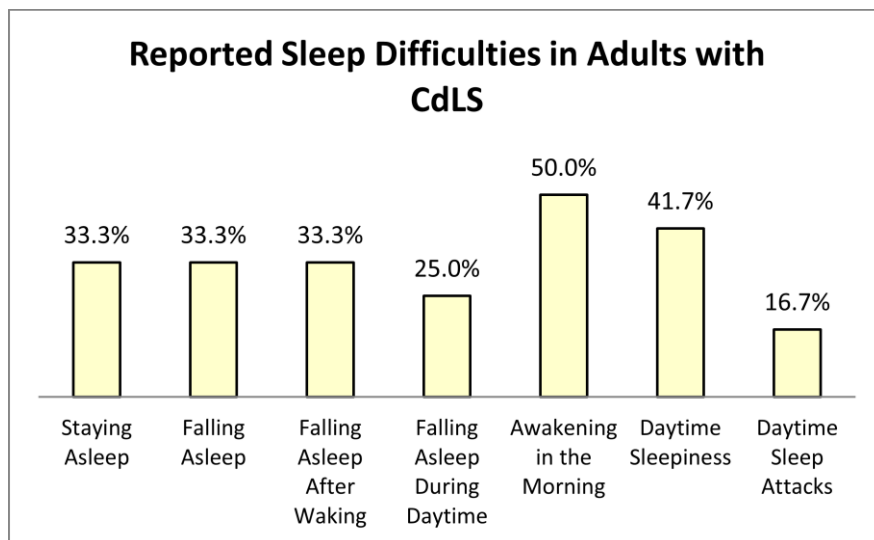
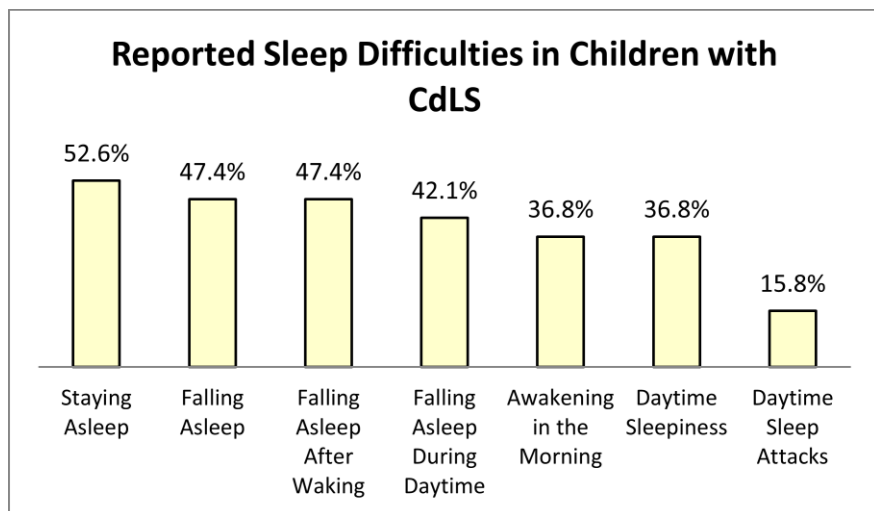


Sleep in Cornelia de Lange

Research papers

Rajan et al. (2012) reported different types of sleeping difficulties seen in 19 children and 12 adults with CdLS using a sleep history questionnaire that focused on sleep patterns and behaviour:



In this group of participants, it was found that:

- **Over 50% of children and 30% of adults** were reported to experience problems in either initiating or maintaining sleep
- **Waking up early in the morning** was the most common sleep difficulty reported in adults with CdLS
- The average time taken to fall asleep once awake was 61.8 minutes (range 0-245 mins) for children and 14.9 minutes (range 2-50 mins) for adults. While this appears like a big difference, no **statistical differences** were found between children's and adults' sleep. This means that the differences found may have occurred by chance rather than being actual differences.

Key Facts

- ★ Past studies have shown that generally **55-72%** of individuals with CdLS experience sleep problems.
- ★ Only one study has compared people with CdLS to individuals with intellectual disability without CdLS. No differences were found.
- ★ The most common sleep difficulties are reported in **settling** and **waking up**.
- ★ Health conditions in people with CdLS, such as gastrointestinal difficulties or dental problems, may be involved in sleep difficulties.

Hall et al. (2008) compared sleep problems in people with CdLS to matched participants with the same degree of intellectual disability:

- * No difference was found in the likelihood of sleeping difficulties occurring more in one group compared to the other.
- * Sleep difficulties were not found to be associated with self-injurious behaviours.

Berney et al. (1999) found 27 out of 49 (55%) individuals with CdLS to be experiencing **at least one symptom of sleep disturbance**. 25% of people **had at least 3 symptoms**. Such sleep disturbance symptoms included having an irregular sleep pattern, interrupted sleep and excessive day-time drowsiness.

Sleep Disordered Breathing

Sleep disordered breathing is understood to be interrupted breathing during sleep.

Stavionoha et al. (2011) investigated sleep disturbance in 22 individuals with CdLS using validated sleep questionnaires:

- * **33-36% had a score suggestive of moderate to severe sleep disordered breathing**
- * **This is higher than in the general population (1-4%).**