

Brief Report

The feasibility of psychomotor therapy in acute mental health services for adults with intellectual disability

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Keywords

Intellectual disability, mental health, challenging behaviour, psychological therapy, assessment.

Abstract

Background. Psychomotor therapy enables people to reflect on experiences and feelings. This study examines ‘PsyMot (ID)’, an assessment that directs this psychological therapy.

Method. 12 suitable consecutive admissions were recruited from a specialist intellectual disability (ID) assessment and treatment unit for adults. Video-recordings of PsyMot (ID) allowed assessment of inter-rater reliability (IRR). Treatment goals indicated by PsyMot (ID) were addressed using psychomotor therapy as part of a comprehensive programme of interventions.

Results. Psychomotor therapy was both feasible and popular with patients who participated without any adverse effects. 9 patients completed PsyMot (ID). IRR of the treatment goals identified by all 3 raters was good to excellent in 81% cases, but there were discrepancies for individual items.

Conclusions. PsyMot (ID) and psychomotor therapy is feasible within this context, and enriched the clinical team’s formulation. Further studies of reliability and efficacy should be undertaken.

Introduction

Psychomotor therapy uses body awareness exercises and physical activity as a therapeutic tool for stimulating reflection and improving mental health (Probst et al 2010). The study was conducted in England where Psychomotor Therapy is not a recognised term in either clinical practice or research (Probst et al 2010). A variety of body-oriented therapies have been found beneficial for people experiencing mental health problems but it requires research between clinicians and academics to advance the field (Rohricht, 2009). Psychomotor therapy is a specific technique practiced widely in Continental Europe to treat of a variety of mental health conditions, and also to address challenging behaviour in people with ID. Research related to psychomotor therapy has been published in both therapy-specific (Ekerholt 2011; Emck et al 2012) and pathology-specific (Probst et al 2013; van der Maas et al 2014) journals.

This approach is well suited to assess and treat challenging patients with ID who struggle both to express themselves verbally and to interpret bodily arousal appropriately (McDonnell et al 2015).

However, there is no research base with this population. Since a trusted assessment process is key both to therapy and its evaluation, we examined the use of a diagnostic tool PsyMot (Emck and Bosscher 2010), developed to direct psychomotor therapy with children and adolescents who have mental health problems. Since its inception four small studies support inter-rater reliability, internal consistency and concurrent validity of the cluster scores for PsyMot (Emck 2014). Emck translated it into English for this study and the team adapted it for ID to create PsyMot (ID)ⁱ by modifying the procedure and excluding irrelevant items.

The PsyMot (Emck 2014) assessment consists of a battery of games and a reflective interview that in combination assess mental and bodily functioning. Items can be completed in any order, but assessment usually starts with the person being asked to identify equipment, describe what it is for, and whether they have used it before. They are then asked to select a treadmill, static bike or small trampoline, and are supported by the therapist to use it safely. Once they have become physically active, body awareness is assessed by asking the person what if anything they notice is changing. They are directed to attend to breathing, heart rate, sweating or muscular warmth only if no relevant comment is forthcoming. During this and a number of other exercises their motivation to continue is also noted. Mildly competitive games with the therapist are introduced to assess whether the person can understand and follow rules, and how they respond to winning and losing: these may involve using soft balls to throw, catch, or kick goals, or a resistance game of holding onto a treasured ball which the other person is trying to take, and then reversing roles. Additional body awareness activities involve lying down with eyes shut and showing where quoits had been placed onto their body. Activities are interspersed with reflective exercises such as inviting the person to look at themselves in a mirror, describe both what they see and how they feel about their body.

The definitions of items and associated scoring system are based on International Classification of Functioning, Disability and Health (ICF) (World Health Organisation 2001). Each item score relates to one of 7 possible treatment clusters: Body Acceptance, Participation and Enjoyment, Perceived Competence, Motor Performance, Self-Control, Self-Confidence, and Interaction with Others (Emck and Bosscher 2010). Weighted scores are combined to identify the focus of psychomotor therapy.

