Chapter 11

The Body in Movement: A Clinical Approach

Michel Probst and Jolien Diedens

Additional information is available at the end of the chapter

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Abstract

Physiotherapy or body-oriented therapy is often overlooked as an adjunctive treatment for patients with eating disorders (ED). However, the integration of physiotherapy is based on the physiotherapists' experience in both the body and the body in movement, two important issues integral to eating disorder pathology. From our clinical experience, physiotherapeutic techniques represent a potent clinical addition to available treatments. Patients with eating disorders have an intense fear of gaining weight and present a negative body experience. Excessive exercise and drive for activity or hyperactivity are considered to be a secondary symptom and are characterized by a voluntary increase in physical activity, a compulsive urge to move and by the dissociation of fatigue. Both characteristics are the two cornerstones for physiotherapy in children, adolescents, and adults in an inpatient or outpatient treatment. More concrete, the objectives for physiotherapy are (1) rebuilding of a realistic self-concept, (2) curbing hyperactivity, and (3) developing social skills. Physiotherapists have a wide array of skills that can be applied successfully in the treatment of anorexia nervosa (AN). The goal of this chapter is to present practical guidelines for physiotherapeutic management in eating disorder, more specific about mirror exercises, film images, and some additional individual or group exercises, recommendations based on more than 35 years of clinical experience.

Keywords: body image, physiotherapy, body-oriented therapy, mirror exercises, video confrontation

1. Introduction: body image and eating disorders

In the eating disorder pathology, body image disturbance is a central theme (see diagnostic criteria) [1] and distinguishes eating disorders from other psychological status that occasionally involve eating and weight abnormalities [2].

Bruch [3] was the first to recognize a group of three interrelated "perceptual and conceptual" disturbances in anorexia nervosa: (1) body image disturbances of delusional proportions;

(2) disturbance in perception or interoceptive disturbances such as an inability to accurately identify internal sensations such as hunger, satiety, or affective states; and (3) an overwhelming sense of personal ineffectiveness. The disturbance in body image of delusional proportions is described as follows: "the absence of concern about emaciation, even when advanced, and the vigor and stubbornness with which the often gruesome appearance is defended as normal and right and not too thin and as the only possible security against the dreaded fate of becoming illness" [2–4].

Since Bruch's description, a significant amount of literature on body image disturbances in eating disorders has been published over the last 50 years due to the relative new disorder and the demands of scientific evidence of the treatments. Her concept about body image is today integrated in the definition of body image proposed by Cash and Smolak [5] and which is today worldwide accepted.

Body image is a multidimensional concept with at least three aspects, including neurophysiologic, psychological, and behavioral. First, the neurophysiologic aspect refers to perceptual experiences as visual spatial, sensory judgments, physical sensations, body awareness, body recognition, physical appearance, and body size and shape. The psychological aspect refers to cognitive (thought process and thinking styles) and subjective experiences (feelings, emotions affect, and mood). A third behavioral component (avoidance and checking behavior) might actually be the result of neurophysiologic and psychological aspects [5–7].

The "perceptual aspect" refers to the degree to which the patient is not able to assess the own body size accurately. The most perplexing abnormality is the patient's apparent inability to recognize how thin the patient has become. In the literature, this phenomenon refers as a disturbed size awareness, that is, overestimation of some body parts (belly or thighs). Most of them recognize that they appear emaciated, but that further weight loss is a necessary condition to eliminate their protruding stomach. The cognitive and affective components of body image disturbance, without any obvious sign of perceptual mediators, refer to patients who react to their bodies with extreme forms of disparagement or occasionally aggrandizement for parts of their body. Patients with AN have a fear of ugliness and are forever concerned with their appearance, while denying the abnormalities of their starved bodies. In general, patients with ED perceive themselves as unrealistically big or fat and as out of proportion. They are proud of their emaciated bodies. The disturbed body experience is often expressed as a nonverbal message, a rejection of the body, a fear and a refusal to grow up. The behavioral component refers to the behavior as a consequence of the body image disturbance avoiding behavior such as mirrors, parties and activities, checking behavior, maladaptive physical activity, and excessive and compulsive (physical) activities [2, 4, 5, 7, 8].

Their experience with body weight and shape is distorted. Persons suffering from an ED evaluate their body in an unrealistic way. Even when underweight, they experience their body as normal or even too fat. They express a discrepancy between the way they see themselves and the way they see others. They are able to give an accurate estimate of another patient's body size while they do not realize, they look the same or even worse! They report inaccurate ideas about the consequences of food intake on their body structure. After a meal, they feel their stomach is "bulging" or their belly is "swelling." Most patients with ED nourish a negative

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attitude toward their physical appearance. They are constantly focusing, criticizing, hiding, or fighting their body. The dissatisfaction applies to body parts that are not related to weight (wide hips, short height, short legs). Patients develop their own standards. They do not accept that the inner part of their thighs touch each other in stand. There is sometimes a similarity with people suffering from "imagined ugliness" or body dysmorphic disorder or from physical or sexual abuse. The problem is that weight loss does not increase their satisfaction and their confidence at all. They tremble at the thought of being touched and become anxious with physical closeness in general [2, 4, 5, 7, 8].

The theory of lenses illustrates clearly the conflict within body experience. The unbiased, objective, or neutral lens or "how does the person really look" indicates reality. The internal lens or "how does the person see himself" and the ideal lens or "how would the person like to look" refer to the (dis-) satisfaction and the discrepancy between thoughts and feelings and reality [7]. The external lens or "how do others see me" reflects the concern of the patient about how other persons think or perceive the patient. The external lens refers to (social) anxiety. The more the four lenses diverge, the more problematic the self-perception is. The core problem resides in the absence of self-esteem and the negative self-perception, which is expressed in the negative body image [4, 7–9].

