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Chapter 2

Psychomotor Therapy for Patients with Severe Mental Health Disorders

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Abstract

Psychomotor therapy is defined as a method of treatment based on a holistic view of the human being that is derived from the unity of body and mind. Assessments (observation and/or evaluation) are essential to achieving concrete psychosocial objectives methodically. Psychomotor therapy uses movement, body awareness and a wide range of movement activities to optimize movement behaviour as well as the cognitive, affective and relational aspects of psychomotor functioning (i.e. the relationships between physical movements and cognitive and social-affective aspects). Consequently, the approach to this type of therapy integrates the physical, cognitive and emotional aspects of functioning in relation to the capacity of being and acting in a psychosocial context in order to achieve clearly defined goals in consultation with the patients. Psychomotor therapy framework consists of three different approaches: a health-related approach, a psychosocial approach and a psychotherapeutic approach, which can be embedded in several psychotherapeutic approaches. Through the implementation of both systematically planned evaluations and individually targeted interventions in group, the psychomotor therapist strives to broaden the general action competences and specific skills and to stimulate a positive self-image and personal well-being in balanced social relationships. Today, there is sufficient evidence that psychomotor therapy has a major contribution to both well-being and mental health of patients with severe psychiatric problems. In Flemish psychiatric hospitals, psychomotor therapy is imbedded in different treatment programmes. In this chapter, the theory behind this approach and some practical examples will be provided.

Keywords: body image, physical activity, mental health disorders, psychiatry, psychotherapeutic accent, movement therapy, psychomotor therapy

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1. Introduction

In Belgium [1], the Netherlands [2] and Germany [3], psychomotor therapy has been well integrated into psychiatry care since 1965. Psychomotor therapy is defined as a method of treatment that systematically uses a wide variety of physical activities as cornerstones of its approach. It is considered a supplement to and a support for residential psychiatric treatment [4]. Psychomotor therapy attempts to achieve positive therapeutic results regarding the psychiatric problems of the patient (depression, anxiety, schizophrenia, autism, eating disorders, etc.) by systematically using adapted body experiences and physical activities, movement, sensory awareness and sport-derived activities. In this sense, psychomotor therapy is more than just "doing exercise" or "performing recreation activities". The foundation of psychomotor therapy is based on the well-accepted relationship between mental health and physical activity [5, 6]. It is imbedded in different multidisciplinary psychotherapeutic treatment programmes (behavioural, cognitive, or psychodynamic therapy) for different diagnosis-related patient settings [4]. Psychomotor therapy (see **Figure 1**) stimulates and integrates motor, cognitive and affective competences as inherent aspects of human behaviour, thereby enabling a person to act autonomously within his own psychosocial context [7]. Psychomotor therapy focuses on the somatic effects of physical activity (at the morphological, muscular, cardiorespiratory, metabolic, and motor levels) and on the physio-psychological effects as the core of the treatment. The experiences during PMT and the responses that arise from these experiences function as a dynamic source of change [1, 4]. Psychomotor therapy is mostly a group therapy based on the ideas of Yalom [8]. It has no real side effects, and its safety rules are transparent.

This chapter clarifies the background, history and clinical implementation of psychomotor therapy for patients with severe mental health disorders in psychiatry.

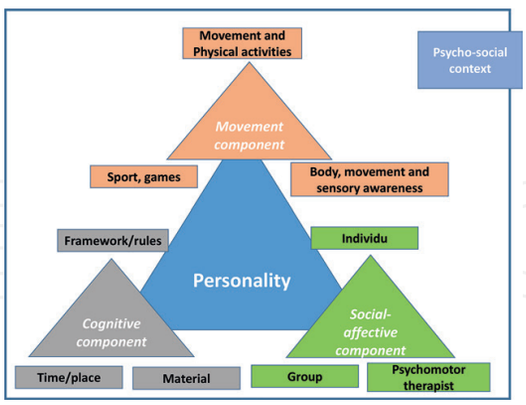


Figure 1. Psychomotor therapy: motor, cognitive and social-affective components.

2. From occupation to psychomotor therapy: a historical perspective

The French Revolution was a milestone in the treatment of patients with psychiatric problems. Pinel (France, 1745–1826) and his contemporaries Esquirol (France, 1772–1840), Tuke

(England, 1745–1813), Greisinger (Germany, 1817–1868), Chiarugi (Italy, 1759–1820), Riedel (Czech Republic, 1803–1870), Rush (USA, 1745–1813) and Guislain (Belgium, 1797–1860) transferred the ideas of the French Revolution to the treatment of patients with psychiatric disorders [9]. A repressive approach (i.e. detention, chaining of patients) was replaced with a more humane and moral treatment that consisted of daily rounds by the medical doctor and different daily activities (housekeeping activities, gardening, working in a vegetable garden, and others). Later, other milestones were important in the development of treatments for patients with severe mental health disorders: The Great World War (1914–1918), the development of neuroleptics (1952), the influence of philosophers and phenomenologists on (mental) health care (Kierkegaard, Husserl, Heidegger, Merleau-Ponty and Sartre) and the development of different types of psychotherapy and adjunctive or complementary therapies.

