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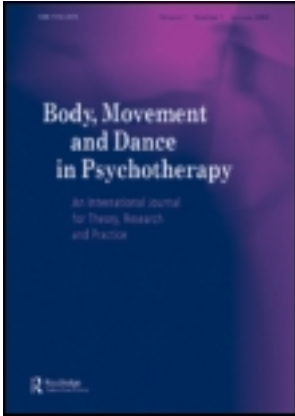
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Eating disorder behaviours can be seen as self-destructive behaviours to a great extent related to inhibited anger expression. However, a treatment protocol targeted at anger and aggression in these disorders is lacking. This paper describes a psychomotor therapy (PMT) model as a body-oriented method to help patients with eating disorders to cope with anger and aggression. They learn to see aggression as a positive, relational, body-felt experience, and to control anger expression at the right time with appropriate intensity. Our clinical experience indicates that PMT can accelerate the overall treatment process by triggering hidden feelings and thoughts and by developing expression skills. This article discusses PMT principles of aggression regulation and the methodological procedures of the intervention. Randomised controlled research is needed to validate clinical experiences.

Keywords: aggression; anger; body-oriented therapy; eating disorders; emotion regulation; psychomotor therapy

Introduction

Eating disorders are severe mental disorders with high mortality rates (Arcelus, Mitchell, Wales, & Nielsen, 2011; Hoek, 2006; Smink, Van Hoeken, & Hoek, 2012). The lifetime prevalence of eating disorders is estimated at 5% among females (Hoek, 2006; Keski-Rahkonen et al., 2007, 2009; Treasure, Claudino, & Zucker, 2010). Eating disorders do occur among males, but the prevalence is much lower (Raevuori et al., 2009). Biological, sociocultural and interpersonal factors contribute to illness onset and persistence (Hoek et al., 2005; Treasure et al., 2010).

Recent studies indicate that anger is the most significant underlying emotion contributing to disordered eating (Engel et al., 2007; Fox & Power, 2009; Harrison, Sullivan, Tchanturia, & Treasure, 2010; Ioannou & Fox, 2009; Quinton & Wagner,

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2005). Anger and aggressiveness are found to be associated with several eating disorder subtypes, severity of eating disorder symptoms, comorbidity, personality traits, impulsivity, altered biochemical functioning, endocrinological dysfunction and poorer treatment outcome (Krug et al., 2008).

In their review, Truglia et al. (2006) found that anorectic patients tend to suppress feelings of anger or direct it towards themselves. Patients with bulimia often feel anger directed towards others or towards objects. In eating disorders, aggressiveness is mostly directed at the self in an attempt to control the body and regulate emotions and as a means to confirm one's own fragile identity (Truglia et al., 2006). Silencing the self and self-sacrifice are related to dissatisfaction with one's body, which notion supports the hypothesis that unexpressed feelings may be redirected to the body (Zaitsoff, Geller, & Sriameswaran, 2002).

Truglia et al. (2006) consider behaviours such as vomiting and misuse of laxatives or diuretics to be self-injurious behaviours; these can be regarded as aggressive behaviours, albeit self-directed. Patients can use disordered eating to avoid or inhibit painful affect (Harrison, Sullivan, Tchanturia, & Treasure, 2009), but the price is high in terms of harmful behaviour directed at the self. Non-suicidal self-injury is quite common in eating disorders (Claes, Soenens, Vansteenkiste, & Vandereycken, 2012). Even though the self-injury is nominally non-suicidal, patients incur high mortality risks (Hoek, 2006).

The role of anger problems in the aetiology of eating disorders is undisputed, but official guidelines do not focus on aggression regulation. There is a lack of research on how to approach anger and aggression in treatment (Fassino, Abate-Daga, Pieró, & Rovera, 2002; Krug et al., 2008; Miotto et al., 2003; Truglia et al., 2006). Although suggestions have been made to apply elements of existing cognitive-behavioural approaches, a specific intervention protocol targeted at aggression is missing. Recently, Italian researchers shed light on anger treatment by investigating the effectiveness of an emotion-focused day hospital treatment which included bimonthly exercises in breaking objects, using a punching ball, and participating in psychodramas focusing on aggressive relationships. A decrease in the degree of control over anger seems to relate to clinical improvement (Abate-Daga et al., 2012).

