

Positioning and Feeding Techniques Effective in Improving Sensorimotor Functions in Infants with Cleft Palate

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Occupational Therapy Program

BACKGROUND & RATIONALE

1 in 1,700 babies in the US are born with a cleft palate

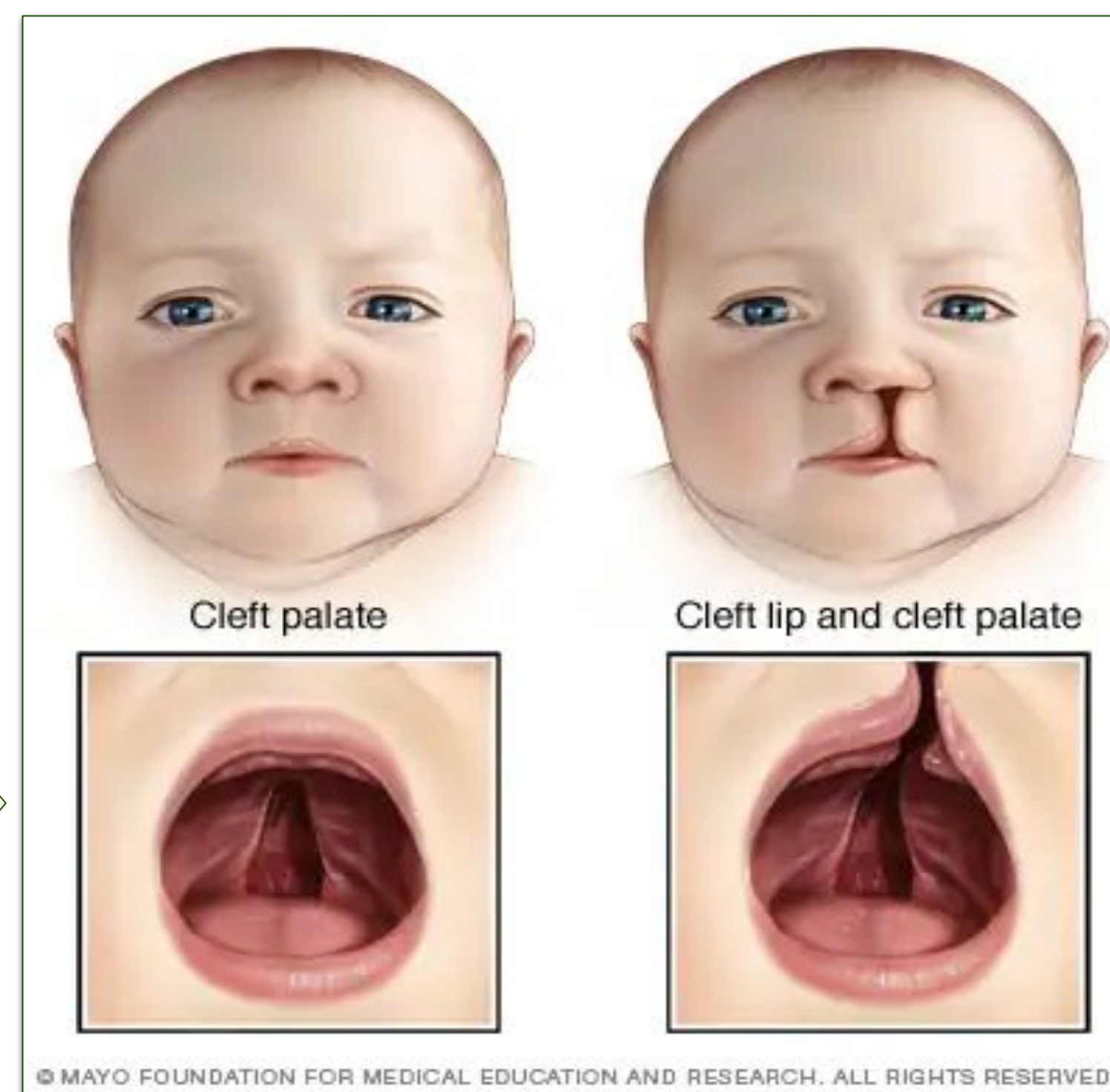
This research will help determine appropriate interventions within the scope of OT, such as, positioning, bottle modifications, and sensorimotor techniques

Orofacial clefts are the second most common type of birth defect in the United States.

