Dysfluency anticipation in adults who stutter

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Adults who stutter (AWS) most commonly report that they can anticipate upcoming stutter events: even before a planned utterance is fully encoded and overtly articulated, a speaker who persistently stutters often has the sensation that a certain part of speech will be produced dysfluently. To date, it is not clear whether (i) these anticipatory sensations are in fact specific to speakers who stutter and (ii) what these anticipations are based on.

In the current study, we tested the quantity and accuracy of anticipations in a group of 21 AWS and 21 matched controls consisting of adults who do not stutter (ANS).

To this end, we collected anticipation judgments after a silent reading trial of six short narratives that were subsequently read aloud. Any kind of dysfluencies were transcribed using video-recordings of the overt reading sessions. Anticipation judgments were evaluated against the actually occurring stutter events.

We examined a set of linguistic factors that have previously been found to be implicated in stuttering to test whether speakers' anticipations of stutter occurrences exploit these linguistic factors as well. Analyses were conducted using log-linear mixed effects models, taking participants and words as random factors. Overall, AWS reported significantly more anticipations than ANS. Moreover, across AWS, lexical factors (i.e., Word Frequency, Sentence Position) play a role in Stuttering and Anticipation models. Post-lexical factors (i.e., Onset Complexity) and specific combinations of lexical/post-lexical factors were found to be involved in AWS' individual internal models of Stuttering and Anticipation.

The findings are discussed against the background of cognitive models of spoken production and self-monitoring- and control models. The implications for treatment programs are also discussed.