Changing the way, patients with AN experience their bodies should be considered a priority in the treatment of this disorder. According to Bruch [3], a realistic self-concept and the acceptance of the body are necessary for recovery. Vandereycken et al. [10] claimed that one of the causes for the failure of some methods of treatment lies in the neglect of these aspects of therapy. Other authors [11–13] pointed to the negative prognostic value of a distorted body experience.

In this chapter, we want to review therapeutic interventions that specifically focus on improving the body experience of AN patients. Therefore, changing the way, patients with eating disorders experience their bodies should Be considered as a priority in the treatment of this disorder [3, 10–11].

Patients with eating disorder tend to acquire total control over their own body, both physically (weight, food, hunger, fatigue) and mentally (perfectionism, asceticism). The fear as losing control is translated into a huge fear of gaining weight, even with seriously underweight [14]. Therapies focusing on the treatment of eating disorders should aim to change these negative body experiences. [9].

2. Body-oriented therapy (BOT) and the role of physiotherapy

Although physiotherapy is often overlooked as an adjunctive treatment for patients with eating disorders, physiotherapy has a unique role to play in the treatment of eating disorders. Physiotherapists have a knowledge about both the body and the moving body, two important issues integral to eating disorder pathology. They can use physical interventions to help patients overcome their symptoms and to accept their changing body shape. From our clinical experience, physiotherapeutic techniques represent a potent clinical addition to available

treatments of eating disorders. Since 1965, this physiotherapeutic approach is called in Belgium psychomotor therapy or body-oriented therapy, which is a specialty in physiotherapy [7, 9].

This specific approach includes exercises from physiotherapy and ideas of psychotherapy that focus on the body to improve psychic functioning. In this approach, patients are faced with primarily nonverbal experiences that can be discussed verbally later or elsewhere in treatment. This approach has been applied in clinical settings under different names and leaded by therapist with different education.

Literature [2, 7, 9, 10] suggested that BOT can influence the distorted body experience, the hyperactivity, and the fear of losing self-control [10]. Patients with eating disorders have an intense fear of gaining weight and present a negative body experience and a disturbed body perception (weight, circumference, and form). Excessive exercise and drive for activity or hyperactivity are considered to be a secondary symptom in the diagnostic of patients with eating disorders and are characterized by a voluntary increase in physical activity, a compulsive urge to move and by the dissociation of fatigue. These characteristics are the two cornerstones for physiotherapy in children, adolescents, and adults with eating disorders problem in an inpatient or outpatient treatment. Based on this previous study and on the specific behavior of eating disorders, three general objectives were formulated: (1) rebuilding a realistic self, (2) regulation of hyperactivity, impulses and tension, and (3) improvement of social interaction.

3. Treatment approaches

There are several ways to accomplish the above-mentioned objectives in physiotherapy. Group or individual therapy is possible. Physiotherapists have a wide array of skills that can be applied successfully in the treatment of patients with eating disorders. Different therapeutic interventions aimed at improving the body experience in patients with eating disorders can be used: postural training, relaxation training, mindfulness, tai chi and yoga, breathing exercises, physical activities, sensory awareness, and self-perception (mirror exercises and body awareness) (see **Figure 1**; **Table 1**) [2, 7, 9].

Not just doing exercise or performing activities are intrinsically therapeutic. The exercises are not only goals in themselves, but the patient's experience and inner perception play the central role. Movement is used as a therapeutic tool for stimulating the embodiment of the mind needing specific training and skills. The emphasis lies mainly on the acquisition of mental and physical proficiencies related to the body in motion and on supporting personal development to enrich the people in order to increase their independent functioning in society. The motor domain is employed as a gateway to ameliorate the social affective functioning of an individual. Within this approach, the physiotherapist creates a setting that favors the onset and the development of a process in the patient using their specific working methods in order to stimulate the patients to get in touch with their inner world [15].

By offering some wide range activities around the theme of " body in motion," patients are invited to come out of their comfort zone, to experience new things, thoughts (obsession, perfectionism, worrying), and many emotions (depressive feelings, fear, guilt, anger, stress, feelings of unease, estrangement, and dissatisfaction), and to get more in touch with their inner world. This allows them to gain a better insight into their own performance [2, 15].

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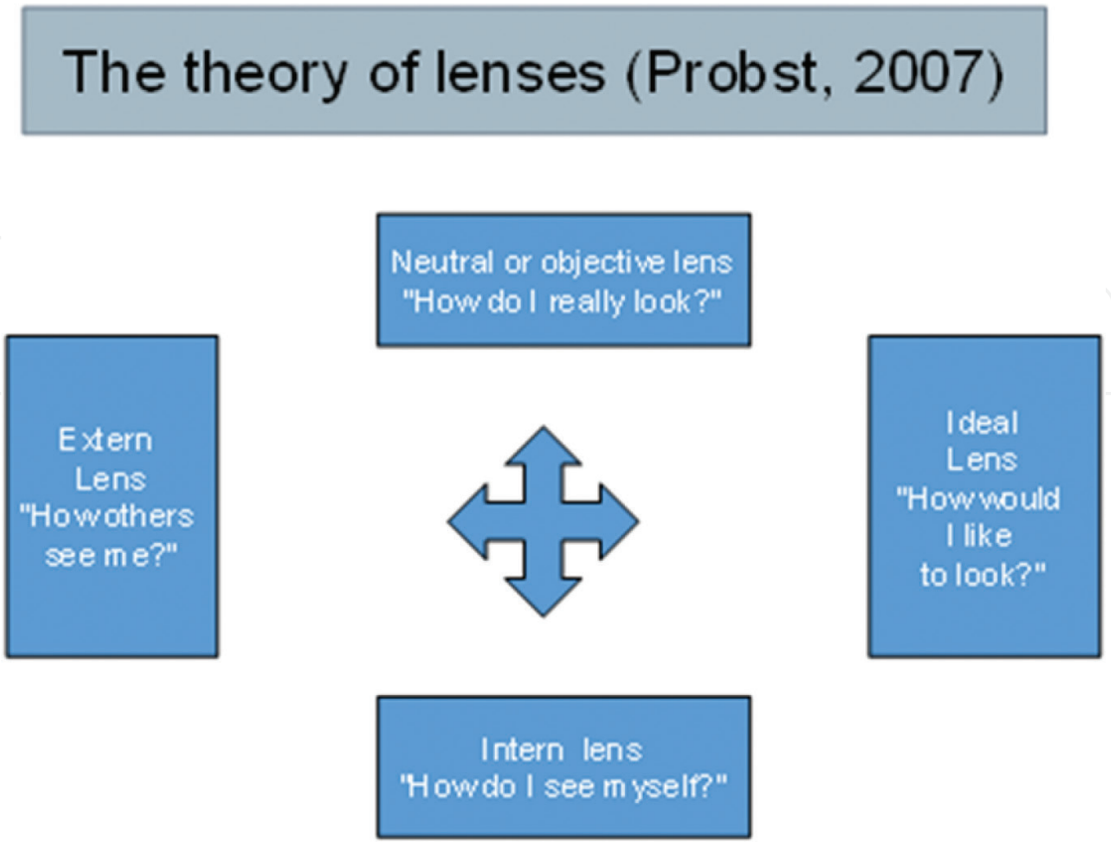