This birth defect can cause feeding challenges, auditory deficits, speech deficits, and have an impact on oral-motor development which may require extensive support from caregivers, nurses, physicians, and therapists, among others.

PICO QUESTION

What positioning and feeding techniques are more effective in improving sensorimotor functions in infants with cleft palate?



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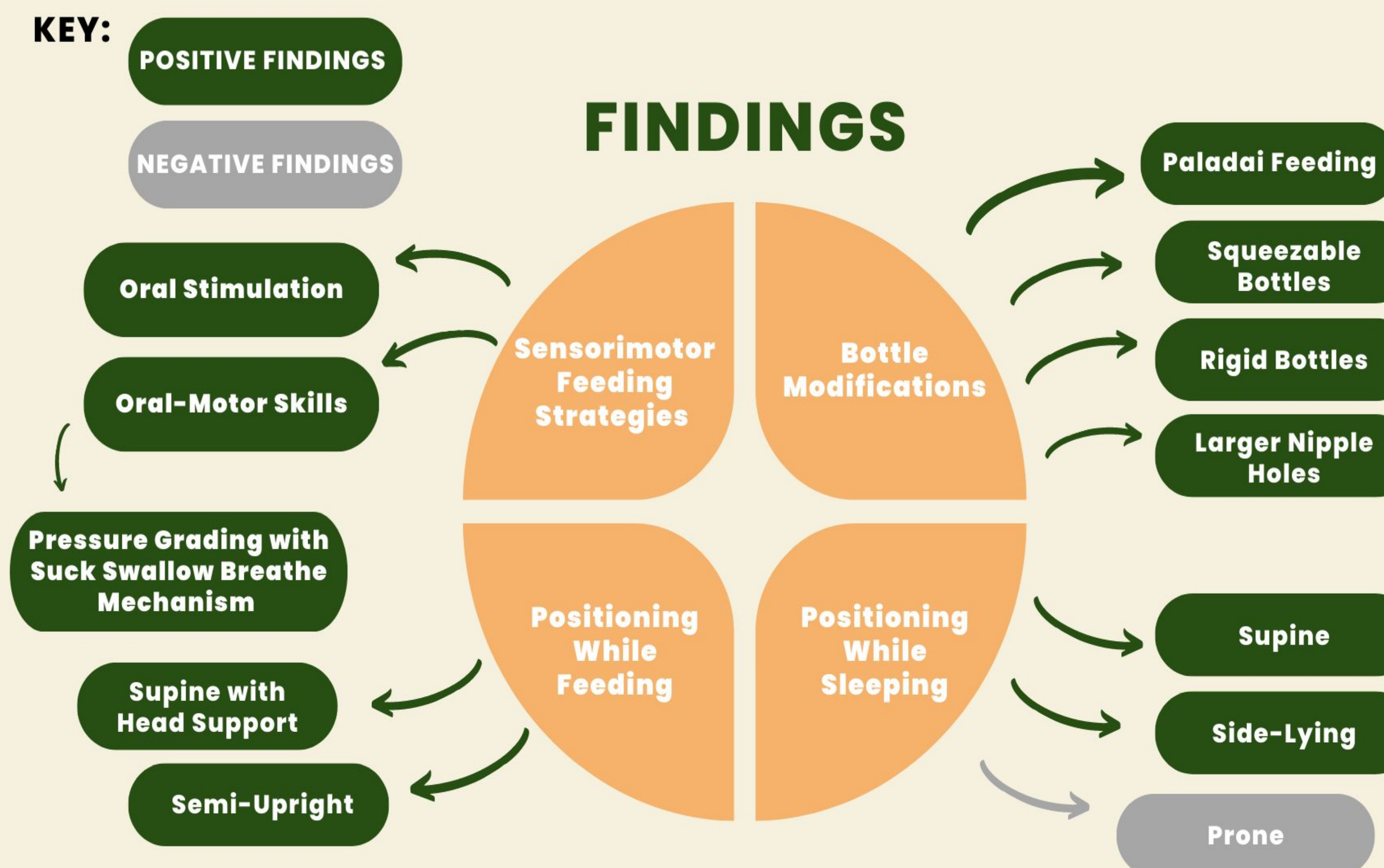
SEARCH METHODOLOGY