The book "Aktive Krankenbehandlung in der Irrenanstalt" [10], by Simon (1867–1947), a German psychiatrist, led to new ideas concerning more active treatments for patients with mental illnesses. The approach aimed to address and stimulate the healthy part of the personality of each patient.

Albert Day (1812–1894) developed an institution in New York to treat alcohol addiction. This gymnasium featured appropriate fitness equipment for its time [11, 12]. Shepherd Ivory Franz (1874–1933) [13] studied the effects upon the retardation in conditions of depression. In the United States, Meyer (1866–1950) [14] reported the positive effects of daily activities on mental health. He underlined the unity between body and mind and the effect of exercise on the balance between thinking, doing and being. He was convinced of the effects of activity as a type of therapy and of the advantages in social life for patients with mental illness. Movement activities for psychiatric patients were derived from the so-called active therapies (called "occupational therapy" in some countries) that were organized in psychiatric hospitals [1].

Until 1960, occupational therapy and psychomotor therapy were based on the same ideas [15]. In Belgium, psychomotor therapy and occupational therapy developed as two different tracks. Psychomotor therapy was focused on physical activity [1]. In the Flemish part of Belgium, Simon's and Meyer's ideas were adopted by several psychiatrists after the Second World War. Movement therapy became an essential part of mental healthcare treatment services and was initially provided by teachers in physical education settings. The philosophy of this approach was "mens sana in corpore sano" ["a healthy mind in a healthy body"]. Gradually, the attention broadened from movement activities themselves to how people move in relation to their environment. In 1962, Professor De Nayer, dean of the Faculty of Kinesiology and Rehabilitation Sciences at the University of Leuven, introduced courses on movement therapy in mental health within a physical therapy curriculum. At that time, this idea was very innovative. Professors Pierloot [16] and Van Coppenolle [17] developed the theoretical and practical content. Both were influenced by Simon and Meyer who, together with Van Roozendaal (1922–1996) [18], were the trendsetters in the use of movement activities in psychiatry. At the end of the 1960s, the term "movement therapy" was replaced by "psychomotor therapy". Psychomotor therapy focused on the interactions between the body in motion and the mind, especially from a behavioural perspective. Methods derived from more physical therapy- and body-oriented approaches, such as relaxation and sensory- and body awareness, became an integral part of therapy [1, 4].

3. Definition of psychomotor therapy

Psychomotor therapy was defined as a method or treatment that uses corporality and movement as a driver of its approach and in which the clinician tries—after having performed a methodical psychomotor examination and in consultation with the patient—to realize clearly formulated goals that are relevant to the patient's problems [19]. This definition refers more to the structure than the content of the psychomotor therapy. Psychomotor therapy in mental health is person-centred and aimed at children, adolescents, adults and elderly individuals with common and severe, acute and chronic mental health problems. Psychomotor therapists provide health promotion, preventive health care, treatment and rehabilitation for individuals and groups, mostly in inpatient treatment. They create a therapeutic relationship to provide assessment and services specifically to the complexity of mental health within a supportive environment, applying a bio-psychosocial model. The core of psychomotor therapy is to optimize well-being and empower the individual by promoting physical activity, exercise, movement awareness and functional movement, bringing together physical and mental aspects. Psychomotor therapists play a key role in an integrated multidisciplinary team and in an interprofessional care. Psychomotor therapy in psychiatry is based on the available scientific and best clinical evidence [20].

The main purpose of psychomotor therapy is to demonstrate how goal-directed movement situations can have a positive psychological effect, not only physical skills but also cognitive, perceptual, affective and behaviour. The moving body in all its aspects is the cornerstone of the psychomotor approach. This characteristic distinguishes psychomotor therapy from other approaches in psychiatry. Movements that represent real-life situations provide the patient good structure and the opportunity to create a realistic image of his/her own capabilities and boundaries. The commitment requires discipline, responsibility and perseverance. In the first stage of therapy, mostly individualized treatment is offered depending on the problems the patient presents. At a later stage, more group and interactive activities are proposed [1]. Through the implementation of both systematically planned evaluations and individually targeted interventions, psychomotor therapy stimulates and integrates motor, cognitive and affective competences as inherent aspects of human behaviour, thereby enabling a person to act autonomously within his/her own psychosocial context. The goal is to stimulate a positive self-image and personal well-being in balanced social relationships. Psychomotor therapy is used in individual and in group sessions, mostly in inpatient settings. The theoretical foundation of psychomotor therapy came from various disciplines, such as medicine (neurology, psychiatry), psychology (clinical and exercise), pedagogy, sociology, kinesiology and exercise physiology.