Body-oriented psychotherapy can be of specific use in aggression regulation because aggression is a body phenomenon. As we present in this paper, body work can be used to trigger physiological responses, feelings, thoughts and images associated with anger, which can then be addressed therapeutically.

Recognising that anger is a key feature of eating disorders, the Groningen (Lentis) Center for Mental Health in the north of the Netherlands implemented a therapy module to help patients with eating disorders better understand and cope with the multifaceted anger and aggression issues which often underlie eating disorders. It is based on psychomotor therapy (PMT) and has been used in clinical practice for over 10 years to treat aggression regulation in eating disorders.

We first describe the general approach of the PMT aggression regulation module. The subsequent section describes the basic principles of the module in relation to eating disorders. The final section describes body exercises used in clinical practice, including some clinical case vignettes.

Psychomotor therapy: a body-oriented approach to aggression regulation

PMT is a body and movement-oriented therapy much used in mental health care in the Netherlands and Belgium since ± 1965. It uses body awareness and physical activities to help patients to improve their understanding of their emotions and to learn to redirect or control their expression. PMT in the context of psychotherapy is basically an eclectic therapy integrating psychodynamic, client-centred, as well as cognitive-behavioural approaches, extended by offering patients the opportunity to experience and practice new behaviours directly and nonverbally. In the Netherlands, PMT has become well established in various fields of health care as a clinical approach for regulating aggressive impulses, for example, for the treatment of personality disorders (Kuin, 2005). Our PMT aggression regulation module for patients with eating disorders is built on this tradition. The body-felt 'urge to act' inherent in aggression finds an outlet in non-verbal exercises. These exercises enable hidden needs, feelings or skills to be discovered and verbalised. Patients have the opportunity to practice verbal and non-verbal expression at the right time and with appropriate intensity. The module is meant to complement the total eating disorder treatment process.

Cognitive-behavioural therapy (CBT) is the most common approach to anger management and appears to be effective for reducing anger (Beck & Fernandez, 1998). CBT programmes are usually focused on learning to keep one's temper, whereas internalising eating disordered patients need just the opposite, that is, to let go of anger-related feelings and thoughts. They need techniques that help them express rather than reduce anger. For these patients, PMT can provide an essential arena to experience different forms of aggressive behaviour in a safe and supportive environment. By using body language and by interacting with others, patients begin to develop a new personal expression repertoire.

PMT principles of aggression regulation

Three interrelated principles underlie an effective aggression regulation strategy in PMT:

1. The positive meaning of anger and aggression;
2. An 'in relation to' approach to anger and the body and
3. Responsible use of the punching bag.

The positive meaning of anger and aggression

In our clinical work, we find that patients usually equate aggression and violence. They relate anger to feeling frustrated, discouraged, irritated, furious, inadequate, resentful, jealous and rebellious. Such negative connotations make patients oversuppress anger out of shame, guilt, fear or taboo, which in turn may lead to passive aggressiveness, anger outbursts and self-injurious behaviours. Classifying emotions as bad or wrong and not accepting secondary responses such as shame or fear may increase anger avoidance strategies in anorexia nervosa (Harrison et al., 2009). According to theorists on emotion regulation, the important question is not whether emotions are good or bad, but whether the way that they are expressed is helpful or unhelpful in a particular context (Gross & John, 2002).

An important purpose of aggression regulation in PMT is for patients to reappraise anger and use it positively in goal-directed actions. Negative aggression is related to violence and hostility. Positive aggression is in our view characterised by appropriate timing and intensity, that is, befitting the actual situation. It means stepping forward and confronting internal or external threats, such as painful memories, the fear of losing control, critical inner voices or the disapproval of others.

