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Survey of Clinical Practice

Clinician perspectives of Basic Body Awareness Therapy (BBAT) in mental health physical therapy: An international qualitative study

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ABSTRACT

Introduction: Body awareness is a movement therapy used in Physical Therapy in Mental Health especially in Scandinavia. The method Basic Body Awareness Therapy has been scientifically investigated in particular for patients with Depression, Schizophrenia and Post Traumatic Stress Syndrome (PTSD).
Methods: Thirty-four Physical Therapists from 13 countries working with the Basic Body Awareness Therapy method in Mental Health Care were interviewed in six focus groups about what effects they have experienced in their work with patients. The Physical Therapists worked within the whole Mental Health spectra. Content analysis was used to analyze the informants' experiences of the clinical effects of body awareness.
Results: Five categories emerged: To be in contact, Refocus and coping, Sense of Self, Relations to others and Daily life activities. The results are discussed in relation to previous research, existing theories of body awareness and cognitive neuroscience and findings of experimental psychology.
Conclusion: The informants experienced that Basic Body Awareness Therapy worked mainly by helping the patients to be in better contact with their "bodily self." Stability, balance, improved grounding and the ability to relax were understood as the basis to establish an improved sense of self and leading to improved acceptance of oneself and one's ability to relate to others.
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1. Background

Body awareness is a physiotherapeutic approach to improve health and well-being that has attracted international scientific attention (Mehling et al., 2011; Catalan et al., 2011; Gyllensten et al., 2009). The broad concept of body awareness has been described as a key element and a mechanism of action for therapeutic approaches often categorized as mind–body approaches such as yoga, Tai Chi, body-oriented psychotherapy, Basic Body Awareness Therapy, mindfulness-based therapies/meditation, Feldenkrais method, Alexander Technique, and Somatic Breath Therapy (Mehling et al., 2011). Body awareness is a part of self-awareness, as the awareness and development of the self and one's identity are closely related to the body. Theories of embodied cognition propose that higher order mental processes are essentially based on perceptual and motor processes, and semantic concepts have to be grounded in sensorimotor experiences to have meaning (Fernadino and Iacoboni, 2010).

The increased interest in body awareness methods may be related to the increase in current European mental health- and stress-related problems such as depression, anxiety, post-traumatic stress disorder, and chronic stress (WHO, Health, 2020, BRIS, 2017). In Sweden, mental health problems are the leading reasons for sick leave among workers (Insurance Agency, 2016). Furthermore, there is an ongoing shift in society toward a view that health is something more than the mere absence of sickness. The concept of health also involves interpersonal relationships and one's participation in society (Health, 2020, WHO). In addition, The International Classification of Functioning, Disability and Health stresses that health includes aspects such as physical function, activity, and participation and should be considered within the context of environmental and personal factors (World Confederation of Physical Therapy, 2018; World Health Organization, Health, 2020).

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One of the most evaluated and clinically used body awareness methods in physical therapy in Scandinavia is Basic Body Awareness Therapy (BBAT) (Gyllensten et al., 2015). BBAT has been found to promote health and self-efficacy; to improve coping strategies; and to reduce musculoskeletal symptoms in stroke, post-traumatic stress disorders, anxiety and depression, eating disorders, and severe mental illness (Gard, 2005; Serafiris et al., 2016; Bergström et al., 2014); (Madsen et al., 2015; Nyboe et al., 2017); (Danielsson et al., 2014; Gyllensten et al., 2009); (Catalan-Matamoros et al., 2011); (Hedlund and Gyllensten, 2009). Presently, BBAT is mostly conducted and studied within the field of physical therapy in Nordic countries, but it is now slowly spreading globally (Yamamoto and Kaganai, 2015).