Aims

1. Can PsyMot (ID) be used in an ID acute assessment and treatment unit?
2. Given high levels of psychological distress and challenging behaviour, does psychomotor assessment or therapy have any adverse effect on the day of intervention?
3. Can PsyMot (ID) assessments be scored reliably?
4. Does PsyMot (ID) identify treatment cluster(s) that are relevant to these patients?

Methods

Suitable consecutive admissions to an 11-bedded specialist acute assessment and treatment NHS unit for adults with ID over a 12-month period were invited to participate in this study, which had ethical approval from the UK's National Research Ethics Service. The agreed ethics protocol included a procedure for approaching the next of kin when the Responsible Clinician (RC) considered the person to lack capacity to consent to research. The unit admitted adults in acute psychological or psychiatric distress whose unstable mental health or challenging behaviour had created increased risk to them or others: average length of stay was under 6 months. Exclusion criteria were anticipated brief admission and any contra-indication to psychomotor therapy identified by their RC from clinical history and electrocardiogram (ECG) screening. Patients all had pre-existing diagnoses of intellectual disability. The problems related to mental health and/or challenging behaviour that had resulted in them being admitted to the unit were formulated by the multi-disciplinary team, combining diagnosis based on ICD-10 with relevant aspects of psychological functioning and/or family context. Their gender, age, and ratings on Health of the Nation Outcome Scales for Learning Disability (HoNOS-LD: Roy et al 2002) on admission are

given. The Health of the Nation Outcome Scales were developed to measure the health and social functioning of people with severe mental illness in order to monitor improvements nationally (Wing, Curtis, Beevor, 1996). Behaviour and mental health over the previous 4 weeks are reported by a knowledgeable informant. HoNOS-LD has good inter-rater reliability, can be used irrespective of the degree of ID (Roy et al, 2002), and has been used to evaluate the effectiveness of services provided by inpatient settings (Hillier et al, 2010; Pearce, Skelly & Baxter, 2011). Scores have been analysed into four factors by Skelly & D'Antonio (2008): Cognitive and communicative competence; Disturbance in behaviour, mood and relationships; Loss of adaptive functioning and physical illness; and Internal dysregulation.

IQ scores from recent assessment on WAIS-IV were obtained for most patients from case records. Where WAIS-IV IQs were not available, IQ was estimated for the study from Raven's Coloured Progressive Matrices (CPM). This was selected to provide good-enough descriptive data while minimising the assessment load placed on distressed individuals who are already asked to undertake a substantial range of physical, emotional and cognitive assessments during a relatively short admission. One individual who had not previously agreed to cognitive testing turned out to have an IQ over 80 on this scale, but socially disadvantaged individuals with chaotic lives and multiple needs who have been supported by ID services for much of their life sometimes do remain within services for continuity.

It is of course undesirable to utilise two different measures, but Ravens CPM brings the advantage of being completable by patients who are fairly chaotic and/or whose cognitive abilities lie below the WAIS floor. Since there is ongoing research and scrutiny of Ravens' matrices (Raven, Raven

& Court 2004), and scores were utilised solely for description rather than data analysis, it provided a pragmatic way to describe the intellectual abilities of the sample.

PsyMot (ID) is an assessment that deliberately poses challenges. Since many of these patients had been abused or were otherwise vulnerable or emotionally volatile, both assessment and therapy were carried out by Kay in consultation with the patient's psychiatrist, supported by clinical supervision from the unit's clinical psychologist (Clegg).

Assessments were carried out in a quiet room on the unit and were video-recorded. The standardised assessment battery was completed in one session for most participants but could spread over a number of sessions depending on each person's needs.