The silencing of needs and anger is crucial to the development of eating disordered pathology. Learning to use anger effectively and productively is both healthy and empowering (Farinon, 1998; Striegel-Moore, 1994). Anger-in strategies, which rely on the inhibition of aggression, need to be replaced by anger-out strategies which involve deliberately aggressive behaviours. Relational skills represent a relevant target in treatment, as self-directedness and cooperativeness extensively relate to anger and psychopathology in bulimia nervosa (Amianto et al., 2012). To support the need for anger-out strategies, we propose to no longer consider prosocial behaviours and aggressive behaviours as opposites, but to see them both in a combined positive alliance. Prosocial coping and aggressive (not antisocial) coping are found to be effective strategies in stressful situations, and result in better emotional outcomes, more so than rugged individualism (Monnier, Hobfoll, Dunahoo, Hulsizer, & Johnson, 1998). The challenge is not only to cope with anger in an open way, but to use anger itself as a useful coping strategy. Anger is not just regulated, it regulates. In learning to deal with aggression, patients learn to use prosocial aggressive action as a coping strategy.

An 'in relation to' approach to anger and the body

In our approach, anger is more than an emotion 'inside-the-body' that needs to be mastered. Roffman (2004) is justifiably critical about approaching anger as a thing-to-be-managed as if it were a substance under pressure awaiting discharge. In his phenomenological view, individuals with anger problems should learn to situate the experience of anger ecologically, within the larger context of who they are as persons and who they are in relation to others. This 'in relation to approach' resembles the relational approach of body expression in PMT, that is, in awareness of the significance of present interactions and past experiences 'remembered' by the body.

For eating disordered patients, the body seems to be an object of destruction. Although internalising patients are known to 'silence the self' (Farinon, 1998), they are in fact also 'silencing the body' by reducing themselves to a rational executive system in control of an irrational, emotional body. In PMT, the patient and therapist share responsibility for dealing with disturbing cognitions and feelings that interfere with healthy efforts to regain the 'relational body,' that is, the body as a subject interacting within a meaningful network of relationships.

Responsible use of the punching bag

The first desire of many patients is to make aggression disappear by hitting or shouting. However, in line with the relational approach discussed earlier, to express anger does not mean 'to get rid of' aggression by using the body as a mechanical instrument. Just physically hitting a bag is not a solution, just as venting anger on

another person does not solve a problem. Contrary to the popular opinion, research shows that hitting a bag with a baseball bat offers no cathartic release but can even cause an increase in aggressive behaviour (Bushman, Baumeister, & Stack, 1999). Nevertheless, it is too easy to rule out the use of the bat and the punching bag. These kinds of tools are of therapeutic value precisely because they offer the possibility of triggering aggression, which then needs to be relationally addressed in treatment, preferably in PMT. Just as anger is not intrinsically bad, hitting the punching bag is not bad in and of itself. A biomechanical approach needs to be replaced by a relational approach of body-felt anger expression, including the responsible use of a punching bag.

Intervention: the PMT aggression regulation module

This section first describes the starting points of the PMT aggression regulation module, then the concepts and setup of four techniques of the module. Several examples from clinical practice are presented.

The PMT aggression regulation module consists of six weekly 1-h sessions with two patients and one therapist. The sessions are held in a large room with a variety of props, including a punching bag, ropes, large blocks, etc (Figure 1).

Working with two patients increases the possibilities for interaction while at the same time enabling sufficient individual attention. The participants are supportive witnesses of each other and enable peer-to-peer recognition.

The experience of body-oriented techniques may create lasting impressions and therefore need proper guidance for positive outcome. The exercises are timed according to the patient's receptivity and stress tolerance. The therapist acknowledges the patient's fears of losing control, losing contact or feeling empty or frustrated. A flexible approach within a solid therapeutic alliance allows the therapist to closely track the patient.

Educating patients about the basic principles of aggression regulation is part of the intervention. Generally, in the beginning neither patients nor most therapists



Figure 1. Boxing bag.

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regard eating disorders as an aggression problem. But the relationship between aggression and the eating disorder is easy to demonstrate in terms of self-directed violent thoughts and behaviours. We discuss four approaches to treating aggression regulation with the use of body-oriented techniques:

1. The balance between anger-out and anger-in;
2. The aggression thermometer;
3. The controlled approach exercise and
4. The aggression street.

The balance between anger-out and anger-in

The first visible mechanism to regulate anger-in and anger-out is provided by the layout of the therapy room. The therapy room is a kind of laboratory to experiment with new behaviours.

To explore control over anger-in and anger-out, the room can be divided into two parts by a rope which separates the functions practised in each half of the room (Kuin, 2005).