Different aspects of the concept of body awareness have been scientifically studied in physical therapy. In BBAT, two aspects are mainly in focus: one concern is to improve movement awareness and quality (Skjaerven et al., 2008, 2010; 2018) and the other is the experience and contact with the body as part of oneself, the embodied identity (Gyllensten et al., 2010). There is moderate evidence for using BBAT in depression and anxiety as an adjunct treatment (National Board of Health and Welfare, 2017). Studies focusing on patients with anxiety, depression, personality disorders, and bodily symptoms in a randomized controlled trial in outpatient care revealed that patients receiving BBAT made significantly less use of social services and psychiatric health care, one year after a 3-month BBAT intervention. The treatment group also showed significantly improved self-efficacy both directly after treatment and at 6 months of follow-up (Gyllensten et al 2003, 2009). In another randomized controlled trial of patients suffering from major depression, the respective effects of aerobic exercise, BBAT, and an advice group were investigated. The results showed that both aerobic exercise and BBAT reduced self-rated depression significantly when compared with the control group, and aerobic exercise also reduced symptoms of depression (Danielsson et al., 2014). BBAT in addition to standard treatment has also shown positive effects in a controlled study of people with eating disorders (Catalan-Matamoros et al., 2011). Research on BBAT as a treatment for patients with post-traumatic stress disorders (PTSD) is still scarce. Presently, there are several intervention studies indicating the effectiveness of BBAT on movement, experiences, PTSD symptoms, and pain (Blaauweendraat et al., 2017); however, more research is required. BBAT has also been evaluated as a treatment for women who have been sexually abused. The researchers found that BBAT reduced symptoms and improved self-image and self-love (Mattsson et al., 1998). Currently, mental ill health is an alarming problem in many countries, particularly among adolescents and young adults. Reports have shown that Swedish schoolgirls aged between 13 and 18 years have very high levels of stress-related symptoms, anxiety, and depression in combination with various somatic problems (Strömbä;ck et al., 2013). Immediate significant effects on heart rate variability (HRV) in healthy subjects have been found, indicating a possible improvement of the autonomic functioning of the vagal and sympathetic systems after a session of BBAT (Mantovani et al., 2016).

Most of the physical therapy research concerning the clinical effects of body awareness therapies has been primarily carried out in Northern Europe. However, the authors were interested in a more global view of the perceived effects of body awareness methods in physiotherapy.

The aim of the present paper was to study the effects of BBAT as perceived by physical therapists working in different countries within the mental health care system or within psychosomatic health or prolonged musculoskeletal pain areas.

2. Informants and methods

2.1. Informants

A total of 34 physical therapists (29 females) from 13 different countries participated in the study. Informed consent was signed before the interview started and information about age, gender, workplace, and number of years working as a physical therapist and as a physical therapist in mental health care was collected beforehand.

The participants came from Belgium (one), Canada, (one), Denmark (ten), England (one), Finland (six), Japan (one), the Netherlands (one), Norway (one), Scotland (one), South Africa (one), Sweden (seven), Switzerland (two), and the USA (one). The informants volunteered to participate due to their interest in the subject. The participants were aged between 23 and 71 years (median 51 and mean 49 years). Years of practice as a physical therapist varied from 1 to 45 years (median 28 years and mean 22 years); years working in mental health care varied from 1 to 29 years (median 9 years and mean 10 years). Participants were working with children, teenagers, and adults across the whole mental health spectrum, including patients with psychosis, depression, PTSD, anxiety, dementia, eating disorders, or stress-related disorders and prolonged pain. Their workplaces were general practice, private practice, hospitals, or outpatient care units.

2.2. Methods

Qualitative interviews were performed by the use of focus groups. By this method, new research areas can be investigated from the participants' perspective (Morgan, 1997).

Data were thus collected from six focus groups; four focus groups were performed in connection with conferences for physical therapists interested in mental health, and the remaining two focus groups were performed on a separate planned occasion to obtain more in-depth data and variation in the study. Confidentiality was guaranteed, and the results were analyzed at group level so that no individual could be identified.

Group size varied from 3 to 9 participants, and the duration of each focus group was 60–90 min. In this study, the following question was asked: "Can you tell us about your experiences of the clinical effects of the body awareness method you use?" The interviews also included relevant supplementary follow-up questions. The participants were allowed to comment and deepen each other's contributions and reflect together. The interviews also contained the questions: "What is body awareness for you?" and "How do you use body awareness in your clinical practice?" The results from these questions will be addressed and discussed in a different article.

Two researchers interviewed the participants. During the interviews, one researcher acted as moderator and led the discussions, striving to create a nonthreatening, supportive environment and to encourage all participants to share their views. The second researcher served as an observer and asked supplementary questions. The focus group discussions were audio-recorded and transcribed verbatim. A third researcher participated in the analysis of the data and in the writing of the article.