Figure 1. The theory of lenses.

The careful guidance and encouragement of the physiotherapist and the possibility to experience feelings in a safe environment allow the patient to develop behavior that he or she would not have developed otherwise. The underlying problems are not necessarily resolved, but the therapist tries improving his/her handling of problems. The patient shares his behavior, his feelings, and thoughts with the therapist and eventually with his peers. More emphasis is put on experiences, and how reactions to these experiences function as a dynamic power [15].

Throughout the physiotherapy intervention, an alternative frame of experiences can be made available. Experiencing that an alternative may exist will trigger new emotions and experiences, and a discrepancy between reality and the patient's perception of their reality will arise. The activities are aimed at learning, acquiring, training and/or practicing psychomotor, senso-motor, perceptual, cognitive, social, and emotional proficiencies. The following themes are taken into consideration: body and movement awareness, expressing and regulating emotions, augmenting the tolerance for frustration, refraining from impulsive behavior, improving the reality orientation, improving social interaction, learning to draw limits, strengthening self-confidence, improving body perception and self-perception, coping with emotionality, accepting responsibilities, dealing with fear of failure, developing self-reflection, exploring actual emotional and social life, and providing better insight into conscious inter- and intrapsychic conflicts [15].

It is obvious to present the patient a safe and structured framework, where everyone knows the rules and where the therapist is sufficiently informative about the therapeutic setting [2, 7, 9].

Physiotherapy intervention	Content and explanation
Postural exercises and postural awareness	A correct posture reduces physical symptoms, but also increases self-esteem; postural abnormality due to weakened muscles, which results in poor posture compensations (scoliosis, (]hyper-) kyphosis, lumbar (]hyper-) lordosis, scapula alata), and low back pain
Relaxation exercises	Relaxation reduces perceived stress and anxiety and the level of salivary cortisol. Relaxation techniques: progressive relaxation, autogenic training, yoga, mindfulness-oriented exercises, or biofeedback
Respiratory exercises	Respiratory exercises—especially those aimed at lowering respiration frequency, thereby amplifying abdominal respiration and lengthening expiration; the objective of breathing exercises is not simply to control respiration, but also to facilitate learning how to sense one's own body
Massage	The following forms of massage are used: relaxing and/or activating massage of the back and legs with or without instruments and passive mobilization of the limbs
Exercises targeting self-perception	Exercises targeting self-perception aim to amplify awareness of one's own body in its external appearance: mirror exercises, estimation techniques
Sensory awareness training	Sensory awareness training aims to discover the body through the senses in a nonthreatening manner. Awareness of touch Body boundary exploration, tactile awareness, body scanning ("trip around the body"), internal sensory exploration a "voyage into the body,"
Exercise, physical activity, sports, and games	Supervised exercise and physical activities such as fitness training resistance training, exercise, aerobics and callanetics, pilates, sports, and gymnastics

Table 1. Summary of therapy interventions.

The described picture of the body experience features highlights the perceptual, cognitive, affective, and behavioral aspects. It seems evident that the confrontation with their own body takes a crucial role in the treatment. Patients with eating disorders commonly criticize that they look fat viewing in the mirror [3, 6, 7]. The goal of this chapter is to present practical guidelines based on more than 35 years of clinical experience about two procedures namely the confrontation with mirrors and with life film images.

4. Mirror exercise

Mirrors play an important role in the life of the patient with eating disorders. Mirrors are to image what scales are to weight [16]. Some authors mention that the mirror is an illusion, one-half actual size. In fact, the size of one's reflection in a mirror is considerably smaller than one's real life body size [17]. Mirrors induce a self-centrality and show a greater awareness of one's own emotions and inner feelings. Mirrors have important effects. They make subjects more self-conscious, more critical, and more conforming. Mirror feedback can increase guilt, intensify self-dissatisfaction and affect mood, decrease the self-esteem, and increase conformity to the prevailing standard [16].

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Scientific and clinical evidence provides some indication to address mirror exercise in the treatment of eating disorders. The aim of the mirror exercises is to target body experience concerns, to learn to use the mirror in a different way and to deal with the mirror and the associated emotions in a constructive way, to become aware of their own body, to start a habituation process about their own body. Mirrors are seen as a therapeutic ally. Mirrors could be helpful in forming a more stable integrated mental representation, they could break through the denying and could provoke an intense reality testing [2, 4, 9, 16–23].

