

Cross-linguistic exploration of speech treatment for Parkinson's disease: is a universal speech treatment approach plausible?

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Objective

1) Examine speech treatment outcomes in people with Parkinson's disease (PD) across different languages to explore the plausibility of a universal speech treatment approach.

Background

The impact of sensorimotor speech deficits across different languages in people with PD has received little attention. Recently, Rusz [1] explored patterns of hypokinetic dysarthria in PD across languages to address the question of "do we need language specific management of dysarthria in PD?" He studied 146 speakers with PD across five languages (Czech, English, French, German, Italian) on a range of acoustic measures. Rusz reported that while speech patterns were language specific, the patterns of PD speech were highly consistent across different languages. The conclusion was that no language specific management of PD dysarthria may be required.

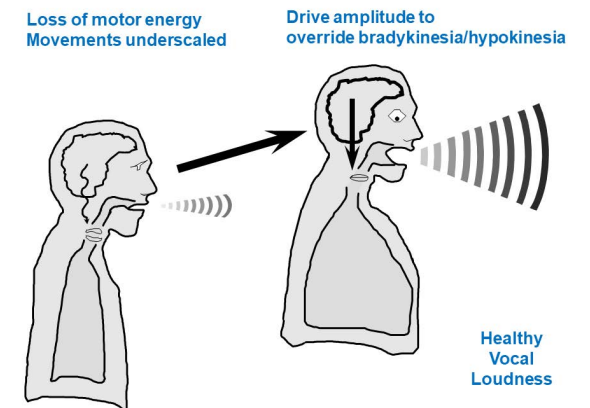
LSVT LOUD is an evidence-based speech treatment for people with PD with three RCTs documenting short and long-term improvements in vocal loudness and self-perception of speech [2-5]. There are over 25,000 speech therapists in over 60 countries trained in this treatment approach. Thus, the purpose of this study was to explore LSVT LOUD outcomes across languages to see if a universal speech treatment approach is plausible.

Methods

Published studies of LSVT LOUD in 7 different languages were reviewed (Spanish, Cantonese, Japanese, Persian, German, Italian, and French) [6-12]. A comparison of acoustic, perceptual and neural imaging outcome measures was examined. Data were compared to outcomes from speakers of American English with PD.

Results

Across studies, speech outcomes were generally positive and consistent with previously published literature. For example, Spanish speakers improved speech intelligibility [6], Cantonese speakers improved loudness and intonation, but not lexical tone [7], Quebecois French speakers increased vowel space area [12] as did German speakers [10]. Persian speakers improved self-perception of voice [9] and Japanese speakers had short and long-term improvements in vocal loudness [8].



Conclusions

LSVT LOUD addresses core sensorimotor deficits in PD that underlie hypokinetic dysarthria. As such, it appears that the benefits from this treatment may be "universal" regardless of language background. Prospective language comparison studies are needed to further clarify these findings.

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