A theoretical and clinical perspective of an embodied view in psychotherapy of somatic symptoms disorders

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ABSTRACT

In this paper, we offer some ideas for the treatment of somatoform patients and related pathologies based on the concept of embodiment. Embodiment refers to the interplay between body and mind in behavior. The word refers to giving a body to something, "incarnate". Spinoza wrote extensively about the topic in the 17th century. In the 20th century, picking up on Spinoza's work, Damasio presented extensive and important neuro-scientific evidence that feelings can be direct perceptions of internal body states, substantiating the growing understanding of emotions and feelings as a core component of the embodied experience. Here, we summarize the evidence for the intersection of emotion and cognition in the body, which impinges on the effectiveness of using the body and movement in psychotherapy and the management of somatic symptoms and related disorders. We present evidence indicating that movement would be a way to reach unconscious processes dealing with body-mind interaction and body awareness.

Key words: embodiment, somatoform disorders, psychotherapy, neurosciences.

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Introduction

For the purpose of this paper, embodiment refers to the incorporation of the body into something, in this case, psychotherapy. It also has the connotation of incarnating or incorporating the body into something. The term "embodiment" was proposed by Varela in 1991 in the domain of cognitive sciences (Varela *et al*., 1991).

We summarize the evidence for the intersection of emotion and cognition in the body, embodiment, and how this can impact psychotherapy, which impinges on the effectiveness of using the body and movement in the treatment of somatic symptoms and related disorders. This approach includes patients with unexplained symptoms and others with bodily distress, commonly known as "psychosomatic".

We think that the concept of embodiment may be useful in most issues dealing with mind-body interplay and in the understanding and treatment of somatoform and related disorders [according to the Diagnostic and Statistical Manual of Mental Illnesses – 5th edition (DSMV) classification].

DSMV includes psychological criteria such as health anxiety, catastrophizing, or extra time devoted to preoccupation with symptoms. We refer here to a group of patients who have been diagnosed as somatoform (Abey, 2005; Brown, 2004) or suffering from unexplained symptoms, or those recently named as "bodily distress disorder" (Henningsen *et al*., 2018). A considerable number of these people visit biomedical specialties, from general medicine to psychiatry. However, they do not get a clear diagnosis. In most cases, they present comorbidities such as anxiety or depression. Those patients who accept to go into psychiatric units are diagnosed as having somatic symptom disorder or labeled as psychosomatic (Hilbert *et al*., 2010).

All this points toward the difficulties faced by somatoform and other patients and the regular physical or psycho-therapeutic treatments applied (Henningsen *et al.*, 2007). It is important to notice that this is not only the case in patients with "unexplained somatic symptoms" attributed to the malfunction of general medical conditions (Henningsen *et al*., 2018; Lahmann *et al*., 2010; Mayou *et al*., 2005). Some maladaptive reactions to somatic symptoms have been described (van der Feltz-Cornelis & van Houdenhove, 2014).

In a recent paper, Henningsen *et al*. (2018) apply the term "bodily distress" as a better term for "medically unexplained symptoms". "Bodily distress would address those patients with persistent bodily symptoms that are burdensome to the sufferer and lead them to medical consultation with or without a psychiatric diagnosis" (Henningsen *et al.*, 2018).

We will discuss some relevant aspects of the treatment of somatoform patients and those with bodily distress, emphasizing the role of the body and movement.

Complementary treatments have been applied for a long time in Europe (Kanitz *et al.*, 2013), however without acknowledge the importance of "body and movement" as an important tool in the therapy program of these patients. Several psychological and physical therapies have demonstrated low efficacy in the treatment of somatic symptoms and related disorders (Henningsen *et al*., 2018; Theadom *et al*., 2015).

Movement provides a way to connect to the world and the objects outside. The bodily core self is viewed as a power for action (Gallese & Sinigaglia, 2011). The execution of movements encourages body feeling and sensation in patients who are at some point blocked at the somatic level, *i.e*., not able to make sense of their bodily symptoms.

Converging lines of evidence about the connection between emotions and the body in creating emotional awareness led us to explore some issues during development.

