

Prevalence of Feeding Challenges Among
Children with Autism Spectrum Disorder

Jane Q. Public

Nyack College

Abstract

This paper investigates the prevalence of feeding challenges among children with autism spectrum disorder (ASD). It reviews research that examines the multifaceted nature of feeding challenges. This includes defining common feeding difficulties, possible factors, and methods of assessments used by professionals. It also reviews areas of effective intervention. The goal of this literature review is to evaluate the existing information in order to identify the areas in which future research should be conducted. This review established that there is a lack of research on effective evidence-based practices that promote an increasing repertoire of foods, while also decreasing problem behavior. This was found to be a demanding area of research because of the negative consequences that may result from extreme food selectivity and persistent behavioral challenges.

Keywords: autism spectrum disorder, feeding challenges, problem behavior

Prevalence of Feeding Challenges Among Children with Autism Spectrum Disorder

Feeding difficulties are incorporated into the developmental process. Typically developing children, along with children with disabilities, face a number of challenges during mealtime. This is especially difficult when parents attempt to maintain a healthy diet for their children. Leo Kanner's earliest description of autism spectrum disorder involved eating difficulties as being part of the "repertoire of symptoms" that define ASD (Twachtman-Reilly, Amaral, & Zebrowski, 2008). The following research presents consistent information regarding the high rates of eating difficulties in children with ASD. An identification of feeding challenges, factors, assessments, and interventions will be deliberated.

Literature Review

The research will discuss the multifaceted problem of feeding challenges in children with autism spectrum disorder. The information provided by this research will illuminate the importance of researching and addressing the many challenges that children and their families face when eating difficulties are present.

Identifying Feeding Challenges

Seiverling, Williams, and Sturmey (2010) cited that 46-89% of children with ASD demonstrate specific food preferences or food refusal without comorbid medical issues. Similarly, Rogers, Magill-Evans, and Rempel (2012) stated that 46-75% of children with ASD have feeding challenges. In comparison, only 25-35% of typically developing children display feeding challenges that are similar to those of children with ASD. However, these challenges are typically a phase of "picky eating" that passes. Marshall, Ware, Ziviani, Hill, and Dodrill (2015) also agreed in stating that, while 25% of typically developing children display feeding

difficulties, up to 89% of children with ASD share this struggle. Although feeding difficulties are more prevalent in children with developmental delays when compared to their typically developing peers, it is clear that this presence is significantly higher in children with ASD (Rogers et al., 2012).

When discussing feeding difficulties among children with ASD, professionals are typically referring to a variety of symptoms. According to Twachtman-Reilly et al. (2008), Seiverling et al. (2010), Rogers et al. (2012), and Marshall et al. (2015), specific food preferences and a limited repertoire of food choices is the most common feeding challenge among children with ASD. This involves food refusal, which may include refusing or engaging in problem behavior when novel food is presented. Many professionals define this as food neophobia, which is considered an extreme fear of novel food items. Due to their routine-based nature, these individuals may also have a preference for the way their food is presented and the types of utensils that are used (Rogers et al., 2012; Twachtman-Reilly et al., 2008). In addition to food selectivity, other feeding and/or mealtime difficulties may include: food cravings or pica, packing, rapid eating, slow eating, liquid avoidance, texture preferences, and difficulty with staying seated for a meal (Twachtman-Reilly et al., 2008; Seiverling et al., 2010; Rogers et al., 2012; Marshall et al., 2015).

According to Marshall et al. (2015), individuals with limited diets are more prone to a variety of health complications due to the lack of nutrition that is incorporated into their diet. More specifically, a major complication is failure to thrive. If the child is relying on energy-sparse foods, they will not consume the appropriate amount of energy, which may lead to weight loss. On the other hand, even if the child consumes more energy-rich foods, they will most likely be consuming nutrient-poor foods, which may lead to inappropriate weight gain.

Furthermore, Seiverling et al. (2010) discussed specific food groups that children with ASD typically eat less of; these included: fruits, vegetables, starches, proteins, and dairy products. Other health complications, cited by Marshall et al. (2015), include gastrointestinal discomfort and iron deficiency anemia. The same researchers discussed long-term risks, like becoming overweight and developing other diseases, that may appear in adult-life. In addition to personal health problems, Marshall and colleagues (2015) considered increased parental stress as a component in the negative outcomes of feeding challenges.

