

MA in Psychotherapeutic Practice: Humanistic
UWTSD
Year 3: Dissertation

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**Dance Movement Psychotherapy and the use of touch
in the recovery of
adult survivors of sexual abuse:
A critical literature review**

Abstract

Neuroscientific research has shown that the neurological impact of sexual trauma can leave a survivor unable to verbalise their emotional distress. Survivors may not fully recover if treatment is limited to talking therapies. By gaining direct access through the language of the body to integration of the right brain, Dance Movement Psychotherapy (DMP) appears to support the processing of unconscious memories. This critical literature review explores the benefits of DMP as an alternative creative, non-verbal and embodied approach in the recovery of survivors. The way in which DMP is underpinned by embodiment, interoception and dissociation theories, and can act as a means to heal the mind-body connection is considered. Touch is our first language and earliest form of communication. The integration of therapeutic touch in DMP has particular significance for this client group who may only ever have experienced abusive touch. This review also examines how touch in DMP can be used as a potentially healing, non-verbal means of communication for this population and non-verbal clients. The gap in the research around the intervention of touch and its under-valued relevance as a tool to access emotional and physical trauma of survivors is addressed. The findings of this review found therapeutic benefits of DMP in the experiences of self, self-regulation and interpersonal relations. DMP and touch offers an important therapeutic modality for those survivors for whom words alone cannot provide healing, and for non-verbal survivors for whom the body is allowed to tell its story.

Keywords: dance movement psychotherapy, adult survivors of sexual abuse, embodiment, dissociation, therapeutic and ethical use of touch, non-verbal client

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Introduction

Dance Movement Psychotherapy, essentially, utilises creative movement and dance to express thoughts and feelings in a therapeutic relationship (Payne, 2017). Although not as widely practiced as verbal psychotherapies, Dance Movement Psychotherapy or DMP is gaining increasing attention as a treatment modality as neuroscientific research indicates that spontaneous movement, which is the theoretical foundation of DMP, may be a helpful intervention for embodied trauma (Forde and Duvvury, 2020; Levine and Land, 2016). The neurobiological impact of this type of trauma on the brain can leave a person unable to verbalise their feelings and emotions (van der Kolk, 2015; Ogden et al, 2006). Unexpressed trauma is stored in the body, and movement may be a way to tap into unconscious feelings and emotions and express them non-verbally in a creative way (Homann, 2020; Payne, 2017).

The initial aim of this review is to examine how DMP, as a creative, embodied modality, may help survivors reconnect to their bodies particularly in view of the dissociation commonly experienced by survivors (Dieterich-Hartwell, 2017a; Pierce, 2014). As a therapeutic practice DMP embraces the treatment of the client's mind and body as interwoven aspects of the person as a whole. The body as a source of knowing, the way in which DMP as a method of healing is informed by neuroscience and trauma theory are also discussed, together with the neurological impact on the body and the brain following trauma (Dieterich-Hartwell, 2017a; van der Kolk, 2015; Levine, 2015; Ogden et al, 2006).

The second aim of the review is to explore the therapeutic use of touch as a powerful tool to reconnect to self, help develop self-regulation, rebuild trust and repair ruptures in boundary violations (Moenter, 2020; Barrero González, 2018; Novak, 2018, Cristobal, 2018). Touch within DMP has particular significance for this client group who may only ever have known abusive touch. Touch and DMP has particular relevance for survivors who may be non-verbal or have impaired verbal skills (Müller-Oerlinghausen and Eggart, 2020; Dymoke, 2019). The extant literature and current research in the application

of touch within psychotherapy are discussed. For the purposes of this review, adult survivors of sexual abuse will be referred to throughout by the term 'survivors'.

Methodology

Although this review was approached through the lens of humanistic-based modalities and a phenomenological perspective, both psychodynamic and humanistic theories currently influence DMP and it is not reliant on any specific technique or theoretical approach.

A computerized search was undertaken to identify contemporary research literature in the field. The research design incorporated qualitative, mixed-methods and quantitative studies. Different keywords were used for DMP and movement-related interventions and entered as single terms, specifically: dance movement therapy; dance therapy; expressive dance; therapeutic movement. Search term combinations included: DMP + sexual abuse; DMP + touch; DMP + trauma; DMP + dissociation; DMP + PTSD; verbal psychotherapy + touch; neuroscience + DMP; interoception + DMP.

Primary sources referred to peer-reviewed research articles, professional journals, reference books and other published texts. The search was conducted in databases that included: DOAJ; OpenDOAR; Digital Commons Network; CORE; ProQuest Research Library; JSTOR; Cambridge Core. Inclusion criteria: (i) reviews or studies published during or after 2000; (ii) DMP as a single case or group intervention; (iii) adults over 18. Exclusion criteria included: (i) non-English studies or reviews (ii) published before 2000. Seven studies were identified in which DMP was the treatment modality in the recovery of sexual trauma: two qualitative single-case studies (Dymoke, 2019; Margolin, 2019); two qualitative multiple case studies (Harris, 2019; Portokaglou, 2018); one clinical trial incorporating quantitative and qualitative methods; (Ho, 2015); two qualitative phenomenological studies (Mills and Daniluk, 2002; Leseho and Maxwell, 2010).

There is increasing evidence for the efficacy of DMP across a range of client groups and affective conditions including: depression (Hyvönen et al, 2020; Karkou et al, 2019); dementia (Ho et al, 2018; Karkou and Meekums, 2017); Parkinson's disease (Abraham et al, 2018). DMP as a successful treatment for trauma has been documented with qualitative studies on refugees (Portokaloglou, 2018; Gray, 2015), war-affected children (Harris, 2009; 2019) and survivors of childhood sexual abuse (Ho, 2015; Valentine, 2007; Mills and Daniluk, 2002). Cruz (2016) maintains that because of its mind-body connection, DMP has the potential to become instrumental in trauma treatments and neurorehabilitation with greater research emerging from the fields of neurobiology and neuropsychology. In a recent single case study on a male patient with multiple sclerosis, Cazan et al (2020) concluded that self-expressive movement and the expression of difficult emotions changed the client's perception leading to lowered depression and improvements in his sense of self and quality of life. A six-month study on seven dementia patients by Chita et al (2020) concluded that DMP generates important and beneficial clinical changes in the short term including mood enhancement, emotional and behavioural improvements and quality of life. A randomised controlled trial examining the impact of dance on young people aged 15 – 29 with cerebral palsy revealed increased range of motion in all lower limbs compared to the control group (Teixeira-Machado and DeSantana, 2019). This study also concluded that dance allowed patients to express their feelings, thoughts and actions in new ways, promoted self esteem and a sense of wellbeing and belonging.

Greater use of ethical and therapeutic touch in DMP, as advocated by Dymoke (2019), Cristobal (2018) and Matherly (2013), has particular significance for survivors who have experienced touch violations or who may be non-verbal patients, ie, patients with severe intellectual disabilities (Müller-Oerlinghausen and Eggart, 2020).

As one of the creative arts, DMP appears to offer a combined somatic and verbal approach to help integrate the experiences of survivors (Homann, 2020; Forde and Duvvary, 2020; Dieterich-Hartwell, 2017a). The neurobiolog-

ical impact of this type of trauma is such that it often leaves the person feeling both powerless and voiceless. Trauma can often leave a survivor with a disorganised and fragmented sense of self (Federman et al, 2019; van der Kolk, 2015; Pierce, 2014). DMP offers an alternative treatment model in the recovery of survivors as trauma, like shame, is held within the right hemisphere of the brain which makes it harder to access through cognitive processes or talking therapies alone. DMP uses right-brain integrative activity and sensorimotor, non-verbal techniques that allow clients to reclaim and reconnect to their bodies (Schoore, 2009, 2019; Dieterich-Hartwell, 2017a; van der Kolk, 2015; Siegel, 2009; Ogden et al, 2006). Schoore (2019) asserts that traumatic events tend to engage the right hemisphere and disengage the left. He emphasises the dominance of the right brain in the therapeutic process. In a brain imaging study Lanius et al (2005) demonstrated the dominant function of the right hemisphere of the brain during memory recall of trauma and dissociation. Although considerable empirical research has since been obtained from neuroimaging studies, Stark et al (2015) maintain that findings have been inconsistent. However a brain-imaging study on women experiencing PTSD resulting from prolonged childhood sexual abuse by Schalinski et al (2017) revealed this category of childhood adversity to have the strongest impact on altered brain functioning. Homann (2020) and Bläsing (2020) assert that participation in DMP involves being fully embodied in the present, and by engaging both right and left hemispheres DMP engages the whole brain, so that new brain patterns are created leaving clients more resilient and aware of their state of being.

The nature of this type of trauma can often lead to dissociation, ie, the disconnection between mind and body that prevents the integration of experiences, thereby hijacking our social engagement system that helps us to navigate relationships (Sanderson, 2021). Alternatively, survivors may be in a contact state of hypervigilance due to their experiences where there is no place of safety, and they do not have the ability or time to process what has happened. This may be compounded by the silence and secrecy that is ubiquitous in any type of sexual violence and particularly in childhood sexual abuse where survivors are not able to talk about it or process it, and are

therefore not able to integrate the experience (Sanderson, 2021). Traumatized clients are not suffering from a disease in the usual sense of the word, they have become stuck in a state of dissociation (shutdown) or hyperarousal that makes it very difficult to function normally (Payne, Levine and Crane-Godreau, 2015). This review addresses the need that the body has an equal importance to the mind in terms of healing and growth for trauma survivors. Current research and interest within the scientific community appears to be increasingly focused on embodiment and emotions in therapeutic approaches (Merritt Millman et al, 2020; Homann, 2020; Marmeleira and Santos, 2019; Barrero González, 2018; Shafir, 2016).

The Association of Dance Movement Psychotherapy UK (2021) describes DMP as a relational activity whereby physical movement and dance is practiced by client and practitioner in an empathic, creative way to help integrate elements of the self at all levels - emotional, cognitive, physical and social. DMP is a means of communication that is formulated on the notion that our emotions and our movements are interlinked, looks at the correlation between them and works to repair the rupture of boundaries of trauma survivors by re-connecting the lost mind-body connection (Levine and Land, 2016).

In light of the implicit acceptance of touch within the field of DMP, curiously there has been little dialogue or research literature published on the intervention of touch within DMP (Cristobal, 2018; Matherly, 2013). The integration of therapeutic touch within DMP is important for survivors who may only ever have experienced abusive touch. Moreover it has particular significance for non-verbal survivors as it allows them to reclaim their relationship to their bodies as illustrated with the case study in Chapter 4. The extensive gap in the literature around the intervention of touch and its under-valued and under-utilised relevance as a tool to access the emotional and physical trauma of survivors and non-verbal survivors, certainly merits much greater research.

The goal of touch within DMP is to help integrate healing touch into the life of a survivor that helps them to understand and to re-connect with the body. Var-

ious types of touch within a touch continuum are used to achieve these therapeutic objectives. DMP builds on the use of non-verbal, non-linear communication and symbolic movement (Serlin, 2018) providing clients with an alternative means to address painful issues they may not otherwise be able to articulate (Cristobal, 2018). Moreover, DMP can potentially bypass social and certain cultural barriers as it does not rely on survivors' cognitive and linguistic abilities (Karkou et al, 2019). A study on the indications and contraindications of DMP as experienced by practitioners (Koch, 2020), revealed certain contraindications for trauma patients, ie, exercises that involved patients having their eyes closed, working lying down or touching other patients to avoid the risk of re-traumatisation. The same study revealed indications for techniques that provide a sense of safety – these include the circle dance, mirroring or other techniques within the group (Koch, 2020).

The review examines the interplay between DMP, touch and therapeutic goals when working with survivors. In terms of our relationships, Moenter (2020) asserts that introducing touch as part of psychotherapy addresses a basic human need that can lead to healing and growth. Bainbridge Cohen (2021) suggests that movement and touch are pathways to discovering consciousness. Neuroscientific brain imaging indicates that movement is vital to and may even direct human awareness (Cebolla and Cheron, 2019). Paivio and Pascual-Leone (2010) suggest that the use of touch provides support, comfort, affect regulation and validation. Moenter (2020) argues that attuned touch, by enhancing the therapeutic movement dyad, helps to reinforce the survivor's degree of trust and safety.

The acknowledgment in neuroscience of the integration of mind, body and emotions suggests a more positive perspective towards touch (Berendson, 2017). Berendson (2017) advocates for greater research into the helpful and unhelpful aspects of touch in DMP, together with the need for codes of ethics in regulatory organisations to state unequivocally the implications of questions around power differentials, culture and gender (Kelly et al, 2018; Matherly, 2013; Popa and Best, 2010).

In their systematic review of dance movement therapy from a neurocognitive perspective, Merritt Millman et al (2020) advocate the standardisation and manualisation of DMP-based treatments for specific symptoms, psychological or bodily disorders. What is certain is that obtaining identifiable, measureable outcomes and an empirical research evidence base for DMP's efficacy for this vulnerable client group is challenging. Koch et al (2019) maintain that empirical research involving large-scale trials of clearly-defined DMP interventions are essential for the survival of the profession and will enhance the considerable qualitative research available. In their systematic review of DMP as a mind-body healing modality for sexual trauma, Lee et al (2022) concur that although benefits are indicated for outcomes in respect of self, affect and interpersonal relations, DMP interventions currently lack a robust empirical evidence base.

Chapter 1 below highlights the historical, cultural and social context of DMP, treatments currently available to survivors and the rationale for this research in relation to this particular client group.

Chapter 1

Historical, cultural and social context, and rationale

Movement and dance have been used for ritual, storytelling, expression, healing and managing trauma by indigenous cultures for millennia (Lauffenburger, 2020). Using the body, rhythm and dance as part of transformation and healing establishes dance movement psychotherapy as a therapeutic medium that precedes verbal psychotherapies (Lauffenburger, 2020). Dance/movement therapy was developed in America in the 1940's as a distinct type of psychotherapy (American Dance Therapy Association, 2020) and from its foundation has always been associated with individuals suffering from trauma. Today its practitioners can be trained in the traditions of psychodynamic, Gestalt or humanistic modalities (American Dance Therapy Association, 2020).

Within the United Kingdom the history of dance movement psychotherapy and its philosophical approach has always been linked to the creative arts - therapies that also include art, drama, music, poetry and creative writing. The Association for Dance Movement Psychotherapy UK, founded in 1982, is compliant with the UK Council for Psychotherapy (UKCP)'s standards and regulations for practice. Qualified members of the ADMP UK can now be registered as UKCP psychotherapists. Karkou et al (2019) and Payne (2017) inform that the significance of the therapeutic relationship led to a change in the name 'dance movement therapy' to 'dance movement psychotherapy' within the UK.

Childhood sexual abuse remains a global problem that can have severe and long-term somatic, psychological and mental health consequences. A commonly experienced long-term health condition experienced by survivors is post-traumatic stress disorder or PTSD. For survivors with a diagnosis of PTSD, the National Health Service currently offers limited psychological therapy that includes trauma-informed cognitive behaviour therapy (TI-CBT), and eye movement desensitisation and reprocessing (EMDR) (National Health Service, 2021). Although EMDR has been evidenced in some measure to be effective at reducing symptoms of PTSD, it does not necessarily address or

rectify the underlying impact of trauma on the body (Holtzhausen, Ross and Perry, 2016). Although it is offered infrequently, DMP is included in the range of treatment options available within the NHS. Currently there are two NHS Foundation Trusts in the North of England that offer DMP to patients with PTSD or schizophrenia ([National Institute for Health and Care Excellence, 2016](#)).