Ethics. Ethical principles were followed according to the Helsinki Declaration. All participants were informed about the study, and written informed consent was signed. Data were collected and confidentially stored.

2.3. Analysis

The interviews were analyzed using qualitative content analysis

according to Graneheim and Lundman (Graneheim and Lundman, 2004). The analysis was performed according to the following steps: getting a sense of the content as a whole, identifying meaning units, coding and categorizing these meaning units, and describing the identified categories and subcategories. The identification of meaning units was performed as a manifest content analysis, while the coding and categorizing required interpretation of the manifest content and was performed as a latent content analysis (Graneheim and Lundman, 2004). The abstraction in the analysis procedure began when the meaning units were condensed and labeled with a code. Two authors participated in the development of the categories. The third researcher read and contributed to the discussion of the categories and results to increase the credibility of the findings.

3. Results

3.1. Being in contact

"Being in contact" with oneself and one's body seemed to be a prominent effect of body awareness therapy, according to the informants. Being in contact was defined by the participants as being aware of the body. Breathing was another factor that was found to be important to increase awareness of bodily aspects of oneself and of sensations and emotions. The ability to be present in the moment was also mentioned as important. "Being in contact" included two subcategories: "stability and balance" and "awareness of anxiety or emotions."

3.2. "Stability and balance"

According to the informants, bodily balance was dependent on the ability to let the weight orient itself with regard to the ground – "grounding" – instead of trying to hold oneself upright with the help of the shoulder muscles, which is often the case when one is anxious and fearful. Allowing one's weight to "drop" toward the ground relaxed the posture and increased the sense of bodily stability. The increased experience of stability seemed to result in improved balance and gait, or improved performance in functional tasks.

I help my patients to be more aware and I think it is important to see a difference after a few weeks, their movements are relaxed and they can feel their physical and mental functions improving as well, so I actually feel that the patient's body awareness is improving and they are appreciating how their physical and mental functioning are improving, their strength, awareness and balance …

I notice that quite a few are better grounded, more stable and more relaxed around the shoulders.

3.3. "Awareness of anxiety or emotions"

This subcategory seemed to be related to becoming more aware of anxiety or feelings of, for example, shame or contentment. Contact with emotions was seen as another aspect of the experience of oneself and seemed to be related to becoming more in contact with oneself as a person. According to the informants, this awareness could easily be achieved, yet was often related to something that was difficult for the patients to experience, and the physical therapist needed to help the patient to handle this.

I work with their breathing and awareness about their breathing pattern. On a physiological level I work a lot with the breathing, when you are tense you stop breathing, just being aware of how you breathe in different situations you can calm yourself and get in touch with yourself and get a lot of positive effects. Quite simply you can get positive effects on three out of five occasions, a lot of things change and this of course affects the psychological life, you find your resources and are more content, though not with everybody as the key thing is to get the connection ("3–5 times" in this quote refers to 3–5 treatment sessions with BBAT. These physiotherapists worked with stress-related problems that usually have quicker treatment progress than PTSD, for example).

The body remembers, and after a traumatic experience BBAT can activate memories of something the patient did not previously remember, but that was there in the body. As a PT you need to accept this and help the patient incorporate it into their psychological treatment.We perform movements in order to improve the contact with the body, to understand our bodily history, and work to improve the bodily balance

3.4. Refocus and coping

The informants experienced that BBAT increased the patients' ability to handle sensations, emotions, or pain, differently than they habitually did. Following BBAT, the level of anxiety was experienced as reduced, and it was easier to accept pain and to refocus on other bodily sensations. Some of the informants also perceived that the patients learned to understand their bodily sensations in a different way; they decoded their own body language differently. To learn how the body felt when everything felt good was another issue the informants wanted to highlight.

I have had a patient with whiplash pain. When we moved the focus from the neck down to the rest of the body and also the breathing, the patient was able to relax around the neck and become calmer. There was a clear effect of changing the focus from the painful areas and to lower the focus to the rest of the body

To break a vicious circle and reduce the pain and stress leads to more calm in the whole system … This enables access to other resources in the body to promote better coping.

They noticed that the bodily reactions such as rapid heartbeats or pressure in the chest are not a sign of a heart-attack and they learnt to understand all sorts of bodily reactions because they were more aware of themselves.

