Desensitization for Dental and Medical Care in Intellectual Developmental Disorders

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Background

Dental anxiety in children with autism spectrum disorder is often associated with sensory overload, feelings of helplessness, and loss of control in the dental setting, which can lead to dental avoidance and long-term oral hygiene consequences. (Star et al,2023)

The purpose of this study was to evaluate desensitization as a non-pharmacological intervention for reducing anxiety, improving cooperation, and facilitating dental and medical care in children with intellectual developmental disorder (IDD), compared with traditional management approaches.

Methods

A systematic review of peer-reviewed literature published between 2004 and 2024 was conducted to evaluate behavioral interventions for children and adolescents (<21 years) with neurodevelopmental disorders, including autism spectrum disorder (ASD) and intellectual developmental disorder (IDD), in the United States. Databases searched included PubMed, Embase, Elsevier, and Cochrane Library

Evaluated **non-pharmacological behavioral interventions** to improve tolerance of medical and dental procedures.

Interventions included **graduated exposure/desensitization, task analysis, positive reinforcement, visual supports, and prompt fading**.

Implemented in **clinical, educational, or home settings**, often with **caregiver involvement**.

Outcomes measured: **compliance, procedural completion, distress, and problem behaviors** using **direct observation or video review**.

All included studies reported adherence to **ethical standards**, including informed consent and monitoring of participant well-being.
*(Final included studies can be accessed via QR code)

Conclusions

Desensitization and related behavioral strategies effectively enhance cooperation and access to dental and medical care for children with IDD. Integrating evidence-based interventions and caregiver involvement supports health outcomes.

Results

Desensitization-based interventions consistently improved compliance, reduced anxiety, and increased tolerance for dental examinations, needle procedures, and pill swallowing. Multicomponent approaches combining exposure, reinforcement, visual supports, and caregiver involvement demonstrated the greatest and most durable improvements, with generalization across settings. Minimal adverse effects were reported, and non-pharmacological interventions reduced reliance on sedation and physical restraint.

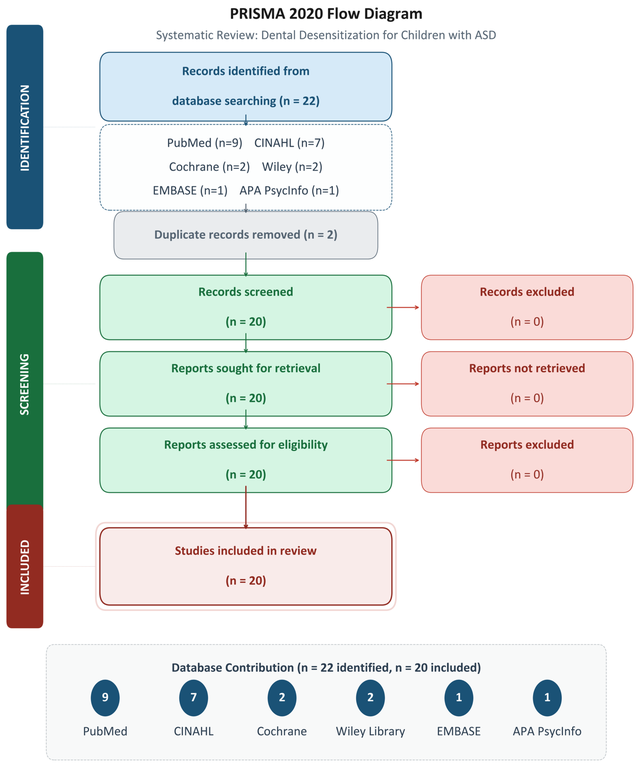
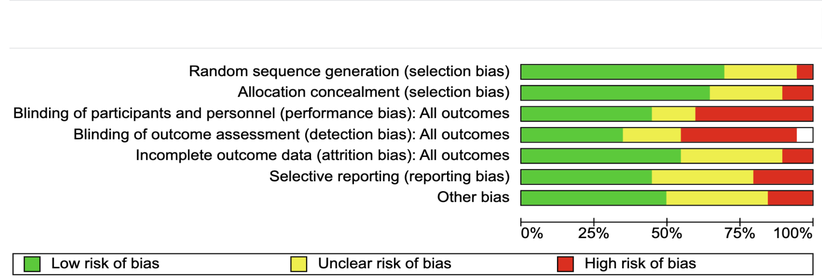
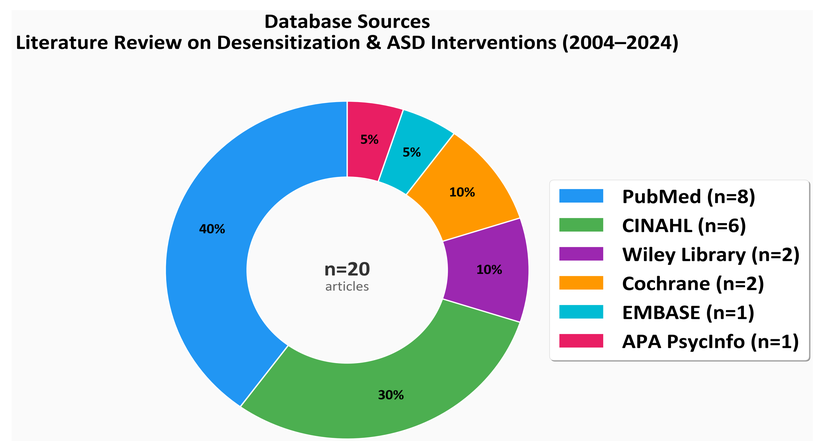


Figure 1: Risk of bias graph





Study Selection Criteria: PICO Table

	Population	Intervention	Comparison	Outcome	Date	Language	Region	Peer Reviewed
Inclusion	Children and Adolescents under 21 years	Desensitization	Non-Pharmacological interventions	Compliance to the treatment/procedure provided	2004-2024	English	Studies published in the USA	Yes
Exclusion	Adults over 21 years of age	All other intervention	Pharmacological interventions		Before 2004	Other languages	Studies published outside the USA	No

References

Please scan for references