

Resource for Dental Professionals Providing Care to Individuals with Autism Spectrum Disorder Utilizing Occupational Therapy Modalities

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Introduction

Children with autism spectrum disorder (ASD) present significant concern in dentistry due to their difficulty in managing their oral health and prevention of dental problems as they age (Zerman et al., 2022).

- Prevalence of ASD: every 1 in 36 children (National Institute of Health, 2022).
- At least 91% of children with ASD have sensory processing (SP) difficulties (Genovese & Butler, 2020).
- Routine checkups are often anxiety inducing (Delli et al., 2013) and result in uncooperative behaviors and noncompliance (Como et al., 2020).
- 60% of parents of children with ASD reported moderate to extreme difficulty engaging in routine dental cleanings (Cernaket al., 2015)
- Only 40% of general dental practitioners stated that they would work with children with ASD (Como et. al., 2020).
- Sixty percent of general dentists feel underprepared to treat patients with these special needs (Alumran et al., 2018; Como et al., 2020; Corridore et al., 2020).
- Dental practitioners uses an average of six accommodations to address the complexities associated with treating these patients (Como et al., 2020).

AIM: To develop a resource for dental professionals that provides targeted tools and strategies to address sensory processing and emotional dysregulation commonly experienced by ASD individuals in dental settings. The goal is to reduce anxiety and improve cooperation, ultimately enhancing oral care outcomes and increasing accessibility for children with ASD and their families.

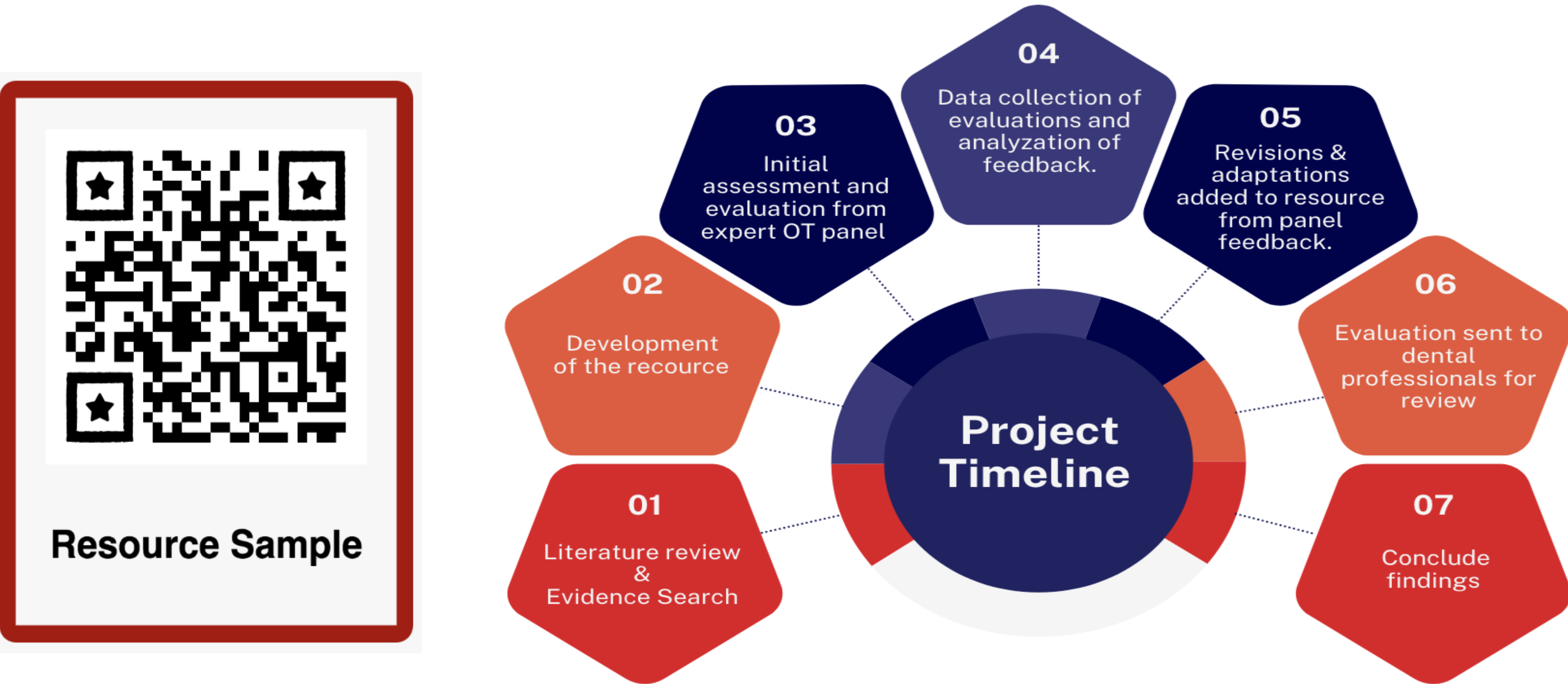
Approach

Population: Dental professionals working with children on the autism spectrum and OTP's.