The Crime Survey for England and Wales for the year ending March 2019 estimates that 3.1 million adults aged 18 to 74 have experienced sexual abuse before the age of 16. Together with the unknown long-term personal, societal and economic cost of childhood sexual abuse, the exact scale of the abuse also remains unknown due to the lack of disclosure (Office of National Statistics, 2019). Interestingly, Sanderson (2021) posits that survivors of childhood sexual abuse may have PTSD or Complex PTSD (C-PTSD) that is often misdiagnosed as Emotionally Unstable Personality Disorder (EUPD) or Dissociative Identity Disorder (DID). In a neurocognitive study on DMP and mental health, Merritt Millman et al (2020) refer to dissociation as a psychiatric disorder. Harris (2009), Sanderson (2021), Homann (2020) and Levine (2010) posit that dissociation is a protective coping strategy to survive the trauma rather than a pathology. Sanderson (2021) argues that personality change, with reference to survivors of childhood sexual trauma, is the result of impaired attachment, abuse and misuse of power, rather than a disorder. In 2018 the World Health Organisation devised a new category in its manual, the International Classification of Diseases (ICD-11), having belatedly recognised that personality disturbances that are a direct consequence of trauma and abuse would be better classified as complex PTSD (Tyrer, 2020). Conversely, Existential Analyst, Stolorow (2016), argues that emotional pain is not a disease or illness, that emotional difficulties are created in the context of human relationships and advocates a non-pathologising approach to emotional trauma.

Why is this research significant and important?

Enabling survivors to restore a healthy relationship with their bodies is significant as physically embedded trauma can limit survivors' range of physical

movement (Ogden et al, 2006). Unresolved PTSD in survivors can develop into co-morbidities that affect the following systems: affective, cognitive, immune, muscular, visceral (autonomic) and endocrine (Payne, Levine and Crane-Godreau, 2015). The experience of trauma in the body can lead to hyper or hypo-vigilance which may not allow survivors to verbalise their feelings and emotions. Contemporary neuroscientific research into the theory of trauma demonstrates that the rationale for creative, non-verbal interventions that do not rely on left-brain verbal processing is growing increasingly stronger (Merritt Millman et al, 2020; Marmeleira and Santos, 2020; Margolin, 2019).

Harris (2009; 2019), van der Kolk (2015), and Ogden et al (2006), highlight that talking therapies are often recommended to trauma survivors despite evidence that the way in which trauma memories are stored in the human brain undermines attempts to express them verbally. Grabbe and Miller-Karas (2017) and Payne (2017) concur with this view, and posit that as evidenced in advances in attachment research and neuroscience, we are increasingly aware of the role emotion plays in the general regulation of the body and the way that the experience of trauma can compromise our capacity for self-regulation. Payne (2017) asserts that trauma is imprinted in our bodies and such unspeakable, intolerable emotional injuries are rarely affected by words or intellectual understanding. The defensive coping mechanisms a person adopts to survive trauma, such as dissociation, need to be addressed, according to Payne (2017), through the physical body. Grabbe and Miller-Karas (2017), van der Kolk (2015) and Levine (2010) concur that in spite of intellectual insight of their experiences of trauma, survivors are still left with a range of sensory reminders held in implicit or unconscious memory such as smells, sounds, noises, tone of voice, fragmentary or intrusive images. As they are beyond the client's conscious control, these triggers can elicit emotional dysregulation and distress in the client at any time.

In terms of verbal psychotherapies, Emotion-Focused Therapy (EFT) and Gestalt are two therapeutic modalities that combine both verbal and somatic (body) interventions to treat trauma. EFT, with its emphasis on exploring and adapting emotions, is a practice with a proven evidence base that has been

shown to be effective with individuals experiencing PTSD resulting from childhood sexual abuse (Khayyat-Abuaita et al, 2019; Mlotek, A and Paivio, 2017; Paivio and Pascuale-Leone, 2010). Psychodynamic therapy traditionally focuses on gaining insight from the interpretation of the client's thoughts and feelings. However there appears to be greater emphasis by some practitioners on accessing the client's emotions in the here-and-now and experiential learning as the key therapeutic agent for change (Levenson, 2020). Lane (2020) advocates integrating EFT interventions in psychodynamic therapy that highlight the importance of emotional experiencing and observable behaviour. He maintains that this addresses neurobiological rather than simply psychological factors within the therapy (Lane, 2020). As an evidence-based modality, Trauma-Informed Cognitive Behaviour Therapy, (TI-CBT), has proven effective particularly with children and young people experiencing complex trauma (Pleines, K, 2019; Neelakantan et al, 2018). One of the components of TI-CBT involves emotion regulation.

These findings would seem to suggest that across verbal psychotherapeutic modalities there is increasing emphasis on the body and its emotions as the mechanism for change in the treatment of traumatised clients. Body psychotherapist Ogden (2020) posits that working on three levels – cognitive, emotional and sensorimotor (bodily) - helps the client to make new neural connections and integrate their traumatic experiences. Ogden (2020) maintains that this integration cannot be achieved through intellectual insight alone.

The physical and emotional trauma experienced by survivors of sexual exploitation means that the body becomes a source of danger and shame. Dissociation between mind and body is a central feature of the trauma experienced by survivors and acts as a coping mechanism to manage the trauma. As trauma is stored in the body, Ho (2015) argues that making sense of somatic experiences can only be achieved through working at a bodily level that provides survivors with direct access to unconscious emotions. The use of verbal or cognitive therapies only may not allow a survivor to heal fully from trauma, and this has particular significance for non-verbal clients who have experienced sexual abuse. In his book, *The Body Keeps the Score*, van der

Kolk (2015) cites a brain-imaging study by Steuwe et al (2012) on the effect of direct eye contact in PTSD relating to trauma from childhood abuse that indicated intense feelings of shame were reflected in abnormal brain functioning. Findings of this study indicated that part of the brain (pre-frontal cortex) that would normally assess a person coming towards you with mirror neurons helping to appraise their intentions, was not activated in individuals with PTSD. Instead, a more primitive area of the brain was activated connected to hypervigilance and other self-protective behaviours. van der Kolk (2015) suggests that this has implications for a person's ability to trust and to experience others as separate individuals.

With its emphasis on embodiment and creativity and relational aspect, DMP may be particularly useful as a treatment modality for survivors. The experiential nature of DMP that incorporates touch provides direct access to the body. The experience of non-abusive, nurturing touch affords survivors the opportunity to rediscover a sense of bodily safety and to repair the mind-body connection (Cristobal, 2018). According to Bernstein (2019), movement helps release emotional energy that is stored in the body revealing sensations, images, feelings and emotions that may have long been hidden in the body. In contrast, clinicians in psychology and psychiatry attribute affective or mood disorders to an imbalance in neurotransmitters or chemicals in the brain that can best be managed by medication and talking therapies (Liang et al, 2021; Wilkinson and Sanacora, 2019).

DMP adopts an embodied or bottom-up (somatic) as opposed to a predominantly top-down (cognitive) approach. Perry (2009) asserts that bodily movement and touch helps to control the brain stem area leading to developmental growth within the brain. In psychiatry, as dissociation disorders resulting from trauma are not directly treatable with psychiatric drugs, best practices currently include top-down cognitive-behavior therapy, dialectical behaviour therapy, psychodynamic approaches and EMDR (Grabbe and Miller-Karas, 2018). However in psychiatric nursing there appears to be a shift towards adding a bottom-up or somatic intervention to treating trauma using sensory

awareness to help with regulating and integrating emotion (Grabbe and Miller-Karas, 2018).

Regarded as a core tenet in DMP, a dance movement psychotherapist mirrors the individual's movements in order to feel what the individual is expressing and feeling and to empathise with them, thereby enabling the individual to regulate their emotions. Shafir (2016) argues that changes in movement and posture help to regulate emotion. By practicing mirroring the dance movement psychotherapist activates mirror neurons in the individual. Shafir (2016) does caution that practitioners should be aware that the process is bidirectional and cites an example whereby a dance movement psychotherapist might adopt a similar position to that of a survivor who is slumped and apathetic to convey empathy. However this may, at the same time, convey a sense of hopelessness and the dance movement psychotherapist's inability to help the survivor. More explicit examples would be the conscious avoidance of a physical or facial expression of anger or disgust that the client elicits in the practitioner. Alternatively, rather than physical mirroring, the survivor's slumped posture can be pointed out verbally and the survivor can be invited to explore what they can learn from this (Ogden, 2020). Mirror neuron theory (Gallese et al, 1996) or mirroring is not without its critics. Existentialist Ioannidis (2019) posits that even if the biological or neural connection of mirroring is a fact, we cannot claim to empathise with a person as if we know what they think and feel. He maintains that the only way to know another person is by creating a community with them, ie, creating something together. According to Ioannidis (2019), the fact that we share the same brain formation that allows us to mirror another person's feelings, does not allow us to know that person. Cognitive neuroscientists have also challenged this controversial theory by claiming other parts of the brain have functional roles in the perception and understanding of actions that merit further research, and although mirror neurons may function in action selection, they have little to do with goals, intention or any form of social information processing (Hickok, 2015; Steinhorst and Funke, 2014).

When and how to use metaphor, imagery and the decision to witness or mirror the client's movements is entirely at practitioners' discretion. Dieterich-Hartwell (2017a) makes the point that the survivor's emotional growth is dependent on the practitioner's skill, sensitivity and awareness of bodily countertransference within the therapeutic dyad. Perhaps the most obvious limitations would be the tendency of practitioners to misattune, misinterpret or direct the survivor's movements (Grabbe and Miller-Karas, 2017). Therapists in the psychodynamic tradition, Gelso and Kanninen (2017), advocate for greater focus on neutrality and abstinence from the therapist within the therapeutic dyad whilst still maintaining empathy and caring. The authors advocate not participating in the client's relational struggles or manipulating the client into emotional expression. Emotion-focused therapy specialist, Goldman (2017), argues that an attitude of analytic neutrality creates an imbalance of power in the relationship, and that authenticity, warmth, and acceptance on the part of the therapist in EFT cannot be neutral. Tovey (2017), a person-centred psychotherapist, argues that many survivors who experience childhood sexual abuse appear to struggle with fundamental issues of trust and self-worth. This would suggest that the relational impact of the therapeutic dyad between client and dance movement psychotherapist has even greater significance for this client population in terms of the repair of attachment and trust issues.

Therapeutic goals in DMP include promoting understanding of the survivor's psychological state by firstly establishing somatic safety, boundaries and stability through interoception, ie, somatic self awareness and an increase in sensation and feeling. Integrating thoughts and feelings with the body can help to re-build a healthy relationship with the self and with others (Homann, 2020; Meritt Millman et al, 2020). Theories that support the use of DMP including interoception and integration and the extent to which neuroscience informs our understanding of the trauma experienced by survivors, are discussed in Chapter 2.

Chapter 2

Theoretical underpinnings of dance movement psychotherapy

The current neuroscientific debates around theories of embodiment, trauma and dissociation in Chapter 2 highlight how DMP is underpinned by our knowledge of the neurobiological impact of this type of trauma on the brain and the body (Dieterich-Hartwell, 2017a; van der Kolk, 2015; Levine, 2010). An impact that can leave survivors speechless and trauma which cannot be accessed by talking therapies alone. Contemporary debate around the concept of interoception (awareness or sensing of inner bodily states or signals) as a source of emotional regulation is also explored, a feature that is pivotal for clients experiencing hyper- or hypovigilance (Talmon and Ginzberg, 2018; Payne, Levine and Crane-Godreau, 2015).

Findings reveal that as an embodied intervention, DMP can be used to address, integrate and heal trauma survivors. It is useful as a source of emotional regulation for survivors as it directs attention and awareness to the body and may help to mitigate dissociation by integrating implicit memories stored in the right hemisphere of the brain using its bottom-up approach. The theories discussed below appear to confirm DMP's importance as a modality that is able to address and heal the mind-body connection of survivors.

Embodiment

From the moment we are born our relationships are embodied in reciprocated gestures, faces and touch, our bodies are essential to our growth and learning and to our relationships with others (van der Kolk, 2015). Koch et al (2019), Payne (2017) and van der Kolk (2015) suggest that with the complexity of rhythm, creativity, movement and sensory experience, DMP provides added elements of psychological healing and growth through embodiment. There appears to be growing interest in creative embodied interventions, such as DMP, and acceptance of the role the body plays in the integration and recovery of trauma survivors (Margolin, 2019; Marmeleira and Santos, 2019; Berrol 2016). Research indicates that traumatisation occurs in both mind and body

and affects unconscious behaviours and interaction, therefore any treatment approach needs to include the body to recover health (Lauffenburger, 2020, Merritt Millman et al, 2020; Forde and Duvvury, 2020; Cruz, 2016).

Embodiment theory is founded on the work of phenomenologists such as Edmund Husserl and Maurice Merleau-Ponty who posited that an individual uses their own somatic (bodily) experience and processes to understand their own and others' emotional experiences. Phenomenology explores the nature of our conscious, lived experiences. By being open to our lived experiences, Moustakas (1990) asserts that we can learn to trust in our self-awareness and understanding and to extend that understanding through relating to others. Embodiment theorists claim that the body influences all our psychological processes including our emotions, motor systems (part of the nervous system that supports movement) and sensory systems (Glenberg, 2015). Embodiment therapies use the body as a tool for healing through connection, self-awareness, self-regulation, and self-acceptance (Homann, 2020). According to Homann (2020) embodiment explores the relationship between our physical bodies and our energy and involves the interaction of our body, actions and thoughts. However, in contemporary neurocognitive thinking, the hypothesis that the body can play a role in cognition continues to be controversial.

Opinion among neuroscientists continues to be divided as Dove (2016) explains that cognitive scientists view cognition (knowledge and understanding) as functionally independent of perception and action. In contrast, supporters of embodied cognition (knowledge that has its roots in motor behaviour) offer an alternative framework whereby cognition is viewed as fundamentally grounded in motor and sensory systems (Glenberg, 2015). Embodiment theorists refer to studies that point to sensorimotor and affective systems in cognitive tasks (Glenberg, 2015), whereas critics of embodiment theory offer non-embodied explanations of these findings that involve amodal (whole perception) systems (Machery, 2016). Michel (2020) suggests that the empirical evidence for both the embodied approach, and the amodal approach to cognition in terms of concepts, is inconclusive. He argues that it would be better to approach these distinctions (modal/amodal and embodied/non-embodied) as

phenomena that happen in stages rather than dichotomies or hybrid elements. Marmeleira and Santos (2019) suggest that embodied cognition offers an alternative to amodal accounts of human cognition and cite Woloszyn and Holol (2017) who posited that embodiment should not be regarded as a stand-alone theory, but rather a continuously evolving research programme. Embodiment, according to Marmeleira and Santos (2019), is primarily about how our psychological life (emotion, cognition, relationships) is an embodied experience.

The therapeutic effectiveness of DMP as an embodied approach may warrant further empirical research and control groups to measure treatment outcomes such as self-awareness, self-regulation and self-acceptance as claimed by Homann (2020). As an embodied therapy, the way in which DMP can affect our bodily senses or interoceptive functioning is discussed below.

Interoception

Interoception (sensory awareness of internal bodily states including emotions and feelings) has been the subject of a large amount of research over the last twenty years, and clear evidence has been found between interoceptive dysfunction and psychiatric and dissociative disorders (Tsakiris and De Preester, 2018; Dieterich-Hartwell, 2017a; Levine and Land, 2016). Dieterich-Hartwell (2017a) cites Damasio (1999) who posited that interoception is built on the premise that our emotions originate in our physical bodies.

The basic tenet of interoception is that new, adaptive interoceptive experiences can act as an antidote to feelings of helplessness and overwhelm created by trauma, to be superseded by feelings of empowerment and agency (Payne, Levine and Crane-Godreau, 2015). A key feature of DMP is directing attention and awareness to the body, its physical and psychological emotions and boundaries (Homann, 2020). Merritt Millman et al (2020) suggest that measuring levels of interoception in survivors both before and following DMP may help to give DMP a greater neurocognitive foundation. The authors propose that although there is evidence that DMP improves embodiment and in-

teroception, it is not clear how the mechanisms that underpin DMP achieve this. They suggest that integrating DMP methods with neurocognitive research on interoception and embodiment may help to develop an evidence base for DMP interventions to treat mental health disorders.