PsyMot converts scores into treatment clusters by attributing and weighting the 60 item scores in the light of previous research studies with non-disabled children (Emck & Bosscher 2010)ⁱⁱ. This study focussed on assessment reliability, but also sought to pilot the feasibility and practical utility of psychomotor therapy with adults with ID. For patients likely to remain on the unit long enough, the first author identified the most relevant treatment cluster utilising the highest scores on PsyMot(ID); the appropriateness of working to improve the person's abilities in that particular area was then negotiated with the clinical team and, wherever possible, the person. A programme of psychomotor therapy was drawn up that both elaborated some of the PsyMot games or activities and drew on Kay's psychomotor therapy training. Interventions were designed to be completed within 6 to 8 treatment sessions because of the short-term nature of these individuals' placement on the unit.

Day to day management of risk occurred by the therapist checking the patient's state before each session and by having 2 members of nursing staff present during sessions, one of whom was the same gender as the participant. Since a previous research study in this environment found that more incidents were recorded following any activity (Turner 2014), records were also reviewed to check whether incidents increased on days when psychomotor assessment or treatment had occurred.

In order to determine inter-rater reliability (IRR), the first video of a PsyMot (ID) assessment was scored jointly by Kay and Clegg with discussion of disagreements. The remaining 8 assessment videos were scored independently. Three of these videos were also sent to Emck for reliability calculation and quality check. The DOMENIC method (Cicchetti et al 2009) was used to determine IRR using kappa for each individual item from PsyMot and for each of the seven treatment clusters, which were automatically calculated by the Excel scoring sheet. DOMENIC differentially weights presence, absence, and size of rating discrepancy. Values for kappa according to Fleiss (1981) are: <0.4 Poor; 0.4 to 0.59 Fair; 0.6 to 0.74 Good; >0.74 Excellent.

Results

The sample

From 15 consecutive referrals, 1 was unsuitable for PsyMot (ID) or psychomotor therapy following ECG screening and 2 did not engage. Of the 12 included in the study, 9 PsyMot (ID) assessments were completed: the other 3 participants could neither understand the instructions for games nor engage in reflective interview. However, data from their referring clinician suggested

that a specific psychomotor therapy treatment cluster may be helpful for them and so therapy was undertaken on that basis. These 3 presented with significant movement pathologies and recurrent falls in addition to their psychiatric diagnoses.

< Please insert Table 1 about here >

Descriptive data about feasibility

PsyMot (ID)'s games and activities gave a strong basis for proposing treatment clusters and constructing psychomotor therapy, as they provided opportunities to observe affect and movement behaviour. The combination of games and activities were suitable for most patients' concentration span: for the majority, both practical and interview elements of PsyMot (ID) could be completed within an hour. Scoring, interpretation and report-writing took up to another 3 hours.

Adjustments were required to the PsyMot protocol in order to adapt the procedure for this particularly vulnerable client group. For example, items that request participants to lie with eyes closed to assess body awareness using touch, required the therapist to be aware of any history of known or suspected abuse, and to be sensitive to cues about the person feeling intruded-upon. Similarly, for patients with a history of violence, competitive items that assess response to winning and losing had to be weighed against the risk of some people finding losing too challenging. Prioritising the well-being of each patient meant that the therapist abandoned the item or reduced the level of challenge whenever there were doubts about the wisdom of continuing. However, most patients could participate and wished to do so.

Did assessment or therapy increase risk?

No. The average number of incidents during the treatment period was 0.21 per day, standard deviation 0.26. The average of reported incidents on the days of intervention was marginally lower (-0.01 per person) on days involving psychomotor assessment and therapy than on days without intervention: this difference was not significant.

Inter-rater reliability (IRR)

IRRs for the PsyMot (ID) items showed 16 of the 60 ratings had kappas in the good or excellent range when comparing 2 raters, but kappas for all 3 raters were rated good or excellent for only 9 items. The main source of difference was that 0 was the most frequent score for the two new raters (Kay and Clegg), while the author of PsyMot (Emck) rated more items and scored them as greater problems.

For the 7 PsyMot (ID) treatment clusters, the IRR between 2 raters was excellent or good (range 0.71 to 1) for all kappas. For the 7 treatment clusters where there were 3 raters, all but four of the 21 kappas were excellent or good (range 0.43 to 0.91).

