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ORIGINAL ARTICLE

Psychomotor therapy for individuals with mild intellectual disabilities or borderline intellectual functioning presenting anger regulation problems and/or aggressive behaviour: A qualitative study on clients' experiences

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ABSTRACT

Background: Psychomotor therapy (PMT) is often applied in Dutch clinical practice to address aggressive behaviour in individuals with mild intellectual disabilities or borderline intellectual functioning. However, the literature on clients' experiences is lacking.

Methods: An interpretative phenomenological analysis was used to analyse the semi-structured interviews of seven participants (19–60 years; four male, three female) who completed PMT targeting anger regulation problems.

Results: According to the participants, becoming aware of increasing tension and/or learning to downregulate the tension were the main goals of PMT. They emphasised both the possibility to learn by doing and the therapeutic alliance as essential to create a safe context, where participants can experiment with alternative behaviour. After completing PMT, participants perceived fewer aggressive outbursts and an increased self-esteem.

Conclusions: Participants in our sample experienced PMT as being helpful in targeting anger regulation problems and aggressive behaviour. The experiential nature of the program was perceived as a valuable aspect of PMT.

KEYWORDS

Mild intellectual disability; borderline intellectual functioning; psychomotor therapy; anger regulation; aggressive behaviour; client experiences

Psychomotor therapy (PMT) stands for a variety of interventions using movement and body experiences, with different origins. The origins include physical education, physiotherapy, body psychotherapy, martial arts, and yoga, which all share the same principal idea that movement, physical exercise, and bodily experiences can be used in a therapeutic manner to target behavioural, psychological, or psychiatric problems (Emck & Scheffers, 2019; Probst, 2017; Röhricht, 2009). In PMT, interventions are used both to learn concrete skills (i.e., action-oriented approach), but also to experience and gain insight into emotion regulation (i.e., experience-oriented approach) (Emck & Scheffers, 2019; Probst et al., 2010).

The evidence base for PMT is growing with clinical studies and a few reviews and meta-analyses providing positive results for interventions using movement and body experiences as a medium in the prevention and treatment of many kinds of mental health problems in several populations (Bloch-Atefi et al., 2014; Koch et al., 2014; Koch et al., 2019; Papadopoulos & Röhricht, 2014; Priebe et al., 2016; Vancampfort et al., 2021). Thus, PMT interventions are widely used in a broad range of mental health populations, including individuals with mild intellectual disabilities or borderline intellectual functioning (MID-BIF). One of the focal points in PMT is the (disturbed) regulation of emotions related to aggressive behaviour (see Boerhout et al., 2013; Zwets et al., 2016).

In the light of treating anger regulation problems and aggressive behaviour, it is assumed that when a person is aware of one's anger-related bodily signals, this facilitates emotion regulation and as a result, it might prevent aggressive behaviour (Boerhout et al., 2013; Füstös et al., 2013; Gross, 2015; Price & Hooven, 2018; Zwets et al., 2016). Empirical studies support the importance of being aware of anger-related body signals and adequate coping with anger in the light of anger regulation and preventing aggressive behaviour (Boerhout et al., 2017; de Looff et al., 2019; Ter Harmsel et al., 2021). Especially in people with MID-BIF, aggressive behaviour caused by deficient anger regulation is a well-known problem. Prevalence rates vary between 10% and 20% and raise to 50% in inpatient treatment settings for individuals

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with MID-BIF who demonstrate severe and challenging behaviour (Tenneij & Koot, 2008). Aggressive behaviour has the potential to adversely affect not only the individual with MID-BIF but also his or her family and support staff. It may lead to several consequences such as isolation and mental health sequela (Hensel, Lunsky, & Dewa, 2014; Woods & Ashley, 2007).

To address anger regulation problems and aggressive behaviour in clients with MID-BIF, different programs have been developed and studies mostly focus on adaptive coping skills such as mindfulness-based programs as well as progressive relaxation (Bellemans et al., 2019). While there is indeed evidence for the efficacy of these programs from both qualitative and quantitative studies (Bellemans et al., 2019; Chapman & Mitchell, 2013; Currie et al., 2019; Griffith et al., 2019), in practice therapist emphasises that for individuals with MID-BIF also not only coping but also the awareness of anger-related bodily signals is a key (Bellemans et al., 2018). However, specific knowledge on the efficacy of PMT, which uses besides an action-oriented approach also an experience-oriented approach to gain insight into anger regulation, is still lacking.

Until now, to the best of our knowledge, no studies have explored the experiences of clients with MID-BIF receiving PMT targeting anger regulation problems and aggressive behaviour. A qualitative approach emphasising client's views on both the results and the working mechanisms of an intervention might provide relevant information on valued and disliked therapy aspects in order to improve its quality and effectiveness (McDonald et al., 2003; Walmsley, 2004). Recently, studies show the relevance of clients with MID-BIF expressing their experiences about therapy they receive (Brown et al., 2011; Currie et al., 2019; Griffith et al., 2019). Where PMT is concerned such a study should address a broad range of therapy factors, both PMT-specific as well as non-specific factors, such as the therapeutic relationship between therapist and client, as both factors affect the efficacy of the therapy (Wampold, 2007). The first indications of the importance of non-specific factors, such as the role of the therapeutic alliance in PMT within adults with mental health needs, are already presented by Heynen et al. (2017). For the specific factors, interoceptive awareness (IA) and adaptive coping skills are mentioned by the psychomotor therapists working with people with MID-BIF and anger regulation problems and aggressive behaviour (Bellemans et al., 2018). However, we could not find information yet available on this issue from people with MID-BIF.