In a qualitative review of the enduring impact of childhood sexual abuse on female and male survivors, Talmon and Ginzberg (2018) suggest that as this type of trauma is not often processed verbally, interventions that emphasise the significance of the body with attention on interoceptive experiences may be particularly relevant for this client population. Dieterich-Hartwell (2017a) indicates that whereas studies have been undertaken on interoception in yoga and meditation there is a lack of research into movement-based studies. Both Dieterich-Hartwell (2017a) and Pierce (2014) concur that manualised DMP interventions such as attunement, and kinaesthetic mirroring would help towards obtaining evidence-based research in the field of DMP.

Trauma

Psychological responses to traumatic and overwhelming experiences can result in a range of chronic conditions that may include PTSD, anxiety, depression, withdrawal and aggression. Complex PTSD may also result in self-harming or addiction (Sanderson, 2021; Stirling and Andrews, 2021; Payne, Levine and Crane-Godreau, 2015). The smallest suggestion or sign of danger can lead to the reactivation of a traumatic experience that may have occurred a long time in the past triggering the brain to release a large surge of stress hormones (van der Kolk, 2015).

Current thinking about trauma treatment emphasises the need to cope with triggers and stressors by learning grounding and self-soothing techniques including self-touch to help clients return to an optimum level of tolerance to avoid disorientation or dysregulation (Rothschild 2021; Moenter, 2020; Cristobal, 2018); Ogden et al, 2006). A central aspect of trauma is the loss of safety which plays a crucial role in a survivor's recovery. Bringing attention to the body in DMP has to be done in a safe, non-threatening way (Kleinlooh et al, 2021; Porges, 2017; Levine, 2015). It is suggested that activities that promote

movement, including dance and music, support a decrease in hyperarousal as their impact facilitates feelings of safety and protection in the survivor by helping to calm the autonomic nervous system and increase self regulation (Gray and Porges, 2017; van der Kolk, 2015; Ogden and Fisher, 2014).

Research on the neurobiological impact of trauma on the brain and the body by Schore (2003; 2019), Porges (2017), van der Kolk (2002; 2014), and Levine (2010) has been directed on areas including the brain stem, an area that deals with perception, and the limbic system that deals with motivation and emotions and houses traumatic memories over which the individual has no conscious control. Their findings revealed that verbal cognition and understanding that is centered in the area of the brain called the pre-frontal lobe does not tend to heal trauma. In their view, experiential psychotherapies including DMP appear to be more effective as they work with areas of the brain that verbal psychotherapies alone cannot reach.

The use of words alone to express traumatic events does not appear to resolve a client's issues. Payne, Levine and Crane-Godreau (2015), van der Kolk (2002; 2015) and Ogden et al (2006) propose that performing actions that allow the individual to overcome their sense of helplessness experienced during the trauma, and having the chance to express the emotional and somatic sensations associated with the traumatic memory may be more effective in helping them overcome the trauma.

According to Federman and Sterenfeld (2017), the embedded physical stress responses to trauma – release of hormones, fight/flight/freeze/faint reactions - indicate the central role of the body both during and following the traumatic experience. Payne, Levine and Crane-Godreau (2015) and Stanek (2014) maintain that when a traumatic event occurs, intense emotions and sensations become stuck in the body as the experience does not get processed at the time of the event, and being stuck in either a hyperaroused or dissociated state makes it very difficult for survivors to function normally.

Memories and bodily sensations associated with the trauma are trapped in the body and mind and can emerge in the form of flashbacks and nightmares – these traumatic memories are embodied and easily re-triggered, thus it may be therapeutic to use the body to explore these traumatic memories both on a conscious and unconscious level (Stanek, 2014). Stress-related implicit memories can constantly ‘hijack’ survivors back into the past. Only when these traumatic memories can be processed and integrated into the hippocampus area of the brain can they be experienced as past memories and survivors can experience themselves as fully present (Payne, Levine and Crane-Godreau, 2015; van der Kolk, 2015).

Payne, Levine and Crane-Godreau (2015) posit that making survivors’ aware of kinaesthetic, interoceptive and proprioceptive experiences is central to the process of trauma therapy. The authors posit that the client’s emotional outlook, bodily posture and cognitive thinking are fundamentally connected and mutually responsive. For example, changing body position may shift the clients’ emotional state or changing the clients’ attention may shift their autonomic nervous system.

Homann (2020) considers that DMP interventions support the integration of the autonomic nervous system. By generating state shifts in a client’s neurophysiology, DMP promotes psychological healing (Caldwell, 2018). Movement in DMP involves the client’s full, embodied engagement in the here and now which, according to Homann (2020) and Bläsing (2017), activates both right and whole hemispheres of the brain, disrupting chronic neural sequences and creating new responses to present circumstances.

Integration

According to Dieterich-Hartwell (2017a) survivors’ trauma can be integrated by enabling them to be as present as possible in relation to their emotions, perceptions, thoughts and feelings experienced in the past. When the dissociated or ruptured parts of the self are brought into awareness or consciousness in the here and now, this allows an integrated, autobiographical narrative of the self to emerge (Solomon and Siegel, 2003).

Federman and Sterenfeld (2017) cite van der Kolk's (2002) emotional and sensory imprints (belief systems or deeply embedded memories) that are left with the survivor following the experience of trauma, and, how, in order to change these belief systems, the need to experience embodied coping in the present is required. This research has implications for the treatment of survivors within DMP in that the practitioner needs to focus a consistent level of attention to the survivor's sensory and kinaesthetic signals in the here and now. In a qualitative review based on a grounded theory approach, Acolin (2016) examines DMP theory against empirical evidence from behavioural and cognitive sciences. Existing DMP theory was refined to generate grounded descriptive statements. The author then summarised extant empirical data from behavioural and cognitive neurosciences that substantiated these statements or otherwise. In considering the statement that movement in DMP is integrative, the author found that there was indirect evidence to support integration, but no evidence that related directly to the DMP concept of integration. Acolin (2016) concluded that further research and empirical evidence for assertions made in DMP theory (including integration, movement and expression) would be merited.

Dissociation

One of the therapeutic goals of DMP is to support the integration of the self to help mitigate the dissociation related to traumatic experiences (Pierce, 2014; Bowlby, 1988). In a trauma-related qualitative review, Pierce (2014) examines the potential of DMP as a bottom-up approach to integrate the self. Pierce (2014) suggests that, as a bottom-up intervention DMP may help to directly integrate unconscious memories stored in the right hemisphere of the brain. As discussed earlier, the way in which the right brain dominates in traumatic memory recall is supported by affective neuroscientific research (Schoore, 2009, 2019; Dieterich-Hartwell, 2017a; van der Kolk, 2015; Siegel, 2009; Ogden et al 2006). Pierce (2014) hypothesises that dissociation could be viewed as the cessation of interoceptive awareness as its original purpose was to provide a defense for the client against inner sensations too horrific to tolerate at the time of the trauma. This disintegration of right-brain functioning

results in a less cohesive or dissociated self (Kleinlooh et al, 2021). As previously discussed, experiential activities such as DMP activate right-brain processing that help to mitigate the effect of dissociation.

The use of metaphors and symbols in DMP, as suggested by Malchiodi (2021) and Pierce (2014), leads to right-brain functioning at a pre-conscious, non-verbal level that stimulates new neural pathways that then contribute to a more integrated, secure sense of self. Kleinlooh et al (2021) cite Batcup (2013) who suggests that creating safe distancing using symbols, metaphor, images and sound, provides containment for the disclosure of traumatic experiences. The creative use of metaphor and symbolism together with the therapeutic use of kinaesthetic empathy and attunement are discussed in Chapter 3, which also explores the lived experiences of DMP from the perspectives of both DMP practitioners and survivors.

Chapter 3

The phenomenological experiences of practitioners and survivors

As stated in the introduction, the initial aim of this review was to provide a critical analysis of evidence that supports the potential benefits of DMP in the recovery of survivors. Benefits that Homann (2020) and Ogden et al (2006) suggest lead to shifts in sensorimotor experiences that aid emotional self-regulation, memory processing, and generate restored vitality and re-connection to life.

Phenomenological qualitative studies of lived experiences of survivors utilised both thematic analysis of data (Leseho and Maxwell, 2010) and interpretative phenomenological analysis (Mills and Daniluk, 2002). In a mixed-methods controlled trial, questionnaires, including the Courtauld Emotional Control Scale and Rosenberg Self-Esteem Scale, were used for quantitative data collection and analysis, and a thematic analysis method was used for qualitative data collection (Ho, 2015). Of these phenomenological experiences of DMP by survivors the following overarching themes were identified: the therapeutic relationship; establishing safety; learning to be present; from powerlessness to empowerment through movement.

The therapeutic relationship

One of the themes that emerges from the phenomenological experiences of practitioners and survivors in DMP that include the use of touch is the significance of the therapeutic alliance (Moenter, 2020; Cauna and Vende-Kotova, 2017). In Maté's (2017) view, the success of any treatment modality has to be the quality of the therapeutic dyad. It is widely accepted that this relationship is one of the main agents of change within psychotherapy and is linked directly to positive therapeutic outcomes (Stamoulos et al, 2016; Rogers, 1995).

The necessity of non-hierarchical, collaborative dyadic co-regulation for this client group is emphasised due to experiences of the abuse of power (Sanderson, 2021; Forde and Duvvary, 2020). In a case illustration using body

psychotherapy with a survivor whose narrative included sexual trauma and dissociation, Novak (2018) emphasises the need to build trust in the therapeutic alliance over a period of a year with verbal psychotherapy only before approaching any use of touch. He describes the survivor touching him with her arms and shoulders. This type of comfort touch initiated by the survivor was never experienced by her as a young child. In relation to touch, Novak (2018) asserts that the survivor not only learned to trust the therapeutic boundaries created by him but also to trust in her own ability to hold these boundaries in respect of touching others. Dieterich-Hartwell (2017b) maintains that boundaries both define our unique identity and the way in which we distinguish ourselves from others. The physical body provides important cues and signals that indicate when boundaries are overreached or transgressed: a sense of discomfort, greater rigidity or agitation; instinctive physical shying away or flinching from the experience of fear, shock or disgust (Dieterich-Hartwell, 2017b). With the emphasis on the relationship between the survivor and practitioner, or between the survivor and group members, DMP plays a central role in the restoration of trust, social engagement and self worth that are often annihilated as a result of relational trauma (Levine and Land, 2016; Pierce, 2014).

Establishing safety

It is universally accepted within DMP and psychotherapy that supporting change in the survivor's understanding of their psychological state can only be achieved by first promoting safety and stability in the body (Moenter, 2020; Cristobal, 2018; Levine, 2015; van der Kolk, 2015; Ogden et al, 2006). The survivor needs to experience a fundamental sense of safety before any integration and higher-order learning can take place (Cozolino, 2017). Failure to create a safe and protective environment has proven to impact negatively on human development and capacity for social engagement (Ledoux, 2015; Porges, 2011).

Breathing techniques, grounding exercises and imagery are some of the ways used to help survivors regulate their autonomic nervous system (Cristobal, 2018; Dieterich-Hartwell, 2017a; Pierce, 2014). Extending Siegel's (1999)

window of tolerance or optimal zone of arousal, not only helps survivors to tolerate distress but also allows them to feel joy and pleasure (Sanderson, 2021; Rothschild, 2017). Once survivors learn self-regulation techniques, interoceptive and self-awareness methods can then be introduced that can link unconscious bodily sensations with cognition and emotion (Dieterich-Hartwell, 2017a; Pierce, 2014). Evidence that a survivor feels safe in DMP is indicated by the experiences of survivors who report a sense of spontaneity, joy, playfulness and freedom (Ho, 2015; Mills and Daniluk, 2002).

Core skills of the DMP practitioner

Building the therapeutic alliance within DMP takes the form of an embodied relationship that relies on the core skills of mirroring, attunement, non-verbal reflection and kinaesthetic empathy (Dieterich-Hartwell, 2017a; Levine and Land, 2016; Pierce, 2014). Of these core skills, mirroring is regarded as one of the most important therapeutic goals in DMP in that it allows the survivor to be seen, heard and witnessed without judgement. Bearing witness to the survivor's narrative, just as in verbal psychotherapy, is a significant part of the therapeutic process – physical mirroring tells the survivor's story and helps to demonstrate that their story is being heard by the practitioner (Land and Levine, 2016). Working within a DMP group setting, survivors also spoke about the therapeutic power of bearing witness to the experiences of members within the group (Mills and Daniluk, 2002).

The use of creative tools in DMP to establish safety

As discussed previously, the tools of symbolism, metaphor and imagery used in DMP may be effective at accessing implicit or taboo feelings and emotions (Homann, 2020). A concept originated by Jung in 1916, who first proposed dance/movement as a psychotherapeutic modality, Karkou et al (2019) suggest that active imagination may serve as an additional vehicle to access difficult emotions such as anger, with creative metaphors and symbols allowing the survivor to process these feelings in a safe way. This is significant for survivors as PTSD characteristically numbs the frontal lobe of the brain that deals with imagination (van der Kolk, 2014). Karkou et al (2019) assert that creativity, reflection and movement narratives within DMP help to create inte-

gration for the survivor, and that movement (posture, gesture or movement sequence) acts as a means of embodied storytelling of significant moments in the survivor's therapeutic journey. Survivors have identified freedom to create and control their own therapeutic experiences as important elements of DMP (Mills and Daniluk, 2002). Similarly, in relation to the power of imagery and symbolic expression in DMP, the element of control is restored as the survivor sets the boundaries (Bernstein, 2019).

A qualitative meta-synthesis of DMP for trauma clients, by Levine and Land (2016) revealed certain themes that emerged as integral to DMP interventions: developing awareness of the mind-body connection through awareness and meaning making; extending the survivor's movement repertoire to develop empowerment and the ability to reclaim the body; developing a new relationship with the self, practitioner and others in the group. The authors conclude that greater evidence-based practice research is required to endorse DMP as a trauma intervention in the form of a manual that incorporates the themes identified above. Several experienced DMP practitioners and specialists have recognized the contribution of DMP and its creative process to: survivors' sense of safety; self-awareness; their ability to connect with embodied and unconscious memories; the re-establishment of relationships with self and with others; the re-connection of mind/body (Pierce 2014; Valentine, 2007; Meekums, 2000). Their findings highlight the potential benefits of DMP as a treatment modality for this client group but lack empirical evidence in the form of large-scale qualitative and quantitative studies. A mixed-methods, clinical trial of twenty five Chinese female survivors participated in a DMP programme aimed at developing healthy relationships with self and others (Ho, 2015). No quantitative changes of significant effect in this study were found in relation to self-esteem and mental distress. Qualitatively, however, survivors' responses indicated positive, subjective effects of DMP related to its therapeutic aspects based on thematic analysis of the data. The study concluded that embodiment and movement afforded survivors the opportunity to express unconscious feelings and learn self acceptance (Ho, 2015). The author acknowledges that a control group and larger sample size would help to make the study more objective and make it easier to generalise the results.

Learning to be present

Trauma has been defined by Maté (2017) as a disconnection from the self, from the body and from visceral feelings, there is discomfort and an inability to be in the present moment due to feelings too painful to tolerate. Maté (2017) maintains that the therapeutic goal of any treatment modality has to be oriented to the rehabilitation of the survivor and his or her capacity to be in the present moment, whether the present moment is comfortable or not. For survivors who are not receptive to support in DMP, just sitting with the survivor in their discomfort may be enough to offer acceptance and support (Dieterich-Hartwell, 2017b).

Learning to be present is a pivotal motif to emerge from survivors' experiences of DMP and within psychotherapy (Bernstein, 2019; Cristobal, 2018; Greenberg, 2017; Leseho and Maxwell, 2010; Mills and Daniluk, 2002). Learning to become more connected to one's inner emotional world and previously unknown or disowned parts of the self leads to mind-body integration (Yalom and Leszcz, 2021). Through the creative medium of DMP, imagery and metaphor encourage the embodiment of feeling states that reflect previously unrecognised or unexplored aspects of the self (Bernstein, 2019).

