



Low speech rate but high gesture rate during conversational interaction in people with Cornelia de Lange syndrome

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Background to the study

- Individuals with Cornelia de Lange syndrome (CdLS) have difficulties with verbal communication. Those that do have verbal/spoken communication skills are less likely to use their verbal language skills than their peers.
- People with CdLS may find it difficult to initiate a conversation.
- The reason for this is not clear, but it could be the case that people with CdLS find *speaking* in social situations anxiety provoking.
- We don't know whether individuals with CdLS also find using non-verbal language (like gestures for example) difficult in social situations.

Aims of study

- In this study, we aimed to record the use of gestures and spoken language during conversation in individuals with CdLS, Down syndrome (DS) and neurotypical individuals (NT).

Methods

- The rate of gesture use in CdLS individuals during a social situation was measured and compared to that of NT individuals who were of a similar age, as well as individuals with Down Syndrome, who were of a similar age and had a similar level of intellectual ability.
- Fifteen participants for each group were included.
- Gesture use and use of verbal language was coded during a 3-minute conversation between the participant and an unfamiliar adult.

Results

- Overall, the CdLS group spoke (on average) 167.5 words within the three-minute conversation while the NT group spoke (on average) 434.4 words.
- The mean length of spoken sentences was longer in the NT group compared to the CdLS and DS groups.
- Overall, the CdLS group used more gestures than both the DS and NT groups – approximately double that of the other groups
- On average, individuals with CdLS produced 28 gestures per 100 words, while NT individuals used (on average) 13 gestures per 100 words.

Conclusions and implications

- Individuals with CdLS use significantly more gestures than expected given their age and level of intellectual ability.
- Gestures are potentially a strategy to support communication and social interaction.
- A higher rate of gestures in people with CdLS could compensate for the lower levels of speech shown in social contexts.
- Whilst people with CdLS speak less during social conversation, the high rate of gestures tells us that individuals with CdLS are motivated to take part in social interaction, however they may prefer to do so using non-verbal communication skills.

Full Reference: Pearson et al. (2021). *Journal of Intellectual Disability Research*, 65(6),601-607

A link to the paper can be found here: <https://onlinelibrary.wiley.com/doi/full/10.1111/jir.12829>