Clinical relevance of clusters identified

< Please insert Table 2 about here >

The most commonly allocated PsyMot (Emck and Bosscher 2010) treatment clusters were Participation and Enjoyment ($n=6$) and Self-Control ($n =6$), with Body Acceptance ($n =5$) third. Body Acceptance was an identified cluster for 3 of the 4 patients with a diagnosis of Autism.

Discussion

Results of PsyMot (ID) assessments provided a useful guide for the development of directed psychomotor therapy and reports received positive comments from services to which patients were discharged. Psychomotor therapy gives opportunity for experiential learning and given the good level of compliance, it lends itself to achieving patients' goals.

In terms of feasibility, psychomotor assessment and therapy was observed to be an attractive activity that engaged most patients. For the minority that were difficult to engage in PsyMot (ID), low IQ was coupled with reduced physical ability. Treatment clusters could still be allocated following assessment informed by psychomotor principles, but the conclusions were less reliable without the standardised assessment battery. One particularly risky person was moved to a low-secure setting mid-therapy because overall risks presented were too high for the unit. The decision not to challenge him during competitive elements of the assessment, and to adapt assessment and therapy for other people as a result of considering case-knowledge, feedback from nurses about each person on any particular day, and therapist intuition, appear to have been reasonable since neither psychomotor assessment nor therapy were associated with any increase in reported incidents.

With regard to PsyMot (ID) itself, further streamlining of the 60 items could be undertaken to maximise clinical usability. The activities within the standardised assessment were appropriate for this population. However, a crucial part of the assessment process involved touch. Touch is a powerful therapeutic tool in the treatment of stress and for challenging behaviour related to attachment insecurity (Sterkenburg 2008), but appropriate boundaries for its use are essential to safeguard the relationship between the individual and their therapist. PsyMot (ID) ratings showed acceptable reliability for the treatment clusters identified by the assessment, but reliability was low for individual item scores. The main source of difference concerned what behavioural intensity was required to trigger a PsyMot rating, rather than that the items were not meaningful or understood differently by different raters: further specification of rating criteria is required.

The clinical relevance of assessment results and treatment clusters was demonstrated by the unit's multi-disciplinary team readily incorporating them into overarching formulations. One example of a therapeutic intervention involved supporting an individual whose reported pains were considered to be psychosomatic after investigation of possible organic causes proved negative. His body awareness on assessment was very limited. Therapy enabled him to become more alert to changes in his body during and after exercise, and to persist in physical activity despite mild discomfort. Two years post-discharge there has been no recurrence of the serious self-harm towards the affected parts of his body that had resulted in admission, and he remains settled in the home to which he was discharged. Another example of successful psychomotor therapy concerned a woman with intermittent hypomania, who became better able to notice early stages of bodily arousal and act to reduce it, while ensuring that care staff continued to intervene when arousal moved beyond her control.

The results show that allocated treatment clusters for 3 of the 4 people diagnosed with autism from PsyMot (ID) include body acceptance, which finds external validation from Dosen's (2007) identification of poor body acceptance as a significant problem for people with autism. This also fits well with Eigsti's (2013) recommendation of embodied therapies for autism.

Conclusions

This study is a collaborative project between clinicians and academics, as recommended to advance the field of body-orientated therapies for mental health problems. It is the first step in demonstrating the potential utility of psychomotor assessment and therapy within a specialist ID acute assessment and treatment service. Patients required brief health checks before taking part in Psychomotor assessment, but most were suitable and keen to participate. PsyMot (ID) introduced new and varied activities without any increase challenging behaviour incidents, given a therapist who was sensitive to patient feedback working in close collaboration with other members of the treating team. IRR was good enough to support further investigation of PsyMot (ID) but two key developments are required in order to formally evaluate therapy: increasing usability by developing an expert group to refine the item list of 60; and improving the definitions for scoring thresholds.