As part of this process, in a qualitative, phenomenological study by Mills and Daniluk (2002), survivors spoke not only of getting in touch with painful aspects of their traumatic experiences but also reported the therapeutic value of recognising their inner strengths to build self esteem. Van der Kolk (2015) explains (with reference to Lanius et al, 2005) that when survivors experience trauma dissociation, areas of the brain that transmit gut feelings and emotions learn to shut down. The disconnection or numbing of emotions and sensations disrupts the survivor's fundamental sense of self-awareness and identity - sensing and feeling, notably pleasurable feelings, becomes difficult in everyday life (Margolin, 2019). Survivors of childhood sexual abuse expressed both a disconnection from their bodies to different degrees, and what they learned through their experience of DMP: to pay attention to, and feel safe and more grounded in their bodies; to be present in their bodies as adults and to explore the trauma from an adult's understanding (Mills and Daniluk, 2002).

In their qualitative, phenomenological study of five, female survivors (aged 25 – 48) of the same ethnic group, Mills and Daniluk (2002) examined survivors' lived experience of DMP. Interpretative phenomenological analysis of the data revealed six major themes that included a reconnection to the body. All participants were required to have previous experience of a minimum of six DMP sessions. Nevertheless, as the authors are aware, due the study's typically small size, any generalisation of the findings cannot be made.

Learning to take up space in the world, to feel alive again

Taking up space in the world is a further, significant phenomenological disclosure by survivors and a crucial factor in developing healthy relationships as the survivor is able to own the space in which they had previously shielded or protected the body (Levine and Land, 2016). This response may protect the individual but, most significantly, limits their capacity for connection to others (Levine and Land, 2016; van der Kolk, 2015). This is illustrated by a survivor participating in DMP who expresses that she deserves to take up space for herself (Bernstein, 2019). Similarly, in a phenomenological qualitative study by Leseho and Maxwell (2010), a survivor describes how, having spent a lifetime physically and psychologically folded in on her herself and hiding from the world, she learned in DMP to take up space for herself without feeling guilty. DMP appears to afford survivors an authentic space in which to learn to be present in the world (Bernstein, 2019; Cristobal, 2018; Leseho and Maxwell, 2010). This has particular significance where cultural and traumatic experiences informed many survivors that taking up too much space in the world was unacceptable (Portokaloglou, 2018; Leseho and Maxwell, 2010).

In a case study of a Jungian-based movement approach involving touch and sound, one female refugee and survivor expressed how moving her body in the group mitigated her sense of hopelessness affiliated with fear and death by reminding her she was alive (Portokaloglou, 2018). A qualitative, single case study of a survivor experiencing body psychotherapy described movement as life-affirming (Stirling and Andrews, 2021). A survivor participating in DMP described a space within her that made her feel alive (Leseho and Maxwell, 2010). Awareness of an inner space has also been described variously

by other survivors in DMP as: a space that does not think, but feels; an enriched sense of self; discovering a discomfort and learning to listen to inner feelings of insecurity; freedom to be more self-accepting (Ho, 2015).

Working within a DMP group setting, some survivors struggled initially with feelings of vulnerability and fears of emotional disclosure (Portokaloglou, 2018; Mills and Daniluk, 2002). However the overriding benefits that appear to emerge from group work include: strong emotional connection with others, rebuilding of attachment; reduced social isolation and improved social engagement; a sense of belonging (Margolin, 2019; Portokaloglou, 2018; Karampoula and Panhofer, 2018; Mills and Daniluk, 2002).

From powerlessness to empowerment through movement

Arguably, the most important theme to emerge from survivors' experiences of DMP is a move away from seeing the body as a source of shame and danger, to an ally for power, recovery and comfort. DMP appears to have the ability to transform survivors' experiences of their bodies as a result of new experiences in the present (Bernstein, 2019; Cristobal, 2018; Leseho and Maxwell, 2010). New experiences act as an antidote to past trauma to promote feelings of self-acceptance, empowerment and agency rather than shame, powerlessness and victimization (Sanderson, 2021; Harris, 2019; Bernstein, 2019; Margolin 2019, Portokaloglou, 2018).

For survivors who may have previously been disconnected from their bodies and ignored their own inner strengths, DMP provides an avenue of renewal and reclamation of the body that can now be viewed as a source of wisdom (Bernstein 2019; Leseho and Maxwell, 2010). The expression of healthy aggression in DMP, for example, can help to mitigate a long-standing psycho-physical (sensory, perceptual and cognitive) attitude of powerlessness (Bernstein, 2019). Learning new rhythms, intensities and dynamics within DMP can extend and transform the survivor's range of emotions – dancing symbolic images of playfulness, freedom, kindness, courage, power or gentleness can free previously unknown aspects of the self (Homann, 2020; Bernstein, 2019).

Following their experiences of DMP, survivors have reported improved emotion regulation: becoming more stable emotionally and better at problem solving (Ho, 2015); actively using the energy shift from DMP as a way of coping better with daily stresses; being able to be more objective about difficult emotional states (Leseho and Maxwell, 2010). Empowerment and healing are two of the major motifs identified in a thematic analysis of Leseho and Maxwell's (2010) phenomenological qualitative study on the meaning 29 female survivors attributed to DMP in their recovery. The authors maintain that both the consistency of themes uncovered in the data and the wide-ranging demographic (participants from 12 countries aged 16 - 67), evidence that DMP can provide healing across cultures, age, socio-economic status and religion.

In summary, from the phenomenological experiences of survivors and practitioners, DMP and other movement-based interventions appear to lead to a reconnection to the physical body, emotional connection to self and powerful emotional and social bonds to others (Margolin, 2019; Harris, 2019; Portokaloglou, 2018; Ho, 2015; Leseho and Maxwell, 2010; Mills and Daniluk, 2002). From previous feelings of rejection, with imagery and metaphor helping to restore a sense of agency and control, survivors begin to learn to see the body as a wellspring of power, comfort and joy (Portokaloglou, 2018; Leseho and Maxwell, 2010; Mills and Daniluk, 2002). When a sense of safety is created both in the survivor's own body and in the therapeutic space (Yalom and Leszcz, 2021), DMP appears to be able to harness the survivor's emotions and physical resources, and a sense of joy, playfulness and meaning help to counterbalance difficult and painful aspects of their traumatic experiences (Leseho and Maxwell, 2010; Mills and Daniluk, 2002). Notably, no acutely distressing psychological consequences for participants in DMP were noted by the studies explored in this review.

Table 1: Main findings of research studies on DMP and touch for survivors of sexual abuse

Research study	Research design	Theoretical model	Main findings/themes
Dymoke (2019)	Single case study: detailed observations by DMP practitioner for self-harming, non-verbal client	Humanistic (person-centred), somatic movement therapy - touch and movement	➤ Re-connection to self ➤ Greater self-regulation ➤ Greater experience of interpersonal relations
Harris (2019)	Three case illustrations: detailed observations by DMP practitioner	Human development theory, mind-body connection	➤ Sense of empowerment ➤ Greater sense of safety and freedom
Ho (2015)	Clinical trial (excluding control group): Qualitative data obtained from open-ended questions, thematic analysis; Quantitative data obtained from: Courtauld Emotional Control Scale; General Health Questionnaire; Rosenberg Self-Esteem Scale; Stagnation Scale	Bio-psycho-social perspective with focus on attachment and safety	➤ Greater awareness of personal boundaries ➤ Improved experiences of interpersonal relations ➤ Sense of being present and grounded ➤ Sense of discovering an inner space and rhythm ➤ Sense of hope for future
Leseho and Maxwell (2010)	Qualitative phenomenological study: thematic analysis of open-ended questions	Jungian-based psychotherapy	➤ Sense of being present and grounded in the body ➤ Greater self-regulation ➤ Sense of empowerment ➤ Sense of joy and freedom
Margolin (2019)	Qualitative single case study: detailed observations by DMP practitioner and participant; feminist, arts-based perspective	Mind-body connection	➤ Sense of being present and grounded ➤ Greater self-regulation ➤ Sense of safety and freedom ➤ Greater sense of interpersonal relations ➤ Sense of empowerment ➤ Less social isolation
Mills and Daniluk (2002)	Qualitative phenomenological study: interpretative phenomenological analysis of participants' in-depth interviews	Psychodynamic therapy	➤ Sense of being present and grounded ➤ Greater self-regulation ➤ Greater sense of interpersonal relations ➤ Sense of empowerment ➤ Sense of joy and freedom ➤ Deep sense of connection with group
Portokaloglou (2018)	Case study: detailed observations by practitioner and participants: dramatherapy using sound, touch and movement	Jungian-based psychotherapy	➤ Re-connection to self ➤ Greater self-regulation ➤ Sense of empowerment ➤ Sense of joy and freedom ➤ Sense of hope for better future

Chapter 4

The use of touch in Dance Movement Psychotherapy

This chapter explores the debate surrounding the ethical concerns around touch in DMP and in psychotherapy. It also examines the current state of touch research within the area of mental health; considers the phenomenological experiences of touch in DMP from the perspectives of practitioners and survivors; explores the current practice of ethical touch in DMP together with its limitations. It concludes with a single case study of therapeutic touch and DMP for a non-verbal client.

Ethical concerns around the use of touch

As the earliest of our senses to develop in the womb as we begin our lives, and often the last to survive as we come to the end of our lives, touch lies at the core of relationships with the self and with others and is fundamental to human development and learning (Montagu, 2018). Touch, skin, attachment and human development are closely interwoven and create the essential connection between attachment and affect regulation (Schore, 2019). As an important form of communication throughout human life, touch has enormous potential for healing and for harming survivors (Cristobal, 2018). The potential misuse of power inherent in touch has meant that verbal psychotherapists, primarily in psychoanalysis, have considered it too great a risk, firstly, in terms of the potential abuse of clients, and secondly, in terms of power differentials (Wright, 2020).

Firstly, although the human need for touch is acknowledged, the risk of sexual exploitation of the client and fear of boundary violations has led to the complete avoidance of touch in practice for some talking therapies (Wright, 2020; Zur, 2007). The perception of touch within psychotherapy has been negative, critics state that it interferes with the client's ability to work through transference, gives in to the client's gratification, crosses boundaries and may potentially give rise to allegations of professional misconduct and malpractice by the therapist (Bonitz, 2008). Limited discussion around touch and lack of training have led psychotherapeutic practitioners to believe that touch is out-

side of their area of responsibility (Harrison, Jones and Huws (2012). Nonetheless, Porges' (2011) understanding of the role of touch in social engagement together with its role in affective regulation, trauma recovery and PTSD (Ledoux, 2015; van der Kolk, 2015; Levine, 2010), indicates the increasing recognition of touch as an intrinsic element of the therapeutic alliance.

Secondly, power differentials in terms of replicating power and control in the therapeutic dyad, may lead to re-traumatisation in survivors (Sanderson, 2021). Yet the training of dance movement psychotherapists that emphasises collaborative, non-hierarchical dyadic co-regulation would appear to mitigate this risk (Homann, 2020; Dieterich-Hartwell, 2017a; Forde and Duvvary, 2020). Moreover, the circle formation widely used in DMP may help to make the therapeutic relationship more egalitarian, as both DMP practitioner and group members are positioned equally in the circle (Bräuniger, 2014). It could also be argued that the client's consent to touch and ability to revoke it any point during the therapeutic process helps to democratise the power dynamic between practitioner and survivor (Association of Dance Movement Psychotherapy UK, 2021). A meta-ethnographic synthesis of touch in health care professions including psychotherapy concluded that touch conveys comfort, demands a safe setting and exercises power (Kelly et al, 2018). Power, gender, race, privilege, oppression and culture are all issues that may interfere with survivors feeling safe and understood. Greater research into how these power differentials can be implemented through the use of touch from survivors' perspectives would be valuable (Cristobal, 2018).

Nevertheless, it has been proposed that the potential risk of abuse can't be deemed an adequate reason to reject touch as an important therapeutic intervention as it addresses a basic human need, specifically in terms of human relationships (Moenter, 2020; Cozolino, 2017; Berendsen, 2017; van der Kolk, 2015; Zur, 2007). Psychological and neuroscientific research has demonstrated the necessity of touch as a crucial factor for human survival and well-being on an emotional, physical and psychological level across all ages (Wright, 2020; Field, 2010; 2014; Westland, 2011; Gallace and Spence, 2010; Bonitz, 2008; Harlow, 1958). Touch has the power to elicit feelings of security

and, with particular reference to this client group who have experienced dis-empowerment, can prove both transformative and empowering by allowing survivors to take control and agency of their own bodies (Wright, 2020). In view of the lack of neuroscientific research on touch in DMP and a cohesive set of theoretical or clinical guidelines for interpersonal touch, DMP has to rely on ethical principles and models. Neuroscientific evidence for the therapeutic benefits of touch in psychotherapy are discussed below.

The current state of touch research

Although no neuroscientific touch research was found to date on the effects of touch within DMP, the neurological findings of studies relating to touch as an adjunct to psychotherapy and clinical psychology have proved revealing.

In a neuroimaging study involving fNIRS (functional Near-Infrared Spectroscopy), the touch of a hand to the centre of the back of 19 volunteer nursing students was shown to enhance neural activity (Morita et al, 2018). The study was designed to measure changes in increased blood flow to certain parts of the brain in response to touch. The authors suggest that changes in cerebral blood flow may vary with different types of touch. Studies on light touch massage involving nerve fibres in non-glabrous (non-hairy) skin called C tactile (CT) afferents have been researched over the last twenty years – this type of touch has been shown to affect parts of the brain that are linked to interoception and social reward (Müller-Oerlinghausen and Eggart, 2020; Blanchard and Comfort, 2020). In spite of these scientific discoveries, Müller-Oerlinghausen and Eggart (2020) suggest that there continues to a gap in empirical research of the therapeutic value of touch particularly in regard to affective disorders such as anxiety, depression, chronic pain and psychosomatic issues. The authors argue that as the skin offers safe, easy access to the interoceptive system, much greater emphasis should be directed towards research on the skin as a regulator of interoceptive conditions, and advocate for further quantitative research by means of clinical trials. (Müller-Oerlinghausen and Eggart, 2020).

The authors of a subtle touch technique known as Calatonia designed as an adjunct therapy for patients that do not respond fully to verbal psychotherapy alone (patients with PTSD symptoms or other trauma), claim that this touch therapy restores mind-body regulation and creates feelings of well-being and relaxation within patients (Blanchard and Comfort, 2020). A research study is currently in preparation using (fNIRS) imaging to measure differences in brain markers of anxiety following treatment (Blanchard and Comfort, 2020).

Similarly, in a qualitative study on cranio-sacral therapy (CST), Stub et al (2020) assert that for severely traumatised patients talking psychotherapies alone are not always effective. For patients with limited verbal communication, touch in the form of CST can help to promote change. Improvements in patients were interpreted as a reduction in substance misuse as a coping mechanism (eg, choosing to visit a friend instead), greater self-acceptance, better social engagement and improved sleep quality with fewer flashbacks. The authors suggest that randomised control trials on groups of patients with highly complex trauma or PTSD may encounter ethical challenges and advocate patient questionnaires based on qualitative data and longitudinal studies. Further research of the efficacy of CST and other subtle touch interventions that activate the CT system are recommended (Stub et al, 2020).

Despite the fact that no studies of brain imaging of touch interventions in DMP have been found to date, ways to investigate measuring brain activity for survivors during touch interventions should not be excluded as a possibility. At present the field of DMP has to rely on qualitative, phenomenological studies of the benefits of touch.

Phenomenological experiences of touch in DMP

The codes of ethics for the Association of Dance Movement Psychotherapy UK (2021), the American Dance Therapy Association (2020) and the British Association of Counselling and Psychotherapy (2018) state that any sexual touch, exploitation, violent or punishing touch or emotional abuse of the client is prohibited. However they provide no recognition of the powerful effect of

therapeutic or supportive touch within DMP, nor any clinical guidelines for beneficial touch (Popa and Best, 2010).

The use of touch in talking therapies may not necessarily be contraindicated for this client group. In an exploratory qualitative study of three survivors experiencing touch within psychoanalysis, survivors disclosed experiencing feeling safe and accepted, touch appeared to ground them in the present. From the practitioners' observations, touch appeared to strengthen boundaries between self and others and promoted growth and integration (Pinson, 2002). The author suggests that touch may have the power to liberate survivors from feeling fearful or shameful, helping them to feel worthy of care and nurturing. However the author acknowledges the limited size of the sample precludes the ability to draw conclusions without further research (Pinson, 2002). During instances in qualitative studies where either practitioner or survivor experienced touch as sexual or seductive, the practitioner ceased physical contact and brought the survivor's attention back to issues of boundary and safety (Popa and Best, 2010; Pinson, 2002).