The function of one side of the room is to increase tension by stimulating body expression. A wide range of PMT activities can be used to trigger body signals and awareness of hidden feelings and forbidden thoughts related to anger experiences. Exercising the body and voice helps to develop recognition and expression skills. Basic movements such as hitting, pushing, throwing and pulling can be performed with the use of props such as gloves, sticks, baseball bats, balls, ropes, pillows and drums. These objects can have a symbolic meaning in relationship to therapeutic objectives. A heavy ball can represent the 'fat' stomach or a chocolate desert to be thrown away in the corner. Sometimes, playing can make light work of difficult problems. Balls with a 'yes' or 'no' instruction invite the participant to take a position and confirm it with a forceful 'yes' or 'no' while striking the ball. In role-play, patients build up experience in handling situations in real life. Self-confidence exercises are a way of building strength. A relational challenge is hitting a punching body shield held by a partner and trusting the other to give and take punches while staying upright. Various sports or dance forms can also have an indirect function in aggression regulation if a direct appeal to aggression is too overwhelming. The rules of the game and the interaction with others offer a safe structure for controlled expression.

The function of the other side of the room is to de-escalate. Patients learn to decide for themselves when to step out of the anger-triggering situation and cross the rope to calm down in this other part of the room. This is important because if tension remains high, it can lead to an 'anger self-enhancing loop effect' on the intrapersonal as well as the interpersonal level, immediately or after a longer period (Trnka & Stuchlíková, 2011). Sharing experiences, breathing exercises, relaxation and distraction techniques help to limit these self-strengthening effects. Physical activities such as stretching or a little walk may also help the patient to loosen up.

Next to the therapy room there is a safe room, offering traumatised patients the possibility of escape. Here, instead of running away the patient can withdraw to prevent being overwhelmed by emotions. The therapist encourages the patient in advance to see withdrawal as an act of strength rather than failure.

The rope between the two sides of the therapy room represents a locus of control in deciding to step in or out of a triggering situation. It challenges the 'action tendency', the (un)readiness to 'move towards' a relational goal (Frijda, Kuipers, & Ter Schure, 1989). Preparing or imagining stepping into anger-related action is exciting and by itself triggers sensitivity to stimuli originating inside of the body. The first act of aggression is to stand up and *step forward*, reflecting the literal meaning in Latin, *a-gredere*. By crossing the rope, patients confront their ambivalence about self-expression. Learning-by-doing offers a chance to experience a sense of mastery in overcoming fear, guilt and shame.

In the following case report, two patients work together.

T. is a 22-year-old purging anorectic patient who feels extremely insecure and shows a great fear of intimacy. She is unable to express herself in words, which inability blocks the overall therapy process. In PMT it takes a while before she permits herself to take a first step over the rope. The other participant of the module dares her to enter the action side of the room. Both patients start with 'ice-breaking' body exercises, such as bouncing and kicking a ball. They test each other's boundaries by shouting and pushing a little to get the ball. Then T. is triggered by the punching bag hanging on the ceiling. She blushes as she grabs a baseball bat and starts to hit it with increasing force. Her eyes spit fire as she feels a surge of anger. She tries to cry out but it is hard for her to use her voice with good breath control. Then she gradually decreases the application of force and steps back over the rope into the de-escalation side of the room. Still shaky she recounts how her father used to hit her unexpectedly. Images of bullying in the past also flash by. The body remembers. She feels strong but guilty at the same time. She needs supportive affirmations such as "here and now I have the power to act" and "I have the right to say STOP," which we practice in role-play. The hardest part is to communicate with angry eyes and to hold back the propensity to 'save' the relationship by smiling, explaining, apologizing. The critical voice of the eating disorder undermines her belief in her fundamental right to exist at all. It is a new experience to set limits without having to fear the loss of others. Her family needs time to make the change with her. She has to find the right balance between letting loose and holding back. She needs to find out that direct expression of anger feels more satisfying than making herself throw up to reduce tension.