To address the aforementioned gaps and in line with the suggestions for future research by Papadopoulos and Röhricht (2014), we have set up a qualitative study exploring the experiences of clients with MID-BIF who have participated in PMT targeted at anger and aggression.

Therefore, in the present study, we used interpretative phenomenological analysis (IPA; Smith et al., 2009) as a qualitative method to explore what individuals with MID-BIF think and feel with regard to their PMT treatment. IPA is a suitable approach for exploring how individuals with intellectual disabilities (IDs) perceive situations and how they integrate it into their personal and social life. The goal of IPA is to explore how persons make sense of events, embedded in a broader personal and social context. In this study, for instance how participants felt when they were working with the psychomotor therapist and how they experience when their anger problems were topics of interest. IPA studies have small sample sizes allowing in-depth engagement with each participant and exploring similarities and differences between participants (Smith et al., 2009). In individuals with IDs, IPA is appropriate when the sample and the analysis are described in detail (Rose et al., 2019). This study aims to pursue a better understanding of the client's unique perception of PMT targeting anger regulation problems and aggressive behaviour. Emphasis is on the experienced results as well as on experienced mechanisms of action of PMT.

Several topics were explored with the participants to gain insight into the (a) perceived goals of PMT, (b) PMT elements experienced as helpful throughout the therapy process, and (c) client's opinion on the added value of PMT. The topics that were addressed were chosen and analysed in such a way that they can provide additional information besides the information gained from the literature (empirical research) and from clinical experts (psychomotor therapists). This information from different perspectives can be used in order to improve the quality of PMT targeting anger regulation problems and aggressive behaviour in people with MID-BIF.

Method

Sample selection

Clients with MID-BIF who completed PMT targeting anger regulation problems and aggressive behaviour related to the participating institutions were approached by the researcher. Three persons were not interested in participating in the study, and, therefore, they were not further approached. The seven persons who showed interest signed an informed consent (see procedure section).

Participants

Seven participants who completed PMT targeting anger regulation problems and aggressive behaviour in the previous month took part in the study. The sample comprised four men and three women. Characteristics of the participants, reflecting the clinical population, referred to PMT for anger regulation problems, are provided in Table 1. Pseudonyms are used to protect anonymity. Participants' ages ranged from 19 to 60 years with a mean age of 36.7 years. The mean IQ-level was 73 ($SD = 9.62$, range: 60–85). Two participants had additional diagnoses. These two participants lived in a group setting in an institution for adults with IDs. Four participants lived in an apartment with professional support available 24/7, while one participant lived independently without professional support. All participants were referred for PMT due to their anger regulation problems or aggressive behaviour for the first ($n = 4$) or second time ($n = 2$). One participant had received PMT about one year ago and received some booster sessions in the months before the interview.

Intervention

Participants met the psychomotor therapist individually once a week for one hour, during a period of 15–54 weeks (see Table 1). For the participant who had already ended regular therapy, the booster sessions were held weekly over a period of 4 weeks. In PMT, a mixture of action- and experience-oriented approaches were used, using movement/sport activities and body experiences as a medium in the approach in order to both increase awareness of anger-related body signals and increase the ability to downregulate physical tension related to anger. The aim of this complementary therapy was similar to psychological approaches, namely to decrease emotion regulation problems and aggressive behaviour. In contrast to psychological approaches but in line with physiotherapy or physical education, the method used was working with and through the body.

In the therapeutic setting, the tension was created by the activity or the material context (e.g., participating in challenging activities with a material obstacle). Later on in the therapy process, this was done by manipulating the social context during a movement activity (e.g., being challenged by the therapist during a basketball game). In every phase, the focus was on body signals related to tension/anger, and when tension raised the participant received tools to downregulate this tension. Besides the therapeutic sessions, the participants also received a booklet with homework assignments to practise the learned skills during the week by themselves or with the support of their caregivers.

Study procedure

The Scientific Research Committee and the Ethical Committee of Social Sciences of the Behavioural Science Institute of the Radboud University approved this study (ECSW-2019-080). The participating institution declared to be the partner in this study and gave permission to collect data. The inclusion criteria for the participant were (a) an IQ score between 50 and 85 (MID-BIF), (b) an age of at least 18 years, and (c) the last PMT session having taken place during the month leading up to the interview. Owing to the third criterion, purpose sampling was used. All participants were individually approached by the researcher, with an information letter (covering the content of the study and the confidentiality of the data). They signed an informed consent form after they were explicitly told that cooperation was on a voluntary basis (that they were free to withdraw at any time) and data were processed anonymously. Clients also gave permission to ask the personal caregiver for additional information on the clients' experiences when needed due to their limited verbal capacities. The interviews took place at the homes of the participant. Two personal caregivers, related to those clients with the lowest IQ levels, were approached for extra information to compare and confirm the completeness of their answers. The participation of the clients was rewarded afterwards with a little present (i.e., a stress ball).

