



ICPLA 2020: 1st – 4th September 2020

Abstract Submission

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Oral/Poster abstracts should be 300 words maximum.

Abstract Topic

Perception

Abstract Title:

Question or statement – what did you hear? Perceptual evaluation of the question- statement-contrast in children with dysarthria and cerebral palsy

Background:

The speech of children with dysarthria due to cerebral palsy (CP) is characterised by difficulties with respiratory and phonatory control. This can affect the use of acoustic cues to convey linguistic function such as signalling questions and statements. Recent work has shown that children with dysarthria and CP make limited
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use of fundamental frequency (f_0) to signal the contrast (Kuschmann, 2018). At the same time, intonational analyses on the same group of children have revealed that they do differentiate between questions and statements within these limited abilities (Kuschmann, 2020). However, it has yet to be established whether the observed differentiation in terms of intonation contours can successfully be perceived by listeners, and can therefore be considered of functional importance to communication.

Methods:

640 short declarative questions and statements produced by eight children with dysarthria and CP and eight typically-developing children matched for age, gender and dialect formed the basis for the perception experiment. Using a forced-choice paradigm, 20 listeners were asked to indicate whether they heard a question or a statement.

Results:

Preliminary results show that for both groups listeners were more accurate at identifying statements than questions. In addition, listeners were found to identify questions and statements produced by typically-developing children more reliably than those produced by children with CP.

Conclusion:

Listeners were less successful at identifying questions compared to statements. This supports previous research in the field (e.g. Loeb & Allen, 1993), and is likely to reflect the greater motor demands required for rising intonation contours (e.g. Xu & Sun, 2002). The fact that listeners were less successful at identifying questions produced by the children with CP, suggests that the observed level of ability to modulate intonation contours may not be sufficient to mark the contrast effectively.