J. is a 26-year-old restrictive anorectic patient who sympathizes with the experience of T. but does not recognize aggression in her own behaviour. She is preoccupied with controlling body shape and weight. For her the punching bag is a target to control by deliberate engagement. She carefully increases the application of force while counting the blows. She fears the feeling of her heartbeat, which triggers her hypochondria. Relabeling body signals as belonging to the physical performance helps her to calm down. It is challenging to link body sensations to feelings of fear, disgust and self-hatred for being a 'fat monster'. The therapist does not allow her to project herself too completely onto the punching bag. She needs to redirect her anger towards (parts of) her eating disorder rather than towards herself. Little by little the baseball bat no longer serves as an instrument of control but as a crowbar to release herself from her taboos without the fear of losing herself. Once she steps back over the rope, T. is there for her, to compliment her and to alleviate her fear of emptiness by embracing her.

The aggression thermometer

From an early age onwards, aggression is a body-felt phenomenon, most clearly demonstrated by the tantrums of the 'terrible twos' (two year-old children). Angry toddlers uncontrollably and wildly flail their arms and legs and scream at high decibels. In the PMT aggression regulation module, the instruction is to gradually

increase and decrease the power one uses to throw or kick a ball, hit a bag or shout 'HAH' in order to gain control over body awareness and expression. The therapist pays attention to nonverbal cues to the body language of anger expression, such as the look in the eyes, heart rate, temperature, breathing patterns and body posture.

At first, patients usually experience problems with body awareness. The individual may feel only muscular exertion or vague visceral body signals instead of experiencing anger. Patients with anorexia nervosa, in particular, show less emotional awareness, whereas people with bulimia suffer more from poor emotion regulation, whereby the feeling of disgust may suppress the more ego-dystonic feeling of anger (Harrison et al., 2009). Clinical experiences with PMT indicate that varying levels of force production in throwing a ball or striking a bag help to identify and describe feelings of anger. Verbalising the movement experience is thus a challenge. In body-oriented therapies, patients need to find their own words for their embodied experience (Panhofer & Payne, 2011).

The well-known idea of an aggression thermometer enables patients to differentiate between levels of intensity varying from light annoyance to fury. All-or-nothing strategies, which are often used by bulimic patients with borderline characteristics, are challenged by a step-by-step dosing strategy using the aggression thermometer metaphor. The following case is an example of a strong body experience in reaction to a step-dosing exercise.

S. is a 30-year-old bulimic patient with borderline characteristics who has difficulty controlling her anger and is very impulsive. She is eager to perform on the punching bag for she has gained weight against her will. The therapist asks her to start at approximately 25% of her maximum force. Of course she finds it very boring. The therapist wants her to reappraise this level to learn the relational benefits of being able to control herself. The next level is 50%. At 75% she feels a strong urge to increase force production to 100%. Instead, the therapist instructs her to go back to 50%, then 25%. She reacts with fury and frustration. The therapist strives to keep contact with her without giving in to her demands. It is hard for her to step out of the situation and regulate her breath. One technique the therapist suggests to distract herself from her fury is to hold a picture of her child in her pocket. Later on she remembers this confrontation as a turning point in learning to keep her adrenalin rushes under control.

Patients use a log to write down anger experiences at various intensity levels in the week between the therapy sessions. They are asked to be aware of personal triggers for aggression, the intensity of the feeling and their anger-coping strategy. Patients try out alternative and more effective strategies in their interactions with others. Passive aggressive coping is replaced by proactive strategies. The purpose is to create a personal coping repertoire consistent with each level of the aggression thermometer.

The controlled approach exercise

From a cognitive point of view, anger is connected to a perception of a violation of one's personal space (Truglia et al., 2006). The controlled approach exercise by Pessó (1988) is an experiential method that increases awareness of how the body registers strong emotional reactions to the approach of the other towards oneself. In learning by doing, patients try to respond to body signals in a proactive way.

In the aggression regulation module, this exercise is intended not only to help the patient to learn to recognise body signals but also to challenge the patient's body

defence. First, the patient determines how close the partner is allowed to approach by using hand gestures. At that point, the partner announces she will step further and cross the personal border of the other. It then becomes clear whether someone is going to fight, flee or freeze. Not infrequently the patient is alarmed, but her body language does not correspond to her facial expression. Anxiety stems from a lack of basic security that may lead to a state of hypo- or hyper-arousal. At this critical moment, learning to use prosocial aggression is of vital importance. Patients usually need assistance to communicate firmly their desire for their opponent to back off. Often patients keep smiling while in fact their tension is high. The eyes often reflect how determined the patient is to send the message. Particularly for patients with a history of trauma, this can be a painful but rewarding exercise for dealing with old frustrations and feeling new power. From the functionalist perspective, one of the functions of anger is to energise a person for defence. The readiness for action may also prevent aggressive counterreaction by another person (Trnka & Stuchlíková, 2011).

