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Review

Family Mealtime environment, sensory sensitivities and eating behaviour in children with autism spectrum disorder: A Narrative Review

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Abstract:
Children with autism spectrum disorder (ASD) generally exhibit atypical eating behaviours connected to processing differences, which can make family meal time extremely stressful. This review is a combination of evidence on how the family mealtime environment, sensory sensitivities and caregiver struggle,communicate to shape eating behaviour in children with ASD. Studies show that multisensory demands at mealtime as taste,smell,texture,visual,auditory cues contribute to food selectivity, refusal of food and ritualistic pattern of eating. These mealtime challenges enhance stress for caregivers or both the parents and can spoil family routine, bonding and shared meals.Guidance from pediatrician, psychologist and occupational therapist can help increase structured predictable and planned routine. Sensory- friendly adaptation and positive modeling to support sustainable dietary expansion and better mealtime experience.However most available evidence is cross sectional with limited high quality intervention trials that examined family centered.sensory informed strategies more diligent, culturally sensitive research is needed to guide interdisciplinary nutrition and mental health practice especially in low- and middle-income settings.

Keywords: Autism spectrum disorder,sensory sensitivities, food selectivity, family mealtime, caregiver stress, eating behaviour.

Introduction:

Autism Spectrum Disorder(ASD) is a neurodevelopmental condition characterised by differences in social communication and restricted, repetitive patterns of behaviour with a global prevalence estimated at around 1 in 100 children (WHO 2023). International agencies like world health organisation (WHO) emphasise early identification and family centered care to support behaviour, communication, daily functioning in children with ASD *(WHO,2023)*, as per the family context, mealtimes are a key daily occupation that can promote structure, shared communication, nutritional adequacy but they also shows a frequent site of conflict and stress in families of children with ASD *(Samson-Fang & Stevenson, 2020)*.

Atypical eating *behaviours are those which includes extreme food selectivity, refusal and insistence on monotonous eating, these significantly more common in children with ASD than in their typically developing peers (Silva et al., 2018).* These behaviours are closely linked to sensory processing differences as hyposensitivity or hypersensitivity to smell,taste,texture,sound and visual stimuli (*Coulthard et al., 2021)* At the same time parental responses, mealtime rules,modeling and the overall emotional atmosphere of the family meal can may be weaken or boost these challenges *(samson-Fang & Stevenson, 2020).*

This narrative review aims to describe the characteristics of the family mealtime atmosphere in households of children with ASD, summarising the evidence on the relationship between sensory and

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eating behaviour in ASD, analysing caregiver's stress and coping in relation to mealtime challenges and present practical family centered strategies recommended by clinicians and professional bodies for creating structured and sensory friendly mealtime *(Minnesota Department of Health, 2020; Samson-Fang & Stevenson, 2020).*

Family mealtime environment in ASD

Research comparing families with children with ASD to those typically developing children shows that mealtime in ASD households are more often characterised by dispute, adjustments, separate meal preparations *(Nadon et al., 2011)*

Parents most of the time report preparing the separate food, allow different mealtime schedules, negotiating around the child's rigid preferences and selectivity, which may reduce the opportunities for communal eating *(Ausderau & Juarez, 2013)*

These kind of adaptation may avoid sudden outburst behaviour but can also reduce exposure to new foods and limit the nutrition of the child along with participation in family routines *(Johnson et al., 2015)*

Qualitative and observational studies explains mealtime as a stressful and dissatisfying for most of the parents of children with ASD, with frequent interrupted behaviour as leaving the table,refusal rituals, tantrums (johnson et al., 2015), most of the parents complaints about the children's preferences and their behaviours influence what other family members eat, sometimes lead to less nutritional diet which resulting the low nutrition for entire family.(van der Lubbe et al., 2022)

On the other hand, clinical professionals observe that predictable routine, visual schedules,clear expectations can help to achieve more successful mealtime when consistently implemented. (Samson-Fang & Stevenson, 2020)

Sensory activities and eating behaviours

To understand eating behaviours in children with ASD it is very important to know about sensory processing differences,multiple studies shows association between sensory sensitivity and food selectivity (Coulthard & Ahmed, 2021), in comparison of neurotypical peers, children with ASD showed higher rates of hypo or hyper sensitivity across taste, smell,touch,visual and auditory modalities at mealtime.These differences correlate increasing mealtime behaviour problems. (Smith et al., 2015)