In what follows, we will discuss some findings related to the development of affect from a psychodynamic and neuroscientific perspective and how these might impinge on the development of somatic symptoms. Then we will return to discuss new directions for the treatment of somatic symptom disorders.

Affect and development

The theoretical approach presented here builds on psychoanalytic (Bucci, 1997; 2020; Mancia, 2006; Waller & Scheidt, 2006), and neurophysiological sources (Damasio, 1999, 2003; Damasio *et al*., 1996; Duncan & Feldman-Barret, 2007; Gallese, 2009; Gallese & Sinigaglia, 2011; Rief *et al.*, 1998; Russell, 2003). We find that these authors, in various ways, highlight the role of "core affect" in emotional processes and the development of the self, as well as possibly in the development of symptoms. Russell (2003) characterizes "core affect" as "the constant stream of transient alterations in an organism's neurophysiological and somato-visceral state that represents its immediate relationship to the flow of changing events". It is linked to the perception and interpretation of objects and people and how we react to them, which is necessarily related to a particular body state. Picking up on Spinoza's work, Damasio (1999, 2003) presented extensive and important neuroscientific evidence that feelings can be direct perceptions of internal bodily states, substantiating the growing understanding of emotions and feelings as a core component of the embodied experience. Gallese & Sinigaglia (2011) also talk about the body's core self as a power for action.

This concept has also been reconsidered in Damasio's work as "somatic markers" (Damasio, 1999, 2003; Damasio *et al*., 1996). The idea here is that marker signals influence the process of response to stimuli at multiple levels of operation in the brain: some of them occur overtly (consciously) and some occur covertly (non-consciously). This is why marker signals are called somatic: they relate to body state structure and regulation even when they do not arise in the body itself; marker signals arise in bio-regulatory processes, including those that express themselves in emotions and feelings. Damasio's ideas have been of enormous help in overcoming the mind-body split.

Other authors have addressed the term "core affect" which, for the purpose of this discussion, refers to a basic psycho-physiological state related to hedonic value (pleasure/ displeasure) and arousal (sleep/awake) (Russell, 2003), present in mammals from birth on. Core affect is molded in the early years, during which the regulation of physiological functions takes place. Duncan & Feldman-Barrett (2007) described core affect as a neurophysiological state or "barometer" that sums up the individual's relationship with the environment at a given point in time. Self-reported feelings can be equivalent to "barometer readings".

Being so fundamental in the emotional and bodily experience, people experience core affect (sensations and feelings with hedonic value) as distinct from thoughts. The brain circuitry that is responsible for affect serves the function of transforming sensory information from the external environment into an internal meaningful representation (emotion), indicating whether the environment is safe or not. A widely distributed nervous network accomplishes this function by binding sensory and somato-visceral information to create a mental representation of external objects (Damasio, 1999; Damasio *et al.*, 1996; Duncan & Fedman Barret, 2007; Gallese, 2009).

Emotions are intentional states; they move us towards something; *e.g*., people become angry at someone, are afraid of something, or are sad about something. Perception and sensation of feelings and emotions require neurophysiological systems necessary for both the detection of and response to bodily states (Lane, 2008). Interactions with others can also be viewed in terms of adaptive neuroendocrine and autonomic processes (Porges, 2009). The "other" induces a physiological state (related to pleasure or displeasure), therefore activating autonomic arousal.

Emotions, as bodily experiences, have become incorporated into emotional schemes in the mind as part of the dual code model developed by Paivio (1986) and implemented by Bucci (1997) in psychoanalytical treatment research. In Bucci's model (1997, 2020), "emotions are characterized as image-action schemata, operating within or outside of consciousness, which differ from other, more cognitive schemata in their relative domination by motoric and visceral processing systems" (personal communication).

Emotional schemes have been used to understand interactions: feelings, desires, expectations, and beliefs about others, which are formed within the non-verbal system early in life, before verbal language. In a recent publication, Bucci (2020) addresses the multiple code theory in the light of emotional processes and communication, adding a new dimension.

