

# Effect of Speech Accuracy on Quality of Life in Children with Cleft Palate +/- Cleft Lip

Marie Dokovova<sup>1</sup>, Lisa Crampin<sup>2</sup>, Lindsay Campbell<sup>2</sup> & Joanne Cleland<sup>1</sup>

<sup>1</sup>University of Strathclyde, UK; <sup>2</sup>NHS Greater Glasgow and Clyde, Glasgow, Scotland

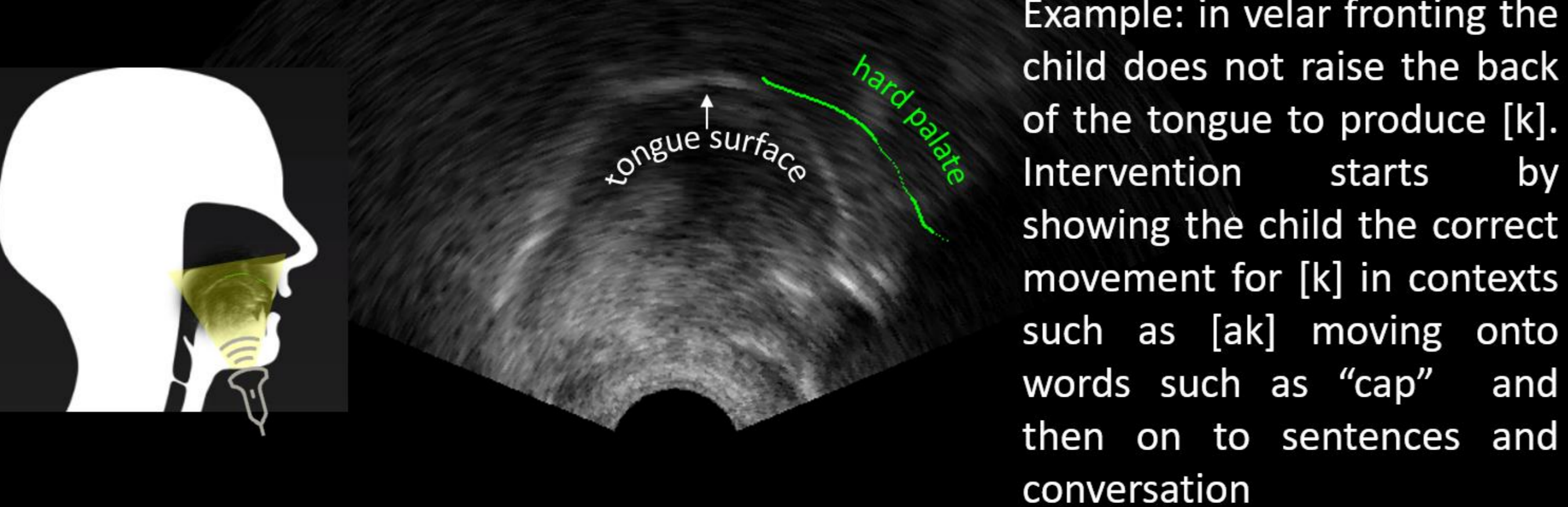
maria.dokovova@strath.ac.uk @DrDokovova, lisa.crampin@ggc.scot.nhs.uk,  
joanne.cleland@strath.ac.uk @DrJoanneCleland