I think about my patients with anxiety who I have in my group for affective disorders. We use the positions where the patients report high anxiety …. I try to select BBAT movements from what is meaningful, that is, the situations where the level of anxiety is high, e.g. lining up in a queue or being alone at night, and I try to perform BBAT in those positions.

Through BBAT you learn to interpret your sensations and emotions. This makes it possible to cope with them in various ways. It may be anger in the body that is recognized and through that released in the therapeutic process.

If they can think about their experiences in a new way or change their perceptions of earlier experiences this may influence the pain experience

3.5. The sense of self

The informants expressed that the effects of BBAT improved the

patients' knowledge, awareness, and confidence in themselves. According to the informants, patients' improved body awareness promoted an increased ability to make choices and enabled them to say yes or no in different situations and not to be bound by habitual behavioral patterns. The acceptance of oneself, or the ability to sometimes even feel proud of oneself could be seen as an effect of body awareness therapy.

BBAT strengthens the patients' self-confidence. I see positive effects in the patients, that they become more self-confident and through questions about their future, what they would like to do, they tell us about their own motivations, something is born within them, a little spirit of "Yes, I can change something," and it is important that they can influence their own well-being

She can now express herself with her body and stand up for herself. She is proud to be a woman.

You can decide what you want to do and that can be felt at home or at the workplace, or wherever, and is an important effect, you can say NO I don't want to do that.

3.6. Relationship to others

According to the informants, when the contact and sense of self was strengthened, the ability to relate to other people improved. In some of the BBAT exercises, the patients either worked with a partner or in a group. Group treatment was only practiced if the physical therapist thought that the patient had enough resources to be able to use a group session in a constructive way. In a group treatment, some may have difficulty to maintain contact/stability/relaxation and at the same time interact in relation to others. One of the informants told a story of how BBAT had helped a man to be able to touch and hug his son without getting a flashback experience that previously had prevented any bodily contact with his son.

I have found the partner exercise very useful, in this the patients improve in their relationships and in coordination and everything, it is important – their ability to connect to another human being.

A person with PTSD, who was attending a group with the aim to cope with flashbacks needed to have more individual treatment with BBAT before joining a group. When he felt safe, it was more meaningful to be in a group setting. Here they practice relating to others

One of my patients had the problem that touching other people led to a flashback experience, but after treatment he could have his child sitting on his lap and was able to embrace him and be a good father to him.

3.7. Daily living activities

The informants expressed that it was of great importance for the patients that the treatment should have a positive effect in their everyday life. The patient's knowledge of being able to help themselves by performing movements or body awareness exercises led to many positive effects such as improved use of energy, being able to relax in difficult situations, calming down, and improving sleep. It can be used in all daily activities, both in the treatment at a day care hospital, at work, or at home and when standing in a supermarket queue or taking the bus.

It is not just about doing the exercises; it carries over to the whole day for both patients and staff. I also do meal support with my patients who have an eating disorder and they say that now they are more present at the meal table. So, I enjoy doing BBAT.

I notice they need less energy during their everyday activities, so it is not so demanding to be in the world. Many patients use a lot of energy in trying to protect themselves and to avoid that which they cannot tolerate. Some patients can translate some of the grounding, standing and balancing to their daily work routines at the supermarket. When anxiety sets in they can return to their body and be more aware. Yes I am here now, this is what I have to do and can calm down again.This is what I hear and what they tell the others in the group and the doctor, it is really good.

BBAT experiences are possible to transfer to daily life situations and very meaningful. The symptoms may be worries, anxieties or tensions.To be able to handle the anxiety and to remain in contact with it and in that way work with exposure.

4. Discussion

4.1. Discussion of methods

All of the physiotherapists interviewed in the study used the body awareness method Basic Body Awareness Therapy (BBAT). In addition, a mixture of different methods in accordance with the specific needs of the patient were also used.

Data were collected from physiotherapists who were interested in the concept of body awareness and used BBAT actively in their daily work. They worked in different countries and in different settings and had a varying experience of working within the mental health area. This enabled the material to become extensive and rich. Encouraging a discussion between the participants and hereby facilitating the informants' reflections about their clinical experiences and the tacit knowledge guiding their way of using the method with their group of patients increased the depth of the data.

