

ABSTRACT

Inducing speech errors in dysarthria using tongue twisters

Authors: H. Kember, K. Connaghan, R. Patel

The type and number of speech errors can provide insight into the cognitive, linguistic and motor processes involved in speech production. Although tongue twisters have been widely used to study speech production in healthy speakers, few studies have employed this methodology for individuals with speech impairment. This present study compared tongue twister errors produced by individuals with dysarthria and healthy controls to examine the underlying impairment in dysarthria. Thirty speakers were audiorecorded as they produced tongue twister lists and short sentences at a faster than habitual rate. One word in each tongue twister was marked for prominence. Preliminary findings from two participants with dysarthria and two healthy controls indicate that although the error types produced by both groups were similar, dysarthric speakers produced over twice as many errors and spoke at a substantially slower rate. Prominent words were less error prone for both groups. Further evidence from the remaining dataset would help substantiate the use of tongue twisters for assessing speech production at various levels of processing and for differentiating between dysarthria and concomitant impairments in language and cognition. Furthermore, given that prominence protects against speech error, interventions focused on emphatic stress production may be effective for improving intelligibility.