4. Some clinical guidelines for optimizing psychomotor therapy

On the one hand, physical activity is currently well accepted in the treatment of patients with mental health problems. On the other hand, data indicate that patients with mental illness have higher levels of social anxiety in physical activity situations compared with healthy control subjects [21]. Consequently, psychomotor therapists should consider social anxiety when trying to improve the outcomes of patients with mental illness and their adherence to

physical activity interventions. Prescribing "sport" activities for patients with severe mental illness without any clarification is therefore counterproductive for the majority of these patients. Most of these patients think they are not skilful enough to fulfil expectations or are afraid of criticism from peers; therefore, they will find many excuses for not attending these activities. Most people are convinced that physical activity is healthy for people with mental illness. This is not always the case, however, as illustrated in the following example of Ellen. This story is an eye-opener.

4.1. Example: Ellen, a 31-year-old patient with borderline personality

Swimming can be an aspect of psychomotor therapy. Swimming is a basic activity, but on an individual level, swimming can have other meanings. The therapist must keep in mind that what obvious is to them is not so obvious to the patient.

A 31-year-old female with borderline personality with eating disorder features was invited to attend a weekly swimming session at the hospital's swimming hall. The treatment was a group approach based on Linehan [22]. The patient had a negative attitude towards the swimming sessions. She discussed the problem with her therapist. She had difficulties sharing and expressing her feelings. The psychomotor therapist encouraged her to try to attend the session and to write about her experience.

"The whole day, I felt anxious about the fact that I have to go to the swimming session and that I wouldn't fit in my swimsuit anymore. It would definitely be too small, and I too fat. I imagined a fat, bulging body. The warm weather made me uncomfortable. Sweating gave me the feeling of being too fat and too indolent, which made the thought of putting on my swimsuit quite hard. The other group members were really enthusiastic. This was unimaginable for me. I could not, and still cannot, comprehend that they like to put on their bikini and have fun in the swimming pool. When I put on my swimsuit, it was larger than the last time. I saw that my belly wasn't sticking out. I felt quite good about my body. The water was less cold than I remembered from the last time. My skin felt soft in the water. I felt a very big contrast between the other group members and me as they moved freely through the water. Some even dared to sit on the edge of the swimming pool. I would have wanted to swim a lap, but I literally felt restricted. It was as if I wasn't able to swim. I didn't even know how to start, although I know that I'm a good swimmer. I had the tendency to constantly contract my muscles. When my muscles were tensed, my body felt so much better, less mushy. After a while, I asked to take a shower. The therapist gave me permission. It was very difficult for me to get out of the swimming pool. Everyone would now be able to see me. I didn't even dare to take a shower. In my fitting room, I really felt…anxious, close to despair. Drying myself and putting on my clothes was very hard for me. I cried, I felt the urge to harm myself, to cut and to ruin myself. I wanted to feel sick and weak by drinking something. However, I didn't do it. Mostly, I felt very and extremely tired".

5. The different dimensions in psychomotor therapy

As indicated in Section 1, psychomotor therapy is more than just physical activity. In psychomotor therapy, physical activities are used in relation to psychological dimensions. **Table 1** provides an overview of the different dimensions and the more concrete action points and

clarifications used during the sessions. It is clear that the classification presented in **Table 1** is artificial. There is indeed a connection among thoughts, mood, behaviour, physical reactions and the environment (life experiences = outside the person). The advantage of such a table is that it clarifies what is meant by the situation and the psychomotor, cognitive, affective, behaviour and symbolic dimension. Different situations can lead to different thoughts, moods, behaviours, and physical reactions.

A seesaw was built with benches and mattresses, as presented in **Figure 2**. *The exercise was successful if the group could keep the seesaw in balance with all participants for at least 5 min. Even a small movement could dramatically affect the balance.*

Psychomotor dimension: In addition to the essential skills (balance and the perception of body tonus by the patients), the patient realizes that the physical skills are not the only ones necessary to achieve a

