

Development of Social Media Nutrition Intervention Components: Perspectives from a Narrative Literature Review on a Global Outlook of Problematic Mealtime Behaviors in Children with Autism Spectrum Disorder

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Background

- Children diagnosed with autism spectrum disorder (ASD) tend to display impaired communication, environmental sensitivity, repetitive behaviors, and reduced attention
- About 1 in 160 children have ASD globally
- Children with ASD may demonstrate adverse mealtime behaviors stemming from:
 - Sensory sensitivity
 - Neophobia
 - Opposition of the general appearance of certain foods
- ASD children are at a greater risk for acquiring lifelong illnesses associated with poor diet, such as obesity and nutritional deficiencies, than children in the general population
- Mealtime behaviors in children with ASD have begun to be observed among low-and-middle-income countries possessing little existing data on autism



Findings

- Obesity, frequent constipation, Vitamin A deficiency, and iron deficiency are common in young children with ASD due in part to:
 - Sugary snack preferences; refusing vegetables, meats, and fibrous foods
 - Difficulty adapting to the introduction of new foods
- ASD-specific characteristics were shown to be heightened in children demonstrating problematic eating behaviors, in particular:
 - Reduced interest in social engagement
 - Object fixation
- Resistant children often wandered away from the table during meals
- South African caregivers were reported to use television as both punishments and rewards when their child resisted eating
- In Malaysia and Singapore, caregivers were found to adopt authoritative feeding practices due to mealtime frustrations
- Caregiver frustrations during mealtimes reinforce and solidify adverse eating behaviors in children
- Developing countries are beginning to publish new literature to address mealtime concerns in children with ASD
 - In these countries, concerns have been raised regarding the caregiver's influence on childhood eating behaviors, especially those with neurodevelopmental disabilities like ASD

Conclusions

- Poverty and food insecurity influence the adoption of negative reinforcement-based feeding approaches from caregivers
- Inclusion of family beliefs and acknowledgement of their capacity is essential when developing nutrition interventions in these children
- Children with ASD demonstrating adverse eating behaviors may have enhanced characteristics of autism that must also be considered
- Data on this subject remains scarce among low-income countries
- Social media can be a cost-effective tool to disseminate nutrition education interventions for children with ASD globally



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Methods

- Narrative review utilizing the Databases PubMed and Web of Science
 - Search terms included, 'autis*', 'mealtime behaviors', 'children', and 'nutrition'
 - Included publications written in English between 2012 and 2022
 - Studies discussing single-subject interventions or children with comorbid eating or feeding disorders were excluded
 - Initial screening of 44 articles preformed through title/abstract review with subsequent full text review following
 - A total of 20 articles were identified for this review
- Social media component is part of a pilot nutrition intervention randomized control trial
- Two private Facebook groups are in development with feeding resources and lesson materials routinely posted
 - ASD Nutrition Study page has been developed on Facebook and two private groups were created for Autism Eats and We Can! Enhanced Usual Care (EUC) groups
 - A list of external resources such as video links and images on healthy eating will be utilized

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