Credibility refers to the researchers' ability to capture the reality, including whether we understood the informants correctly. All the researchers are experienced in qualitative research and have a long-term understanding of BBAT theoretically. Two of the researchers have also been clinically involved doing BBAT with patients in different contexts. The researchers have chosen to work close to the transcribed interviews (e.g., using the informants' own words about their experiences of using BBAT in the clinical work with patients) in the analytic work and description of the results. On the other hand, because of the international context of data collection, the researchers have not had the opportunity to do a member checking. Triangulationing the analysis of data has only been performed by the use of the three physiotherapy researchers.

Dependability refers to the relationships between informants and researchers in terms of being interrelated and having had professional interaction with each other. In this study, one of the researchers had been a colleague to some of the informants. She was a former colleague to six of the informants. This may have influenced the data analysis. This clinician/researcher was asked to join in the analytic work after the data collection was finished. The aim of this was the added experience in the analytic phase of the study from a person who was both a clinician and a researcher. This was believed to add to the credibility and trustworthiness of the study. All the researchers had a preunderstanding of the topic in question, which influenced the way the questions were formulated, as well as the analytic process. However, the qualitative results were well grounded in all the collected data.

Transferability concerns how the knowledge obtained from this

study may be transferable to other contexts. The findings of a qualitative study are specific to a small number of individuals in a certain environment. It is very difficult to demonstrate that the findings and conclusions are applicable to other situations and populations. However, transferability deals with providing sufficient detail about the context of the study and to allow for the reader to be able to decide whether the results can be transferred to, or applicable in another context, e.g., other forms of body awareness settings, or work using other movement therapies. A rich presentation of the findings together with appropriate quotations will also enhance transferability. Transferability is difficult to evaluate by the researchers involved, as a qualitative study must be understood within the specific context of the geographical area in which the research was carried out. The results from this study included informants with a broad geographical base, but the number of participants was small (Shenton, 2004; Graneheim and Lundman, 2004).

5. Discussion of results

The category “Being in contact” and the subcategory “Stability and balance” are important aspects of working with BBAT. According to the informants, the BBAT treatment aimed to stimulate the sense of grounding by letting gravity work on the body and letting the weight act on the floor. When the ability to relate one's gravity to the floor was found, postural function was strengthened. This activated a natural upward postural response that aligned the body, both while sitting and while standing. During movements while sitting or standing, the vertical axis could be perceived and experienced as a better bodily balance. The weight transfers, control of body alignment and balance control gave the patient a basic feeling of bodily security. When lying down, letting go of tension and feeling the pull of gravity seemed to release bodily tension and free breathing. In the standing or sitting positions, the experience of being more grounded enabled the patients to be more relaxed, according to the informants, which is in line with the results of earlier research about balancing body tensions (Gyllensten et. al 2003, 2015, 2018, 2019). The experience of being more grounded and relaxed has previously been described as an aspect of strengthening the resources of the body ego or the bodily self (Gyllensten et. al 2003, 2015). Other researchers describe body awareness aspects as bodily self-consciousness (Blanke, 2012). The three components of bodily self-consciousness are, according to these theories: self-location (the experience of where one is in space); self-identification with the body (the experience of owning a body, or body ownership); and the first-person perspective (the experience that one perceives the world from inside oneself) (Aspell et al., 2012). The first aspect of self-awareness of being more secure in self-location could be found in what our informants experienced as an improved “stability and balance.”

According to the informants, the patients were able to learn how to cope better. The ability to decode sensations or symptoms and understand the meaning or message in these symptoms was not always easy. Sometimes, it was helpful to refocus from an area of pain to other sensations in the body. Yet, it could also be strenuous to expose oneself to situations that were associated with feelings of anxiety, shame, or threat. The informants, however, saw this as a very important step for their patients to regain health and flexibility in life.