The aggression street

The aggression street is a symbolic exercise we designed for dealing with mental blocks or to re-enact painful situations. Objects representing these blocks or situations are laid out in the therapy room. The patient must cross the room. Reaching the other side is the goal. The following scene represents a typical case:

1. The first object encountered is a yellow volleyball that stands for being the victim of bullying. Exposure to relational aggression is a significant positive predictor of eating disorder symptoms for females (Fridman, 2006). Standing before the obstacle, the patient seems overwhelmed by internalised shame or self-reproach. The instruction is to anchor her power by forcefully saying 'no' while hitting the ball. Her goal is to limit the impact of bullying instead of reinforcing the impact by making her own body unattractive and insensitive to painful feelings. A helpful thought is: *'They do not deserve still to have that power over me!'*
2. The second object in this example is a big blue ball which represents the burden of nosy parents. Of course, it is not so easy to get rid of that ball. Constructive aggression belongs to the individualisation/separation process, but without having to be afraid of losing the other. The patient screams *'Let go of me'*. She does not mean *'abandon me'*, so the ball is kicked out of the room, but the door remains slightly open.
3. The third obstacle is a pile of large blocks representing the eating disorder, e. g. the dominant false self by the name of Ms Anorexia. One block is not enough because Ms Anorexia is a very powerful deceiver. For patients with a history of abuse, the eating disorder may give them the *feeling* of control, but patients often do not realise that the eating disorder takes control away from them (Schneer, 2002). In order to regain true self-control, the challenge is to break the taboo and overtly attack the false self or, one could say, the false body of the eating disorder. To knock over the pile of blocks feels like a betrayal. At first, the burden is too big, but in a step-by-step process the patient allows herself to overcome her resistance. Both participants of the

module support each other so they do not have to feel lonely after attacking Ms Anorexia. The therapist confirms: '*You alone can do it but you cannot do it alone*'.

Other objects can represent other burdens that patients have, such as punishing inner voices, negative body fixations and the need to please by being a 'nice person'. A positive representation can also be chosen, for example, kicking the punching bag to support the first steps of regaining weight with 'tough love'. Patients usually report that reaching the other side of the room is an empowering and liberating experience.

Conclusion

The aim of the PMT aggression regulation module is to learn to coordinate anger expression with appropriate timing and intensity in interactions with others. The starting point is to see aggression as a positive, body-felt and 'in relation to' phenomenon. Practical experience indicates that the module accelerates the overall treatment process by triggering anger-related feelings, thoughts and behaviours. To re-establish anger as a resource for empowerment, a meaningful connection must be made to body awareness, life experiences and current interactions with others. Anger and aggression need to be contained and channelled in a body-felt way to be able to overcome shame and develop emotion recognition and expression skills. In the end, patients move from *coping with anger*, that is, dealing with negative aspects in a non-eating disordered way, towards *anger as coping*, that is, using the positive meaning of anger as a resource for prosocial aggression, which is in itself an effective coping strategy in stressful situations.

Current research into anger coping has shifted from simple descriptions of mechanisms within the individual towards dynamic explanations within the interpersonal context (Trnka & Stuchlíková, 2011). This development is consistent with the relational approach to aggression regulation presented in this paper.

To further support theory and practice and to study the effect of aggression regulation in the treatment of eating disorders, randomised controlled research is needed.

Notes on contributors

Cees Boerhout studied Human Movement Sciences and is working as a psychomotor therapist at the Lentis Center for Mental Health in Groningen. After 20 years of experience within the field of body-oriented psychotherapy, he has started a research project to meet the demands of evidence-based practise. As a Ph.D. candidate, he studies the effect of psychomotor therapy on aggression regulation in eating disorders, in cooperation with the University Medical Center Groningen in The Netherlands.

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