Factors

Just as it is perplexing to specify a direct cause of autism spectrum disorder, the cause of feeding disorders and challenges is difficult to stipulate. Twachtman-Reilly et al. (2008) discussed physiological and behavioral factors as facets that are hard to separate. As a result of the defining features of ASD, many individuals with the disorder have sensory processing issues that might encompass abnormal responses to specific tastes, textures, and smells. Likewise, the mealtime environment in the home or at school could involve auditory and visual stimuli that may evoke problem behavior. Twachtman-Reilly and colleagues (2008) also cited other physiological factors, like gastroesophageal reflux (GER) and gastroesophageal reflux disorder (GERD), as being commonly comorbid with ASD. The pain that accompanies these gastrointestinal issues can easily cause problem behaviors to surface in individuals with ASD who lack the ability to effectively communicate.

In addition to physiological factors, popular research discusses a behavioral dynamic when examining reasons for feeding difficulties. As discussed, a diagnostic feature of ASD includes repetitive and ritualistic behavior. Twachtman-Reilly et al. (2008) refers to this as a lack of “mental flexibility,” which would allow a person to approach novel items in an appropriate

way. Therefore, it is important to understand that when putting physiological complications aside, one with ASD might refuse a particular food because it is not part of his or her typical mealtime routine.

Along with this, these individuals may display characteristics of someone with food neophobia (Marshall et al., 2015). Consequently, when placed in fearful situations, individuals with ASD will likely engage in problem behaviors due to an anxiety that they are unable to control. Other than the behaviors previously discussed, problem behaviors can include tantrums, aggressions, disruptions, self-injurious behaviors, and any other behaviors that may cause harm to the individual and/or other people in his or her environment. With that, it is essential to recognize that feeding challenges are caused by an “interaction of medical, congenital, and developmental issues” (Rogers et al., 2012).

Assessments

Assessment of feeding disorders is a current area of conversation for researchers. Professionals have agreed that assessing sensory and physiological complications takes prevalence when determining appropriate interventions that can be implemented (Twachtman-Reilly et al., 2008; Seiverling et al., 2010; Rogers et al., 2012). More specifically, Rogers and colleagues (2012) examined the reasons for food refusal in six specific cases; a variety of reasons were uncovered – ranging from sensory and oral motor issues to a need for sameness. They discussed the importance of incorporating a variety of professionals in the assessment process. These professionals include speech language pathologists, occupational therapists, psychologists, and medical professionals that specialize in feeding and digestion.

While Rogers et al. (2012) emphasized the importance of professional collaboration, Twachtman-Reilly et al. (2008) and Seiverling et al. (2010) discussed the types of interviews and

observations that should be conducted after possible comorbidities have been identified or eliminated. The researchers discussed assessment strategies such as behavior rating scales to directly assess food selectivity. Patterns of behavioral consistencies and inconsistencies were also examined when food was presented in a particular manner and when eating food in different environments (Twachtman-Reilly et al., 2008). In addition, functional analyses were discussed as important types of direct observations that are used when dealing with individuals with ASD. These types of observations allow professionals to focus on specific antecedents and consequences that are associated with difficult behaviors during mealtime, which would ideally lead to identifying a concrete function of the challenging behavior (Seiverling et al., 2010).

Another component of the assessment process is to determine what type of risk the individual is at as a result of the feeding disorder. Rogers et al. (2012) reviewed the importance of conducting nutritional and growth assessments to better direct the type of intervention that should be implemented. This refers to determining the type of food that should be targeted during intervention to promote a larger, more nutrient-rich repertoire of foods.

Discussion

Through an examination of the current research, the prevalence of feeding challenges has been identified as significant within the population of individuals with autism spectrum disorder. A limited repertoire of foods fosters many health-related risks; therefore, interventions should be encouraged. This responsibility falls onto parents, siblings, and caregivers. With that being said, appropriate interventions that focus on the individual, as well as the family, will be considered. Along with interventions, practical applications, limitations, and directions for future research will also be discussed.