Interviews were conducted between January and July 2020 by the first author, who has clinical PMT experience in working with individuals with IDs though was not involved with the PMT process of these participants. The first author was supervised by the second author, who has experience in qualitative research in individuals with IDs (though is no expert in PMT). An interview schedule with key topic areas was developed, based on the topics as used in the interview in the study of Chapman and Mitchell (2013), as well as the topics mentioned by the PMT therapist in the study of Bellemans et al. (2018) and relevant literature, with the cognitive abilities of the participants in mind and were intended to be used flexibly to facilitate open-ended discussion in this study.

The schedule covered six topic areas, including (a) nature of emotional regulation problems they were experiencing at referral, (b) perceived outcomes of PMT, (c) which activities they remember and what they learned from it, (d) which activities they still apply themselves at present, (e) the nature of their

Table 1. Characteristics of participants.

Variable	Participants (pseudonyms)						
	Jenny	Ivy	Daniel	Jane	Jake	Ed	Gene
Gender	Female	Female	Male	Female	Male	Male	Male
Age (years)	34	28	21	60	53	42	19
Additional diagnoses	Motor impairment, Epilepsy	None	None	None	None	None	Autism
IQ score	64	83	85	67	77	76	60
Living situation	Living together with other people with IDs in an institution	Assisted living, together with other people with IDs	Assisted living, together with other people with IDs	Individually	Assisted living, together with other people with IDs	Assisted living, together with other people with IDs	Living together with other people with IDs in an institution
Received PMT	Regular	Regular (a year ago) + recently booster sessions	For the second time (first time during childhood)	Regular	Regular	For the second time (first time > 10 years ago)	Regular
Intensity	1 session per week, for 43 weeks	1 session per week for 22 weeks, +4 booster sessions	1 session per week, for 28 weeks	1 session per week, for 16 weeks	1 session per week, for 32 weeks	1 session per week, for 15 weeks	1 session per week for 54 weeks

emotional regulation at present, and (f) what were pleasant and unpleasant aspects of PMT. A training session took place to ensure that the interviewer was familiar with this interview protocol. Care was taken in the phrasing of questions to ensure that participants understood (Finlay & Lyons, 2002). For example, in the open question words were chosen that were part of day-to-day language, without ambiguous meaning. And during the interview, phrases were short and we asked for concrete examples.

The duration of the interview ranged from 24 min to 68 min, with a mean duration of 52 min. All interviews were recorded and transcribed verbatim with the consent of participants. As mentioned by Hollomotz (2018), in individuals with IDs it is also important to involve the context of the participant. Therefore, we used additional information of personal caregivers of those participants who had difficulties in verbalising. The information was used to check whether we received a correct and full picture of the mentioned items by the participant (e.g., treatment goals and observed changes and findings on the clients' experiences), or to add some in-depth information that was not provided by the participant.

Data analysis

An IPA was adopted to underpin the methodology and analysis of this research as it was concerned with the detailed understanding of how individuals with MID-BIF view and experience PMT. IPA was chosen as it provides the opportunity to engage as a researcher in a dynamic and close way with the reflections of the participants' experiences (Smith, & Osborn, 2015). IPA is characterised by an explicit recognition of the interpretative nature of the process and that any findings are a result of this interpretative process. In IPA, the assumption is that the participant can use the interview process to interpret their experiences and make sense of them in the context of questions posed by the interviewer. Next, the researcher interprets the answers of the participants at the analysis stages, both in the context of own experiences and beliefs as well as in the context of the collective insights of the participants. In order to do this in the present study, the researcher read and reread the transcripts and the memos (e.g., initial notes and comments) on each transcript, highlighting the content, the use of jargon, and potential conceptual and contextual elements. This resulted in identifying emerging themes by exploring patterns across the initial transcripts and notes. These themes were then grouped together, and connections between them were explored to produce higher-level overarching themes. This iterative process led to covering themes that represent the whole cohort. To ensure that the analysis was carried out in a rigorous way and that interpretations made by the first author were of an explicit nature, a second researcher (NPS) provided an audit of the analysis. This analysis was conducted independently by the second researcher. When inconsistencies occurred, they were argued to an agreement. The final analyses were also checked by two other authors (RD and JTB). Triangulation was used as the information of the caregivers was compared to the experiences of the clients on content and completeness of their answers. All analyses were carried out in Dutch. In the report when using citations, (…) indicates omitted material and [] indicates additional information added by the researcher.