Body schemes and effects are constructed on the basis of interactions with the environment and the regulation of internal body mechanisms. Homeostatic processes indicate when the environment is safe and when it is not.

These mechanisms are molded in the early years of life. The infant learns that arousal in the presence of the caregiver will not

lead to dysfunctional patterns beyond his or her (precarious) coping capabilities.

In this regard, Stern (2004) talks about vitality affects, i.e., instant-by-instant shifts in feeling states resulting in an array of feeling flows. Thus, we can assume that the attachment system is a regulatory homeostatic system that organizes core affect (Hofer, 1984; Panksepp,1998). Later on in infancy, emotional schemes are developed predominantly through bodily sensations and awareness, giving place to a cognitive appraisal of emotions and feelings later on.

What happens in somatoform disorders?

Psychodynamic research has demonstrated the developmental pathways of individuals who are vulnerable to developing persistent somatic complaints (Abey, 2005). Childhood adversity, such as neglect or physical and sexual abuse, is a well-known risk factor in the development of bodily (vegetative) and distress symptoms (Brown, 2004; Kirmayer & Looper, 2006; Landa *et al.*, 2012; Maunder & Hunter, 2001; Rief *et al.*, 1998; Walker *et al.*, 1998) in some individuals. The relevance of psychosocial factors and their interaction with biological mechanisms involved in the causation and maintenance of symptoms has also been clearly pointed out (Hilbert *et al*., 2010; Rief *et al.*, 1998; Schaefert *et al*., 2012; Yunus, 2012).

One of the most significant aspects of patients with somatoform disorders and related pathologies is their self-concept of being disabled and ill, which manifests itself in not tolerating average physical sensation or irritation, activity, or effort (Rief & Broadvent, 2007; Sayar *et al.*, 2004). Moreover, some somatoform patients also have deficits in identifying emotional states and denial of their own bodies (Sayar *et al.*, 2004).

Medical and psychotherapeutic evidence indicates that these patients experience themselves as if the body was not part of the "self" (Kalisvart *et al*., 2012). At present, a model of bodily distress as a disorder of "perception" has been proposed. This could be interpreted as a disorder of "interoception", in which interoception is seen as co-determined by top-down processes in the central nervous system (Van der Bergh *et al*., 2017). Therefore, somatoform patients and those with bodily distress remain trapped in a vicious circle of multiple complaints in which physiological, cognitive, and behavioral components overlap, perpetuating bodily symptoms. Many of these patients show especially high levels of psychopathological distress and anxiety (Kanaan *et al*., 2007; Monsen & Monsen, 2000; Rief & Barsky, 2005). They commonly present high proportions of dropout from all kinds of treatments, including traditional verbal psychotherapies (Henningsen *et al*., 2007; Schaefert *et al.*, 2012; Thieme *et al.*, 2006); in our view, this is because the origin of specific complaints is not fully understood.

Because of these challenges, the implementation of new forms of integrative body-oriented psychotherapies considering an embodied theoretical framework is highly recommended. They should be encouraged in the treatment plans of patients from the very beginning. In this case, body-oriented psychotherapies could be more efficient than solely verbal psychotherapy. Therefore, somatoform patients and those with other related pathologies might benefit from combined treatments within an embodiment perspective. Different mind-body therapies have been tested in comparison with a placebo in fibromyalgia patients, showing a non-significant improvement in the reduction of symptoms (Theadom *et al*., 2015).

Why movement?

The use of movement in body-movement psychotherapy is a way to induce specific body-related memories linked to implicit content. These memories have been recruited within the non-verbal or implicit domain (Bucci, 2007, Mancia, 2006; Shore, 2011) which is not accessible to the verbal domain. Movement contributes to the organization of affective experience, favoring bottom-up neuropsychological processes from the body to the mind. By focusing on the kinesthetic experiences, patients can learn about other possible ways of "being in their bodies", *i.e.*, increasing their body awareness and body relatedness. The patients can retain the kinesthetic experience consciously and reproduce it in the outer world.