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Acknowledgements

Our thanks to the patients and staff who participated; to the doctors who carried out ECG screening; and to Jen Collins & Sunita Guha.

Conflict of Interests

None.

Table 1 The sample

| N° | Formulation in addition to Intellectual Disability | Gender | Age | IQ | HoNOS-LD | PsyMot(ID) No sessions | PMT Sessions | Incidents |
|-----------|---|---------------|------------|-----------|-----------------|-------------------------------|---------------------|------------------|
| 1 | Autism | M | 33 | >80 | 11 | 1 | 6 | 0 |
| 2 | Personality disorder (PD), Epilepsy | M | 26 | 61 | 25 | 1 | 3 (D) | -0.2 |
| 3 | Abusive childhood, Attachment disorder | F | 19 | 61 | 23 | 1 | 1 (D) | -0.08 |
| 4 | Autism | F | 39 | 50 | 30 | 2 | 6 | 0.12 |
| 5 | Emotionally unstable PD | F | 23 | 51 | 26 | N/A | 2 | -0.12 |
| 6 | Attachment disorder, Tardive dyskinesia | F | 43 | <40 | 34 | 2 | 1 (d/o) | -0.02 |
| 7 | Manic episode, Sensory & neuro-developmental disorder | F | 19 | 62 | 21 | 2 | 8 | 0.015 |
| 8 | Autism | M | 21 | 51 | 45 | 1 | 0 (D) | 0 |
| 9 | Childhood abuse, Emotionally unstable PD | F | 21 | 44 | 31 | 1 | 1 (D) | 0.15 |
| 10 | Autism, Childhood abuse | F | 19 | 48 | 22 | 1 | 7 | -0.15 |
| 11 | Dementia | M | 44 | <40 | 47 | N/A | 3 | 0.2 |
| 12 | Psychosis, Deteriorating autosomal genetic condition | M | 20 | <40 | 30 | N/A | 7 | 0 |

Key

PsyMot (ID): Sessions to complete PsyMot (ID); PMT: Psychomotor Therapy; N/A: Not attempted; D: Discharge, d/o: Dropped out; Incidents on PMT days compared with other days: Average reported incidents on intervention day, minus average reported incidents on other days.

Table 2 PsyMot (ID) treatment clusters identified for participants

| No | Formulation in addition to Intellectual Disability | Treatment cluster(s) |
|-----------|---|---|
| 1 | Autism | F: <u>Self-Confidence and Self-Expression</u> A: <u>Body Acceptance</u> |
| 2 | Personality disorder (PD), Epilepsy | E: <u>Self-Control</u> |
| 3 | Abusive childhood, Attachment disorder | E: <u>Self-Control</u> |
| 4 | Autism | A: <u>Body Acceptance</u> B: <u>Participation and Enjoyment</u> |
| 5 | Emotionally unstable PD | D: <u>Motor Performance</u> B: <u>Participation and Enjoyment</u> |
| 6 | Attachment disorder, Tardive dyskinesia | G: <u>Interacting with Peers</u> B: <u>Participation and Enjoyment</u> E: <u>Self-Control</u> |
| 7 | Manic episode, Sensory & neuro- developmental disorder | A: <u>Body Acceptance</u> E: <u>Self-Control</u> |
| 8 | Autism | A: <u>Body Acceptance</u> E: <u>Self-Control</u> |
| 9 | Childhood abuse, Emotionally unstable PD | E: <u>Self-Control</u> A: <u>Body Acceptance</u> |
| 10 | Autism, Childhood abuse | B: <u>Participation and Enjoyment</u> F: <u>Self-Confidence and Self-Expression</u> |
| 11 | Dementia | D: <u>Motor Performance</u> B: <u>Participation and Enjoyment</u> |
| 12 | Psychosis, Autosomal genetic condition | D: <u>Motor Performance</u> B: <u>Participation and Enjoyment</u> |

ⁱ English-language copies of PsyMot (ID) available from Josh.Kay@Nottshc.nhs.uk

ⁱⁱ Details from c.emck@vu.nl