Throughout the data collection and analysis process, a reflexive diary was also kept to increase the trustworthiness of the analysis. All issues were discussed with three of the authors (NPS, RT, and TB). This

highlighted a number of issues for consideration for the interviewer. First, the interviewer was aware of having a special interest in why particular exercises were experienced as useful and therefore reflected on whether this was felt by the participants as being more important. Another issue was the balance between sticking too rigidly to the semi-structured interview schedule and the more open exploration of the issues raised by the participants during the interview. Reflection on these issues and the discussion of the process and themes with the members of the research team allowed issues to be addressed when needed, for example, adding all kinds of prompts to the interview schedule, and as a result a more flexible use of this schedule.

Results

In the interviews, three overarching themes emerged that were related to (a) participants views on main treatment goals, (b) their evaluation of the activities and interventions offered during PMT, and (c) their perceived effects (objective and subjective) in the context of anger regulation problems and aggressive behaviour.

Main treatment goals

> Now after PMT, I am able recognise it [shifts in body signals while anger increases]. As I clench my fists and I become grouchy or I become angry. Before PMT, I didn't notice that at all. Yes, before PMT it suddenly appeared out of the blue. (…) Before, I did not recognise the signals as I recognise them now. (Daniel)
> Now [after PMT] I know what to do when I'm frustrated and as a result, I do not have outbursts anymore. (…) Before I got PMT, I felt the tension increase. First it started as feeling irritated, but I only bottled up the tension, then it ended in an outburst. (…). I learned [during PMT] to say 'stop'. (…) In PMT, I learned to draw the line, not only to say it, but also to fortify this by saying it and supporting it with my facial expression and body posture. (Ivy)

Like Ivy and Daniel, during PMT all participants were learning the importance of recognising and being aware of changes in their body signals (i.e., IA), especially in relation to their personal history of increasing anger. Before PMT some clients, like Daniel, got overwhelmed by anger, whereas others, like Ivy, were aware of increasing tension, but lacked the skills to downregulate the tension. While the first type of clients used PMT to get insight into their anger regulation and then learned to cope with their anger, the other group focussed mainly on PMT strategies to downregulate or cope with this increased tension.

During the interviews, we observed several situations in which the participants applied the techniques they have learned during PMT. While Daniel was talking about his sadness about his grandfather passing away, he placed his hand on his belly and used a breathing technique he learned during PMT. He focused on his breathing and became more relaxed and calmer. Similar to Daniel, some participants were aware of the changes in their body signals linked to anger, were able to reflect on that and adequately applied a PMT strategy to downregulate the increased tension while emotionally aroused during the interviews. Thus, these participants were able to generalise the learned knowledge and skills to other situations and emotions.

> I feel it in my stomach [when angry], then I have a kind of tingling feeling. I don't know exactly how to describe it. (…) Now something else happened, something that makes me sad [one of the key-workers is diagnosed with breast cancer]. Sometimes I feel it [tingle in her stomach] (…) and my personal care giver tells me than that I have the sadness in my stomach. (Jenny)

Some participants, like Jenny, had difficulties in verbalising or conceptualising what they have learned during PMT. However, they were able to apply the learned skills, for example, when they talked about intense emotions. As is illustrated in the citation above, Jenny talked about how PMT helped her to understand and cope with her anger during her interview. She also told the interviewer that when one of her personal caregivers was diagnosed with breast cancer, she noticed different body signals, but was not able to associate them with sadness. Also, she did not think to apply the learned techniques to downregulate the bodily tension like she now can when she is angry. It seems that Jenny, in contrast to participants like Daniel, is not able to generalise what she has learned during PMT to other emotions and situations. In order to use PMT in new situations, Jenny needs the help of staff members. Also, Ivy reflects on this issue:

> When I had to go to work, I became insecure again because others had more experience, so I didn't feel equal. That was when I thought 'I could need PMT once more, just to prevent problems'. (…) And after two booster sessions, I could go on. PMT brought me already so much, I just needed the booster to maintain it. (Ivy)

During Gene's interview, the interviewer asked him a question that he found difficult to answer. He then walked out of the room and called one of his caregivers. She asked him if she should help him. Gene nodded and gave his caregiver a paper: his tension thermometer.

> Gene works with a tension thermometer, and when we notice that he does not understand the question, like now, and he feels tense, or becomes angry, we use the tension thermometer. We can ask him some questions about what is going on, how we can help him to become calm again. (Caregiver Gene)

As shown here, Gene was able to use the right strategy when his tension increased because he felt not able to answer the question (i.e., asking his personal caregiver to help him). Later during the interview, Gene did not find the words to explain his breathing exercise:

> How shall I explain the exercise with breathing in and breathing out? [Gene lies himself down on the floor and his caregiver tells the interviewer that he puts his hands on his belly with his fingers crossed while he starts breathing towards his belly. Breathing in with his nose and breathing out by blowing.] (…) When I do this, I can focus on my breathing only, and that helps me. (Gene)

Like Gene, many participants with MID-BIF might have difficulties in verbalising their emotions and reflecting on situations and talked about how important it was for them to learn through experiences instead of only talking about these situations. The combination of actively participating, experiencing the body signals (and thus the inner emotional experiences), and using verbal support to clarify situations, emotions, and the consequences of the behaviour of the client based on their own experiences is precious to the participants as they felt more in control during PMT as during other treatments.

