

Effects of Personalised Observation, Execution and Mental Imagery therapy in a patient with logopenic primary progressive aphasia in telepractice

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Introduction: Verb anomia is a frequent symptom observed in the clinical profile of people with primary progressive aphasia (PPA), particularly in the logopenic variant (lvPPA). Despite the central role of verbs in sentence construction, therapeutic approaches specifically targeting verb anomia remain limited.

POEM therapy (Personalized Observation, Execution, and Mental Imagery) was developed based on evidence supporting the involvement of sensorimotor processes in language processing, especially for action verbs. This therapy relies on three sensorimotor strategies – action observation, motor execution and mental imagery – and has demonstrated beneficial effects on verb naming in people with chronic vascular aphasia. It is therefore relevant to investigate the efficacy of POEM in individuals presenting with neurodegenerative verb anomia, particularly people with lvPPA.

Telepractice offers a promising mode of service delivery for older adults with neurodegenerative diseases such as PPA. Previous studies evaluating remote speech-language therapy in this population have reported encouraging outcomes.

Aims: The present study aimed to examine the potential benefits of the POEM therapy in a participant diagnosed with lvPPA, presenting with verb anomia.

Methods: A 74-year-old woman with APPv1 was recruited. She underwent pre- and post-therapy assessments (i.e., language, cognitive, executive and motor tasks) and POEM therapy delivered via telepractice.

Results: Results following POEM administration did not reveal a significant increase in verb production in naming tasks, spontaneous speech, or functional communication contexts. However, an improvement in gesture use was observed: gestures became more frequent and better executed during the naming of untrained verbs, suggesting a generalization of the gesture execution strategy. A delayed effect of the therapy was also noted, raising questions about the recommended duration of POEM administration for maximum effectiveness in patients with neurodegenerative diseases affecting language.

Discussion: Overall, several positive outcomes were identified: i) maintenance of performance, which constitutes a primary goal in speech therapy for patients with neurodegenerative diseases; ii) increased gesture production during naming tasks, reflecting generalization of the motor execution strategy; iii) improvements in narrative discourse tasks, with longer, more substantial, and more complex utterances in terms of semantics and syntax; iv) no change in the participant's self-perceived communication abilities, but a positive change in her partner's perception, suggesting greater ease in everyday communication; and (v) a reduction in anxiety levels.

Future research is warranted. Investigating POEM therapy in a larger cohort of individuals with PPA, using adapted administration protocols over longer intervention periods and/or combined with home-based training, would be particularly valuable. Additionally, comparing in-person

and remotely delivered POEM interventions would further clarify the effectiveness of telepractice for this therapeutic approach.

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