The mechanisms responsible for mirroring are not known. Most likely mirroring is due to a combination of perceptual, affective, cognitive, and physiologic components of body perception. There is evidence that body exposure leads to a reduction of overestimation [23, 24], negative cognitions [16, 21, 25, 26], and feelings of fear, uncertainty, and sadness [22] as well as to the activation of the autonomic and endocrine system in the hypothalamus. Regular confrontation with the body leads to a habituation and refers to diminished dissatisfaction and a reduced anxiety toward the body. This adaptation process would lead to a more adequate behavior and in some cases even to feelings of success.

Mirror behavior refers to three behaviors: an appropriate mirror behavior, the mirror avoidance or refusing to look in mirrors, and the mirror checking, that is, constantly judging their body shape or body parts. It reveals a deep need to inspect and control the body and body changes in a vain pursuit of a perfect body (narcissistic feature). Checking behavior could be an expression of low self-esteem, anxiety, or addictive behavior [4].

The study of Jansen et al. [25] emphasizes another important issue. In contrary to noneating symptomatic subjects, eating symptomatic participants focused more on their own "ugly" body parts. When high symptomatic and noneating symptomatic subjects look to other bodies, the patterns are reversed. High symptomatic subjects focused their attention on the beautiful parts of other bodies. Normal controls concentrated on the ugly parts of the other bodies. The hypothesis is that a change in the processing of information might be needed for body exposure [25].

Mirrors are a useful tool for transforming body image when constructively combined with the power of visualization [16], with cognitive behavioral therapy (CBT) [21, 25] and with empirically supported CBT exposure therapy and mindfulness-based approaches [27]. Delinsky and Wilson [27] found that mirror exposure was effective in increasing body image satisfaction, reducing body image avoidance, and body checking. Jansen et al. [25] mentioned also that mirror exercises are very efficient if they are combined with cognitive restructuring. Hilbert et al. [28] state that mirror exposure may be useful for improving the awareness of body-related cognitive errors as negative bias, unrealistic standards, and dichotomous thinking.

4.1. Recommendations for mirror exercise based on our clinical practice

Different ways are available to accomplish mirror exercises. Some basic recommendations are proposed based on our clinical experience. Offering a safe framework with respect for the privacy is fundamental. Before starting, detail information concerning the procedure and the expectations is explained and patient's attitude toward the mirror is collected. The therapist possesses a gradation of possibilities. In the rule, the exercise (see addendum)

takes about 30 min including an end-discussion and can be done in-group (with respect for everyone's privacy) or individually. Patients are invited to do the exercise in underwear. The therapist emphasizes the patient's responsibility during the exercise. The therapist looks to another way and refrains as much as possible from comments during the discussion. The frequency of the mirror exercise (i.e., twice a week) at several times (i.e., during the morning and in the afternoon; before and after the meals) develops a certain habituation effect.

In the first phase, the exercises are performed under the supervision of a therapist. In a latter phase, the patient can exercise alone or with a partner. In that phase, it is recommended to keep a mirror diary in which the frequency, the duration, the degree of fear before and after the exercise, and the feelings during the exercises are noted in order to improve the motivation. Using a hand mirror, body lotion, and background music are helpful tools [4].

The proposed mirror exercise consists of different steps. The first instruction is to look, to observe, and to describe, here and now, in a neutral, objective, respectful, mild, and curious manner their own body in the mirror. This instruction highlights that the purpose is not to criticize their own body or to compare with other bodies, but to increase their familiarity with one's own body. The patient stands in front of the mirror and learn to feel that he/she has the control over the body and not the negative feelings. The comparison between the mental picture and the image in the mirror is exercised by closing and after 30 s by opening the eyes. Later, the attention is aimed on possible changes and on patient's body parts that are attractive. Another instruction is to deal with different questions such as "who am I," "who do I think I am," "what do I do during my mirror exercises," "what are my wishes for the future," and "who do I want to be." At the end, the therapist invites the patient to congratulate him/herself [4].

From our clinical experience, there is a great support to implement mirror exercises in the treatment of eating disorder patients. Regular mirror confrontation together with a cognitive behavioral approach can lead to a decrease in body avoidance, checking, and dissatisfaction. After a time, the patients experience feelings of success and higher emotional responses than with other exercises. In our setting, mirror exercises are combined with a body-oriented therapy that also proposes other body-oriented exercises and within a multidimensional cognitive behavioral framework. The therapist must remain alert for possible negative impact of body exposure on the self-perception, such as negative fixations and a changing mood. A preceding interview and a debriefing after the mirror exercises could prevent these negative features [2, 4].

Patients in our inpatient treatment program retrospectively reported greatly valuing the mirror exercises that are incorporated into the body image treatment [2, 4, 9, 20]. Some AN and BN patients state that mirror exercises are one of the most important ingredients of our treatment program [4, 20]. These clinical impressions are supported by other authors [21–28].

5. Confrontation with film images

The use of film images (or video-recording) in the rehabilitation of patients with eating disorders is Not so common. However, since the idea launched by Yager et al. [29], the use of film

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images was included in the eating disorder program. The method has been applied systematically for several years in a greatly modified form of Yager's method [29]. The approach consists of making standardized film recordings of the patient at the start of the treatment and on discharge. The patient is dressed in bikini/underwear because clothes or bathing suits would hide parts of the body which are important for persons with eating disorders. The recording lasts about 10 min. General shots of the complete body in frontal, back, and profile positions in addition to close-ups of parts of the body are taken. In the psychomotor sessions during the first week of the treatment, the pictures are shown to the patient and to the group the patient belongs to. The week before discharge, the patient is confronted both with the admission and the final recording. After viewing the recordings, the patient is invite to express his/her thoughts and feelings. Then, the fellow patients in the group have the opportunity to express their feelings as well and ask questions. On discharge, the two recordings are compared. The therapist refrains from giving comment but notes the responses [30, 31].