Activities and techniques applied during PMT

From the interviews, three phases could be distinguished with activities, namely activities aiming at (1) increasing IA, (2) downregulation of body signals, and (3) integration of IA and adaptive coping skills during movement and sports activities.

> We build a tower of foam blocks and then I had to knock it down. (…) Just to throw out all my anger. And because of the foam blocks you can't wreck anything, so that is fine. The nice thing about this, you can feel the build-up tension collapse at that moment. It feels really good when the tension disappears. (Jane)

> I use colours. Red and orange: then you should stay away. Green means it is okay, and yellow means so so. And there is also black, but that is not good at all. Black is above red, and it goes together with a rage of anger. (…) And I also link it to animals, because that visualises it even better. When I am a snail, I stay at home and stay save like in a shell. An owl, then I keep an eye on the situation, and a lion … that I try not to be. Instead I prefer to be a cat or dog, as that indicates that I am relaxed. (…) In a later stage in PMT, the colours are associated with animals. That is how I better understand the increased tension. (Jake)

> Clenching fists are associated with situations where someone else treats you bad. That is one stage further than feeling nauseous and an increased heartrate. And the first stage is when you just feel a bit agitated, and your breathing becomes a bit heavier. (Daniel)

During PMT, the participants did the exercise to become aware of their level of tension. For example, participants were engaged in often used symbolic exercises, like Jane, to make the tension visual and thus to support the verbal messages during PMT. Other exercises helped participants to experience their bodily tension during increasing and decreasing arousing situations, such as walking a course with blindfolds or completing an altitude trail with climbing and balancing. Often, these exercises were combined with visual tools such as a tension thermometer. This is an image of a thermometer, in which elevated levels of tension are visualised on the thermometer with colours turning from green (relaxed) to orange (irritated) and to red (angry). Other clients, like Jake, also linked the increased levels of tension to animals as turning from a cat (relaxed) into a lion (angry, ready to attack). These visualisations helped the participants to recognise, remember and reflect on increasing tension and anger, and it gave also concrete tools to communicate about their arousal levels with others.

> One of the exercises I still often use is the breathing exercise. When you are angry, you need to breath in, just hold it and then breath out again. Every time you breath out, you blow the anger out of you, further and further away from you. And as a result, you become totally calm. (…) But sometimes that isn't sufficient. Then I have some other manners: listening to music, walking, playing a video game, cuddle with my rabbit. And when things really bother me, I go to the horse farm. (Daniel)

> When I notice that my tension is high, and it is really bad, I go for a walk and I visit the animals of the farm. I know, I can relax over there. (…) First, I walk out of the situation, I count to ten. Very often I feel calm after that. But sometimes I have to pay attention to my breathing as well, and when that doesn't work, I have to go for a walk. And my final rescue is the farm where I can meet the horses and cows. (Ed)

For all participants, anger was linked to a tingle in their stomach, heavier breathing, increased muscle tension, and increased heart rate. While the body-oriented activities helped them to become aware of these body signals, participants noted that the downregulating strategies they learned during PMT, such as breathing techniques and relaxation techniques, were helpful in downregulating the physical arousal related to anger.

Others, like Daniel and Ed, described other strategies that were explored during PMT, including seeking for distraction (e.g., listening to music or go for a walk). Also, seeking for social support (e.g., asking for help or talking to the caregivers) was mentioned. Some participants, like Ed, have insight into the different phases of increasing tension, associated with strategies that can help in each phase to calm down again. As a result of PMT, some participants found out that being (physical) active also can prevent outbursts, helps as a distraction, or can be used as a coping skill to decrease tension and/ or leads to relaxation: "At this time [after PMT], I take an aqua jogging class. (…) Just some moments for myself, moments to enjoy and relax." (Jane)

> On a certain moment [during an exercise where Daniel had to walk with a blindfold, guided by the psychomotor therapist], I noticed that we stepped on the aircushion. Then the psychomotor therapist started to jump and uhm. Then I thought by myself, this is taking matters to far. But he [the therapist] said to me: 'You've should told me earlier to stop. If the tension was already elevated, you should definitely not go beyond your limits. So probably, you could have mentioned you felt tense when you knew we were approaching the aircushion. Or you could only have said stop. (…) In PMT you can make mistakes without serious consequences. We had really good laughs about that. (…) You can try out what would be a good strategy or not. That is funny to do, just exploring the results of different strategies. That is helpful because you can discover the consequences without being in a real situation. So, you can practice these new strategies. (Daniel)

> The power of PMT. Thinking and doing together with the therapist, without any obligation. And being open to each other. (…) And then afterwards bringing it back into practice in the activity. (…) The psychomotor therapist said what she observed, she asked whether I also noticed the same. When I was not able to notice it, she told me to do an exercise to focus on my hands and then she asked it once more. Often I could then tell her what was exactly bothering me. Afterwards, we thought about possibilities to solve the problem, and we tried them out. When I did not knew how to start, she came with advices. (…) Often I have to do things grudgingly, lets say under compulsion. But in PMT I could talk about it with the therapist or I could say no. Better said, I could do thing at my own pace. (Jake)