Dimension	Feature
Psychomotor dimension	Physical sensations (heart rate, sweating, dizziness, shortness of breath, blushing, stomach distress, muscle tension, trembling, headaches, restlessness, fatigue irritability, pain, energy and fatigue). Body, movement and sensory awareness; physical fitness; psychomotor skills (manual skills, eye hand coordination, balance, posture, lateralization, time place orientation…).
Cognitive dimension	Including communication aspects. Issues: What are the person's thoughts and beliefs before, during and after the activity? Are the thoughts accurate? Is the person worried about what might occur? Does the person ruminate about the past? Does the person show thoughts of being in danger, narrow attention, and impulsivity? How are the person's planning and organizational skills? How does the person communicate verbally and non-verbally?
Affective dimension	Including the relational dimension and the emotional distress. What are the person's feelings before, during and after the situation? How are the person's relationships with peers and the therapist? How does the person cope with feelings such as sadness, anger, surprise, disgust, shame, hopelessness, being overwhelmed, numbness …? How is the person's self-esteem, self-image, and attitude? How is his/her level of tolerance or frustration? Who takes the lead? Who follows? Who dares to voice his own opinions?
Behavioural dimension	What is the behaviour of the subject in the given situation? What does the person choose to do or not to do? How does the person overcome the problem; what are his/her problem-solving skills? What type of strategy is used in the given situation? Does the patient use avoidance or checking behaviours, rituals, repetitive behaviour or specific habits (for instance tapping feet, biting fingernails)? Does the patient want to escape the exercise? What is his/her social behaviour like? How does the person function in team efforts? Is he able to achieve the task?
Symbolic dimension	There is a link between the proposed exercise within the therapy and with the outside world (outside the therapy, within society). The proposed exercise contains a life message. The exercise evokes conscious or unconscious events from the past.

Table 1. The different dimensions in psychomotor therapy.

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Figure 2. The seesaw: a group activity in psychomotor therapy.

goal. Other group members intrude into their comfort zone, and the patients are confronted with body contact. For some patients, this is a stress situation. How can they cope with this stress?

Cognitive and communication dimension: What are the thoughts involved in solving the problem? Who presents a substantial proposal for addressing the challenge? How is the communication among the group? Are the basic rules of communication respected? How is the group members' attention and concentration?

Affective and relational dimension: Which emotions come up with this exercise? Are the participants able to feel what the others are experiencing and anticipate their actions? Do they realize that personality and reactions may affect the way the person acts during this exercise? This exercise also led to the visible election of a leader who would be at the centre, giving instructions to the rest of the group. How does he/she lead the group? Which members are passive, and which are active? In this exercise, the value of teamwork is emphasized. How are the social interactions? What is the role of each individual in the group?

Behaviour dimension: What is the role of the patient (active or passive) throughout the task?

Symbolic dimension: Patients are always seeking balance in their life. People with eating disorders will see a weight scale but will soon realize that weight is not important in this exercise. The experiences during psychomotor therapy and the responses that arise from these experiences function as dynamic powers or change.

6. Observation and evaluation in psychomotor therapy

The need for treatment at a psychiatric hospital does not arise from physical or motor deficits but from psychological problems. Psychomotor therapists must therefore focus not only on physical goals but also on relevant psychological goals.

Within psychomotor therapy, observation is an important source of information that cannot always be obtained through tests or other measurement instruments. Even in group therapy, each individual reacts in a specific way. Observation can be helpful for establishing goals and a tailored treatment. **Table 2** provides an inventory of the important general mental health functions to observe individual along with some specific features and descriptions. These functions include the first impression, cognitive functions, affective functions and the conative functions [23]. Motor functions can be assessed using tests such as the Bruininks

Functions	Features	Description
First impressions	Appearance	Self-neglect, excessive self-care, differences between biological and calendar age; over- or underweight; piercings, tattoos, injections, self-harming, amputations
	Contact	Eye contact, looking away, looking around; handshake; non interactiveness; non reactivity
	Posture	Postural slumping, body immobility
	Complaints	Inconsistency between the symptoms and the presentation of the complaints
Cognitive functions	Awareness	Somnolent, soporific, semi-comatose, stupor, narrowed/constricted consciousness
	Attention	Cannot attract or maintain his/her attention
	Concentration	
	Orientation	To time, place and person
	Memory	Imprinting, short- and long-term memory
	Intellectual functions	Assessment skills, intelligence, awareness of illness, abstraction ability, executive functions
	Experience	Illusions, hallucinations, derealization, depersonalization
	Concrete thinking	Slowed thinking, rapid thinking, longwinded thinking, incoherence, …
	Substantive thinking	Poverty of thought, preoccupation, obsession, rumination, delusions
Affective functions	Mood	Gloomy, anhedonic, apathetic, anxious, dysphoric, euphoric
	Affect	Incongruent, flat, unstable, exaggerated, dramatic
	Somatic affective characteristics	Muscle tension, flushing, tachycardia, shortness of breath, sweating and clammy hands
	Vital signs	Sleep disorder, fatigue, loss of appetite, loss of body weight and loss of libido
	Suicidality	
Conative functions	Psychomotor	Mimicking, expression: immutable, excessively slow, absent; facial immobility
	Motivation and behaviour	Loss of decorum, inactivity, loss of initiative, lethargy, avolition, impulsive actions and behaviour, compulsive behaviour, motor agitation

Table 2. Observation of an individual patient with psychiatric disorders (adapted from Hengeveld and Schudel [23]).

Motor Ability Test [24] for gross and fine motor skills, the six-minute walk test [25–28] for measuring functional exercise capacity: alternative Leger test [29] or the Spartacus test [30].

