Behavioral and Sensory Strategies in Disability Care: *Pediatric Dental Resident Views*



PRESENTER: COLUMBIA | COLUMBIA UNIVERSITY IRVING MEDICAL CENTER

Shriya Jain DDS/MPH Candidate '26, srj2134@cumc.columbia.edu

Co-Authors: M. Rubin, A. Myers, S. Simone

BACKGROUND:

- Individuals with Disabilities and Accommodated Needs (IDAN) have unmet dental care needs.
- Oral healthcare access and utilization barriers include:
  - locating a dentist comfortable with treating IDAN
  - tolerating treatment due to sensory sensitivities
  - communication challenges
  - intellectual impairment
  - dental fears and anxiety
- Incorporating **behavioral-psychology based techniques** routinely used in other fields can improve access and reduce barriers to dental care for IDAN.

OBJECTIVE:

To explore Columbia University College of Dental Medicine (CDM) pediatric dentistry residents' knowledge, comfort level, and awareness of behavioral psychology-supported and sensory processing-informed approaches for treating IDAN before and after targeted education.

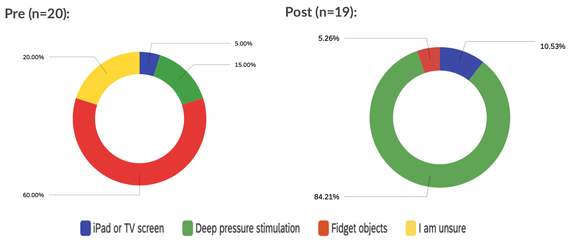
METHODS:

- A two-hour lecture on interdisciplinary psychology-based behavioral techniques and sensory processing differences support in the dental setting was delivered to 20 CDM Pediatric Dentistry Residents (10 in 2022, 5 in 2023, and 5 in 2024).
- Dental resident attendees were invited to complete an electronic pre-lecture and post-lecture survey via Qualtrics under IRB supervision (protocol #AAAU2313).
- Descriptive statistics and paired t-tests were used to analyze and evaluate the lecture experience and perspectives on presented approaches.

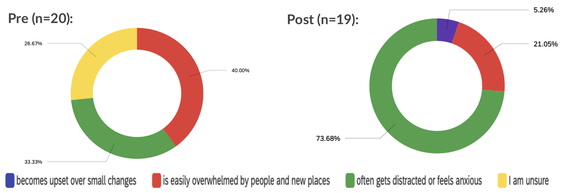
RESULTS:

Figure 1: Knowledge-Based Question Responses Before and After Lecture

Which is most useful for an individual who is hyper-responsive?

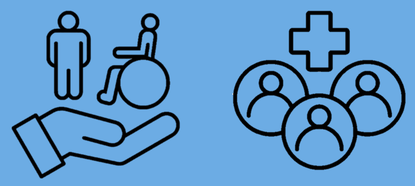


An example of a hypo-responsive behavior is someone who:





After a two-hour lecture, pediatric dental residents were ***more knowledgeable*** about sensory processing differences, ***better understood*** how to address patients' sensory needs, and were interested in ***hands-on training opportunities*** to implement the presented skills.



TODAY'S GOALS

01 ROLE OF BEHAVIORAL PSYCHOLOGY IN DENTISTRY

02 BEHAVIORAL SUPPORT TECHNIQUES THROUGH A BEHAVIORAL PSYCHOLOGY LENS

03 SENSORY SENSITIVES/DISORDER AND HOW TO MANAGE THEM IN A DENTAL SETTING

Sensory Tool Box

AIDING IN SADE- SENSORY-ADAPTED DENTAL ENVIRONMENTS

- Individuals with **tactile sensitivities**
  - Deep pressure
  - Massage/ Firm pressure
  - Weighted blanket
  - Pressure Vest
  - Brushing



Sensory Processing Disorder

HYPER-RESPONSIVE

How do we address hypersensitivity?

- Decreasing stimuli can help them focus on instructions and self-regulate
  - Dim lights
  - Ensure one person is talking at a time
  - Close the door to decrease distractions from the hallway
  - Provide them with a favored item to focus on
- **Deep pressure** inputs
- Want to Avoid particular stimulation
- present stimulation with a technique that will allow them to be aware ahead of time or adjust. (ex: contingent escape)

Sensory Processing Disorder

HYPO-RESPONSIVE (BEHAVIORS)

- Constantly touches objects
- Plays roughly and takes physical risks
- Has a high tolerance for pain
- Often squirms and fidgets
- Is constantly on the move
- Invades other people's personal space
- Often gets distracted or feels anxious



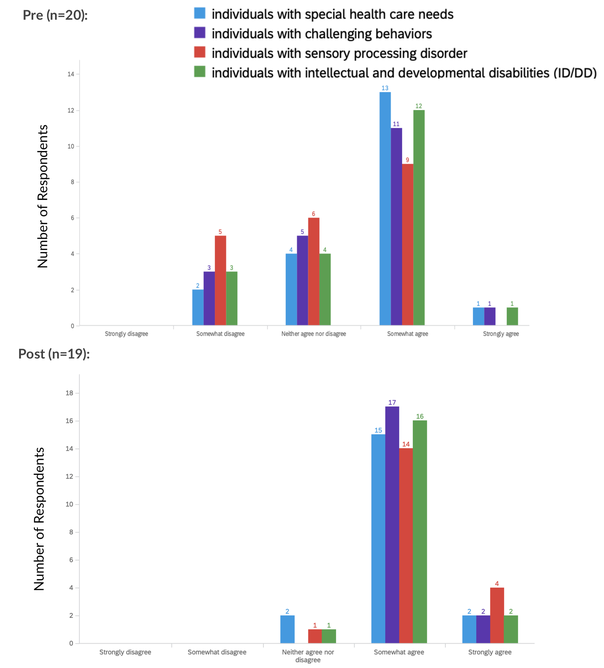






Figure 2: Comfort-Based Questions Responses Before and After Lecture

I am comfortable in my ability to treat:



Field	Mean		
	Pre	Post	P-Value
individuals with special health care needs	3.61	4.00	**0.03**
individuals with challenging behaviors	3.56	4.11	**0.004**
individuals with sensory processing disorder	3.17	4.17	**<0.001**
individuals with intellectual and developmental disabilities (ID/DD)	3.56	4.06	**0.01**

CONCLUSIONS:

- **Study limitations:**
  - small sample size, experiential differences of PGY1 and PGY2 residents, minor modifications in lecture content
- **Future directions:**
  - expand to other post-doctoral as well as pre-doctoral programs, identify opportunities to supplement lecture seminars; pilot use of sensory sensitivity intake form
- **Follow-up studies:**
  - focus on specific techniques; follow up with seminar participants

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