## Main Finding

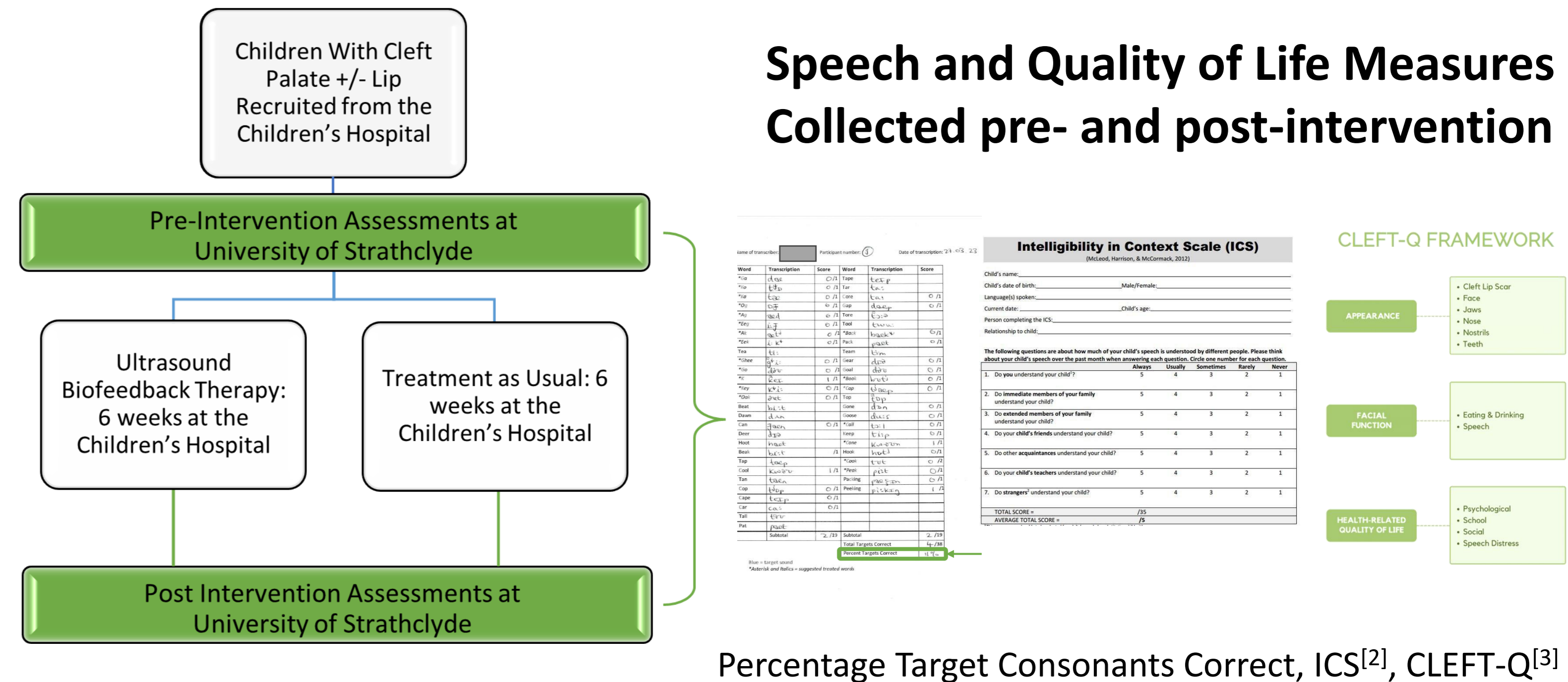
Children with Cleft Palate +/- Cleft Lip with higher percentages of correct consonants (accurate speech) have lower levels of distress across communicative situations.



Intervention based on the principles of motor-learning. Biofeedback of tongue movements provides **knowledge of performance** enabling acquisition of new articulations.



## The SonoSpeech Cleft Pilot



Percentage Target Consonants Correct, ICS<sup>[2]</sup>, CLEFT-Q<sup>[3]</sup>

## Participants

### Group

- Children participating in the SonoSpeech Cleft Pilot (RCT)<sup>[1]</sup>

### n

- 16 (6 girls)