6.1. The Louvain observation scales for objectives in psychomotor therapy

The development of the Louvain Observation Scales for Objectives in Psychomotor Therapy (LOFOPT) followed the "Bewegingsonderzoek" of Van Roozendaal [31], which became obsolete due to the time investment required. The LOFOPT was based on the premise that the observation method should offer direct and relevant information about psychosocial aspects of functioning. These observational scales offer direct indications for goals in psychomotor therapy. The disturbed characteristics of the personality in movement situations are directly related to goals. The LOFOPT observation consists of nine categories of goals that are important to psychiatric patients: improving emotional relationships, self-confidence, activity, relaxation, movement control, focus on the situation, movement expressivity, verbal communication, and social regulation ability (see **Table 3**). The LOFOPT can be considered objective and reliable [32].

Observation categories	Description
Emotional relationship	The extent to which the patient can make contacts that are emotional (i.e. experiencing a connection with fellow patients and the therapist with a certain degree of emotionally).
Self-confidence	The extent to which the patient moves independently from others, without underrating him/herself and in a non-anxious way
Activity	The extent to which the patient actively participates in movement situations
Relaxation	The extent to which the patient carries out or observes movement tasks without excessive muscle tension or nervousness
Movement control	The extent to which the patient moves calmly can control his own body and paces his efforts
Focussing attention on the situation	The extent to which the patient can give account of the situation and remain adjusted to it (concentration and task tension)
Movement expressivity	The extent to which the patient does or does not express something in his/her movements, posture and facial expressions
Verbal communication	The extent to which the patient can make verbal contact with others in a meaningful way according to the situation
Social regulation ability	The extent to which the patient is able to observe predetermined agreements and rules of behaviour during the session

Table 3. The Louvain Observation Scales for Objectives in Psychomotor Therapy: observation categories for group activities [31].

Different questionnaires related to (physical) self-concept and body image are used within psychomotor therapy: the self-description questionnaire by Marsh and O'Neill [33], the physical self-description questionnaire by Marsh et al. [34], the Body Attitude Test [35, 36], physical self-perception profile [37], and the physical self-inventory [38]. Other questionnaires are IPAQ [39] and SIMPAQ [40] and the psychomotor therapy satisfaction questionnaire by Vandensande and Probst [41].

7. The scope of psychomotor therapy

Depending on the problem analysis and the related psychomotor therapy goals, the competence of the patient, and the psychological frame of reference, the psychomotor therapist will be able to choose a more health-related approach, a psychosocial approach or a psychotherapeutic physiotherapy method (see **Figure 3**). Concrete activities are offered to motivate patients to act, interact, learn, experience, and express.

7.1. Health-related approach

The physical health-related approach aims to improve global physical health and is focused on the somatic functional status of the patient. Studies have shown that people with mental health problems are more susceptible to inactivity and are at risk of a sedentary lifestyle. In addition, the use of psychotropic drugs can result in the development of metabolic syndrome, obesity, osteoporosis and cardiovascular disease. The health-related approach is consistent with the recent recommendations of the World Health Organization (WHO) regarding the relationship between "physical inactivity" and poor health, which represents a serious threat to quality of life [42]. Clinical practice shows the importance of tailoring physical activity to each person's individual abilities to influence quality of life [43–46]. The challenge is to motivate people to remain active throughout their daily lives. People who do not continue exercising lose independence and will not maximize their potential in life. The American College of Sport Sciences offers guidelines for physical activity. It is the task of the psychomotor therapist to integrate and adapt these guidelines to the context of the person with mental health problems [47].

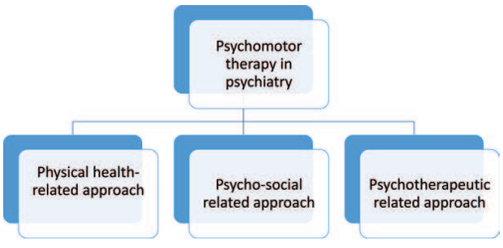


Figure 3. The scope of psychomotor therapy.

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7.2. Psychosocial-oriented and psychophysiological approaches

The psychosocial-oriented approach emphasizes the acquisition of mental and physical skills related to the moving body and to support people's ability to function independently in society. The activities focus on learning, acquiring and maintaining psychomotor, sensorimotor, perceptual, cognitive, social and emotional proficiencies. More concretely, the following aspects are highlighted: paying attention, interacting with materials, recognizing stimuli, suppressing passivity, altering behaviour, performing goal-oriented work, enhancing attention to others, improving social proficiency, learning to collaborate, learning to cope with emotionality, learning to accept responsibilities, and being able to put oneself in someone else's place. Other elementary proficiencies are stressed, such as relaxation education, relaxation skills, stress management, breathing techniques, psychomotor and sensory skills and cognitive, expressive and social skills. Through exercises, patients acquire a broader perspective and can experience their own abilities. Moreover, education regarding the basic rules of communication is also integrated [4]. The psychophysiological approach focuses on the use of physical activity to influence mental health problems, such as depression and anxiety [48–54]. In the literature, the benefits of physical activity for mental health are well accepted. Physical activity has a positive influence on mental well-being, self-esteem, mood, and executive functioning. These effects can halt the downward spiral leading to dejection. Well-balanced and regularly executed endurance activities (walking, biking, jogging, swimming), power training (fitness training) and mindfulness-derived exercises augment physical and mental resilience improve the quality of sleep; enhance self-confidence, energy level, endurance level and relaxation; and in general, decrease physical complaints. Some examples will illustrate this approach.