When participants were able to identify their body signals and downregulate their physical arousal, sports- or movement-oriented activities were used to promote their awareness and practice with their coping skills to decrease their tension. During these activities, such as football, basketball, or obstacle races, participants were exposed to feelings of frustration and anger. These safe, but at the same time challenging situations, created a good base for a therapeutic conversation with the therapist to promote the insight of the participants and (the consequences of) their behaviour. Several participants mentioned during their interview how the different contexts (e.g., using sports materials) and different kinds of activities (e.g., sports-/movement- and body-oriented activities) evoked other expectations of the therapy compared to other, more verbal treatments. Like Jake, they felt in control as PMT was seen as a therapy without obligations, but adapted to their own needs, preferences, and pace. Furthermore, the answers of the participants showed that, as a result of the personalised character and the adaptations made by the therapist to match a participant's wishes and need, they felt their sense of autonomy increased. The participants emphasised that they were given the possibility to practise alternative, sometimes newly learned behaviour in a safe therapeutic setting, in which it is possible to learn by mistakes. In the light of this, clients describe how vital it is that in the sessions clients and therapist were working closely together. The trust in the therapist seems a result of mutual respect between therapist and client, as well as the attunement of the therapist to the clients' needs and perspectives in regard to formulating shared goals and jointly create solutions (with equality between the therapist and the participant).

> At first, I didn't want to do the exercise. (…) Later on [after several sessions], I wanted to do it together and in the end I did it alone because I trusted the psychomotor therapist … She [the psychomotor therapist] takes me seriously. She does not interrupt, only when I fall silent … but then she explains it in an adult way and not childish. She treats me like a valuable person. (Ed)

> The first time he [the psychomotor therapist] did not challenge me. The first couple of sessions, I could get to know him. And the psychomotor therapist always explained well what he was going to do. He had this cap, the 'challenge cap'. If he wore this cap, then he tried to challenge me. And just after the exercise, when we talked about what happened [during the exercise] he took it off. Then we could talk about what went well, what I could have done in a different way, and then we went on with the exercise if there was some time left. (Daniel)

According to the participants, not only the activities are important in PMT, but also the therapists have a crucial role and a good therapeutic alliance is essential to create a safe context in which the participant can experiment with alternative behaviour. During PMT, the therapist uses specific therapeutic techniques including, but not limited to, visualisation, giving words to situations and emotions, and mirroring (i.e., replicating non-verbal

signals such as gesture, attitude, and movement pattern) to provide insight into body signals and (non-)verbal behaviour of the participant in situations in which the participants are (emotionally) aroused. As mentioned by the participants, humour and being able to pour cold water on the learning moments helped the participants to place in perspective and to maintain a safe therapeutic context. According to the participants, observing the therapist attuning to their needs is crucial, as well as working equally together. The therapeutic relationship that is developed was seen as a requirement before they could be challenged to experiment with the new behaviour.

> Sometimes we received a booklet. The psychomotor therapist had written down homework that I had to do together with my key-worker. (Ivy)

> The service workers have to know what you have learned. And they have to be able to help you with the exercises etcetera. At this moment, I don't have a connection with my care giver. I have to tell her what I have done in therapy, but that is to complex. It is really important that there is a good transfer from PMT to the home situation. (Jane)

> When I notice that my tension increases, I don't go to the common 'tea time'-meetings. Than the caregivers also know that there is something wrong. (Ed)

Participants described how difficult it was to generalise the skills they have learned during PMT, to their daily life. Therefore, therapists promote generalising by using experiences from the daily life of the participant in their therapy. Sometimes participants were able to share those experiences with the therapists, but in other situations, those experiences were shared by the caregiver. In addition, concrete tools and exercises were used in PMT and participants were promoted to use those in their everyday life. Sometimes, like in Jane's situation, therapist needed to inform caregivers about the insights, tools, and exercises so that caregivers could assist the client to implement those in their daily life. Finally, from the answers it became clear that informing caregivers about insights and coping strategies can help participants to implement the learned strategies as this sometimes requires them to overcome general habits or rules on wards. For example, in his interview Ed mentions that the jointly tea moments, where all clients and caregivers are present at fixed times, are not always in line with his needs, especially not when his tension is already increased. So breaking the habit of these mandatory activities helped him to prevent outbursts, but requires the therapist to provide psycho-education for the caregivers in the light of preventing aggressive behaviour.

Perceived effects of PMT

> Now, after PMT, I'm calmer, more considerate. I act less impulsive, it doesn't pop out like it just to do. And I don't swear or fight that often any more. Before when you looked at me in a wrong way, I started a fight. (…) But now, after PMT, I'm more relaxed and less wired. (Daniel)

> I know now what to do when I'm frustrated, and as a result I don't have any outburst any more. (…) What I learned is, to talk about my frustration. When I feel irritated, I share my feelings [with the service worker]. (…) And listening to music. Those two things work for me. (…) Through PMT I learned to be … uhm … I just saw that I'm … uhm … that I'm just equal, that I matter. And if you are able to see that, it is also easier to draw the line and say 'no'. (…) Also I learned to focus on the balance in my body, like grounding [she stands up and demonstrates how to stand while grounding]. That thought me to stand firm, just to ground for a second [focus on yourself instead on the other], and be self-confident so I can act in an adequate manner, without an outburst! (Ivy)

All participants mentioned a decrease in aggressive outbursts, both in frequency and in severity, after PMT. This finding was also confirmed by the personal caregivers. The participants increased recognising and often also verbalising their anger, for example, by using colours or animals related to the tension thermometer.

