



## Treatment in Bilingual People with PPA: Evidence-Based Practice or Trial-and-Error?

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# **Treatment in bilingual people with PPA: Evidence-based practice or trial-and-error?**

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## **Introduction**

There is little published research on treatment of bilingual people with primary progressive aphasia (PPA). To date, we know of only two case studies, both with participants who have the logopenic variant, and both who received treatment in their later-acquired and post-morbidly more impaired language (Meyer et al., 2015; Lerman et al., under review). Thus, clinicians who treat such patients are unable to apply evidence-based practice, and often rely on studies of post-stroke aphasia. However, the decline of two languages in a bilingual person with PPA differs from that of post-stroke language impairment, because of the underlying brain injury (Malcolm et al., 2019). Furthermore, treatment for PPA is different in nature to that of stroke-aphasia, encompassing both prophylaxis and remediation, and thus goals must be set that are specific to PPA (Meyer et al., 2020) as well as specific to the patterns of actual and expected decline in each language (Costa et al., 2019; Malcolm et al., 2019).

## **Methods**

Lerman et al. (under review) conducted a longitudinal case study investigating the effects of a verb-based semantic treatment on the two languages of an English-Hebrew bilingual with the logopenic variant of PPA. Verb Network Strengthening Treatment (VNeST) was provided in the later-acquired and post-morbidly more-impaired Hebrew, while language skills were assessed in both Hebrew and English before and after treatment. We assessed whether decline continued or was halted during the treatment period, and whether any halt in the decline was specific to targeted lexical retrieval skills in the treated and/or untreated language.

## **Results**

Overall, deterioration continued during the treatment block, as measured by the WAB-R, especially for repetition in both languages and production subtests in Hebrew. However,

we also observed that while lexical retrieval skills during oral narrative production continued to decline in both languages during the treatment block, no significant decline was observed for lexical retrieval skills in either language at the word and sentence levels, or for written narratives, when measured by our Revised English-Hebrew Aphasia Battery (REHAB). These preliminary results indicate that VNeST was partially effective as a prophylactic treatment in both Hebrew and English in this pre-morbidly highly proficient participant with the logopenic variant of PPA.

## Conclusions

Clearly, there is minimal evidence-based practice in this field. To date, our study (Lerman et al., under review), together with the previously published study (Meyer et al., 2015) indicate similar results: for a person with the logopenic variant of PPA, prophylactic treatment in their later-acquired language will likely be effective in that language and may also be effective in the untreated language. However, limitations in recruiting and treating this population are acute and certain issues need to be considered when planning future studies in this field, such as PPA subtype, time post-onset at the start of intervention, and how to accurately measure decline vs. stability of language skills.

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