Resource Development: QR code below provides excerpts from the created resource.

Evaluation Instruments: Quantitative and qualitative methods of evaluation were implemented to evaluate the resource.

- Short form assessment to evaluate for clarity, content, and quality of information.
- Open-ended evaluation to provide deeper insights and ideas.



Findings

Table 1: Quantitative results by the Expert Occupational Therapist Panel

Evaluation Questions	OT Expert A	OT Expert B
Total Years of OT Experience:	37	31
Experience in Pediatric Setting:	22	25
Experience in Sensory Processing:	22	25
Question 1: Is the flow of the content Clear for the reader?	Yes	Yes
Question 2: Is the content written in a manner that is concise?	Needs more work	Yes
Question 3: Is the verbiage suitable for health professionals with no OT background?	Needs more work	Yes
Question 4: The information and evidence provided are relevant to ASD and SP in how it can assist dental professionals when engaging with this population?	Needs more work	Yes
Question 5: Could this resource be helpful in assisting dental professionals in working with the ASD population?	Yes	Yes

Table 2: Qualitative Feedback Breakdown by the Expert Occupational Therapist Panel and Modifications

Qualitative Feedback Breakdown and Modifications	
Feedback: OT Expert A	Modification Plan
Grammar & syntax errors, repetition of information in some sections.	Careful review of resource to edit and remove repetitive information in sections as well as review grammar and syntax errors. Tables will also be reviewed and reformatted to be more visually digestible.
"Explain more about stimulating- specifically, the function and impact of preventing stimulating (comfort-seeking)"	Include information about the importance of stimulating and repercussions of preventing stimulating behaviors during dental visits in section
Additions of safety precautions for professionals before using certain techniques (i.e., essential oils, use of compression and weighted items).	Review the resource to pinpoint current safety precautions that are already included and add additional safety precautions through the lens of practitioners as well as patients.
Addition of other compression and weighted items in addition to the one already mentioned (i.e., weighted blanket, lead apron, or weighted lap pad)	Addition of other compression garments were considered but ended up not being used due to minimal evidence based information of positive effect in use. Further research will be done to make any final decisions before being ruled out.
Include an example of the actions plan filled out.	Creation of a fake patient with a filled out action plan will be made to facilitate more clarity for use by the professional. It will be included in the appendix of the resource.
Feedback: OT Expert B	Modification Plan
Grammar & syntax errors	Careful review of resource to edit and remove repetitive information in sections as well as review grammar and syntax errors. Tables will also be reviewed and reformatted to be more visually digestible.
Address long wait times in the waiting rooms and once the child is in the dental chair.	Create a space to add this point under the special considerations within the action plan form guide for use (p11)

Table 3: Sensory Modulation Disorder Definitions and Sensory Modifications

SMD	DEFINITION	OPTIONS TO TRY!	OPTIONS TO AVOID/SPECIAL CONSIDERATIONS
Sensory Over-Responsivity (SOR)	An individual may respond too much, too soon, or for too long to sensory stimuli that most people would find quite tolerable.	<ul style="list-style-type: none">• Noise canceling headphones• Blackout sunglasses• Dim lighting• Headlamp• Projector lights• Visual Checklist/Cue cards	<ul style="list-style-type: none">• High volume in the environment.• Minimize the amount of persons in the room to reduce stimulation.• Bright and flashing lights.• Overwhelming smells.
Sensory Under-Responsivity (SUR)	An individual may be unaware of sensory stimuli, present a significant delay before responding. When responding to others their volume/ tone will be muted or they may respond with less intensity compared to the average person.	<ul style="list-style-type: none">• Listening to music• Preferred TV or movie• Projector lights• Essential oils• Fidgets• Body sock• Visual or auditory cues	<ul style="list-style-type: none">• Avoid use of a body sock for patients who have a tendency to get claustrophobic.
Sensory Seeking (SS)	Specifically seek to obtain sensory stimulation. May present as impulsive, disorganized, seek bodily pressure and input	<ul style="list-style-type: none">• Body sock• Fidgets• Projector lights• Preferred TV or movie• Listening to preferred music• Visual checklist/cue cards	<ul style="list-style-type: none">• Avoid use of a body sock for patients who have a tendency to get claustrophobic.

Conclusions & Recommendations

- The panel of OT experts reveals that the resource has potential in providing dental professionals with effective modalities to support SP and ER and facilitate reduction of non-compliance and uncooperative behaviors.
- There is space for further collaboration in the healthcare field between OT and Dentistry.

Limitations: This project faced several limitations, including a condensed timeline for completion and delays in receiving timely feedback from dental professionals for evaluation. Moving forward, obtaining the feedback and conducting a pilot implementation of the action plan would significantly enhance the resource's validity.

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