In qualitative phenomenological studies, survivors and DMP practitioners have described touch in DMP as empowering, relational and reparative for survivors of trauma and abuse (Cristobal, 2018, Cauna and Vende-Kotova, 2017; Dieterich-Hartwell, 2017b; Seoane, 2016; Karampoula and Panhofer, 2018; Dymoke, 2019; Bernstein, 2019). Moenter (2020) asserts that touch in therapy leads to growth and healing for trauma survivors. It has been suggested that touch promotes improved interoception or sensory awareness which may lead to better self regulation in terms of the survivor's emotional and physical states (Moenter, 2020; Pierce 2014). Given that dissociative survivors often lack a sense of their physical boundaries and the ability to differentiate between self and others, by creating boundaries, such as in the circle formation used in DMP, touch may help survivors to define self (Karampoula and Panhofer, 2018). In contrast, a phenomenological study of DMP practitioners' lived experiences indicated contraindications of touch for survivors, with some participants avoiding or blocking touch as they struggled with ruptured boundaries of self and other (Cauna and Vende-Kotova, 2017).

Similar to Pinson's (2002) findings of survivors feeling deserving of nurturing, in a qualitative study by Smith et al (2001), receiving touch left survivors feeling deserving of non-erotic touch and of nurturing with enhanced self-esteem and trust. The supportive use of touch in body psychotherapy was found to enhance survivors' self-esteem and their ability to develop trust and attachment in a study where 69% of survivors reported their experience of touch as positive (Caldwell, 2002).

Touch continuum

In terms of healthy human needs - touch can provide support, comfort, validation and affect regulation (Paivio and Pascual-Leone, 2010). Within a DMP framework, Cristobal (2018) describes touch occupying a continuum, starting with metaphor, touch by proxy (objects or props) and self touch at one end of the continuum, extending to physical or nurturing touch at the other.

When a survivor is observed to be hyper- or hypoaroused by the practitioner, self touch can be used as a bodily resource for self soothing, ie, to self regulate and ground the survivor (Moenter, 2020). As a result of trauma, survivors often lack awareness and direct experience of the body (Mills and Daniluk, 2002). Through direct experience of the body in DMP and the use of self touch survivors can reconnect with their bodies, start to feel again and experience emotion. One of the primary therapeutic goals of DMP and other body-based psychotherapies is to restore self regulation (Cauna and Verde-Kotova, 2017). Cristobal (2018) makes the point that affect regulation with its direct connection to the central nervous system also involves the skin that plays an essential role in the healing process of trauma.

Touch by proxy (object or props) does not have to involve any direct physical contact with the practitioner and can be explored using imagination (Cauna and Verde-Kotova, 2017). Touch of objects or props can elicit feelings of being supported and contained and facilitate both somatic awareness and ground the survivor in his or her environment (Levine and Land, 2016). It brings survivors into the present in a safe way allowing them to engage physically and explore the world (Cristobal, 2018; Cauna and Verde-Kotova, 2017).

One example of physical touch – holding hands within the circle in DMP – is meaningful as a form of non-verbal interaction as it can help even the most reticent of group members to feel accepted and included. They can touch others and be touched by others safely whilst having their own personal boundaries protected (Karampoula and Panhofer, 2018). Comforting and respectful touch helps to support survivors to work through painful, frightening memories and to feel safe enough to explore them further (Smith et al, 2001). According to Cristobal (2018), touch constitutes a physical dialogue with the survivor, dialogue that is supported by the specific training of a DMP practitioner.

Ethical touch principles

In the absence of empirical data in existing research literature on touch, DMP practitioners have to rely on ethical touch principles or models (Wright, 2020; Cauna and Vende-Kotova, 2017). Calmes et al (2013) proposed several hierarchical principles to consider in the use of ethical touch in psychotherapy: *non-maleficence (to do no harm)*; *beneficence (to do good)*; *autonomy*; *fidelity*; *fairness*.

Considered a guiding principle in the field of DMP and psychotherapy, medical and related fields, *non-maleficence* requires a thorough exploration of the survivor's touch history, their current psychological state and cultural values. This helps to ensure that any touch interventions are not likely to cause harm (Cristobal, 2018; Matherly, 2013). Within DMP and psychotherapy the therapeutic goal of promoting the survivor's wellbeing to support their growth and healing is informed by the principle of *beneficence* (Association of Dance Movement Psychotherapy UK, 2021; Dance Movement Association, 2020; British Association of Counselling and Psychotherapy, 2018). The right to informed consent to touch and the ability to revoke it during the therapeutic process ensures the survivor's *autonomy* (Cristobal, 2018). The purpose of *fidelity*, as proposed by Calmes et al (2013), reflects the practitioner's responsibility. Having explained the risks and benefits of touch to the survivor, it is the practitioner's duty to adhere to the agreed boundaries. Lastly, in order to practice *fairness* practitioners need to observe their own internal psychologi-

cal state and scrutinise their personal touch histories and biases. The five guiding principles of touch proposed by Calmes et al (2013) is one example of a decision-making model that could potentially contribute to the basis for a dedicated theory of touch and pedagogy in relation to DMP.

How touch is made safe in current practice

An analysis of qualitative data from the phenomenological experiences of touch from the perspective of practitioners and survivors revealed several criteria applied to the contemporary practice of safe and ethical touch within DMP, specifically: *the therapeutic alliance; informed consent and verbal understanding; intentionality; trauma and touch history* (Caune and Verde-Kotova, 2017; Popa and Best, 2010; Westland, 2010).

It is widely accepted in DMP and psychotherapy that a level of safety and trust has to be well-grounded in the *therapeutic alliance* before employing any use of touch (Moenter, 2020; Novak, 2018; Dieterich-Hartwell, 2017b; Cauna and Verde-Kotova, 2017). The quality of the alliance informs both the use of touch and how touch is received by the survivor (Matherly, 2013; Westland, 2010). *Informed consent* has to involve transparency in the form of an on-going dialogue between practitioner and survivor, with the knowledge that consent can be revoked at any point in the therapeutic process by the survivor (Matherly, 2013; Westland, 2010). Despite the fact that non-verbal communication is the core of DMP, *verbal understanding* is essential to ensure the practitioner is listening carefully to the survivor and to validate the relevance and purpose of any touch intervention (Cauna and Verde-Kotova, 2017). *Intentionality* is a crucial factor in any touch intervention – the decision to use touch must be made explicit to the survivor and be employed for their therapeutic benefit only (Association of Dance Movement Psychotherapy UK, 2021; Matherly, 2013). And, finally, an awareness of the *trauma and touch history* of the survivor to ensure somatic safety should also consider cultural and religious aspects (Sanderson, 2021, Portokaloglou, 2018).

However, obtaining a trauma and touch history, together with verbal consent and affirmation of any use of touch in DMP may not be possible with individuals with profound learning difficulties (Müller-Oerlinghausen and Eggart,

2020). The single case study below explores the use of touch and movement with a non-verbal client.

Single case study of touch in DMP for a non-verbal client

Situated within the context of adult learning disability services, this study was ethically approved by the National Health Service in the UK. Working in both children and adults learning disability services as a dance movement psychotherapist, the author adopts a humanistic (person-centred) therapeutic approach and an integrative model of DMP based on touch and movement principles of somatic movement therapy (holistic, emphasis on mind-body connection).

This reflexive study illustrates the value of touch and movement to the therapeutic process for a non-verbal client. It was included in this review as it specifically demonstrates how integral touch is to communication, self-regulation and interpersonal relations. For Dymoke (2019) the impact and importance of touch within her clinical practice has been pivotal and the subject of her doctoral thesis.

The author indicates that for clients with disorders of the nervous system or in acute distress, touch and movement may not be appropriate. In this case study three initial assessments were carried out to establish the client's consent to the therapeutic relationship, the level of clinical need and communication. The author assessed the need for touch based on the client's self-harming behaviours that served to relieve her distress. Both touch and movement were established as the client's preferred means of expression before the therapeutic work began.

The client in this case study, a female adult with profound, multiple learning difficulties and complex needs, was referred for DMP due to staff struggling to manage her behaviours. Concerns around her wellbeing that included self-harming (pulling her hair out) and compulsive masturbation, led to care staff using arm braces and a helmet on the client who presented as very withdrawn and had difficulty walking (Dymoke, 2019).

At the end of six months of weekly sessions, arm braces and helmet were no longer needed, the client's hair grew back and the intensity of masturbation was reduced due to increased, appropriate and sensitive touch training provided to staff caring for her. In her first session the client did not engage with the DMP practitioner, the sensory items including a fabric ball, music or with the therapeutic space. The client went to the door which the practitioner opened, she then linked her arm with the practitioner and walked slowly outside. As they walked arm in arm the practitioner was aware of the rhythm of the client's walking pace, the tension in her body and restricted breathing. The practitioner's arm supported the client and became the focus of their relationship from which the client could then self direct and move forwards. Through this bodily transference and conscious embodied dialogue the client expressed her wish to move into the world and through their embodied understanding, client and practitioner accomplished this literally one step at a time (Dymoke, 2019). Research indicates that a key element in building the therapeutic bond is the practitioner's ability to meet clients at their individual developmental stage and invite them into a process of creativity and exploration (Bentzen, 2015; Herman, 2015; Ogden et al, 2006).

In the second session the client held the practitioner's hands shifting her body slightly side to side listening to her favourite music with no direct eye contact. Away from the noise and stresses of the busy household where she lived, limited moments of eye contact indicated the client becoming aware of and engaging with the practitioner who perceived the self-calming effect on the client during these moments (Dymoke, 2019).

The remaining sessions took place in a small, quiet garden. Gradually the client's grip on the practitioner's arm became less, with the client always taking the lead. The practitioner matched her walking pace and rhythm to the client's. To regulate the client's emotions the practitioner used gentle dabbing touches along the length of the client's arm that made her smile. Holding the client with both hands facing her and walking backwards made the client laugh. Through somatic attunement the practitioner can introduce new movements that elicit new emotional responses in the client (Bentzen, 2015;

Chaiklin and Wengrower, 2015). Through touch and movement the non-verbal client explored her relationship with the practitioner who attuned to the client to maintain appropriate, relational closeness and safety and establish a clear boundary (Dymoke, 2019). Through touch the client experienced herself directly and her emotional stress lessened (Dymoke, 2019). Initially focused on the practitioner, the client eventually began looking at plants in the garden and the birds singing in the trees. The client gradually learnt to reconnect to her senses, felt her inner resources and regained her ability to self regulate.

From an initial point of non-engagement with others and self harming, the client developed a sense of calm and engagement generated from being afforded the time and space to feel her responses were valid and accepted by the practitioner (Dymoke, 2019). In Dymoke's (2019) view, touch was the means by which the client learned to feel and sense herself in relationship to the practitioner. Pierce (2014) maintains that paying attention to interoceptive awareness helps clients to learn to attune to the self, the present and to their surroundings. As the client's sense of self emerged, her autonomy and ability to relate to others were equally enhanced (Totton, 2015; van der Kolk, 2015).

As the client's body responded to touch, she found a way of engaging that supported her to accept her body as a locus of wellbeing and safety, and not as a source of self abuse (Dymoke, 2019; Bernstein, 2019). Touch and movement communicated the client's somatic tension, resistance, hesitation and physical tone. Dynamic change and shifts in the client's movements made the unconscious conscious (Homann, 2020; Dymoke, 2019). Working with non-verbal clients, touch becomes the language of communication that creates therapeutic understanding (Cristobal, 2018, Dymoke, 2019).

In terms of its limitations, the therapeutic effects of touch within a DMP framework are restricted to a single case study and the reflexive, and thus by definition, subjective account by the DMP practitioner. Nevertheless, Jones and Smith (2017) posit that ethnographic study gives a voice to overlooked or marginalised social groups. The author of this case study highlights the social disenfranchisement of clients with complex learning difficulties and the need

for their greater involvement in decisions relating to their own care and wellbeing, particularly in respect of the predominant touch-averse culture within statutory settings.

Conclusion

According to Kelly et al (2018) and Grabbe and Miller-Karas (2017), within the mental health care professions there has long been an awareness of the importance of introducing the body and therapeutic touch to treat trauma. Certainly, findings in the literature appear to confirm that a fundamental component of healing involves working with embodied trauma (Stirling and Andrews, 2021; Merritt Millman et al, 2020; Talman and Ginzberg, 2018; Rothschild, 2017; Payne, 2017, Herman, 2015; Payne, Levine and Crane-Godreau, 2015). Although this review discovered positive findings of qualitative, experiential DMP studies in the treatment of trauma, evidence-based research to support this intervention is limited. Future empirical-based research should focus on the mechanisms that identify DMP and touch interventions as helpful or unhelpful, and how such mechanisms and interventions affect outcome and lead to therapeutic change (Merritt Millman et al, 2020).

Evidence of the neurological impact of trauma on the brain confirms that it makes it difficult for survivors to verbalise their experiences of trauma (Schore, 2019; Payne, 2017; van der Kolk, 2015; van der Kolk and Fisler, 1995). The shame and terror of the experience often leaves a survivor speechless and a survivor may not fully recover if only verbal or cognitive therapies are used (Fisher, 2017; van der Kolk, 2015). What is evident from the scientific findings explored in this review is the relevance of DMP as a creative, embodied and safe intervention to address trauma as it involves right-brain integrative activity and sensorimotor, non-verbal techniques that allow clients to reclaim and reconnect to their bodies (Schore, 2009, 2019; Dieterich-Hartwell, 2017a; van der Kolk, 2015; Siegel, 2009; Ogden et al, 2006).

In terms of treatment outcome research, it is clear that there is an under-representation of adult survivors who have experienced sexual abuse and their associated mental health issues (Forde and Duvvary, 2020). Stirling and Andrews (2021) maintain that the current lack of available research leaves practitioners uninformed as to the best way to treat survivors. Given the long-term psychological and health implications linked to sexual abuse, significant-

ly greater research is required to support the one in four women and one in six men in the UK who have experienced this trauma (One in Four, 2019).

American psychiatrist, Richard Loewenstein (2018), suggests that failure to diagnose PTSD and other dissociative disorders experienced by survivors of prolonged childhood sexual abuse leads to high societal and human costs, ie, self-destructive behaviours and high suicide rates particularly among male survivors. Given the scale of the debilitating psychological and physiological effects of this trauma worldwide and across cultures, and the limitations of traditional psychotherapies for this client group, the investigation of alternative, effective treatments seems critical (Koch et al, 2019; Dietrich-Hartwell, 2017a).

The impact of PTSD and Complex-PTSD experienced by survivors as a result of the trauma is to split the mind and body (Sanderson, 2021; Rothschild, 2017; van der Kolk, 2015). As an embodied modality DMP and therapeutic touch can act as a bridge and help to rebuild that mind-body connection (Homann, 2020; Cauna and Vende-Kotova, 2017; Cruz, 2016). The potential for emotional and sensory integration when working with the mind-body interconnection is well documented by both DMP practitioners and trauma specialists (Homann, 2020; Siegel, 2020; Koch et al, 2019; Payne 2017; Gray, 2015; van der Kolk, 2015; Levine, 2015). In addition, creative movement in DMP appears to lead to the expression and release of emotions in the body with imagery, metaphor and symbols acting as emotionally safe conduits to personal discovery (Bernstein, 2019). According to Karkou et al (2019), DMP allows clients to work at both a non-verbal and pre-verbal level. DMP and movement-based interventions appear to be able to circumvent the protective mechanism of the mind that can often keep a survivor stuck in maladaptive behaviours and feelings, and inhibit access to the emotions stored in the body (Leseho and Maxwell, 2010).