This procedure has even if it seems unusual a lot of important advantages for the patients. The patients look to and evaluate the complete body as it is perceived by others. Therefore, patients Can not pretend that they did not know how they looked like, even if image fades fast in time. This is unquestionably the most important positive aspect. This procedure could also be used to affect the body perception in a therapeutic sense. The patient's perception of her condition usually improves and disease denial decreases [30, 31].

The clinical experience with more than 1300 patients has increasingly strengthened the impression that the reactions to the recording provide very important information for the therapy. The reactions can be cluster into following reactions of indifference, surprise, confusion, uncertainty and fear, dissatisfaction, disgust, denial, shame, insight, and satisfaction.

Viewing the pictures in a group offers also an advantage. Watching other patient's recordings (heteroconfrontation) is just as important as self-confrontation. The combination of self-confrontation and group confrontation can increase the motivation and enable correction of the body perception and facilitates the development of a realistic positive body image [31]. No negative fundamental side-effects were experienced with this confrontation. Of course, the therapist must carefully offer a safety framework where the patients are informed about what, when, where, and how prior to the session. When the procedure is integrated in a multidisciplinary therapeutic setting, the theoretical risks of fear, reduced self-esteem, and a deterioration of the symptoms can be dealt with [30, 31].

6. Additional exercises (individual/group)

6.1. The estimation of shapes by a rope

The goal of this exercise is to observe patients' reactions during the different exercises and to confront the patient little by little with their wrong ideas concerning their own body. The patient receives one rope of 120 cm. This rope is always lying on the floor. Participants are asked to estimate/to guess the size of some shapes; for example, estimation means that you try to make an appropriate judgment without measuring. More concrete: What do you think about the size of the proposed object? What will be the approximate size?

When all the questions are clarified, the therapist can start the exercise. The exercise consists of different tasks:

- Estimate the circumference of a neutral object for instance the base of a trash bin or a bottle, by using the rope.
- Estimate the girth/outline of your body at the level of the belly button, above spina iliaca anterior superior (waist). How do you estimate the size of your waist?
- Estimate the girth/outline of the body of the therapist at the same level.
- Estimate your ideal girth/outline at the same level.
- Measure your girth/outline of your body and place it on the floor.

The results are an illustration of how patients think and feel. After each task, the therapist compares the result of the estimation with the real measurement. It is advisable not to focus on the result but more on the message that is expressed by the estimation.

6.1.1. Guidelines for the therapist

In the rule, most of the patients are able to make more or less an appropriate estimation of neutral objects. It is the task of therapist to judge whether the estimation lies within the normal range. In exceptional situations, the therapist is confronted with a deviant estimation, mostly depending of the level of familiarity with the chosen object. The general conclusion of this first introduction exercise is that in general there is nothing wrong with our eyes and with our perception.

In the second task, all the patients will overestimate their size. It is important that therapist and patient(s) discuss the estimation. After the estimation, the therapist can verify whether the estimation corresponds with the real size. Therefore, the patient is standing and the therapist shows the estimated size on the body of the patient, afterward the therapist shows the real (measured) size. In all cases, the patient will overestimate their own size, sometimes even two times the real size. The conclusion is that the estimation of our own size is not objective, but it is influenced by our thoughts and feelings. It is acceptable that they are unsatisfied with their own body because they have an unrealistic idea about their own size.

In the third task, the patient will be confronted with the fact that they are unable to estimate their own body size, but in the rule, they are able to estimate the size of somebody else. This is for the patient an important finding. The message of this exercise is that you have to be more open for what others (parents, group members, friends, relatives, partner, etc.) say. The message of the second and third task is that patients have to be very careful to believe their own thoughts and feelings in regard of their body.

The fourth task is an additional, not required, task. The patient will be confronted with the fact that in most of the cases, the ideal image is larger than the real image. This can provoke some emotional reactions. It is shocking to see the large difference between the shape of the body that they have in their minds and their actual body.

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The last task is the most important one. The patient can measure their own size in standing position and make the real size on the floor. As therapist, it is important to observe the verbal and nonverbal reactions. This exercise provokes high emotional reactions. Some of the patients do not like to look to that size. Others do not believe that this is reality and measure again, sometimes five times. Some of them are confused, and others deny or minimize the results of the exercise.

The whole exercise is not a goal in itself; it is just a means to provoke some reactions and to discuss these reactions. Therefore, it is important to underline that after each task, patients are able to discuss, to express their thoughts and feelings, and to give comments. During the evaluation at the end of session, the exercise can be evaluated. The reactions represent the attitude of the patient about his/her body. The ideas elaborated during the rope exercise can be used during the mirror exercises.

6.2. A letter to your body or body part

The idea of writing a letter to your body originates in the narrative therapy. It is a very concrete task, where feelings and thoughts are expressed. The person is asked to write a letter from their own point of view. This process should promote empathy, understanding others, and flexibility. Writing letters allows that those who are involved can reflect on the problem in question without falling into communication. The process of writing is the most important. Afterward, everyone has the freedom to share the letters with the therapist and/or peers. It is important to explore what the exercise did with them. Writing can be a first step toward more depth and that is exactly what therapy is all about.

In this guided imagery exercises, the person is asked to write a letter to the body or to a loaded or unloaded body part. This is done in the same way as one would write a letter to a relative or friend. In a later phase, the same person will be asked to reread the letter and formulate a response from the body (or body part) addressed to the sender. Two examples from a 21-year-old patient with bulimia nervosa and from a 17-year-old patient with anorexia nervosa illustrate this exercise (see Boxes 1 and 2).

