

The impact of a feeding program combining oral hygiene, food awareness and positive mealtime experiences in children with feeding disorders

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BACKGROUND :

Feeding disorders are seen in 25-35% of typically developing children and 50 -70% of children with developmental disabilities. Feeding and swallowing disorders include difficulty with any step of the feeding process. Many children with feeding difficulties often have sensitivities intraorally or have had negative experiences with feeding. As a result, tooth brushing can be quite a challenge for these kids which results in poor oral hygiene. Subsequently, these kids become quite aversive to any contact on oral structures. By targeting oral hygiene, feeding skills may improve. Also, children with feeding disorders often have difficulties with oral/motor control, sensory processing or may even have a structural deficit which negatively impacts their feeding abilities, making feeding an unpleasurable experience. Providing a nurturing, inviting and pleasurable experience during mealtimes may result in more willingness to accept novel foods.

OBJECTIVE

To examine the impact of a feeding intervention, that targets oral hygiene, food awareness and positive mealtime experiences, in children with developmental disabilities.

DESIGN/METHODS: We collected data in all children who participated in a feeding program at a multidisciplinary university affiliated UCEDD Center in 2016. Patients were seen 1x/weekly for feeding intervention which included emphasis on toothbrushing and providing positive sensory experiences with food through food play. In addition, the **SOS (Sequential Oral Sensory)** approach was utilized, to introduce the children to new foods and provide positive experiences regarding the different sensory aspects of food.

The **SOS Approach** focuses on increasing a child's comfort level by exploring and learning about the different properties of food. The program allows a child to interact with food in a progressive, playful way.

Data collected included demographics, medical and developmental diagnosis, oral/motor and feeding evaluations, introduction of new foods, and performance rubric in 3 areas: sensory responsiveness and toothbrushing, feeding abilities (munching, tongue lateralization, improved bolus-transit time, oral clearance post swallow) and mealtime experience. Statistics include descriptive and paired t-test.

RESULTS

10 children were identified, mean age 4 ± 1.3 y.o., 6 boys, 5 Hispanics, 3 African American, 1 white and 1 Asian.

Diagnoses:

Feeding Disorder =10,
Global Developmental Delays =6
Language Impairment =4
Limited tongue movement =9
Prematurity = 2
Gastrostomy tube=1

Performance Rubric Rating

- (1) Maximum cueing: requires total assist verbal and visual cues for student to produce behavior toward stated goal (more than 5 reminders).
- (2) Moderate cueing: requires steady use of verbal or visual cues (3-5 reminders).
- (3) Minimal cueing: requires initial cues and maintain with nonverbal redirection or visual cues (1-2 reminders).
- (4) Independent: spontaneous production of goal within the therapy setting (no reminders or 1 initial).
- (5) Other settings: parent or teacher report production of goal in other settings.

Areas of performance	Baseline	3 month interval	p	6 month interval	p
Sensory responsiveness & Toothbrushing	1.1 ± 0.3	1.7 ± 0.5	0.01	1.9 ± 0.4	0.002
Feeding abilities	1.1 ± 0.3	1.7 ± 0.5	0.01	2 ± 0.5	0.004
Mealtime experiences	1.07 ± 0.1	2.07 ± 0.3	0.001	2.5 ± 0.6	0.001

Paired t-test

All patients accepted new foods and textures, as reported by parents and observed during session.

CONCLUSION: Participation in a feeding intervention using SOS approach and targeting oral hygiene improved sensory responsiveness, tooth brushing and feeding abilities in children with feeding disorders after 3 and 6 months of intervention. In addition, by providing children with positive sensory experiences with food, they were much more willing and accepting of new foods. More pleasant mealtime experiences were observed at clinic and reported at home. Given the high prevalence of feeding disorders in children with developmental disabilities, more research in the area is needed.