Because of this, children with ASD mostly refuse food as they dislike the texture, strong smell, strong taste and appearance (Silva et al., 2018). A systematic review study on sensory processing and eating in ASD shows consistent evidences that unusual sensory responses triggers to picky eating, food aversions, mealtime challenges throughout the life (Coulthard & Ahmed, 2021).studies using tools like short sensory profile and mealtime behaviour checklist found moderate to strong relation between sensory measures and trouble behaviour during meals,(Smith et al., 2015). Heavy noise, bright lighting, crowded tables and strong cooking smells can also be overwhelming sensory sensitive children that enhance escape behaviours and refusals highlighted by occupational therapists and psychologists.(Coulthard & Ahmed, 2021)

Caregivers stress, coping and Modeling

Peak stress situation for parents of children with ASD so many times experience chronic stress with mealtimes often described as a peak stress context, (Ausderau & Juarez, 2013). Higher food selectivity and mealtime behaviour are connected to spousal stress which can lead to stronger effects on family functioning.(van der Lubbe et al., 2022). particularly mothers or the first caregiver faces additive stress related to planning meals, flexible preferences,and worrying about nutritional adequacy and social judgement (Samson-Fang & Stevenson, 2020).

Because of these pressures caregivers generally follow strategies like preparing safe foods, allowing screens during mealtime and toys on table or to feed separately in different areas or different room to avoid dysregulational episodes (Nadon et al., 2011). Experts note that while some accommodations can serve as helpful initial steps, over accommodation might unintentionally strengthen limited eating habits and restrict chances of modeling and gradual exposure(Autism Speaks,2020). However, when caregivers use calm, consistent routines, positive reinforcement and modeling of different food intake, this can help children to gradually expand their diet and fewer disruptive behaviour, which can help to enhance the nutrition adequacy in children with ASD.(Samson-Fang & Stevenson, 2020)

Structural Routine and sensory friendly meal time

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Structured mealtime routines, like seating arrangements, consistent timings, step by step expectations are widely recommended by paediatricians, psychologists, occupational therapists who work with children with Autism (Minnesota Department of Health, 2020). The uncertainty can be reduced by these routines, provide predictability and help children to understand what will happen next, which can reduce anxiety and resistance.(Samson-Fang & Stevenson, 2020).

Sensory friendly adaptations help to reduce overwhelming stimuli by offering gradual sensory exposure,(Minnesota Department of Health, 2020). Strategies includes reducing background noise, warm lights, stable seating arrangements, avoiding strong cooking smell and strong smell food item,introducing new food in small portion alongside with familiar food in a non pressured way,(Autism Speaks,2020)

Occupational therapists also suggests systematic desensitisation techniques such as letting the child observe first, then touch, smell and finally taste the food with positive reinforcement and pace led by the child.(Coulthard & Ahmed, 2021)

Parental Modeling and Responsive Feeding

Parents modeling diverse eating habits and calm response during mealtimes plays crucial role in shaping children's attitude towards food, even when sensory issues are prominent, many studies shows that parents'own mealtime behaviour,language around food and emotional responses and emotional behaviour to refuse food can influence children's willingness to try new food,(Samson-Fang & Stevenson, 2020)

Some points are recommended to reduce power struggles and support self regulations such as responsive feeding approaches which emphasise attending to the child's cues, offering choices within limits,and avoiding force feeding (Minnesota Department of Health, 2020).

Experts based guidance recommends offering repeated low pressure exposure to new foods, allowing the child some control for example a child can choose between two acceptable options given by parents and appreciating exploratory behaviour rather than focusing on consumption alone. This interaction between parent and children with ASD can help reduce anxiety about new foods while keeping parents in charge of meal routines and nutritional goals.(Johnson et al., 2015)

Interdisciplinary and global perspective

Interdisciplinary collaboration among psychologists, dieticians, pediatricians, occupational therapist is increasingly recognised as key for addressing eating and mealtime difficulties in children with ASD,(Coulthard & Ahmed, 2021)

Medical professionals help to control gastrointestinal,allergic, or oral motor issues while dieticians analyses nutritional intake and guide balanced food introduction, whereas mental health professionals support behaviour strategies and caregiver coping.(Cermak et al., 2010), occupational therapists overall supports in sensory based interventions for mealtime (Samson-Fang & Stevenson, 2020).

