Investigating speech processing abilities in adults who stammer

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Abstract

Persistent developmental stammering is characterised by primarily non-fluent patterns, such as prolongations, repetitions, and pauses during the speech flow of a speaker. Furthermore, additional individual symptoms can occur such as avoidance of special words. All of these symptoms arise frequently in stammered speech. To date, our knowledge concerning the origins, causes, and manifestation of developmental stammering remains underspecified and different theories exist which try to explain the phenomenon of stammering. Theories consider, amongst other factors, motor speech difficulties and linguistic or phonological problems as explanations for the phenomenon of stammering. Much research has been performed considering children who stammer and different explanatory theories. However, adults with persistent developmental stammering are rarely investigated, especially related to features which are described as triggers during childhood for the onset of stammering. Multiple approaches have been made to link stammering behaviour to linguistic variability and complexity. One new solution is to approach stammering within a psycholinguistic framework which gives the promise of a more cohesive understanding of stammering. This psycholinguistic framework includes input, lexical presentations, and output. By assessing input and output, a particular aspect about the nature of stammering could be localised. Hence, the aim of this study is to investigate these levels in adults with persistent developmental stammering.

In pilot MSc work the author found clear differences in phonological measures between adults who do and adults who do not stammer. This current PhD work aims to explore the differences more systematically and attempts to discover psycholinguistic differences between adults who stammer and their counterparts. Additionally, a test tool which is sensitive to test stammering in adults in a psycholinguistic manner is developed. The recent stage of the project is marked by finalising the tasks of the developed test tool and ensuring its sensitivity and validity. Additionally, the test tool will be piloted and evaluated with regard to missing or dispensable tasks. Included tasks are, amongst others, spoonerism performances in different setups (non-words, real words, with a time ticker, measuring of reaction time), spelling of non-words, reading of non-words, non-word repetitions (with and without reaction time), and auditory discrimination. Additionally, the recent stage is characterised by confirming the broader research design. Participants with dyslexia are also considered as a second control group. Furthermore, the project can be divided in two phases; phase 1 is the general assessment of all participants (including control groups), phase 2 describes case analyses of participants who stammer with regard to individual features such as secondary
symptoms. The presentation will cover the basic ideas of the test tool and the methodology. The discussion should include feedback about the developed test tool, as well as ideas and thoughts about the methodology part of the project. Questions for the audience to consider:
- Is the developed test tool sensitive and valid?
- Are the included tasks appropriate regarding the aim of the research?
- Do you have general feedback on the test tool?
- If you critically appraise the research design and the test tool from your individual perspective, what points can you make?

**Keywords:** Stammering; Adults; Psycholinguistic framework; Test tool

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