7.2.1. Calculator

The goal of this exercise consists of tapping all the numbered cards located in the large square (calculator) by hand, in order and in the shortest possible time span.

The cards are numbered from 1 to 30 but are scattered randomly throughout the square. Only one player may be in the calculator at any time. A subsequent player can therefore only enter the machine when the other player leaves the square. The cards may not be moved. The time starts when the first player passes the start line. The stop time is at the time at which the last player returns to behind the start line. The level of difficulty can be increased by changing the rules, for instance, to tapping the cards from 30 to 1 or tapping every other card in order (1,3,5,7…). The activity can be adapted for elderly patients by allowing them to tap the cards with a foot or by placing the cards on tables or chairs. It is not necessary to include a competition between two teams. This situation focuses on coping with stress and on cognitive and social skills.

7.2.2. The Duplo game

The group is divided into subgroups of three patients each. The therapist and each group receive the same number of different coloured Duplo blocks. Each subgroup designates a "go-between" and two

builders. The therapist constructs a model using the different Duplo blocks and places the model so that the builders cannot see it. The group must then reproduce the model following specific rules.

The go-between is the only person who is allowed to look at the hidden model made by the therapist. The go-between from the group has to perform a circuit to be able to see that figure. After circling and checking the figure, he can come back and answer the questions of the other two members, who will ask yes/no questions and construct the figure. The winner is the group that builds the figure first. In this exercise, patients have to cope with frustration. Communication is very important, as is memorization. It is very important from a symbolic point of view that the "go-between" who checks the figure is very sure of what he/she is doing.

7.3. Psychotherapeutic-oriented approach

The psychotherapeutic-oriented physiotherapy approach uses the motor domain as a gateway for ameliorating social-affective functioning. Using movement activities with a psychotherapeutic accent, the psychomotor therapist creates a setting that favours the initiation and development of processes designed to help patients gain better insight into their own functioning. During these activities, patients are invited to venture outside their comfort zones, think outside the box, experience new things, become more in touch with their inner self and cope with many emotions (depressive feelings, fear, guilt, anger, stress, feelings of unease, estrangement and dissatisfaction) and negative thoughts (intrusion, obsession, morbid preoccupations and worrying). Moreover, they will confront their behaviours (i.e. impulses, lack of abilities) or cognitive symptoms (i.e. derealisation, lack of concentration). Throughout psychomotor therapy interventions, an alternative perspective of experiences can be proposed. Becoming aware 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 emerge. Consequently, it is important to note that it is not the physical activity itself but the patient's experiences and inner perception that play the central role. Different issues are elaborated during psychomotor therapy, such as being aware of one's body and movement, expressing and regulating emotions, augmenting tolerance for frustration, refraining from impulsive behaviour, improving orientation to reality, improving social interaction, learning to define limits, strengthening self-confidence, improving body perception and self-perception, dealing with fear of failure, developing self-reflection, exploring one's actual emotional and social life and providing better insight into one's conscious through inter and intrapsychic conflicts. The careful guidance and encouragement of the psychomotor therapist and the opportunity to experience feelings in a safe environment allow the patient to develop behaviours that he/she would not have developed otherwise. The underlying problems are not necessarily resolved, but the therapist tries to improve the patient's management of problems. The patient shares his/her behaviour, feelings, and thoughts, initially with the therapist and eventually with peers. More emphasis is placed on experiences and how reactions to these experiences function as a dynamic source of power. Some examples of psychomotor therapy activities clearly illustrate the underlying message of the psychotherapeutic approach.

7.3.1. Blind squares

Blindfolded participants look for two ropes in a defined area. With these two ropes, they need to make two perfect squares, a small one in the middle of a large one. The entire length of the rope should be used. The ends of each rope are tied together. Self-confidence, communication, problem solving, orientation and concentration are the main aspects in this exercise.