We propose the use of movement as a way to encourage body feeling and sensation (through sensory-motor awareness), engaging embodiment processes affecting both cognition and emotion. Although not entirely new (complementary therapies have been implemented at psychosomatic clinics in Germany for a long time), body-movement therapy contributes to a better understanding of the body-mind relationship in interaction with the outer world from the patient's point of view. This approach seems to be more effective than other therapies such as relaxation techniques and dance therapy, the latter of which is mainly focused on expression (Burns, 2012). Physiotherapy alone has not been evaluated as successful in these patients (Theadom *et al*., 2015).

Stages in body movement psychotherapy

Briefly, the stages of the therapeutic process named after Dosamantes-Alperson (1984), can be described by the authors as follows.

Self-focus attention

Content in self-focus attention is self-related information towards bodily sensations: "interoception" related to thoughts and images involving evident autonomic reactions, and "proprioception", promoting bodily self-awareness. Guided by the therapist, the patient achieves regulation of alertness, which is manifested by a slowing of autonomic parameters. Somatic body awareness can be thought of as occurring on a spectrum or continuum, from pure sensation or movement (implicit content) to sensory experiences that are affectively or cognitively involved in the sensation. These experiences embody "content" or knowledge that belongs to the patient. The most important aspect of this kind of implicit knowledge is that it contains representations, affects, memories, and other non-verbal concepts.

Implicit knowledge has important clinical implications regarding how we shape our memories and attitudes in relation to the body. Focused attention fosters inquisitive attitudes towards the body and relational past experiences. The necessary understanding of the body in movement through time and space is thus acquired. Attunement to the patient's manifestations related to movement (*i.e*., embodied simulated experiences from the therapist's side) is fundamental to the process.

Spontaneous movement

Dosamantes-Alperson (1984) observed that the natural imitation of movement and the internally generated movement are vehicles for emotions. She described how she used kinesthetic

empathy by recreating her client's movement in her own body and responding to the client's emotional state from her own sensations (Dosamantes-Alperson, 1984, p.156). Nebbiosi and Federici-Nebbiosi (2008) emphasized the importance of rhythm imitation (*i.e*., voice and tone) in therapeutic encounters as a form of empathy and relatedness. Requesting the patient to develop a spontaneous movement that can be imitated by the therapist in terms of quality, strength, and speed promotes the mobilization of emotions and unconscious processes. Procedural knowledge arises, allowing for fantasies and feelings. This shows that the patient perceived the therapist as being attuned to the patient's intentions and emotions. The therapist sensed that she had accurately captured what the patient might have experienced. Downing (2015) proposed experiential interventions to draw attention to one's own body experience. An example would be to ask the patient "what do you feel in your body at this moment?"

From a neurobiological point of view, it has been demonstrated that simple motor execution of movements performed in relation to happy or satisfactory moments significantly increases positive affect. In contrast, the execution of fearful movements significantly increases negative affect (Shafir *et al*., 2013). Shafir *et al.* (2016) have described the relevance of body posture and motor characteristics by which each emotion was predicted by a unique set of motor elements and that each motor element predicted only one emotion.

Associations

The therapist encourages the patient to transform his or her movement experiences (micro and macro movements) into verbal language. The patient attempts to symbolize the experience through words, which come to their minds sometimes in a non-coherent or illogical way. Inquisitive attitudes towards the body arise; expressive movement and aliveness occur.

In this phase, emphasis is placed on an experience and how it feels rather than storytelling or symbolization, favoring reflective awareness and self-confidence or authenticity on the part of the patient. Selective "attunement" refers to the therapist's synchrony with the patient by means of movement and body feelings that can also manifest as somatic countertransference. Example: "I feel in my stomach the rage you (the patient) are feeling towards your father" (even if the patient has not put it into words yet). Knoblauch, 2011) analyzes the micro-movements of body-emotional exchanges and how these exchanges can facilitate reflection and verbalization.

This is a simple example during therapy:

> Therapist: "Have you ever moved like that?"
> Patient: "No, now I feel my feet are on the ground and I feel much more empowered and stronger... a difference"

Focusing on kinesthetic experiences, patients can learn about other possible ways of being in their bodies, *i.e*., increasing body awareness and body relatedness. They can retain this kinesthetic experience at a conscious level and reproduce it in the outer world.