As previously discussed, trauma compromises emotion regulation in survivors and can potentially lead to serious mental health conditions such as PTSD, depressive and dissociative disorders (Payne, 2017; Grabbe and Miller-Karas,

2017). Interoception or conscious awareness of the body's internal states and shifts continues to be studied as a source of emotion regulation (Payne, Levine and Crane-Godreau 2015, Pierce, 2014). Moenter (2020) maintains that the therapeutic use of touch promotes interoception, which in turn promotes better self regulation. The dissociation commonly experienced by some survivors appears to have been mitigated by their lived experiences in DMP of learning to be present, to pay attention to and feel safe and grounded in their bodies (Leseho and Maxwell, 2010; Mills and Daniluk, 2002).

Therapeutic touch

There appears to be a direct correlation between therapeutic touch and the client's emotions, touch forms an integral part of emotional regulation and expression (Dymoke, 2019). DMP connects us to our emotions and it is evident how important a role the body plays in creating and transforming emotional distress (Payne, 2017; Payne, Levine and Crane-Godreau 2015). Touch, which for survivors may be associated with feelings of powerlessness, has the potential to elicit feelings of safety (Wright, 2020). From a case illustration of a non-verbal client, the use of touch in DMP appeared to connect the client to her own experience and to the practitioner. Her improved self-regulation was evidenced as she ceased self harming and engaged with her carers (Dymoke, 2019). Through touch the client found a way of engaging that enabled her to see her body as a locus of wellbeing and safety, and not as a source of self abuse.

Both dance movement psychotherapists and body psychotherapists have long advocated for greater experiential training in the use of touch interventions (Westland, 2011; Totton, 2018; Cristobal, 2018; Dymoke, 2019). Dymoke (2019) argues that the reciprocal, interpersonal nature of touch allows the practitioner to set the boundaries for the client rather than violate them. Touching, according to van der Kolk (2015), helps to control hyperarousal by making the client feel safe, and to re-build boundaries that may have been ruptured or lost.

DMP appears to restore power and control to survivors (Margolin, 2019; Portokaloglou, 2018; Leseho and Maxwell, 2010; Mills and Daniluk, 2002), elements that according to trauma specialist, Herman (2015), are the key tenets of recovery and have particular relevance to this client group given the nature of the abuse. From experiences of trauma and abuse that are literally unspeakable, DMP and touch gives the survivor's body a voice to tell its story without the risk of re-traumatisation.

In qualitative studies survivors describe their experiences in DMP as restorative and life-affirming, affording them a sense of vitality and self-worth. However, although evidence indicates that DMP can facilitate improved physical and psychological health (Karkou et al, 2019), DMP lacks empirical evidence of the definition of the mechanisms or active elements that reflect this vitality in its movement interventions (Karkou et al, 2019; Acolin, 2016).

Limitations

Reviewing the extant literature revealed several limitations: the ethical difficulty of obtaining both qualitative and empirical research data, identifiable, measurable outcomes and an evidence base in relation to this vulnerable client population; a demographic that is largely restricted to female survivors; DMP's limited availability to clients as a treatment modality and which is largely based on Western-based practices and techniques; cultural factors that may limit the use of DMP, eg, cultural groups where verbal and emotive therapeutic approaches are not openly encouraged, or where bodily expression is confined to prescribed forms of dance; the need for further dialogue and empirical research in the area of touch and DMP. The decision to use touch by DMP practitioners is influenced by the survivor's capacity for self-reflection, ability to develop self-awareness and a sense of self (Matherly, 2013). Contraindications for the use of touch and movement may include survivors exhibiting psychosis, or acute distress with a distorted sense of reality (Dymoke, 2019; Matherly, 2013). Research data into the psychological and emotional impact of the deprivation of touch for this client group was not included in the review. Although this review did not include participants, ethical considerations for my own emotional wellbeing took the form of regular reviews with my

supervisor and personal therapist to express my emotional and intellectual concerns. The reputational protection of UWTSD was also considered in terms of risk management. This review reflects ethical compliance with codes of practice in relevant regulatory bodies and, in line with ethical standards, was scrutinised via text-matching portals to check for plagiarism.

Recommendations and implications for practice

Neuroscientific research into theories of embodiment, dissociation, interoception and integration appear to underpin much of DMP in terms of its effectiveness as a form of non-verbal communication in relational movement to treat trauma. The growing interest in the mind-body connection across academic disciplines has resulted in increased empirical research by behavioural and cognitive neurosciences into embodiment (Marmeleira and Santos, 2019; Berrol 2016). DMP practitioners argue that due to the pivotal role of the body in trauma, embodied therapies are both relevant and necessary in the recovery of trauma survivors (Homann, 2020; Koch et al, 2019).

Nevertheless, Acolin (2016) maintains that DMP as a profession lacks an inherent theory in regard to the mind-body connection. The experiential skills and knowledge of its practitioners have produced a rich body of literature based on clinical recommendations and case studies, but as a field DMP is still lacking research-based literature linked to evidence-based and scientific data that supports its theory and interventions (Acolin, 2016). For this purpose, Acolin (2016) suggests developing a potential framework for DMP theory based on the way research is classified for medical evidence, ie, predicated on the quality of empirical data ranging from expert views to meta-analyses.

In a systematic review of a neurocognitive approach to DMP and mental health, Merritt Millman et al (2020) conclude that initial evidence indicates the underlying dynamics that DMP and its interventions generate improvements in embodied cognition and interoception. To substantiate this evidence, the authors advocate evidence-based research of specific DMP interventions integrated with neurocognitive research on interoception and embodiment using brain imaging. Research data regarding survivors' phenomenological experi-

ences and the correlation between the concepts and mechanisms of DMP interventions that contribute to survivors' recovery are also lacking, and this gap in the available research literature needs to be addressed. Koch et al (2019) propose the need for control groups as the biggest limitation of existing qualitative studies is small sample sizes. It may also be useful to measure changes in survivors' psychological functioning over time using longitudinal studies.

Through their experiential training that incorporates body movement observational skills and assessment, mirroring, kinaesthetic empathy and non-verbal creative tools, it is apparent that DMP practitioners are uniquely positioned to promote a survivor's sense of safety and personal empowerment through their enhanced sensitivity towards touch. Moenter (2020) and Cauna and Verde-Kotova (2017) concur that the use of touch dictates the need for skilled, moment-by-moment attunement to the survivor's movements, physical cues, level of arousal and the practitioner's ability to monitor transference and counter-transference. It is this competency in non-verbal communication that allows them to integrate touch in DMP in nuanced and sensitive ways (Cristobal, 2018).

The most salient and controversial aspect of therapeutic touch in DMP is how to make it a safe intervention. In light of the importance of both ethical and legal implications of touch, Kosierb and Bilodeau (2020) advocate the establishment of a pedagogy of therapeutic touch to inform good practice and help to ensure the safe intervention of touch within DMP. Given the vital importance of touch to human development and relationships, there is a clear need for further dialogue, research and the establishment of a new ethical framework of touch within DMP, with specific reference to survivors of sexual abuse. The focus of future research should be on greater detail of the factors that facilitate or inhibit effective and ethical touch interventions.

If, as a profession, DMP does not stay open to the possibility of touch, it risks closing down a potentially valuable means of communication for exploration and growth. Certainly touch, as an important aspect of psychological healing, deserves our re-evaluation as an ethically attainable and valuable therapeutic

intervention for survivors of sexual abuse. For client groups for whom verbal psychotherapy is not possible, touch is a powerful tool within DMP offering a universal language of communication that enhances reconnection to self, improves self-regulation and rebuilds trust (Dymoke, 2019; Cristobal, 2018).

The neurological impact of the trauma of sexual abuse can leave a survivor voiceless, he or she may not fully recover if treatment is limited to talking therapies. By gaining direct access through the language of the body to integration of the right brain, DMP appears to support the processing of unconscious memories. The findings of this review provide an insight into the therapeutic benefits of DMP and touch in the experiences of self, self-regulation and interpersonal relations. The research evidence suggests that DMP and touch may facilitate recovery from sexual abuse. To further develop evidence-based DMP models, both greater quantitative and qualitative research data is merited in relation to treatment outcomes, DMP mechanisms, cultural factors and contraindications for this client population. As an alternative creative arts therapy, DMP that incorporates therapeutic touch appears to offer an important creative, embodied and safe modality for those survivors for whom words alone cannot provide healing, and for non-verbal survivors for whom the body is allowed to tell its story.

The findings of this critical review enhance our understanding of how DMP and the use of touch benefit the recovery of survivors of sexual abuse. They highlight the need for further empirical research into the mechanisms of DMP and their effectiveness in helping survivors to reclaim a sense of self and a reconnection to their bodies. Furthermore, the review highlights the gap in the research literature in terms of the application of touch interventions in DMP, that merits the development of a specific framework of touch for this vulnerable client group.

References

- Abraham, A et al (2018) *Dynamic neuro-cognitive imagery improves mental imagery ability, disease severity, and motor and cognitive functions in people with Parkinson's disease* Neural Plasticity, pp 1-15
<https://doi.org/10.1155/2018/6168507>
- Acolin, J (2016) *The Mind-Body Connection in Dance/Movement Therapy: Theory and Empirical Support* American Dance Therapy Journal 38: 311-333
<https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10465-016-9222-4.pdf>
- American Dance Therapy Association (2020) *The Code of Ethics and Standards*, Sections 1.5; 1.5a - 1.5 n, ADTA, 230 Washington Avenue Extension, Suite 101, Albany, New York 12203 - 3539 <https://www.adta.org/>
- Association for Dance Movement Psychotherapy UK (2021) *Code of Ethics and Professional Practice*, Sections 1.2; 5.4.1 - 5.4.5, ADMP UK, Lytchett House, 13 Freeland Park, Wareham Road, Poole, Dorset, BH16 6FA
<https://admp.org.uk/>
- Bainbridge Cohen, B (2021) *Sensing, Feeling, and Action: The Experiential Anatomy of Body-Mind Centering*, Wesleyan University Press, 3rd Edition
- Barrero González, L (2018) *Dance as therapy: embodiment, kinesthetic empathy and the case of contact improvisation* Vol 27(1) 91 – 100, Adaptive Behaviour, Special Issue: 4E Cognition research in Colombia, Sage Publications
<https://journals.sagepub.com/doi/full/10.1177/1059712318794203>
- Bläsing, B (2017) *Dance in the body, the mind and the brain: neurocognitive research inspired by dancers and their audience* The Oxford Handbook of Dance and Wellbeing, eds Karkou, V, Oliver, S and Lycouris, S, Oxford University Press USA, 1st Edition, pp 41-56
- Bartlett, J et al (2019) *The impact of a state-wide trauma-informed care initiative in child welfare on the well-being of children and youth with complex trauma* Children and Youth Services Review, 84 110-117, Elsevier Ltd
<https://www.sciencedirect-com.ezproxy.uwtsd.ac.uk/science/article/pii/S0190740917306370>
- Bentzen, M (2015) *Dances of connection: Neuroaffective development in clinical work with attachment* Body, Movement and Dance in Psychotherapy 10(4): 211-226 <https://www-tandfonline-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/17432979.2015.1064479?needAccess=true&>
- Berendsen, P (2017) *The Intervention of Touch in Psychotherapy and Trauma Treatment* Touch in the Helping Professions: Research, Practice and Ethics [Rovers, M, Malette, J and Guirguis-Younger, M], Chapter V, pp 85 -106, University of Ottawa Press

Bernstein, B (2019) *Empowerment-Focused Dance/Movement Therapy for Trauma Recovery* American Dance Therapy Association, American Journal of Dance Therapy 41:193-213 <https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10465-019-09310-w.pdf>

Blanchard, A and Comfort, W (2020), *Keeping in Touch with Mental Health: The Orienting Reflex and Behavioural Outcomes from Calatonia* Brain Sciences, Vol 10 <https://doi.org/10.3390/brainsci10030182>

Bonitz, V (2008) *Use of physical touch in the “talking cure”: A journey to the outskirts of psychotherapy* Psychotherapy Theory, Research, Practice, Training 45(3): 391-404
<https://www.scribd.com/document/48292116/Bonitz-2008-Use-of-Physical-touch-1>

Bowlby, J (1988) *A secure base: Parent-child attachment and healthy human development* London UK, Basic Books

Bräuniger, I 2014 *Specific dance movement therapy interventions – Which are successful? An intervention and correlation study* The Arts in Psychotherapy, 41: 445-457
<https://www.sciencedirect.com/science/article/abs/pii/S0197455614000781>

British Association of Counselling and Psychotherapy (2018) *Ethical Framework for the Counselling Professions* Sections 34; 35; 36; 37, BACP, 15 St John's Business Park, Lutterworth, Leicestershire, LE17 4HB
<https://www.bacp.co.uk/>

Brooke, S, L (2007) *The use of the creative therapies with sexual abuse survivors* Springfield, IL: Charles C Thomas

Caldwell, C (2018) *Bodyfulness: Somatic practices for presence, empowerment and waking up in this life* Shambhala Publications Inc

Caldwell, C (2002) *Using touch in psychotherapy* Paper presented at the USA Body Psychotherapy Conference, Baltimore as stated in Phelan, (2009) *Exploring the use of touch in the psychotherapeutic setting: A phenomenological review* Psychotherapy: Theory, Research & Practice, 46: 97-111
<https://ezproxy.uwtsd.ac.uk/login?url=https://openurl.ebscohost.com/linksvc/linking.aspx?sid=Primo&volume=46&custid=s4793139&date=2009-03&spage=97&issn=0033-3204&issue=1&genre=article&authtype=ip%2Cuid&title=Psychotherapy&epage=111&doi=10.1037%2Fa0014751>

Calmes, S, Piazza, N and Laux, J (2013) *The Use of Touch in Counseling: An Ethical Decision-Making Model* Counseling and Values, Vol 58, No 1: 59-68
<https://onlinelibrary-wiley-com.ezproxy.uwtsd.ac.uk/doi/pdfdirect/10.1002/j.2161-007X.2013.00025.x>

Cauna, E and Vende-Kotova, K (2017) *An exploration of the application of touch in dance movement psychotherapy* Chapter 7, *Essentials of Dance Movement Psychotherapy: International Perspectives on Theory, Research and Practice*, Routledge, 1st Edition

Cazan, F et al (2020) *The Benefit of Dance-Movement Therapy in a Multiple Sclerosis Patient with Depression* *Science, Movement and Health*, Vol 20 (2): 87-90

<https://ezproxy.uwtsd.ac.uk/login?url=https://openurl.ebscohost.com/linksvc/linking.aspx?sid=Primo&volume=20&custid=s4793139&date=20200601&page=87&issn=2285-777X&issue=2&genre=article&authtype=ip%2Cuid&title=Ovidius+University+Annals%2C+Series+P.E.+and+Sport>

Cebolla, A and Cheron, G (2019) *Understanding neural oscillations in the human brain: From movement to consciousness and vice versa* *Frontiers in Psychology*, Vol 10, Article 1930, <https://doi.org/10.3389/fpsyg.2019.01930>

Chaiklin S and Wengrower, H (2015) *The Art and Science of Dance/Movement Therapy: Life is Dance* 2nd Edition, Routledge

Childhood Sexual Abuse: *Numbing the Pain – Survivors’ Voices of Childhood Sexual Abuse and Addiction* One in Four, 219 Bromley Road, London, SE6 2PG www.oneinfour.org.uk, 2019

Cozolino, L (2017) *The Neuroscience of Psychotherapy: Healing the Social Brain* 3rd Ed, W W Norton & Company

Crime Survey for England and Wales: year ending March 2019 Office for National Statistics

<https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/childsexualabuseinenglandandwales/yearendingmarch2019>

Cristobal, K (2018) *Power of Touch: Working with Survivors of Sexual Abuse Within Dance/Movement Therapy* American Dance Therapy Association, *American Journal of Dance Therapy* 40:68-86

<https://ezproxy.uwtsd.ac.uk/login?url=https://link.springer.com/content/pdf/10.1007/s10465-018-9275-7.pdf>

Cruz, R (2016) *Dance/Movement Therapy and Developments in Empirical Research: The First 50 Years* American Dance Therapy Association, *American Journal of Dance Therapy* 38:297-302