7.3.2. The carpets

One person is invited to stay on a carpet. The carpet measures 70 cm by 70 cm. The top and the underside of the carpet are different colours. In this exercise, a person must turn over the carpet without touching the floor. If the person succeeds, he/she invites a second (third, fourth, fifth…) person to join him and turn the carpet back. The level of difficulty increases as the number of people on the mat increases. This is a great exercise to improve participants' balance and test their problem-solving skills. In dialogue, the participants should find the appropriate strategy for turning over the carpets. This exercise also requires leadership, coordination and co-operation skills to succeed. Closeness, bodily contact and touch are difficult issues for people with mental health problems such as eating disorders, post-traumatic stress disorders, and personality disorders to cope with. Patients will feel others invading their comfort zone. This exercise imitates real-life situations, such as rush hours on the bus, train or tube. Patients can become aware of their own thoughts, feelings, and behaviours while at the same time searching for new strategies to cope with this uncomfortable situation.

7.3.3. The window with 16 sections

The therapist designs a frame with 16 sections. Different letters lay in all but one of the sections. Using these letters, four group members must make a sentence following the rules of a sliding window. The person and the letters can only move horizontally or vertically. Letters and people cannot move diagonally.

An alternative form of this activity could be to place a person in all but one of the sections, with the goal of moving the youngest person to the beginning of the framework and the oldest to the end.

This exercise requires problem solving, communication skills, and attention.

7.3.4. Push and pull activity, a dance experience within psychomotor therapy

Patients are asked to be aware of the concepts "push" and "pull". During a warm-up, they can experience the meaning of "push" and "pull" separately in practice. Afterwards, the participants are asked to form to equal groups (in terms of both the number of members and strength) for a tug-of-war. The next step is to experience the push and pull concept during a two-minute music sequence. The participants are able to move freely during the activity and can choose whether to come in contact with other group members. The last step is to push and pull for 15 min along with music, starting from an as small a space as possible for the patient to feel safe. The patients are invited to increase the tempo in the room by touching, pushing and pulling. Again, they can decide whether other group members are allowed in their comfort zone.

These activities require self-esteem for the patient to use the whole space of the room or only the borders, to move without the concerns about the others, and to move in three dimensions. Attracting

and rejecting or pushing away; greeting, meeting and then leaving; and coming together versus separating are well-known strategies for double messages and are congruent with eating and not eating, exerting control and not exerting control, tensing and relaxing, daring and not daring, and jumping and not jumping.

8. Psychomotor therapy interventions examples in psychiatry: depression, schizophrenia, personality disorders and eating disorders

8.1. Psychomotor therapy intervention for patients with depression

Table 4 shows the most important goals of psychomotor therapy for patients with depression. The approach focuses on providing regular successful experiences through realistic and individualized goals using mastery experiences [64] and group dynamism [8] as a mean to develop adequate coping strategies. Training effects are important but not necessary to improve the patient's physical self-concept. Therefore, the psychomotor therapist should focus on strategies for improving physical self-concept [4, 37, 55–57].

8.2. Psychomotor therapy for patients with schizophrenia

In addition to the basic goal of maintaining good physical condition, the psychomotor therapist will offer a wide range of movement activities to expand skills and structure their behaviour. Based on recent research, the evidence-based psychomotor programme consists of (a) a stress-reduction programme, (b) a movement activation programme and (c) a psychosocial therapy programme [58]. *The stress-reduction programme* consists of (1) progressive muscle relaxation, (2) yoga/tai chi therapy [65], (3) aqua therapy and (4) stress management training. This programme provides patients self-maintenance coping skills that help reduce psychological distress and improve subjective well-being [66]. In the *movement activation programme* (e.g. "start to walk" sessions, psychoeducation sessions regarding lifestyle, physical activity and fitness sessions), health-related issues (the metabolic abnormalities associated with atypical antipsychotics; sedentary lifestyle) should be of special interest. The self-determination theory [67] is an appropriated approach to motivate patients to move [68]. The psychosocial therapy programme focuses on a group setting and group involvement. In the group, patients will experience during the different group processes of cooperation, compromise, confrontation and conformity during movement sessions. Clinical observations confirm the conclusion of Faulkner and Biddle [69] that exercise can be a coping mechanism for positive symptoms, such as auditory hallucinations (see **Table 4**).

8.3. Psychomotor therapy in a clinical psychotherapy setting for patients with personality disorders

Twemlow et al. [70] suggest the use of movement in physically oriented therapies combined with psychodynamic psychotherapy. In psychomotor therapy, those ideas are applied for individuals with personality and behaviour disorders. In this setting, physical work in

Psychomotor therapy for patients with depression [55–57]

- *Improving objective and subjective fitness: stimulating health-related physical fitness and improving general physical condition by running, swimming, cycling, (Nordic) walking*
- *Reducing feelings of anxiety and tension*
- *Providing experiences of success; improving self-image*
- *Psychoeducation and coaching concerning physical fitness and personal well-being and teaching patients to actively search for solutions*
- *Assisting people with lower verbal skills*

Psychomotor therapy for patients with psychosis and schizophrenia [46, 58, 59]