Furthermore, participants were better able to deal with anger as they had a larger variety of coping strategies including, but not limited to, talking with a caregiver, breathing and/or relaxation exercises, and/or distracting themselves. As participants, like Ivy, experienced that they were in control of their anger, their self-efficacy and confidence increased. Before PMT, they often felt incompetent and insecure as they felt an increased tension, but were not capable to cope with it, while after PMT, they had tools to change this, which resulted in feeling more self-confident. All participants mentioned that PMT brought them the ability to have influence on their anger. The participants felt more in control and thus also less at the mercy of the (unpredictable) outbursts.

Discussion

The aim of the study was to explore how individuals with MID-BIF experienced PMT targeting anger regulation problems and aggressive behaviour. Participants distinguished three phases: (1) increase of IA, (2) down-regulation of body signals, and (3) integration of IA and adaptive coping skills during movement and sports activities. According to the participants, PMT treatment

resulted in a reduction of aggressive outbursts due to their improved IA (i.e., the consciousness of body signals related to anger) and adaptive coping skills, which in turn induced more self-control, and both an increased self-efficacy and self-esteem. This two-way approach when anger regulation is concerned (or a lack of adaptive coping skills, or a lack of both IA and adaptive coping skills) is congruent with the treatment aims described by psychomotor therapists (Bellemans et al., 2018) and therefore treatment aims as expressed by the psychomotor therapists accord with the goals as perceived by the clients. Furthermore, it seems that the applied PMT activities seem to contribute to the treatment aims. The perceived effects of PMT described by the participants are in line with the existing quantitative research on PMT targeting anger regulation problems and aggressive behaviour conducted in other settings or populations, respectively, eating disorders and forensic settings. For example, Boerhout et al. (2017) and Zwets et al. (2016) have concluded that also in these groups PMT leads to an increased IA and/or increased adaptive coping skills, or self-efficacy.

The findings embedded in Franks' transcultural model of healing practices

PMT can be seen as an eclectic therapy, similar to art therapies, in which both specific key elements (i.e., a focus on IA and adaptive coping skills) as common aspects of various treatments are responsible for a successful treatment (Emck & Scheffers, 2009; Schweizer et al., 2017; Wampold, 2019). Next to the three key elements, participants mentioned throughout the interviews an interplay of different common factors, which are in line with Frank's transcultural model of healing practices, that is also used in psychotherapy (Wampold, 2007). These factors include (1) the emotionally charged and confiding relationship between therapist and client, (2) a healing context that creates hope, (3) a rationale (theoretical model), and (4) treatment procedures in accordance with the rationale of the treatment.

In line with the first factor of Frank's model, all participants mentioned the role of the psychomotor therapist and the working alliance as a crucial element of PMT. As participant and therapist, both with their own characteristics, bond and start to trust each other, working alliance originates. The authentic and equal relationship as well as the agreement about treatment goals create a safe setting to learn and experiment with new behaviour. Thus, body- and movement-oriented activities as such might not be evenly effective as this experiential approach, in which the activities are embedded in a safe therapeutic context and relationship. According to the participants, this safe context made it possible to be triggered or challenged by the therapist or the activity, which was necessary to get insight and to generalise the learned skills in daily life. In PMT, it is customary to use co-creations. The activities used as well as the attunement stresses the perceived equality between the participants and the therapist, which makes it easier to agree about the goals and tasks of therapy. This is seen as an important part of the therapeutic relationship. Although alliance seems a prerequisite for a safe therapeutic context, in clinical practise often only short-term treatments are possible in the light of reimbursed care. As a result, establishing a working alliance in such a short period seems challenging. The findings on the therapeutic context and relationship add to the findings of Stubbs et al. (2018) as they argue that the effects of movement interventions are in favour when supervised by qualified experts. Participants described PMT as an intervention that differed from other therapeutic interventions that they have been given before. The therapeutic context (i.e., using sports materials and a gym or other contexts created for sports) invites the participants to move and to be moved. Using sports or movement activities and working with the body make PMT a specific and easily accessible approach. With the support of a therapist, the activities can be completed with success in motivating through a safe context (Emck & Scheffers, 2019). By using sports and body experiences, PMT enhances motivation (Kolb, 2015). Not only because there is pleasure to be found in these kinds of activities but also because of their concrete character, which fits the characteristics and learning strategies of individuals with MID-BIF who find themselves able to participate with no restrictions (Kolb, 2015). Furthermore, PMT seems to facilitate the participants to generalise the learned skills in daily life by the concrete applied techniques and practising these techniques as well as newly learned behaviour repetitively in various movement situations. This creates a context of healing (factor 2 of Frank) in which the participants believe that they can change their situation and can influence their aggressive behaviour. The plausible explanation (i.e., the rationale as factor 3) for the problems faced by the participants concerns a deficiency in the use of the body both as a barometer for remarking an increased tension or anger and as a tool for downregulating this tension. Concrete techniques, such as breathing exercises and games incorporating body awareness, have been shown to be effective in psychotherapy for people with IDs and in reducing their aggressive and disruptive behaviours (e.g., Lewis et al., 2016; To & Chan, 2000). Although follow-up sessions and active guidance are