In this regard, Stern (2004) insists that "the now moment" is the only time when we are having direct, real experiences. This is the only time when we feel what is going on: "it is a moment of coming into being. It is the moment when all of a sudden, things come together" (Stern, 2004, pp. 3-22).

Imitation and mirroring

The intentional simulation of the patient's movements from the therapist's side in terms of quality (slow/fast, fluid/broken), expression (spontaneous/conscious), and muscle tone (low/high) channels the patient's affect. Thus, the therapist induces an embodied simulation of the patient's state through movements, in terms of emotions or sensations they experience. This is the basis for countertransference. Most likely, the face-to-face approach during therapy can be more helpful for such patients than the traditional couch, indicating the need for reassurance (Schachter & Kaechele, 2010).

Creating coherence

By favoring the development of body sensitivity through movement, body posture, and touch, the patient develops a connection to the entire self in movement, helping to differentiate the self as embodied (implicit knowledge) from the self as a thought or abstract entity. Much later, it is possible to transform this peripheral information into symbolic processes and verbalization.

Organization of new information

Patients need time to reorganize their emotional and body schemes in such a way that new experiences can be integrated into the self. The extrapolation of these experiences to the outer world is a further step by which the patient can incorporate new information; this requires time, repetition, and fine-tuning.

In short, working with implicit knowledge, sub-symbolic processing, and later through cognition and verbalization, primary core emotions are worked out and reviewed from the point of view of the patient's felt sense, allowing modification of self-referential processes.

Clinical case vignette

A 35-year-old female, with experience in Psychoanalitical Psychotherapy, consults psychotherapist with expertise in Body-Movement Psychotherapy. She suffered from treatment-resistant chronic pain during the last 5 years, inducing in her a feeling of being disabled. The painful regions may subjectively migrate from one part of her body to another creating major discomfort.

Fibromyalgia (FMS) syndrome was diagnosed by her neurologist and confirmed by a rheumatologist via the examination of tender points and joints according to ACR 1992 criteria. As stated by the patient, the FMS-diagnosis was of help since it eliminated the possibility of a more dangerous pathology.

Therapy started twice a week. The central part of each session (30 minutes) was devoted to exercises of body-movement perception and awareness. Although she was not very convinced at the beginning (she had been in conventional verbal psychotherapy for some time) this modality of psychotherapy was well received after the third session.

She agreed to go one step further and started to relate life events to her multiple pains. Using movement techniques and awareness, she began to link unspecific body complaints to important issues in her life. Childhood memories and core issues arose (such as the need to take care of herself). For example, in one exercise the therapist mirrored the patients´ feelings represented by movement. The therapist induced an embodied simulation of the patient's state expressed through movement. The patient observed the therapist's action of her own movement, establishing with her a kind of "intentional attunement".

After 15 sessions most bodily symptoms disappeared and the patient was in salutogenic touch with her own feeling of responsibility to heal her body- mind. She became asymptomatic and her body relatedness increased by which she gained confidence, regulation and control over her previous state of disability.

As technical psychoanalytic concepts are used in the movement psychotherapy field, any form of countertransference is important; therapists should be aware, in particular, of their own somatic countertransference. Thus, the capacity to work with somatic countertransference depends on the practice of somatic awareness and the ability to reflect on one's own somatic experiences as a therapist (Knoblauch, 2011; Sletvold, 2018).

Conclusions: which kind of framework could be useful for the treatment of somatoform disorders?

In our view, there should be a framework that provides unity of body and mind in a social context. There should also be a framework considering neuroscience and psychoanalytical perspectives. There is a need to build connections between the nonverbal domain of implicit knowledge and the symbolic domain of words and other symbols. These connections can be accomplished using specific techniques related to the perceived body in movement. Movements represent interactions with the world "beyond my skin", thus they give feedback to concomitant sensations. We emphasize the need to integrate body parameters and bodily perceptions in the context of psychotherapy, building a viable bridge between emotion, cognition, and symbolization.

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