Total Articles from Search: 1,919
Total Articles After Appraisal: 27

Databases searched: EMBASE, EBSCOHost, Scopus, CINAHL, Pubmed, AJOT, Google Scholar, CJOT, AOTJ, ScienceDirect, Cochrane Library, Clinical Key, UTHSC Digital Commons, JSTOR, MEDLINE, JAMA, SAGE, New England Journal of Medicine, Wiley Online Library: Journal

(children) OR (orofacial clefts) OR (babies) OR (NICU) OR (cleft palate repairs) OR (cleft palate unrepaired) AND (positioning) OR (sleep) OR (feeding) OR (lactation) OR (calming) OR (relaxing) OR (breast feeding) OR (bottle feeding) AND (vestibular) OR (proprioception) OR (calming) OR (tactile) OR (relaxing) OR (suck swallow breathe) OR (oral motor) OR (tone) OR (sensorimotor)

MAIN FINDINGS AND LIMITATIONS



LIMITATIONS

- Small sample size / Limited sample representation
- Limited generalizability
- Recall Bias
- Lack of follow up
- Cleft laterality and severity were not assessed
- Lack of details on how the analysis was conducted
- Lack of comparison groups and specific treatment protocols

SEARCH RESULTS

Levels of Evidence



CLINICAL BOTTOM LINES

- Based on the findings, **further research is needed on this topic; however, the following techniques and treatments were found to be effective for children with cleft palate when parent education is provided.**
- Feeding techniques include **bottle modification, specifically squeezable bottles, rigid bottles, and larger nipple holes, as well as oral stimulation and sensorimotor-based feeding strategies.**
 - Research shows that using these strategies prevent feeding difficulties that may lead to malnutrition.
- On the other hand, research on positioning was lacking or contradicting existing research; therefore **these interventions should be used with caution.**
 - There was research supporting positioning for sleep and feeding, although they yield different results.
 - Some studies found upright or supine positioning to be more effective for feeding while others found that positioning had no effect on feeding performance.
 - In terms of sleep quality and duration, some articles found that side-lying was the most effective position, yet others found that supine was more effective.
 - Therefore, it is concluded that **further research should be conducted to determine the effectiveness of position and feeding techniques for infants with cleft palate.**

RECOMMENDATIONS FOR IMPLEMENTATION

Positioning in Sleeping:

- Supine
 - **Recommended with caution due to conflicting evidence:** Side-lying

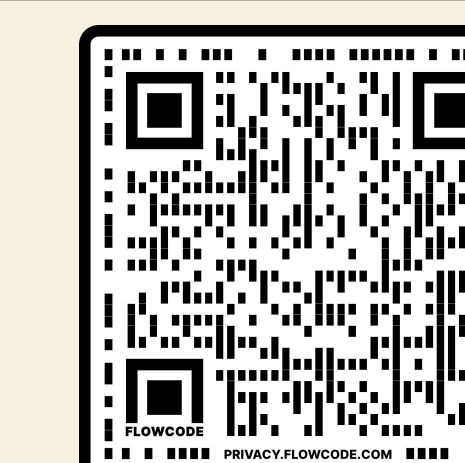
Feeding

- Bottle modification (squeezable bottles, rigid bottles, larger nipple holes), oral stimulation, and sensorimotor-based feeding techniques

We recommend further research be performed in these areas:

- OT's role in infants with cleft palate
- Various sleep positions
- Feeding technique

REFERENCES



RESOURCES