necessary to enhance generalisation, these concrete techniques result in healthy actions of the participant as they can apply the learned downregulation strategies in daily life and some of them start to get insight into their anger regulation. Hence, based on the interviews we argue that next to relationship and specific factors (enhance the awareness of body signals and downregulating strategies), the healing context that creates hope, the rationale (the theoretical model), and treatment procedures that are in accordance with rationale of the treatment contributes to the treatment effect.

Strengths and limitations

In this study, we aimed to contribute to the limited number of studies investigating PMT by providing insight into the experiences of seven participants with MID-BIF. Although the sample might seem small, saturation was reached across (in terms of the emergence of the themes) and within cases (in terms of a rich and full picture for each participant) and the number of participants was in line with the guideline of using five to ten participants for an IPA method (Smith et al., 2009).

We interviewed the clients approximately a month after they finished their last PMT session. Therefore, the participants had to rely on their ability to think back and reflect on things in the past, which is generally accepted to be limited in individuals with MID-BIF. To fill this gap, we additionally checked the answers with the remarks of the personal caregivers, to ensure their validity (cf., Hollomotz, 2018). We found that the participants had similar views on PMT as their personal caregivers, although the supplemental information of the social network was enriching.

However, the results of this study must also be interpreted with prudence as it did have several limitations. First, only participants who completed their treatment were included in this study. As a result, the experiences of persons who dropped out were not included. This might positively affect the outcomes of the study. Second, some participants (with the lowest IQ levels) found it difficult at times to verbalise their opinions, especially when asked for their inner feeling when angry and when talking about transference to other emotions. Some participants tried both to understand the bodily phenomena they experienced during intense emotions and to figure out how to cope with being tense. This was sometimes difficult to verbalise, which might have led on some occasions to responding with socially desirable answers. Corby et al. (2015) point to this problem and highlighted that individuals with MID-BIF might experience difficulties in communicating emotions and the use of images and prompts. From the citations used one could get the impression that we relied more on the information of some of the participants than on that provided by others. For instance, Daniel, one of the participants with better verbal capacities, was often cited in the study. This was the result of him being best able to verbally express himself in terms of emotions and reflecting on situations. However, in this study, we have analysed information presented by all, also from those who had difficulties in verbalising, such as Gene. Using IPA in qualitative research is found to be useful in individuals with IDs (Rose et al., 2019); however, using alternative methods of communication might help those with difficulties to verbally express their emotions and reflect on them. In future research, special emphasis might be given to those having difficulties with expressing their emotions by using alternative methods such as icons or other visual tools like a tension thermometer combined with observations.

Other suggestions for future research

In the light of the PMT-specific results of this qualitative study, future studies could include quantitative measures, such as IA and coping skills. By including these measures, the assumptions (i.e., IA is needed to be aware of anger, and is thus a prerequisite to downregulate anger) that are now the theoretical fundament of PMT concerning this population with anger regulation problems and aggressive behaviour can be examined. This is needed to build a stronger theory and thus provide the therapist to deepen one's knowledge to bring this in an attuned way into practice.

In terms of qualitative research, future research investigating the role of the therapist as a key element in PMT is warranted, as well as studies investigating to which extent the co-creations used during PMT contributed to the agreement about goals and tasks of therapy. The alliance in PMT and art therapies is already examined and seems to be an important factor (Heynen et al., 2017), but still needs to be further examined in people with MID-BIF. This also applies to other non-specific factors or therapy characteristics (e.g., therapy duration, homework assignments, and involvement of informal caregivers) affecting the efficacy of PMT.

Conclusion and clinical significance

The results suggest that PMT targeting anger regulation problems and aggressive behaviour is perceived as a helpful intervention by participants with MID-BIF as included in this study. Key elements mentioned by

clients are IA and adaptive coping skills, which are in line with the experiences of the therapists (Bellemans et al., 2018). The importance of these therapy-specific factors as highlighted in this study is confirmed in previous research on PMT targeting anger regulation problems and aggressive behaviour (e.g., Zwets et al., 2016). Besides that, the role of the therapist – therapeutic alliance – seems important, which is in line with Heynen et al. (2017). By working with co-creations, clients seem to experience equality in a context in which they perceive hope is created. However, it remains unrevealed how PMT – similar to other therapies – exactly works.

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Data availability statement

The data are not publicly available due to their containing information that could compromise the privacy of research participants. All authors have seen and approved the manuscript and agree to the order of authors as listed on the title page.

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