According to the informants, the sense of self was also improved. This agrees with the findings of a randomized controlled trial on the effectiveness of BBAT for patients with anxiety and depression (Gyllensten et al 2003, 2009). The strengthened belief in one's own ability to take care of needs and tackle problems resulted in less use of psychiatric healthcare, less sick-leave, and a decrease in the number of disability pensions (Gyllensten et al., 2009). The informants in this study indicated that they dared to say yes or no, reflecting a change of attitude. It has previously been suggested that BBAT leads to a more from “within-myself” perspective” on the self and one's needs (Gyllensten et al., 2010). This is in accordance with the theories of bodily self-consciousness and the aspects of body awareness perceived as an intrabody experience. The authors point to the key feature of bodily self-consciousness as being of global character. The self-identification and first-person perspective comprising the unitary entity ("I") and perceiving the world from within oneself is dependent on the association of oneself as a single, whole bodily person, not as multiple separated body parts. Self-identification is described as dependent on the multisensory integration of somatosensory, visual, auditory, vestibular, visceral, and motor signals. Multisensory processing can also be described as the integration of sensory signals to be able to generate a coherent representation of the world and the body on the basis of the available sensory evidence (Tsakiris, 2017). Aspell and Blanke are anchored in research from the area of cognitive neuroscience and experimental psychology primarily involving subjects with different neurological phenomena (autoscopic phenomena) where the sense of the body is disrupted. These symptoms have a lot in common with the experiences that can be found in some of the patients with psychiatric disorders. These could include out-of-body experiences, feelings of disruption of the body, or experiences of dissociation between the body and the self (Aspell et al., 2012). According to Blanke (Blanke, 2012, pp.556), one of the most astonishing features of the human mind is the ability to have a conscious experience of the “I” as an intrabody experience. In physical therapy for mental health, strengthening the sense of "I" as an inside-body-experience is an essential aim of body awareness therapy and a very important clinical aspect. Working with movement and motor function in a relational perspective is, according to our informants, to reach and strengthen the experience of the bodily-self of the patients.

The ability to relate to other people in a satisfactory manner is very important, and there are theories in BBAT proposing this three-sided relationship, “the three-sided contact problem.” The theory focuses on the ability to relate to oneself, others, and reality as different aspects of the same problem (Gyllensten et al., 2015; Skjaerven et al., 2018). The informants in the present study pointed out the ability to relate to other people as something that can be practiced and trained in BBAT. Trusting and relating to other people is often difficult for patients with severe mental illness, and it is often part of their dysfunction. Practicing the ability to relate to oneself and to be in contact with oneself is often a starting point in BBAT. The level of challenge can be increased when the patients are required to do the same in a group context. Maintaining the acquired contact, relaxation or stability within one-self and at the same time being in contact with others is difficult and has to be subtly developed. This is one of the professional challenges for the physical therapist working in mental health that resembles an art form. It is a question of dosage, timing, alliance, and trust. If performed successfully, the patient will discover their own resources and dare try relating to other people. This is done first in a small group as practice for real-world relationships.

The informants considered that the ability to transfer the learned abilities to everyday life was of great clinical significance. Being able to carry the bodily contact, coping, stability, and relaxation in oneself outside the therapeutic room and into everyday life was of great importance. The informants expressed that being able to have a strategy for what to do when things were perceived as threatening was embedded in the work with BBAT. According to the World Health Organization, subgroup for Mental Health, the activity and participation aspects of treatments are factors that need

to be considered further in physiotherapy (WCPT, 2016). Turning help into self-help should be given high priority.

5.1. Limitations of the study

No member checking with the informants was performed and the triangulation was done only by the three researchers. This may have had an impact on the credibility of the study. One of the researchers was a former colleague to six of the informants. This may have influenced the data analysis and thereby the dependability of the study. The number of participants from the respective countries were relatively low. This may have impacted the transferablility to other contexts.

5.1.1. Future research

Working with movement, balance, stability, and physical activity in the form of BBAT was perceived to have positive effects in daily life, according to this study and needs to be further studied in relevant contexts internationally. In addition, research to implement the use of BBAT in mental health physical therapy needs to be performed.

6. Conclusion

The informants from 13 countries who were all working with Basic Body Awareness Therapy (BBAT) experienced that it worked mainly by helping the patients to be in better contact with their bodily self. “Stability and balance” was mentioned as one important aspect of the bodily self. Improved grounding, relaxation, and breathing were understood as a basis for establishing more contact with mental aspects, including anxiety. According to the informants, recognizing and decoding the “body language or bodily signals” may make it possible for the patients to change their coping strategies when encountering problems. BBAT was thought to improve the sense of self and lead to higher acceptance of oneself. The ability to relate to others was also reported to be an effect of the increased contact with oneself. The experience of being able to use and integrate the movements/exercises in daily activities and life was also highlighted by some informants.

Conflict of interest

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