, D. A. (2007a). Dance/movement therapy approaches to fostering resilience and recovery among African adolescent torture survivors. *Torture*, 17(2), 134–155.
- Harris, D. A. (2007b). Pathways to embodied empathy and reconciliation after atrocity: Former boy soldiers in a dance/movement therapy group in Sierra Leone. *Intervention Journal*, 5(3), 203–231.
- Iribarren, J., Prolo, P., Neagos, N., & Chiappelli, F. (2005). Post-traumatic stress disorder: Evidence-Based research for the third millennium. *Evidence-Based Complementary and Alternative Medicine*, 2(4), 503–512. doi: 10.1093/ecam/neh127
- Karampoula, E., & Panhofer, H. (2018). The circle in dance movement therapy: A literature review. *The Arts in Psychotherapy*, 58, 27–32. doi: 10.1016/j.aip.2018.02.004
- Leventhal, M. (2008). Transformation and healing through dance therapy: The challenge and imperative of holding the vision. *American Journal of Dance Therapy*, 30, 4–23. doi: 10.1007/s10465-008-9049-8
- Levine, B., & Land, H. M. (2015). A meta-synthesis of qualitative findings about dance / movement therapy for individuals with trauma. *Qualitative Health Research*, 26(3), 330–344. doi: 10.1177/1049732315589920
- Levine, B., Land, H. M., & Lizano, E. L. (2015). The elements of dance / movement therapy employed when treating women with posttraumatic stress disorder. *Critical Social Work*, 16(1), 40–57.
- Levy, F. J. (1988). *Dance/movement therapy: A healing art*. United States: Educational Resources Information Center (ERIC).
- Lowell, A., & Renk, K. (2018). Cognitive-behavioral treatment of ptsd with a young boy and his mother following the experience of chronic domestic violence. *Clinical Case Studies*, 17(3), 166–187. doi: 10.1177/1534650118771220
- Lucchi, B. (2018). Authentic movement as a training modality for private practice clinicians. *American Journal of Dance Therapy*, 40(2), 300–317. doi: 10.1007/s10465-018-9287-3
- Lykou, S. (2018). Dance movement psychotherapy with the under fives and their families: Identified and unidentified learning difficulties in a diagnosis dominated world. *Body, Movement and Dance in Psychotherapy*, 13(2), 72–86. doi: 10.1080/17432979.2018.1433719
- Martinec, R. (2018). Dance movement therapy in the wider concept of trauma rehabilitation. *Journal of Trauma Rehabilitation*, 1(1), 1–5.
- Mazza, M., Tempesta, D., Pino, C. M., Nigri, A., Catalucci, A., Guadagni, V., ... Ferrara, M. (2015). Neural activity related to cognitive and emotional empathy in post-traumatic stress disorder. *Behavioural Brain Research*, 282, 37–45. doi: 10.1016/j.bbr.2014.12.049
- McGarry, L. M., & Russo, F. A. (2011). Mirroring in dance / movement therapy: Potential mechanisms behind empathy enhancement. *The Arts in Psychotherapy*, 38(3), 178–184. doi: 10.1016/j.aip.2011.04.005
- Parker, Simon, Spires, P., Farook, F., & Mean, M. (2008). *State of trust how to build better relationships between councils and the public*. London: Demos.
- Parker, Sydney. (2018). Moving on: An investigation of dance movement therapy in ptsd treatment. *Intuition: The BYU Undergraduate Journal in Psychology*, 13(1), 100–111.
- Pierce, L. (2014). The integrative power of dance/movement therapy: Implications for the treatment of dissociation and developmental trauma. *The Arts in Psychotherapy*, 41(1), 7–15. doi: 10.1016/j.aip.2013.10.002
- Saremi, H. (2015). Empowerment as a new approach in the management. *International Journal of Accounting and Business Management*, 3(1), 209–221. doi:10.24924/ijabm/2015.04/v3.iss1/209.221
- Schmais, C., & White, E. Q. (1986). Introduction to dance therapy. *American Journal of Dance Therapy*, 9, 23–30.
- Serlin, I. A. (2017). Dance/movement therapy. In I. B. Weiner & W. E. Craighead (Eds.), *The corsini encyclopedia of psychology* (4th ed., pp. 459–460). doi: 10.1002/9780470479216.corpsy0250
- Shim, M., Goodill, S. W., & Bradt, J. (2019). Mechanisms of dance / movement therapy for building resilience in people experiencing chronic pain. *American Journal of Dance Therapy*, 41(1), 87–112. doi: 10.1007/s10465-019-09294-7
- Takahashi, H., Matsushima, K., & Kato, T. (2019). The effectiveness of dance / movement therapy interventions for autism spectrum disorder: A systematic. *American Journal of Dance Therapy*, 41(1), 55–74. doi: 10.1007/s10465-019-09296-5
- Van Baaren, R., Janssen, L., Chartrand, T. L., & Dijksterhuis, A. (2009). Where is the love? The social aspects of mimicry. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1528), 2381–2389. doi: 10.1098/rstb.2009.0057

Verreault, K. (2017). Dance / Movement therapy and resilience building with female asylum seekers and refugees: a phenomenological practice based research. *Intervention*, 15(2), 120–135.

Wondra, J. D., & Ellsworth, P. C. (2015). An appraisal theory of empathy and other vicarious emotional experiences. *Psychological Review*, 122(3), 411–428.  
doi: 10.1037/a0039252