6.3. The exercise “middle point”

This is a group exercise. Patients are sitting close to each other in a circle. The therapist asks whether they feel comfortable. The awareness of feeling comfortable is being explored. After this exploration, the therapist explains the exercise: The patients are invited one by one to come in the middle of the group during 60 s without talking. It is the creativity of the patient to fill in the minute. The therapist observes the patients and gives the patient after each attempt the possibility to express their own experiences and feelings; the group members are also allowed to ask questions.

The focus of the exercise lies in “how to cope with stress, with low self-esteem, with attention (to be in the middle point), with the idea that others are looking (see and be seen).

Body awareness, communication, and relational aspects are other important items. Patients are invited and not obliged to execute the exercise. Even if some patients do not take the opportu-

nity to perform the exercise, they will be confronted with a lot of emotions. The execution of the exercise is free; there is nothing wrong or good. Most of the time it shows how a patient thinks and feels. The focus lies on the exploration of the awareness of oneself in relation to others.

Dearest Belly

When I look at my body, you are the part that I hate the most. I don't know why you're so important in my life. You decide who I am and how I feel. It's just like you encourage me every day, and after every meal, to vomit. I sometimes think you're so fat! Why can't you just stay thin? I hate to be confronted with you day after day. Because I hate you so, you obstruct a part of my healing. Why do I have the feeling that everything I eat is stored in my belly? There is not an hour that goes by without thinking of you. I don't want this anymore. I want to go on, whether or not you want to help me out. I won't let you live my life, but from now on I take matters into my own hands. I was a happy woman and I still have everything to be that happy woman again. You can't take that away from me. You're a part of me that will always be difficult for me, but gradually I will try to accept you. Give me some time and I really hope that we can be buddies for life in the future. What do you think?

Love Bianca.

Dear Bianca,

Why do you worry so much about your belly? I'm just a body part, just like any other. I don't want you to worry about me. Everyone has a belly. It's normal that your stomach isn't very tight and you have a full feeling after your meals. A belly has its own shape, but that is typically female. You should be happy that you look so beautiful. Accept me as I am and you'll see that I won't change so much. Instead of beating or pinching me, try to give me some extra attention sometimes by rubbing me with a body lotion. I really like.

As you write in your letter, you were once a very happy woman. You can still be that. Do not worry about how you want me to be, but accept me as I am. Once you stop worrying about me, we can be good friends. I would love to see you happy again in the near future. Didn't I hear you talking to your boyfriend about getting babies? I'd be honored to feel your baby inside me. Think about that. If you want children, you have to let go and accept me as I am!

I know you can, and that you will soon be the happy girl who you were before. We continue working on our friendship.

Greetings

Your Belly

Box 1. Letter from a 21-year-old patient Bianca with bulimia nervosa.

At the end of the session, the link between the exercise within a therapeutic session and the outside world needs to be underlined and elaborated. There a lot of alternatives possible. The

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Dear Belly,

Just before I was anorexic, you were still very common. I could walk around in bikini in the summer without any problem.

But 2 years ago everything became quite different. I didn't expose you, I didn't dare to walk around anymore. But still I did it and others started to gaze at me. I was proud of this, because you were skinny and they were thick. You are a very important body part for me, because you decide how I feel for the rest of the day. Sometimes you seem thicker and that scares me. Sometimes you seem skinny and that still makes me proud. I'm not going to lie about that. Ideally I would keep you as you are now. You give me some kind of security, a feeling that I'm worth it.

When I look at the future, I'm scared. I'm afraid of what will happen if I need to gain weight and you will return "normal?" I don't want to be normal. I want to be different from the others, I want to stand out from the others. And you help me with this. I don't want to give up on you. Not yet … now. But I realize that I'll have to, I want to continue. But then I have to give up on you and I have seen you like my god recent years. What now? I don't know anymore. It's all so confusing. Who should I listen to? The angel or the devil? The eternal dilemma: I think white or black. It would better be … gray.

But the essential thing is that I do not know how to deal with this situation. At the moment I'm not sure, but one thing is certain, I would like to be proud and happy …

So I think that I should taper the obsessive attention that I give you. Quietly, and it will not be easy. I realize that it will be hard, because it is similar to rehabilitation from drugs or alcohol. A dangerous addiction that is difficult to combat. I hope I can go on and can accept you in the end as you will be.

Big Kiss,

Sonia.

Dearest Sonia,

Since about 2 years I've been one of the most important things in your life. You've done me a lot of deficit by eating less. I often longed to eat, but that you did not give me. I know you're proud of me because I'm flat but that is a wrong idea. You'd better gain some weight and be happier than to stay lean and be unhappy. Yet I know it won't be easy for you. I will never say that. But think of all the people who believe in you and want to help you. You have cheated on them for years and yet they continue to support you. Isn't that more important to you than me, a body part? You say you want to be different from the others. Realize that you are unique because of who you are and not for what you do. Keep on fighting.

Big hug,

Your Belly

Box 2. Letter from a 17-year-old patient Sonia with anorexia nervosa.

therapist can manipulate the height (sitting on the floor or on a chair or in a standing position) or the distance between the participants.

6.4. The labyrinth

The labyrinth is a sail divided in 100 equal squares. The players have to follow an unknown route mapped in advance by the therapist. This route departs from one side and will revert to the other side. The route can take any form. The rules can be adapted to the players but need to be explained before the start. During the execution of the exercise, the therapist can make an appointment with the players not to speak, write, and establish codes, neither on the field nor outside. Only one person can be present simultaneously in the labyrinth. The therapist gives after each step the message "just go on" or "wrong step." Each player can make two wrong steps. After two wrong steps, the player needs to go back the way out. Another player takes the place till he makes two wrong steps. The game is over when all group members reach the other side. Different adaptations are possible in function of the group composition.

