



Studies included in this review were investigations into the impact of an oral sensorimotor therapy on reducing drooling rates in children with cerebral palsy.

#### Data Collection

Results of the literature search yielded the following study designs meeting selection criteria: Single-Subject studies (4), a Randomized Clinical Trial, a Randomized Prospective Study, and a Case Study.

### ***Results***

#### Single-Subject Studies:

Fischer-Brandies et al. (1987) assessed the effectiveness of using stimulatory plates in order to treat orofacial dysfunctions in children with cerebral palsy. These 71 children (mean age = 10 years) received this orofacial regulation therapy for an average of 1 year and 3 months. The removable plates inhibited abnormal tongue and lip positioning while facilitating normal movement of these structures. As the types of CP varied in the subjects, so too did the appliances. These variations included addressing the cigar-shaped spastic tongue and alternating borders to practice lateral tongue movement. In addition to treatment with these plates, oral and facial physiotherapy was applied in one third of the participants. The oral sensory-motor abilities of these children were assessed with a neuropaediatric exam at the beginning and end of treatment, with check-ups every 2-4 months. Outcome measures included various symptoms such as drooling, feeding issues, and tongue positioning and mobility. It is unclear if appropriate statistical analysis was conducted as they were not described. Results found improvement in at least one half of the participants in

to be every 40 seconds but was made shorter if necessary. Once a participant achieved an 80% success rate, they were then to proceed to the next phase which involved using the auditory signal at a regular environment (i.e., school) for a minimum of two hours a day. Participants were then re-assessed, had one month without using the timing device, and then were re-assessed a final time. Outcome measures included drooling rate (ml/hr) and swallowing rate (swallows/hr). Appropriate statistical analysis was performed, and results found that drooling rates were significantly reduced and swallowing rates had increased. The authors concluded that this study highlights the usefulness of auditory feedback in improving oral motor skills to treat drooling.

Although this study had a small sample size, it is not without its strengths. The children all received the same training and instructions, making this study very replicable. The participants were also assessed at various times allowing for both short term and longer term data. This study was determined to have highly suggestive validity and importance.





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