<https://link.springer.com/article/10.1007/s10465-016-9224-2>

Dieterich-Hartwell, R (2017a) *Dance/movement therapy in the treatment of post-traumatic stress: A reference model* *The Arts in Psychotherapy*, 54 38-46, Elsevier Ltd

<https://www.sciencedirect.com/science/article/abs/pii/S0197455616302404?via%3Dihub>

Dieterich-Hartwell, R (2017b) *The Art of Reaching Out* American Journal of Dance Therapy 39: 179-188, American Dance Therapy Association
<https://www.sciencedirect.com/science/article/abs/pii/S0197455616302404?via%3Dihub>

Dove, G (2016) *Three symbol ungrounding problems: Abstract concepts and the future of embodied cognition* Psychonomic Bulletin Revue, Vol 23: 1109-1121, Psychonomic Society, Inc, Springer
<https://link.springer.com/article/10.3758/s13423-015-0825-4>

Federman D and Zana-Sterenfeld, G (2017) *Overcoming trauma: When verbal language is not enough* Chapter 11, *Essentials of Dance Movement Psychotherapy: International Perspectives on Theory, Research and Practice*, edited by Helen Payne, Taylor & Francis Group

Federman, D, Zana-Sterenfeld, G and Lev-Wiesel, R (2019) *Body Movement Manual for the Assessment and Treatment of Trauma Survivors* American Dance Therapy Association, American Journal of Dance Therapy 41:75 – 86
<https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10465-019-09298-3.pdf>

Field, T (2010) *Touch for socioemotional and physical well-being: A review* Developmental Review, 30: 367-383, Elsevier.
<https://www.sciencedirect.com/science/article/abs/pii/S0273229711000025>

Field, T (2014) *Touch* 2nd Revised Edition, MIT Press

Fisher, J (2017) *Healing the Fragmented Selves of Trauma Survivors: Overcoming Internal Self-Alienation*, Routledge, London

Forde, C and Duvvury, N (2020) *Survivor-led relational psychotherapy and embodied trauma: A qualitative inquiry* Couns Psychother Res. 2021; 21:633–643,
<https://onlinelibrary-wiley-com.ezproxy.uwtsd.ac.uk/doi/pdfdirect/10.1002/capr.12355>

Gallace, A and Spence, C (2010) *The Science of interpersonal touch: An overview* Neuroscience and Biobehavioural Reviews, 34:246-259, Elsevier
<https://www.sciencedirect.com/science/article/abs/pii/S0149763408001723>

Gallese et al, (1996) *Action recognition in the premotor cortex* Brain, Vol 119, Issue 2: 593-609, Oxford Academic.
<https://academic.oup.com/brain/article/119/2/593/382476?login=false>

Gelso, C and Kanninen, K (2017) *Neutrality Revisited: On the Value of Being Neutral within an Empathic Atmosphere* Journal of Psychotherapy Integration, Vol 27(3), 330-341
<https://doi.apa.org/doiLanding?doi=10.1037%2Fint0000072>

Gendlin, E (1998) *Focusing-oriented psychology: A manual of the experiential method* 1st Edition, Guilford Press

Glenberg, A (2015) *Few Believe the World is Flat: How Embodiment is Changing the Scientific Understanding of Cognition* Canadian Journal of Experimental Psychology, Vol 69, No 2, 165-171, Canadian Psychological Association
<https://www.proquest.com/docview/1688621712?accountid=130472&parentSes-sionId=B4vbB0CjIvYwJlcpSEeh%2FicNK4qYfcLDVALiWzaY%2BAE%3D&pq-origsite=primo>

Goldman, R (2017) *The Emotion-Focused Therapeutic Relationship: Genuineness, Warmth, and Acceptance Are Not Neutral: Comment on Gelso and Kanninen (2017)* Journal of Psychotherapy Integration, Vol 27, No 3, 350 – 358, American Psychological Association <https://www.semanticscholar.org/paper/The-Emotion-Focused-Therapeutic-Relationship%3A-and-Goldman/135131a56784cde7305219852fd2fe6d6d65540d>

Grabbe, L and Miller-Karas, E (2017) *The Trauma Resiliency Model: A “Bottom-Up” Intervention for Trauma Psychotherapy* Journal of the American Psychiatric Nurses Association, Vol 24 (1): 76-84, Sage Publications
<https://journals-sagepub-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1177/1078390317745133>

Gray, A (2015) *Dance/movement therapy with refugee and survivor children: A healing pathway is a creative process* In C A Malchoidy (ed), *Creative Interventions with Traumatized Children*, 2nd ed, pp 169 – 190, New York: Guilford Press

Gray, A, (2017) *Polyvagal-Informed Dance/Movement Therapy for Trauma: A Global Perspective* American Dance Therapy Association, American Journal of Dance Therapy 39:43 – 46 <https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10465-017-9254-4.pdf>

Gray, A & Porges, S (2017) *Polvagal informed dance/movement therapy with children who shut down: Restoring core rhythmicity* In CA Malchiodi, DA Crenshaw (Eds) (2017) *What to do when children clam up in psychotherapy: Interventions to facilitate communication* NY: Guilford Press, pp 102 – 136

Guindon, M, Packard, R and Charron, N (2017) *The Ethics of Touch in the Helping Relationships* Touch in the Helping Professions: Research, Practice and Ethics [Rovers, M, Malette, J and Guirguis-Younger, M], Chapter XII, pp 213-236, University of Ottawa Press

Greenberg, L (2017) *Emotion-Focused Therapy* American Psychological Association, Washington DC, Revised Edition

Harlow, H (1958) *The Nature of Love* American Psychologist, 13: 573-685
<https://psycnet.apa.org/record/1960-02805-001>

Hickok, G (2015) *The motor system's contribution to perception and understanding actions: clarifying mirror neuron myths and misunderstandings* Language and Cognition, 7: 476-484, UK Cognitive Linguistics Association
<https://www-cambridge-org.ezproxy.uwtsd.ac.uk/core/journals/language-and-cognition/article/motor-systems-contribution-to-perception-and-understanding-actions-clarifying-mirror-neuron-myths-and-misunderstandings/9A500A311904C35AB302F6A56BB5947C>

Harris, D, A (2009) *The Paradox of expressing speechless terror: Ritual liminality in the creative arts therapies' treatment of post traumatic distress* The Arts in Psychotherapy, Vol 34, Issue 2, pp 94 - 104, Elsevier, Ltd <https://www-sciencedirect-com.ezproxy.uwtsd.ac.uk/science/article/pii/S0197455609000215>

Harris, D, A (2019) *Dance/movement therapy in cross-cultural practice: Fostering assertiveness with torture survivors* American Journal of Dance Therapy, 41: 256-272
<https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10465-019-09318-2.pdf>

Harrison C, Jones, R and Huws, J (2012) *"We're people who don't touch": Exploring clinical psychologists' perspectives on their use of touch in therapy* Counselling Psychology Quarterly, Vol 25, Issue 3 pp 227 – 287 <https://www-tandfonline-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/09515070.2012.671595?needAccess=true&>

Herman, J (2015) *Trauma and Recovery: The Aftermath of Violence – From Domestic Abuse to Political Terror* Basic Books

Ho, R, T, H (2015) *A place and space to survive: A dance/movement therapy program for childhood sexual abuse survivors* The Arts in Psychotherapy, Vol 46, 9 – 16
<https://smartmove.co.in/wp-content/uploads/2020/04/A-Place-and-Space-to-Survive-A-dance-movement-therapy-program-for-childhood-sexual-abuse-survivors.pdf>

Ho, R T H et al (2018) *Psychophysiological effects of dance movement therapy and physical exercise on older adults with mild dementia: A randomized controlled trial* The Journals of Gerontology: Series B
<https://academic.oup.com/psychsocgerontology/article/75/3/560/5211555>

Holtzhausen, L, Ross, A, Perry, R (2016) *Working on Trauma – A Systematic review of TF-CBT work with child survivors of sexual abuse* Social Work, 52(4), 511 - 524
https://www.researchgate.net/publication/310482348_Working_on_trauma_-

[A systematic review of TF-CBT work with child survivors of sexual abuse](#)

Homann, K (2020) *Dynamic Equilibrium: Engaging and Supporting Neuro-physiological Intelligence Through Dance/Movement Therapy* 42:296-310, American Journal of Dance Therapy, American Dance Therapy Association. <https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10465-020-09337-4.pdf>

Hyvönen, K et al (2020) *The Effects of Dance Movement Therapy in the Treatment of Depression: A Multicenter, Randomized Controlled Trial in Finland* Frontiers in Psychology, Vol 11, Article 1687 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7434972/>

Ioannidis, I, (2019) *No Empathy for Empathy: An Existential Reading of Husserl's Forgotten Question* International Journal of Philosophical Studies, Routledge, Vol 27, No 2: 201-223 https://www.academia.edu/38892911/No_Empathy_for_Empathy_An_existential_reading_of_Husserls_forgotten_questionKarampoula,

Jones, J and Smith, J (2017) *Ethnography: challenges and opportunities* Evidence Based Nursing, BMJ, <http://dx.doi.org/10.1136/eb-2017-102786>

Karampoula, E and Panhofer, H (2018) *The circle in dance movement therapy: A literature review* The Arts in Psychotherapy, Elsevier, 58: 27-32 <https://www.sciencedirect.com/science/article/abs/pii/S0197455617301521>

Karkou, V and Meekums, B (2017) *Dance movement therapy for dementia* Cochrane Database of Systematic Reviews, edited by Cochrane Dementia and Cognitive Improvement Group <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD011022.pub2/full>

Karkou, V et al (2019) *Effectiveness of Dance Movement Therapy in the Treatment of Adults with Depression: A Systematic Review with Meta-Analyses* Frontiers in Psychology, Vol 10, Article 936. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6509172/>

Kelly et al, (2018) *Experience of Touch in Health Care: A Meta-Ethnography Across the Health Care Professions* Qualitative Health Research, Vol 28(2) pp 200 – 212, Sage Publications. <https://journals-sagepub-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1177/1049732317707726>

Khayyat-Abuaita, U et al (2019) *Emotional Processing of Trauma Narratives is a Predictor of Outcome in Emotion-Focused Therapy for Complex Trauma* American Psychological Association, Vol 56, No 4, 526-536 <https://pubmed.ncbi.nlm.nih.gov/31246057/>

Kleinlooh, S et al (2021) *Dance Movement Therapy for Clients with a Personality Disorder: A Systematic Review and Thematic Synthesis* *Frontiers in Psychology*, Vol 12, Article 581578.

<https://www.frontiersin.org/articles/10.3389/fpsyg.2021.581578/full>

Koch, S et al (2019) *Embodied Self in Trauma and Self-Harm: A Pilot Study of Effects of Flamenco Therapy on Traumatized Patients* *Journal of Loss and Trauma*, Vol 24, Nos 5-6: 441-459, Routledge, Taylor & Francis Group.

<https://www-tandfonline-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/15325024.2018.1507472?needAccess=true>

Koch, S et al (2019) *Effects of Dance Movement Therapy and Dance on Health-Related Psychological Outcomes. A Meta-Analysis Update*, *Frontiers in Psychology*, Vol 10: Article1806. <https://www-sciencedirect-com.ezproxy.uwtsd.ac.uk/science/article/pii/S0197455613001676>

Koch, S (2020) *Indications and contraindications in dance movement therapy: learning from practitioners' experience* *GMS Journal of Arts Therapies*, Vol 1, 1-16.

https://www.researchgate.net/publication/341742218_Indications_and_contraindications_in_dance_movement_therapy_learning_from_practitioners_experience_on_indications_and_contraindications_of_dance_movement_therapy_DMT_cific_patient_populations_Fifty-f

Kosierb, S and Bilodeau, C (2020) *Supervising the use of touch: a phenomenological study* *Body, Movement and Dance in Psychotherapy, An International Journal for Theory, Research and Practice*, Vol 15: 280-294, Routledge, Taylor & Francis

<https://www-tandfonline-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/17432979.2020.1787517?needAccess=true>

Lane, R (2020) *Promoting the Integration of Psychodynamic and Emotion-Focused Psychotherapies Through Advances in Affective Science and Neuroscience* *Clinical Social Work Journal*, 48:279-286. <https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10615-020-00759-8.pdf>

Lanius, R et al (2005) *Functional Connectivity of Dissociative Responses in Posttraumatic Stress Disorder: A Functional Magnetic Resonance Imagery Investigation* *Biological Psychiatry*, 57: 873-884, Society of Biological Psychiatry.

<https://www-sciencedirect-com.ezproxy.uwtsd.ac.uk/science/article/abs/pii/S0006322305000545>

Lauffenburger, S (2020) *'Something More': The Unique Features of Dance Movement/Therapy/Psychotherapy* *American Journal of Dance Therapy* 42:16-32, American Dance Therapy Association. <https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10465-020-09321-y.pdf>

Ledoux, J (2015) *Anxious: The Modern Mind in the Age of Anxiety* London: Oneworld Publications:

Lee et al (2022) *Therapeutic Dance for the Healing of Sexual Trauma: A Systematic Review* TRAUMA, VIOLENCE & ABUSE Vol 0(0): 1-22 Sage Publications <https://journals-sagepub-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1177/15248380221086898>

Leseho, J and Maxwell, L (2010) *Coming Alive: creative movement as a personal coping strategy on the path to healing and growth* British Journal of Guidance and Counselling, Vol 38, No 1: 17-30. <https://www-tandfonline-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/03069880903411301?needAccess=true>

Levine, B and Land, H (2016) *A Meta-Synthesis of Qualitative Findings About Dance/Movement Therapy for Individuals with Trauma* Qualitative Health Research, Vol 26(3): 330 - 344, Sage Publications. <https://journals-sagepub-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1177/1049732315589920>

Levine, P (2010) *In an unspoken voice: How the body releases trauma and restores goodness*, North Atlantic Books, US

Levine, P (2015) *Trauma and Memory: Brain and body in a search for the living past: A practical guide for understanding and working with traumatic memory* North Atlantic Books, US

Levenson, H (2020) *Enlivening Psychodynamic Brief Therapy with Emotion-Focused Interventions: An Integrative Therapist's Approach* Clinical Social Work Journal, 48:267-278. <https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10615-020-00762-z.pdf>

Liang F et al (2021) *Neurotransmitters and Electrophysiological Changes Might Work as Biomarkers for Diagnosing Affective Disorders Disease Markers* Hindawi Ltd, Article 9116502. <https://downloads.hindawi.com/journals/dm/2021/9116502.pdf>

Loewenstein, R (2018) *Dissociation disorders: everything you know is wrong* Dialogues in Clinical Neuroscience, Vol 20, 3:229-242 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6296396/>

Machery, E (2016) *The amodal brain and the offloading hypothesis* Psychonomic Bulletin Revue, Vol 23: 1090-1095, Psychonomic Society, Inc, Springer. <https://link.springer.com/content/pdf/10.3758/s13423-015-0878-4.pdf>

Malchiodi, C (2021) *Neurobiology creative interventions, and childhood trauma* In C A Malchiodi (Ed), *Creative interventions with traumatized children*, Guilford Press, 2nd Edition

Margolin, I (2019) *Breaking Free: One Adolescent Woman's Recovery from Dating Violence Through Creative Dance* American Journal of Dance Therapy 41:170-192, American Dance Therapy Association.
<https://link.springer.com/content/pdf/10.1007/s10465-019-09311-9.pdf>

Marmeleira J and Santos, G (2019) *Do Not Neglect the Body and Action: The Emergence of Embodiment Approaches to Understanding Human Development, Perceptual and Motor Skills*, Vol 126(3) pp 410 – 445, Sage Publications. <https://journals-sagepub-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1177/0031512519834389>

Maté, G (2017) *The Addict in All of Us* Psychotherapy Networker, July/August 2017. <https://www.psychotherapynetworker.org/magazine/article/1102/the-addict-in-all-of-us>

Matherly, N (2013) Navigating the Dance of Touch: An Exploration into the use of Touch in Dance/Movement Therapy, American Journal of Dance Therapy 36:77-91, American Dance Therapy Association <https://link.springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10465-013-9161-2.pdf>