This exercise tests memory, demands attention, and develops a problem-solving strategy. Before and during the game, the patients could be confronted with anxiety, with fear to fail, with pressure. During the exercise, other group members are observing the person trying to find the way out. How does the person cope with seen and be seen? How does one feel when one has a black out in the middle of the labyrinth? Depending on the rules, It is also a good exercise in communication. This exercise has not only a cognitive, or emotional aspect but also a symbolic dimension that can be discussed during the evaluation. Life is a labyrinth, sometimes one has to take risks. It is much more difficult to take decisions when one is in the middle of the problem than when one look from outside to the problem. Sometimes to solve a problem one need to accept help, together it is easier to face problems. Listen to others is necessary. Persons have to believe in themselves. If one does it alone, one will make the same mistake.

7. Epilogue

The literature about the recovering process in eating disorders assesses rarely the patient's opinion and experience. However, the exploration of patients' subjective remarks and experiences of the patients with this approach can provide important indications. Therefore, the patients were interviewed at discharge [2, 4, 20, 32, 33]. One of the topics was "Do patients with eating disorders benefit from physiotherapy?"

¨"I just want to add that psychomotor therapy has helped me a lot."

¨"I want to thank the psychomotor therapist for his help. He taught me a lot. He often had to exhort me, but he made me look at myself in a different manner."

¨"I think psychomotor therapy was not always fun. The tasks were always difficult, but I learned a lot by executing them."

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¨"It doesn't affect me having to say goodbye. Through psychomotor therapy the psychomotor therapist made me feel more confident and now I dare a lot more. I thank him for his patience and the interest he showed in me."

"For me psychomotor therapy was often a difficult and confronting therapy, but it did help me a lot to get where I am now…"

"I have the feeling that the psychomotor therapy helped me on the way of a complete acceptance of myself…"

"Sometimes the nature of the tasks we had to carry out surprised me but afterwards I always thought I had learned a lot."

¨"I find it difficult to linger over myself. But psychomotor therapy helped me in this. I feel I can be less resistant to change."

¨"The psychomotor therapy was not the easiest therapy for me but the psychomotor therapist helped me through it. There were even moments when I could enjoy it. My body is no longer a necessary evil but a team-mate I have to take into account…"

These statements are in the line of earlier research [32] but need to be interpreted scrupulously. What is the value of these statements? How sustainable are they? They were collected by interview upon discharge, expressed in the presence of the therapist and are perhaps influenced by the "hello-good-bye effect."

These qualitative remarks completed with more objective evaluations and observations, and remarks by other team members give some indications about the value of psychomotor therapy for certain patients. At least, a final remark with respect to the changes in body experience after treatment has to be made. When we compare our results 1 year after admission with the data of normal subjects, we see that eating disorder patients still have a more negative body experience. But can one expect body experience to change so quickly and is it realistic to expect "normalization" anyway? How many eating disorder patients will not retain a special relationship to their bodies throughout their lives? [2, 4, 7, 32, 34, 35].

At least, a final remark with respect to the changes in body experience after treatment has to be made. The comparison of the results of 1-year follow-up with the data of nonclinical subjects revealed that eating disorder patients still have a more negative body experience. Is it realistic to expect a "normalization?" The development of body experience is a process. Can such a change be supposed so quickly? The most of patients with eating disorder will throughout their lives retain a special relationship to their bodies [2, 4, 7, 32, 34, 35].

BOT is perceived as an effective form of therapy as patients encounter improvements in self-awareness, both physically and mentally. A closer contact with the own body, a more positive body experience, insight in a disturbed body image and distorted way of thinking, and improved self-esteem arise as a result of BOT and contribute to the process of accepting the own body. The role of the therapist, the presence of peers, one's own motivation and openness, and the time aspect are considered as key elements of BOT. These results should be targeted in future studies with larger sample sizes.

Appendix: Mindful mirror exposure

Welcome at this mirror exposure. I invite you to stand in front of the mirror and to prepare yourself for this mirror exposure.

Besides that, I invite you to participate in this exercise while wearing only your underwear. The reason for this, our clothes hide our most important body parts.

The intention of this exposure is to look at your own body in a mild, curious, non-judging way. But most of all, to look at your body in a respectful way. The goal is to become more familiar with your own body.

So try to look in a neutral and objective way at yourself in the mirror. It is not the aim to criticize yourself, nor to compare, but above all to look at your body.

Watch your posture. During the mirror exercise you can move or touch yourself. Try to pay attention to your posture and take a proud posture: Stand straight up, knees stretched, shoulders slightly to the back, head up and a smile on your face. Do you notice any difference?

Because you probably will be distracted to some specific parts of your body. We will systematically run over the different body parts journey around the body).

We will start with:

The head and the face

- Look at your hair specifically take a look at the color, length,…, of your hair
- Look at your forehead, eyebrows. Pull your eyebrows up or frown and feel the tension in your forehead
- Look at your eyes with eyelashes, eyelids, color of your eyes, and your appearance
- Look at your nose including nose bridge, nostrils, and naris
- Look at your mouth: lips, teeth, and corners of your mouth
- Look at your chin, cheekbones
- Look at your cheeks, are they little bit pale or are they rose-tinted?
- Look at your ears with your earlobes and auricles.

Now look at the global image of your head and face.

Further we look at the neck muscles. If you turn your head to the left and the right, you can feel the tension in those muscles of your neck.

Further down are the clavicles, with behind the shoulder muscles. When you move your shoulders forward, you accentuate your collarbones. When you shrug, you feel the tension in your shoulder muscles.

Then focus on your right shoulder, right upper arm with, among other things, at the front side of your arm the biceps (arm bender) and backside of your arm the triceps (arm extensor).

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I invite you to bend and stretch the muscles in your upper arm.