### Age

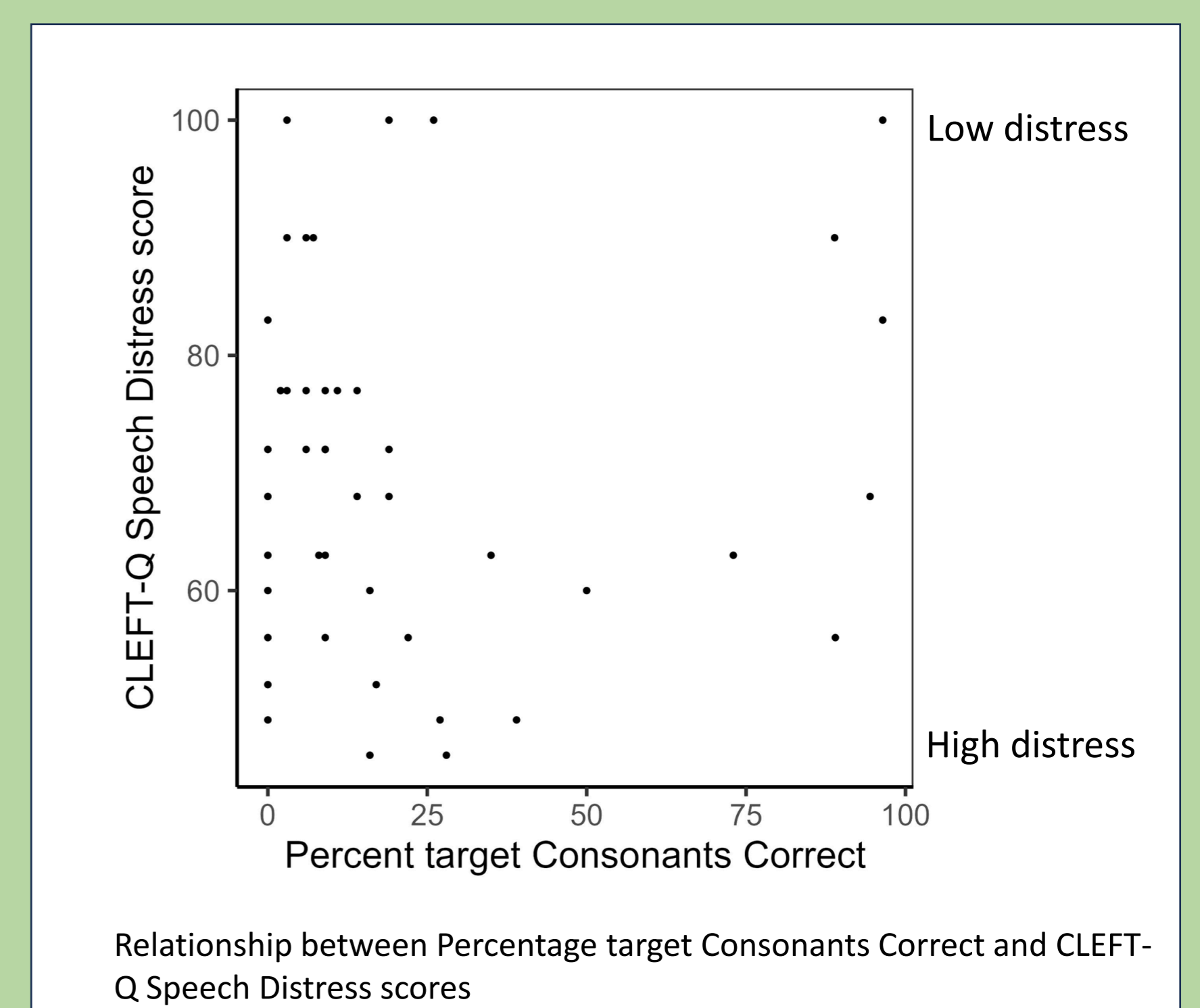
- Mean = 8 years 5 months

## Measures

- Speech sound accuracy:** Percentage target consonants
- Intelligibility:** Intelligibility in Context Scale (ICS) <sup>[2]</sup>
- Quality of life:** CLEFT-Q speech distress scale <sup>[3]</sup>
- Participation:** CLEFT-Q speech functioning scale <sup>[3]</sup>
- Collection:** Before intervention, one week, and one month after the final intervention session.
- Statistical Analyses:** Linear mixed effect analyses.

## Results & Discussion

- Difficulties with speech sounds are associated with distress in children with CP+/-L.
- It appears that children participate in activities despite speech-related distress.
- Qualitative research is needed to explore the relationship between a child's distress and their ability to participate in activities.



## References

- [1] J. Cleland, L. Crampin, L. Campbell, and M. Dokovova, "Protocol for SonoSpeech Cleft Pilot: a mixed-methods pilot randomized control trial of ultrasound visual biofeedback versus standard intervention for children with cleft lip and palate", *Pilot Feasibility Stud.*, vol. 8, no. 1, p. 93, Apr. 2022, doi: 10.1186/s40814-022-01051-x.
- [2] S. McLeod, L. J. Harrison, and J. McCormack, "The intelligibility in Context Scale: validity and reliability of a subjective rating measure", *J. Speech Lang. Hear. Res. JSLHR*, vol. 55, no. 2, pp. 648-656, Apr. 2012, doi: 10.1044/1092-4388(2011)10-0130.
- [3] A. F. Klassen *et al.*, "Psychometric findings and normative values for the CLEFT-Q based on 2434 children and young adult patients with cleft lip and/or palate from 12 countries", *CMAJ Can. Med. Assoc. J.*, vol. 190, no. 15, pp. E455-E462, Apr. 2018, doi: 10.1503/cmaj.170289.

## Acknowledgements

This study was funded by the Chief Scientist Office TCS/20/02. Thank you to the participants.