Meekums, B (2000) *Creative group therapy for women survivors of child sex abuse* London: Jessica Kingsley

Merritt Millman, L et al (2020) *Towards a neurocognitive approach to dance movement therapy for mental health: A systematic review* Clin Psychol Psychother. 28:24 – 38, Wiley <https://onlinelibrary-wiley-com.ezproxy.uwtsd.ac.uk/doi/pdfdirect/10.1002/cpp.2490>

Michel, C (2020) *Overcoming the modal/amodal dichotomy of concepts* Phenomenology and the Cognitive Sciences, Vol 20: 655-677.
<https://link.springer.com/content/pdf/10.1007/s11097-020-09678-y.pdf>

Mills, L and Daniluk, J (2002) *Her Body Speaks: The Experience of Dance Therapy for Women Survivors of Child Sexual Abuse* Journal of Counseling & Development, Vol 80, pp 77-85, American Counseling Association.
<https://onlinelibrary-wiley-com.ezproxy.uwtsd.ac.uk/doi/pdfdirect/10.1002/j.1556-6678.2002.tb00169.x>

Mlotek, A and Paivio, S (2017) *Emotion-focused therapy for complex trauma* Person-Centered & Experiential Psychotherapies, 16:3, 198-214 <https://www-tandfonline-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/14779757.2017.1330704?needAccess=true>

Moenter, A (2020) *Being in touch: The potential benefits and the use of at-tuned touch in psychotherapy for functional neurological symptoms (FNS)* European Journal of Trauma and Dissociation 4 (2020) 100161, Elsevier Masson SAS.
<https://www.sciencedirect.com/science/article/abs/pii/S2468749920300314>

Montagu, A (2018) *Touching: The human significance of the skin* 3rd Ed, New York: Harper & Row

Morita, I et al (2018) *Brain activity in response to the touch of a hand on the center of the back* PLOS ONE
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0206451>

Moustakas, C (1990) *Heuristic Research: Design, Methodology and Applications* Sage Publications

Müller-Oerlinghausen, B and Eggart, M (2020) *Touch Research-Quo Vadis? A Plea for High-Quality Clinical Trials* Brain Sciences, MDPI, https://mdpi-res.com/brainsci/brainsci-11-00025/article_deploy/brainsci-11-00025.pdf?version=1609130813

National Health Service: *Treatment for Post-Traumatic Stress Disorder (PTSD)*, 13 May, 2022 <https://www.nhs.uk/mental-health/conditions/post-traumatic-stress-disorder-ptsd/treatment/>

Neelakantan, L et al (2018) *Users' experience of trauma-focused cognitive behavioural therapy for children and adolescents: a systematic review and metasynthesis of qualitative research* European Child and Adolescent Psychiatry, Vol 28, (7): 877-897. <https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s00787-018-1150-z.pdf>

Novak, E (2018) *A Model of Informed Physical Contact in Psychotherapy* Transactional Analysis Journal, Vol 48, No 1, pp 18 - 32, Taylor & Francis Group
<https://www-tandfonline-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/03621537.2018.1397962?needAccess=true>

Ogden, P (2020) *The different impact of trauma and relational stress on physiology, posture, and movement: Implications for treatment* European Journal of Trauma & Dissociation, Elsevier Masson SAS
<https://doi.org/10.1016/j.ejtd.2020.100172>

Ogden, P & Fisher, J (2014) *Sensorimotor Psychotherapy: Interventions for Trauma and Attachment* WW Norton & Company

Ogden, P, Minton, K and Pain, C (2006) *Trauma and the Body: A Sensorimotor Approach to Psychotherapy* WW Norton & Company

Paivio, S, C and Pascual-Leone, A (2010) *Emotion-Focused Therapy for Complex Trauma: An Integrated Approach* American Psychological Society

Payne, H (2017) *Essentials of Dance Movement Psychotherapy: International Perspectives on Theory, Research and Practice* Routledge, 1st Edition

- Payne, H (2019) *Embodied Perspectives in psychotherapy*
<https://www.pesi.co.uk/blog/2019/june/embodied-perspectives-in-psychotherapy>
- Payne, P, Levine, P and Crane-Godreau, M (2015) *Somatic Experiencing: using interoception and proprioception as core elements of trauma therapy* Frontiers in Psychology, Vol 6, Article 93,
<https://www.frontiersin.org/articles/10.3389/fpsyg.2015.00093/full>
- Perry, B, D (2009) *Examining child maltreatment through a neurodevelopmental lens: Clinical applications of the neurosequential model of therapeutics* Journal of Loss and Trauma, 14(4), 240 – 255. http://www.healing-arts.org/tir/perry_examining_child_maltreatment_through_a_neurodevelopmental_lens.pdf
- Phelan, J (2009) *Exploring the use of touch in the psychotherapeutic setting: A phenomenological review* Psychotherapy: Theory, Research & Practice, Vol 46(1), 97 – 111 <http://dx.doi.org/10.1037/a0014751>
- Pierce, L (2014) *The integrative power of dance/movement therapy: Implications for the treatment of dissociation and developmental trauma* The Arts in Psychotherapy, Vol 41: 7–15, Elsevier
<https://www.sciencedirect.com/science/article/abs/pii/S0197455613001652>
- Pinson, B (2002) *Touch in Therapy: an Effort to Make the Unknown Known* Journal of Contemporary Psychotherapy, Vol 32, Nos 2/3: 179-196
<https://link.springer.com/article/10.1023/A:1020545010081>
- Pleines, K (2019) *An Attachment-Informed Approach to Trauma-Focused Cognitive Behavioural Therapy* Clinical Social Work Journal, Vol 47, (4): 343-352 <https://link.springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10615-019-00701-7.pdf>
- Popa, R and Best, P (2010) *Making sense of touch in dance movement therapy: A trainee's perspective* Body, Movement and Dance in Psychotherapy: An International Journal for Theory, Research and Practice, 5:1, 31 – 44
<https://www-tandfonline-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/17432970903545941?needAccess=true>
- Porges, S (2011) *The Polyvagal Theory: Neurophysiological Foundations of Emotions, Attachment, Communication and Self-regulation* New York: WW Norton
- Porges, S (2017) *The Pocket Guide to the Polyvagal Theory: The Transformative Power of Feeling Safe* New York: WW Norton
- Portokaloglou, T (2018) *Transplanting the Soul-Tree: an analytical perspective on how the Sesame approach and movement with touch and sound became the fertile soil for the psychological support and therapy for refugee*

women The British Association of Dramatherapists, *Dramatherapy*, Vol 39, No 2, 102-112, Routledge, Taylor & Francis Group. <https://journals-sagepub-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/02630672.2018.1482937>

Rogers, C (1980) *A Way of Being* Houghton Mifflin Company, New York

Rogers, C (1995) *On Becoming a Person: A Therapists' View of Psychotherapy* (2nd Ed), Houghton Mifflin Company, New York

Rothschild, B (2017) *The Body Remembers Volume 2: Revolutionizing Trauma Treatment* WW Norton & Company

Sanderson, C (2021) *Working with Survivors of Childhood Sexual Abuse*, 18 – 19 July, 2021, <https://www.pesi.co.uk/blog/2021/june/working-with-survivors-of-csa-the-essentials>

Schalinski, I et al (2017) *Oscillatory magnetic brain activity is related to dissociative symptoms and childhood adversities: A study with women with multiple trauma* *Journal of Affective Disorders*, 218: 428-436, Elsevier
<https://www.sciencedirect.com/science/article/abs/pii/S016503271631850X?via%3Dihub>

Schore, A (2009) *Right-brain affect regulation: an essential mechanism of development, trauma, dissociation, and psychotherapy, in the Healing Power of Emotion: Affective Neuroscience Development and Clinical Practice*, eds D Fosh, D F Siegel and M F Solomon, New York, NY, Norton, pp 112 - 144

Schore, A (2019) *Right Brain Psychotherapy* WW Norton and Co

Seoane, K (2016) *Parenting the Self with Self-Applied Touch: A Dance/Movement Therapy Approach to Self-Regulation* *American Dance Therapy Association*, 38: 21-40. <https://link-springer-com.ezproxy.uwtsd.ac.uk/content/pdf/10.1007/s10465-016-9207-3.pdf>

Serlin, I (2018) *Responding to natural and manmade disasters with Dance Movement Therapy* *Journal of Applied Arts & Health*, Vol 9, No 2, <http://www.union-street-health-associates.com/articles/responding-to-disaster.pdf>

Shafir, T (2016) *Using Movement to Regulate Emotion: Neurophysiological Findings and Their Application in Psychotherapy* *Frontiers in Psychology*, Vol 7, Article 1451
<https://www.frontiersin.org/articles/10.3389/fpsyg.2016.01451/full>

Simona, C, D et al (2020) *Dance Movement Therapy Influences the Quality of Life and has Behavioural Improvements in Dementia Patients* *Science, Movement and Health*, Vol 20 (2): 91-96 <https://www.analefefs.ro/anale-fefs/2020/i2/pe-auto->

[ri/5. CHITA DANA SIMONA_DOCU AXELERAD SILVIU_STUPARU ALEXANDRU FLORIS_DOCU AXELERAD DANIEL_STROE ALINA ZORINA.PDF](#)

Siegel, D (1999) *The Developing Mind: Toward a Neurobiology of Interpersonal Experience* Guilford Press

Siegel, D (2009) *Emotion as integration: a possible answer to the question, what is emotion?* in the *Healing Power of Emotion: Affective Neuroscience, Development and Clinical Practice*, eds D Fosh, D F Siegel and M F Solomon, New York, NY, Norton, pp 145 - 171

Siegel, D (2020) *The Developing Mind: How Relationship and the Brain Interact to Shape Who We Are* Guilford Press, New York, Guilford Publishing, Inc , 3rd Edition

Smith, E, Clance, P and Imes, S (2001) *Touch in Psychotherapy: Theory, Research and Practice* 1st Ed, Guilford Press

Solomon, M and Siegel, D (2003) *Healing Trauma: Attachment, Mind, Body and Brain* WW Norton & Company

Stamoulos et al (2016) *Psychologists' perceptions of the importance of common factors in psychotherapy for successful treatment outcomes* Journal of Psychotherapy Integration 26: 300-317
https://www.researchgate.net/publication/304186790_Psychologists'_Perceptions_of_the_Importance_of_Common_Factors_in_Psychotherapy_for_Successful_Treatment_Outcomes

Stanek, D (2014) *Bridging the past and present: Embodied intergenerational trauma and the implications for dance/movement therapy* Body, Movement and Dance in Psychotherapy, 10(2): 94 - 105. <https://www.tandfonline.com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/17432979.2014.971872?needAccess=true>

Stark et al (2015) *Post-traumatic stress influences the brain even in the absence of symptoms: A systematic, quantitative meta-analysis of neuroimaging studies* Neuroscience and Biobehavioural Reviews 56: 207-221, Elsevier
<https://oxcadatresources.com/wp-content/uploads/2020/09/Starketal.2015.MetaanalysisPTSD.NeuroscienceBiobehavioralReviews.pdf>

Steinhorst, A and Funke, J (2014) *Mirror neuron activity is no proof for action understanding* Frontiers in Human Neuroscience, Vol 8, Article 333.
<https://www.frontiersin.org/articles/10.3389/fnhum.2014.00333/full>

Steuwe, C et al (2012) *Effect of direct eye contact in PTSD related to interpersonal trauma: an fMRI study of activation of an innate alarm system* Social Cognitive and Affective Neuroscience, 9: 88-97.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3871730/>

Stirling, J and Andrews, K (2021) *Somatic interventions therapists use when treating women presenting with sexual assault trauma involving tonic immobility* Body, Movement and Dance in Psychotherapy: An International Journal for Theory, Research and Practice, Routledge, Taylor & Francis Group, <https://www.tandfonline.com/doi/full/10.1080/17432979.2021.1918250>

Stolorow, R (2016) *Pain is not Pathology* Journal of the Society for Existential Analysis, Vol 27, Issue 1, 70-74. https://www.academia.edu/21664081/Pain_Is_Not_Pathology

Stub, T et al (2020) *Combining psychotherapy with craniosacral therapy for severe traumatized patients: A qualitative study from an outpatient clinic in Norway* Complementary Therapies in Medicine 49 (2020) 102320, Elsevier Ltd. <https://www.sciencedirect.com/science/article/pii/S0965229919312701>

Survivors' Voices: *Breaking the silence on living with the impact of child sexual abuse in the family environment* The Survivors' Narratives Project, 2015 https://oneinfour.org.uk/wp-content/uploads/2015/11/Survivors_Voices_Report_November_2015-2.pdf

Talman, A and Ginzberg, K (2018) *"Body self" in the shadow of childhood sexual abuse: The long-term implications of sexual abuse for male and female adult survivors* Child Abuse & Neglect, The International Journal, Vol 76: 416-425, Elsevier Ltd. <https://isiarticles.com/bundles/Article/pre/pdf/125797.pdf>

Teixeira-Machado, L and DeSantana, J (2019) *Effect of dance on lower-limb range of motion in young people with cerebral palsy: a blinded randomized controlled clinical trial* Adolescent Health, Medicine and Therapeutics, 10: 21-28, Dove Medical Press Ltd. <https://www.readcube.com/articles/10.2147/AHMT.S177867>

Totton, N (2018) *Embodied Relating: The Ground of Psychotherapy* 1st Edition, Routledge

Tovey, C (2017) *Harvesting hope: the concept of post-traumatic growth in relation to counselling survivors of childhood sexual abuse* Therapy Today, 30 September 2017, British Association for Counselling and Psychotherapy <https://www.bacp.co.uk/bacp-journals/private-practice/autumn-2017/harvesting-hope/>

Tsakiris, M and De Preester, H (2018) *The Interoceptive Mind* (Vol 1) Oxford University Press

Tyrer, P (2020) *Why we need to take personality disorder out of the doghouse* The British Journal of Psychiatry 216,65-66. <https://www.cambridge.org/core/services/aop-cambridge-core/content/view/F1A2BD03EE7040E5427C70F112E43A7B/S0007125019001259a.pdf/div-class-title-why-we-need-to-take-personality-disorder-out-of-the-doghouse-div.pdf>

Valentine, G (2007) *Dance/movement therapy with women survivors of sexual abuse* Brooke, S (Ed) The use of creative therapies with sexual abuse survivors, Charles C Thomas

Van der Kolk, B (2015) *The Body Keeps the Score* UK: Penguin Random House

Van der Kolk, B and Fisler, R (1995) *Dissociation and the fragmentary nature of traumatic memories: Overview and Exploratory Study* *Journal of Traumatic Stress* 8 (4): 505-525. https://jimhopper.com/pdf/van_der_kolk_fisler1995.pdf

Westland, G (2011) *Physical touch in psychotherapy: Why are we not touching more?* *Body, Movement and Dance in Psychotherapy*, 6(1), 17 – 29
<https://www-tandfonline-com.ezproxy.uwtsd.ac.uk/doi/pdf/10.1080/17432979.2010.508597?needAccess=true>

Wilkinson S and Sanacora, G (2019) *A new generation of antidepressants: an update on the pharmaceutical pipeline for novel and rapid-acting therapeutics in mood disorders based on glutamate/GABA neurotransmitter systems* *Drug Discovery Today*, Vol 24, No 2: 606-615, Elsevier Ltd.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6397075/>

Wright, J (2020) *Training Issues Related to Touch in Counseling* *The Journal of Counselor Preparation and Supervision*, Vol 13, No 1, Article 8.
<https://digitalcommons.sacredheart.edu/cgi/viewcontent.cgi?article=1340&context=jcps>

Yalom, I and Leszcz, M (2021) *The Theory and Practice of Group Psychotherapy* Revised, 6th Edition, Basic Books

Zur, O (2007) *Touch in Therapy and the standard of care in psychotherapy and counseling: Bringing clarity to illusive relationships* USA *Body Psychotherapy Journal*, 6 (2): 61-93.
https://hakomiinstitute.com/Forum/Issue24/2011_Hakomi_Forum_Zur.pdf