- *Improving poor physical health (cardiovascular fitness) caused by a low level of physical activity and a sedentary lifestyle*
- *Increasing the level of "activity", "attention", "initiative", "communication" and "social contact" by offering a stress-reduction programme, a movement activation programme and a psychosocial therapy programme*

Psychomotor therapy for patients with eating disorders [60–62, 36]

- *Rebuilding a realistic self-image using posture exercises, massage, mirror exercises, breathing exercises, and sensory, movement and body awareness exercises*
- *Curbing hyperactivity, impulses, and tensions using relaxation, yoga, tai chi and other physical activities*
- *Developing social skills using problem-solving exercises*
- *Psych-education concerning the body and physical activity. Coaching concerning physical fitness and personal well-being*

Psychomotor therapy for patients with personality disorders **[63]**

- *Re-tooling the person's experiences under the guidance of a healthy role model. Movement is used as a therapeutic tool for stimulating the part of the mind that requires specific training and skills. The process of mentalization during movement sessions is a crucial therapeutic force*

Table 4. Goals in psychomotor therapy for patients with depression, psychoses, eating disorders and personality disorders.

psychomotor therapy and psychological work in psychotherapy are combined. Psychomotor therapy is viewed as an important complementary approach to psychodynamic therapies. Individuals are allowed to re-tool their experiences under the guidance of a healthy role model [63]. Psychomotor therapy (see **Table 4**) aims to perceive and interpret the patients' behaviour in terms of intentional mental states, such as needs, desires, feelings, beliefs, goals, purposes, and reasons [71]. The different activities are used to experiment with and to learn how to address emotions [4].

8.4. Psychomotor therapy in a cognitive behavioural setting for patients with eating disorders

The cornerstones of psychomotor therapy for patients with eating disorders are the patient's specific relationship with his/her body (unfamiliarity with their own body, body dissatisfaction and social anxiety) and the drive for exercise, expressed as restlessness or hyperactivity in anorexia and bulimia nervosa or passivity (physical inactivity and a sedentary life style) in binge eating disorder [35]. The therapy focuses on the patient's impression (physical self-concept), expression (the emotional self-concept) and communication (social self-concept) using postural awareness exercises; breathing exercises; relaxation exercises; sensory, body and movement awareness; massage; mirror exercises; physical activity; yoga; tai chi; self-confrontation techniques; psychoeducation; guided imagery exercises; dance and expression; and problem-solving exercises in a group [17, 35, 60–62, 72] (see **Table 4**).

9. Conclusion

Psychomotor therapy in the field of psychiatry is a relatively recent and evolving domain. Depending on the patient's request for assistance, competence or therapeutic possibilities and his/her goals and psychological frame of reference, the psychomotor therapist can choose either a more health-related, a more psychosocial or a more psychotherapeutic approach. The therapist has access to a wide variety of activities. The emphasis is to activate patients, to offer them new experiences, and to stimulate them to express their feelings. The psychomotor therapist needs to have good motivation skills as well as creativity and adaptation skills. Because psychomotor therapy encompasses more than just movement, good communication skills are also important. The focus lays on improving the patient's actions and interaction with peers, learning new skills, behavioural change, new experiences and expression of emotions.

After a phase of clinical observations and explanations, the use of psychomotor therapy in psychiatry is now in a phase of testing the effectiveness of psychomotor interventions in different populations and settings. Many factors will influence clinical practice: the evidence, the skills of the patient and the therapist, the enthusiasm of the therapist's message the marketing, the referral systems, the health service systems and of course the economic situation. Compared with the health-related approach, the efficacy of the psychosocial and psychotherapeutic approaches of psychomotor therapy is hard to prove due to the scientific need to control for large numbers of variables. However, qualitative studies concerning patient satisfaction showed that the adjunctive approach is very helpful for many patients [73]. Future research must analyze which patients benefit the most from this approach.

The psychomotor therapist will face various challenges. Interdisciplinary and transdisciplinary are the future of mental health care. Under these approaches, professionals will reach out to other mental health caregivers who use the same methods as the core of their approach. Hopefully, this will open doors for a more intensive interchange of ideas, and the gap between the different adjunctive therapies that developed in the 1960s will begin to close.

In the future, therapists will need to obtain informed consent for each treatment. Each therapist will need to prove that his/her methods have value for the patient and provide information about what, why, where, when and how he/she will proceed and what the possible outcomes are. The move from inpatient treatment (residential therapy) to community treatment is another important challenge.

In Anglo-Saxon countries, psychomotor therapy as such is not well known as in Flanders, The Netherlands, and Germany. This approach is an evolving domain within psychiatry and can be seen as an adjunct bio-psychosocial treatment, in accordance with internationally accepted models. In Flanders, psychomotor therapy is taught at the university level and integrated in the dominant health care system [4].

Inviting people with mental health problems to participate in psychomotor therapy is not about finding a direct solution; rather, it is about starting a dialogue with the person with mental health problems.

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