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ABSTRACT

Background

Listening to and producing sentences is a cornerstone of typical language exchanges. Therapy for aphasic impairments has tended to focus on single-word processing, with comparatively few sentence-level therapies. Usage-based Construction Grammar is an approach to language in which frequency of use of grammatical constructions plays a central role in representation and processing of structures. We report findings from a usage-based sentence intervention: UTILISE (Unification Therapy Integrating LexIcon and SEntences). The intervention began by priming high-frequency constructions (e.g. *I like it*) via listening tasks and then practice of production. Subsequently, different lexical items were inserted to slots around the verb (e.g. *I like coffee now*) to increase communicative options.

Aims

To evaluate the impact of UTILISE on participants' spoken sentence production and comprehension abilities.

Methods & procedures

Participants with chronic aphasia (*n* = 39) were recruited to a two-arm randomised control trial, with 33 participants completing the intervention. At trial entry, participants were randomised to Immediate/Deferred conditions, allowing for treatment/no treatment comparison. Two baseline measures were taken (four-week interval in the Immediate condition; eight-week interval in Deferred). A four-week therapy phase comprised two auditory processing tasks and one spoken sentence production task, delivered over 12 in-person sessions. Outcomes were measured immediately post-intervention and after an eight-week maintenance phase. Main outcome measures were: sentence production in narratives, measured as ratio of three-word combinations to total words in connected speech (Connectivity); spoken sentence comprehension (TROG-2) and quality of life (QoL) perceptions (SAQOL-39). Intervention acceptability was also evaluated, together with an untreated control task.

Outcomes & results

A between-group comparison of Connectivity and TROG-2 scores revealed no significant difference; however, when data were pooled across groups, linear mixed-

effects models revealed gains following therapy in Connectivity, whereas increases in sentence comprehension (TROG-2) scores might be due to repeated exposure to the test. QoL perceptions improved, reaching significance on the SAQOL-39 communication sub-scale. Participants found the UTILISE intervention acceptable.

Conclusions

The study produced initial indications of the value of a usage-based sentence therapy, with increases in three-word combinations in connected speech, enhanced QoL ratings regarding communication, and high acceptability to participants. A number of factors may affect results: intervention was delivered at low-dose, and both production and comprehension measures represented distal measures. However, given these preliminary results, UTILISE has now been developed into an app enabling higher-dose intervention, and is currently under evaluation.