Parents' perception of behavioral techniques for children with autism in the dental setting

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INTRODUCTION

- Autism Spectrum Disorder (ASD) is a developmental disability impacting social interaction, communication, and behavior.[1]
- Affects 1 in 36 children, with boys being almost four times more likely to be diagnosed than girls.[5]
- ASD includes difficulties with learning, language, emotions, medical issues, and behavior, as well as mental health concerns like anxiety and depression.[2]
- Dental visits can be stressful for children with ASD and their families. Collaboration between parents and dental teams is key to creating a comfortable and supportive experience.[3]
- The ongoing study aims to establish that the application of suitable behavior techniques should be customized to every patient diagnosed with ASD. The study will explore how personalized behavior techniques could be incorporated into the standard of care for individuals with ASD.

PURPOSE

This study seeks to identify behavioral techniques that parents of children with autism spectrum disorder (ASD) consider to be the most effective within a dental context to develop strategies to enhance care among these patients.

METHODOLOGY

DATA COLLECTION

Participants: 81 parents of children with autism (N=81) completed the survey during their child's dental visit.

Survey Content:
- Demographic Information
- Patient Characteristics
- Oral Health Habits
- Previous Dental Experiences
- Parent Perceptions of Effective Behavior Techniques

REDCap

✅ Survey Details:
- 24 questions
- Included informed consent

DATA ANALYSIS

Descriptive statistics were calculated. Bivariate logistic regressions were conducted to examine potential associations between the primary outcome variable of interest (most frequently chosen behavior guidance technique: tell-show-do) and parent and patient demographic information, patient oral health habits, and parent-reported child behavior. A p-value of less than 0.05 was used as the level of significance

RESULTS

PARENTS DEMOGRAPHIC	N	%
Gender		
Male	21	25.9%
Female	60	74.1%
Marital Status		
Married	54	66.7%
Single	12	14.8%
Divorced	10	12.3%
Co-parenting	5	6.2%
Education		
Less than HS	3	3.7%
High School	19	23.5%
College	34	42.0%
Post grad	25	30.9%
Income[1]		
Less than $20,000	11	14.1%
$20,000-30,000	4	5.1%
$30,001-$40,000	8	10.3%
$40,001-$50,000	9	11.5%
More than $50,000	46	59.0%
Race[2]		
White	20	25.3%
Black	13	16.5%
Hispanic	39	49.4%
Asian	4	5.1%
Other	3	3.8%

[1]Data missing for 3 participants
[2]Data missing for 2 participants

PATIENT'S DEMOGRAPHIC	N	%
Gender		
Male	63	77.8%
Female	18	22.2%
ASD diagnosis[1]		
Yes	70	94.6%
No	4	5.4%
Co-Occurring Disorders		
Speech Delay	41	50.6%
ADHD	19	23.5%
Developmental Delay	17	21.0%
Intellectual delay	5	6.2%
Seizure disorder	3	3.7%
Asthma	2	2.5%
Parent-reported description of child's ASD[2]		
Mild	23	30.7%
Moderate	38	50.7%
Severe	14	18.7%
Parent-reported level of challenging behaviors		
Low	33	40.7%
Moderate	39	48.1%
High	9	11.1%

[1]Data missing for 7 participants
[2]Data missing for 6 participants

CHILD BEHAVIOR DURING DENTAL VISITS	N	%
How often should you visit the dentist to become familiar with the dental environment?[1]	2	2.6%
Weekly	53	67.9%
Monthly	19	24.4%
Every 6 months	4	5.1%
Yearly	0	0.0%
Emergencies/pain only		
Parent-Reported Behavior guidance technique that will work best during the visit[1]	36	45.0%
Tell-show-do	24	30.0%
Desensitization	4	5.0%
Sedation	1	1.3%
Restraint	9	11.3%
Short multiple visits	5	6.3%
Don't know	1	1.3%
Other		
Techniques that have been used in the past		
Tell-show-do	49	60.5%
Desensitization	27	33.3%
Restraint	11	13.6%
Short, multiple visits	18	22.2%
General anesthesia	5	6.2%
IV sedation	2	2.5%
Conscious sedation	3	3.7%
Nitrous oxide	5	6.2%
Local anesthetic	1	1.2%
Unassisted	0	0.0%
No dental treatment has been performed	13	16.0%
Parent reported most effective communication tool to use during the visit	47	58.0%
Task strips/visuals	43	53.1%
Tell-show-do	18	22.2%
Slower speech pace	17	21.0%
Social stories	24	29.6%
Communication board	11	13.6%
Picture exchange	5	6.2%
Speech-generating device	3	3.7%
Sign Language	24	29.6%
Always let the parent stay in the room	13	16.0%
Sitting in parents' lap	22	27.2%
Music	14	17.3%
Counting		

[1]Data missing for 1 participant

CHILD BEHAVIOR DURING DENTAL VISITS	N	%
What do you believe would help the child have a successful dental visit?		
Short visits	42	51.9%
Frequent visits	53	65.4%
Frequent breaks	16	19.8%
Longer time spent explaining treatment and procedure	5	6.2%
Lower lights/offering sunglasses	8	9.9%
Weighted blankets	13	16.0%
Simulated practice	8	9.9%
Social story for the procedure	11	13.6%
Video/live modeling	12	14.8%
Visual schedule	24	29.6%
Headphones	6	7.4%
Support person present	24	29.6%
Medical stabilization	2	2.5%
Limiting strong odors	5	6.2%
Use X-ray apron as weighted blanket	4	4.9%
Therapy dog	2	2.5%
Headphone/noise minimization, video of the use of technology for distraction	10	12.3%
	9	11.1%
Watching Daniel Tigers' dental episode and other produced "social stories"	30	37.0%
TV they can watch during procedure		
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SIGNIFICANT RESULTS

Bivariate Logistic Regression Results Predicting Tell-Show-Do based on Patient Characteristics

Variable	Odds ratio	95% CI	p
Male	2.52	0.80, 7.90	0.11
Co-Occurring Disorders			
Speech delay	*0.42*	*0.17, 1.04*	*0.06*
ADHD	0.66	0.23, 1.91	0.45
Parent-reported description of child's ASD			
Mild	1.98	0.74, 5.26	0.17
Moderate	0.56	0.23, 1.36	0.20
Parent-reported level of challenging behaviors			
Low	*3.08*	*1.26, 7.73*	*0.02*
Moderate	*0.33*	*0.13, 0.83*	*0.02*

Significant Associations Identified:
1. **Low Levels of Challenging Behaviors:**
   1. Parents with children displaying low levels of challenging behaviors were **significantly more likely** to choose *Tell-Show-Do* as the most effective technique (p = 0.02).
2. **Moderate Levels of Challenging Behaviors:**
   1. Parents with children exhibiting moderate levels of challenging behaviors were **significantly less likely** to choose *Tell-Show-Do* (p = 0.02).

CONCLUSIONS

Enhancing Dental Care for Children with ASD
- *Tell-Show-Do* was commonly perceived as effective, particularly for children with lower levels of challenging behaviors.
- Parents of children with moderate behavioral challenges were less likely to prefer *Tell-Show-Do*, suggesting its effectiveness may decrease as behavioral difficulties increase.
- *Task Strips* emerged as the most effective communication tool, highlighting a preference for structured, visual communication.
- Frequent dental visits and environmental modifications (e.g., watching TV) were identified as helpful strategies to improve dental experiences for children with ASD.

REFERENCES

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