

Could a parent's report on speech intelligibility at 3 years be a predictor of the objective measurement of speech intelligibility at 4-years-old?

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INTRODUCTION

Prevention of speech sound disorders (SSD) involves identifying predictive factors for later speech intelligibility, and **subjective parent's report** could be one of them (Eadie et al., 2014, Harrison et al., 2017). In this study, we explored the link between subjective parent's report thanks to the **Intelligibility in Context Scale (ICS)** (McLeod et al., 2012), which is a subjective scale. It takes into account several interlocutors and thus several contexts of speech intelligibility. The ICS is very quick and available for free.

RESEARCH'S OBJECTIVES


Q1 : Could parent's **global concerns** about child' speech at age 3 be a predictor of the **objective measurement** of speech intelligibility at age 4 ?

Q2 : Could **parent's contextualized report** about speech intelligibility at age 3 be a predictor of the **objective measurement** of speech at age 4?


METHOD

PARTICIPANTS

- ✔ 57 children
- ✔ Monolingual French-speaking
- ✔ Taking part in a larger study on speech and myofunctional development



- ✘ >40dB hearing loss
- ✘ Speech intervention
- ✘ Cognitive/neurological disorder



DATA

Subjective data (35-39 months)

- Parent's report of intelligibility with the ICS
- Parents' concern about child language (yes-no)

Objective data (47-51 months)

- Percent Consonants Correct (PCC) through Picture naming task of Eulalie (Meloni et al., n.d.)

DISCUSSION

- Both global and contextual subjective parent's report of intelligibility predict future speech performance
- Results corroborate previous studies (Eadie et al., 2014, Harrison et al., 2017)
- The question "Are you concerned about your child's language ?" is a reliable quick and accessible screening for further investigation
- Contextual measure like ICS does provide more information for clinical purpose
- Prevention of SSD should start with large-scale subjective screening

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RESULTS

There is a **significant correlation** between ICS at 3 years-old and PCC at 4 years old ($r' = .499, p < .01$). Children whose parents mentioned language concerns at age 3 ($n = 3$) have significantly lower PCC at age 4 than children whose parent's did not express any concerns (Mann-Whitney U = 141,500, $p < .05$).

- Eadie, P., Morgan, A., Ukoumunne, O. C., Ttofari Eecen, K., Wake, M., & Reilly, S. (2015). Speech sound disorder at 4 years: Prevalence, comorbidities, and predictors in a community cohort of children. *Developmental Medicine and Child Neurology*, 57(6), 578-584. <https://doi.org/10.1111/dmcn.12635>

- Harrison, L. J., McLeod, S., McAllister, L., & McCormack, J. (2017). Speech sound disorders in preschool children: correspondence between clinical diagnosis and teacher and parent report. *Australian Journal of Learning Difficulties*, 22(1), 35-48. <https://doi.org/10.1080/19404158.2017.1289964>

- McLeod, S., Harrison, L. J., & McCormack, J. (2012). Echelle d'intelligibilité en contexte[Intelligibility in Context Scale: Language] (MacLeod, A. N., Trans.). Charles Sturt University. <http://www.csu.edu.au/research/multilingual-speech/ics>