Global child health strategy emphasises that interventions must be practical, culturally befiting and family centered, especially in low and middle income countries (WHO,2023)

Sensory processing difficulties and mealtime behaviour problems are common across cultures but access to professional services may be limited globally including India, shows studies from diverse settings.(Cermak et al., 2010)

Gaps and Directions for future research

Based on small samples, cross sectional evidence shows that there is the link between eating behaviour, sensory selectivity,and family mealtime experiences.(Silva et al., 2018). There is a need of longitudinal studies that can track how mealtime patterns, sensory responses and caregiver strategies changes gradually and sustainably and how these points can relate to nutritional status and psychological outcomes (Coulthard & Ahmed, 2021).

Furthermore, high quality randomised and pragmatic trials of trials of family centered sensory informed interventions are lesser and limited especially in communities with low resources context,(Samson-Fang & Stevenson, 2020),

Future research should prioritize developing and testing nutritional counselling, sensory friendly strategies, caregivers mental health support type of manualised programs that combine all, (van der Lubbe et al., 2022).

ANother important direction is evaluating digital and telehealth modalities for delivering parent

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training on mealtime management, particularly in settings with limited specialists availability, (WHO, 2023). Exploring culturally grounded food practices and family rituals that can collaborate to support flexible eating in children with Autism will also help in ensuring that interventions are contextually relevant and acceptable.(WHO, 2023)

Conclusion

Eating behaviour in children with ASD comes up from the link between sensory processing differences and family mealtime environment with significant implications for nutrition,caregiver wellbeing and family functioning. (Silva et al., 2018), Evidence from clinical and community studies shows that structured, predictable and sensory settled mealtime combined with responsive caregiver strategies and interdisciplinary support can reduce stress and promote healthy eating pattern (Coulthard & Ahmed, 2021). Strengthening family centered culturally sensitive interventions and building a stronger trial evidence base remain key priority for improving outcomes for children with ASD and their families globally, (Coulthard & Ahmed, 2021; Samson-Fang & Stevenson, 2020; van der Lubbe et al., 2022; WHO, 2023).

References:

1. Ausderau, K. K., & Juarez, M. (2013). The impact of autism spectrum disorders on the family mealtime experience. Eating Behaviors, 14(3), 204–209.
2. Cermak, S. A., Curtin, C., & Bandini, L. G. (2010). Food selectivity and sensory sensitivity in children with autism spectrum disorders. Journal of the American Dietetic Association, 110(2), 238–246.
3. Coulthard, H., & Ahmed, S. (2021). Eating behaviour in autism: Senses as a window towards food acceptance. Current Opinion in Food Science, 39, 25–30.
4. Johnson, C. R., et al. (2015). Food selectivity, mealtime behavior problems, and parental stress in young children with autism spectrum disorder. Journal of Developmental and Physical Disabilities, 27(4), 449–465.
5. Kuschner, E. S., et al. (2015). A preliminary study of self-reported food selectivity in children with autism spectrum disorders. Appetite, 92, 1–6.
6. Nadon, G., Feldman, D., Dunn, W., & Gisel, E. (2011). Mealtime problems in children with autism spectrum disorder and their typically developing siblings: A comparison study. Autism, 15(1), 98–113.
7. Samson-Fang, L., & Stevenson, R. (2020). Eating and mealtime behaviors in patients with autism spectrum disorder. Neuropsychiatric Disease and Treatment, 16, 3075–3090.
8. Silva, D., et al. (2018). Sensory sensitivity and food selectivity in children with autism spectrum disorder. Journal of Autism and Developmental Disorders, 48(2), 583–592.
9. Smith, K. A., et al. (2015). Sensory differences and mealtime behavior in children with autism. American Journal of Occupational Therapy, 69(5), 6905185050p1–6905185050p9.
10. van der Lubbe, A. C., et al. (2022). Stress, eating behavior, and adverse health in parents of children with autism spectrum disorder. Nutrients, 14(23), 5001.
11. World Health Organization. (2023). Autism spectrum disorders. https://www.who.int
12. Autism Speaks. (n.d.). Autism and food aversions: 7 ways to help a picky eater. *https://www.autismspeaks.org*
13. Minnesota Department of Health. (2020). Supporting sensory-friendly nutrition for autistic children. [PDF].

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