Relax your arm now and feel the relaxation, and notice especially the difference between tension and relaxation.

Focus your attention now at:

- Elbow joint
- Forearm
- Wrist and hand
- The back of your hand
- The hand palm and five fingers starting with the thumb, forefinger, middle finger, ring finger, and little finger. Every finger has three little bones except the thumb that only has two of them. Note that all of the fingers are different
- When you move your finger, you can see the tendons of the finger extensors
- Now we will turn our hand and focus our attention toward the palm of the hand and the thumb thenar. The thenar is a collection of muscles that make the specific movements of the thumb possible. I invite you to make a fist and feel the tension in your hand. Relax your hand now and feel the relaxation
- Notice especially the difference between tension and relaxation

Then look at your whole right arm.

It goes without saying that what we have did at the right side we will also do for our left side.

So focus at your left shoulder, left upper arm with the biceps or triceps. I invite you to bend and stretch the muscles in your upper arm.

Relax your arm now and feel the relaxation, and notice especially the difference between the tension and relaxation.

If you recognize you are distracted by body parts which concern you, I invite you to get your concentration back and to follow again. Focus now at your sternum. Together with your ribs it forms your thorax. The thorax protects some vital organs, such as your heart and two lungs. By deep breathing in and out, you notice a change in the size of your chest. I invite you to breathe in and out deeply and perceive this change.

On top of your ribs you see your pectoral muscles and on top of them you have your both breasts.

Beneath your breast area you find your abdominal area with abdominal muscles, umbilicus and at both sides the loin.

Notice that your belly goes parallel up and down with your breathing.

May I ask you to put both hands on your abdomen and examine how your hands move along parallel with your breathing.

How do you feel this?

How do you experience this?

Then focus on the right hip and the gluteal muscles, of which we have three. Namely: the biggest, the middle one and the smallest gluteal muscle. Those muscles ensure that you can stand on one leg. I invite you to lift you left leg once to feel the tension in your right buttock. Relax your back and feel the difference between tension and relaxation.

So, we will focus now at the right upper leg with at the front side the quadriceps (knee extensors) and at the rear side the hamstrings.

If you pull your knee back, you can feel the tension in your knee extensors. Relax and feel the difference between tension and relaxation. Lower is the right knee, with the patella at the front and at the back of the knee the popliteal.

Then we have the right lower leg with your shin-bone and splint-bone and your calf muscles that ends in your Achilles tendon. The calf muscles ensure that you can stand on the tips of your toes. I invite you to go to stand once on your toes and feel the tension in your lower legs. Lower your heel and stand with your whole feet at the ground.

- Notice the difference between tension and relaxation.

We also come to the right ankle, heel, foot, dorsum of foot, toes and phalanges, but which are small.

If you hang your toes, you can observe the tendons of your toe extensors.

It goes without saying that what we have at the right, we also have at the left: the left hip with the gluteal muscles, of which we have three. Namely the biggest, middle and small gluteal muscle. Those muscles make sure that you can stand on one leg. I invite you once you lift right leg to feel the tension in your left buttock. Relax your back and feel the difference between tension and relaxation.

So, we will focus now at the right upper leg with at the front side the quadriceps (knee extensors) and at the rear side the hamstrings. If you pull your knee back, you can feel the tension in your knee extensors. Relax and feel the difference between tension and relaxation.

Lower is the right knee, with the patella at the front and at the back of the knee the popliteal.

Then we have the left lower leg with your shin-bone and splint-bone and your calf muscles that ends in your Achilles tendon. The calf muscles ensure that you can stand on the tips of your toes. I invite you to go to stand once on your toes and feel the tension in your lower legs.

Lower your heel and stand with your whole feet at the ground.

Notice the difference between tension and relaxation.

Now we also come to the left ankle, heel, foot, dorsum of foot, toes and phalanges, but which are small.

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If you hang your toes, you can observe the tendons of your toe extensors.

And so we come to the end of the journey around our body.

Now we look back to our body at all. In a gentle, curious, not-judgmental but especially respectful way. Once again mind your proud posture.

Look to the whole image of your body

- Turn 90° to the right and look at your body in profile (10–15 s)
- Turn again 90° to the right and look over your shoulders to the backside of your body
- Turn 90° to the right and look at your body in profile
- Turn 90° to the right: frontal
- Turn for one last time 90° to the right, and now you're standing again in front of the mirror.

I invite you to close your eyes and make a mental image of your body as you saw just now in the mirror. So try to make a mental picture of your body. This is not an easy task and it requires some effort.

(After 15–20 s)

Open your eyes and see or your mental image corresponds with the image you see in the mirror. What are similarities? What are the differences?

Close your eyes again and try again to make a mental image of your body. Open your eyes and check or your mental image corresponds with your mirror image.

Look back at your whole body and try to answer the following three questions.

- Who am I? Or who do I think am?
- What am I doing? Am I honest towards myself if I reply on this? Do I not make a fool of myself?
- Where do I want to go? Who I would like to be? Where do I stand for?

Try to search for one positive element of your body. It does not have to be a big part of your body; it can be just a little detail. Also try to motivate why you experience it as positive. Try to find another element then the last time/times when you did mirror exercises.

Look back at your whole body and see or something has been changed since your last mirror exposure.

At the end of the mirror exercises it is important to congratulate yourself for the courage and effort that was needed to successfully complete the exercise or to convince yourself that you are worth it. By standing straight up, look deeply into your own eyes and say loud and with conviction: "I'm worth it."

With this final sentence we finish the mirror exercise. I invite you to dress up again. Than together we can exchange views.

Author details

Michel Probst* and Jolien Diedens

*Address all correspondence to: michel.probst@kuleuven.be

Department of Rehabilitation Sciences and Physiotherapy at the Catholic University of Leuven, KU Leuven, Belgium

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