Interventions

According to Marshall et al. (2015), there is strong evidence for interventions that involve operant conditioning and systematic desensitization. In 2016, Cosby and Muldoon evaluated the effectiveness of an intervention called EAT-UP: Easing Anxiety Together with Understanding and Perseverance. EAT-UP is a family-centered approach that targeted the unique needs of each family and child. An individualized intervention was created based on specific goals that were also created for each child. This involved creating an individualized food acceptance hierarchy based on the struggles of each participant. The study included three families in which both parent and child behaviors were documented. The intervention took place in the home environment and involved coaching parents through mealtime by providing them with a variety of strategies that they can use to promote eating foods that typically cause problems. The intervention was also aimed towards decreasing problematic behaviors. Fortunately, the study resulted in a decrease of problem behaviors and an increased repertoire.

Cosby and Muldoon (2016) also reviewed other evidence-based practices that target decreasing problem behavior. The mentioned interventions were functional assessments, positive, negative, and non-contingent reinforcement, as well as escape extinction. These were considered viable options; however, they are not always feasible for parents. Hence, the EAT-UP approach brings professionals into the home to coach parents through strategies that are tailored to their family and environment.

Limitations

In reference to the specific intervention discussed, the sample size poses a limitation. The EAT-UP study only included three participants, which limits its generalizability. In addition, there is a lack of research in the field to support interventions and therapies (Marshall et al., 2015). This includes research on the role of the parent and family in promoting positive

feeding. Likewise, the research discusses a wide range of factors and topographies of feeding difficulties, which poses a challenge when developing effective interventions that can be generalized. However, this is also due to the wide range of severities of ASD.

Professional Applications

Through this research, professionals will be able to recognize the importance of collaboration. Due to the wide range of possibilities, it would be difficult for one professional to identify, assess, and treat. Therefore, to identify, assess, and treat, a team of professionals should form an alliance to create the most effective intervention. Additionally, it is essential that professionals recognize the importance of an individualized approach. Each family, child, and disorder is distinctive; therefore, one formula for intervention will not be applicable to all.

Future Research

Future research in this area should be conducted to investigate a wider variety of evidence-based interventions. The individual child, as well as his or her ASD diagnosis, specific challenges, and physiological complications should be specified in all research. With that being said, a comprehensive evaluation should also include the child's family, home, and/or school environments. Lastly, future research may include a greater exploration regarding feeding challenges in individuals with other developmental and intellectual disabilities.

Conclusion

All together, the present research provides the field with important information on feeding challenges in children with autism spectrum disorder. The collection of research is growing as more opportunities for experiments arise. This is imperative because of the increasing prevalence of feeding challenges in individuals with ASD. With proper identification, assessment, and intervention, these challenges can and should be overcome to ensure that these

individuals are maintaining a healthful diet, which, consequently, should increase their quality and duration of life.

References

- Cosbey, J., & Muldoon, D. (2017). EAT-UP™ family-centered feeding intervention to promote food acceptance and decrease challenging behaviors: A single-case experimental design replicated across three families of children with autism spectrum disorder. *Journal of Autism & Developmental Disorders*, 47(3), 564-578. doi:10.1007/s10803-016-2977-0
- Marshall, J., Ware, R., Ziviani, J., Hill, R., & Dodrill, P. (2015). Efficacy of interventions to improve feeding difficulties in children with autism spectrum disorders: A systematic review and meta-analysis. *Child: Care, Health & Development*, 41(2), 278-302. doi:10.1111/cch.12157
- Rogers, L., Magill-Evans, J., & Rempel, G. (2012). Mothers' challenges in feeding their children with autism spectrum disorder: Managing more than just picky eating. *Journal of Developmental & Physical Disabilities*, 24(1), 19-33. doi:10.1007/s10882-011-9252-2
- Seiverling, L., Williams, K., & Sturmey, P. (2010). Assessment of feeding problems in children with autism spectrum disorders. *Journal of Developmental & Physical Disabilities*, 22(4), 401-413. doi:10.1007/s10882-010-9206-0
- Twachtman-Reilly, J., Amaral, S. C., & Zebrowski, P. P. (2008). Addressing feeding disorders in children on the autism spectrum in school-based settings: Physiological and behavioral issues. *Language, Speech & Hearing Services in Schools*, 39(2), 261-272. doi:10.1044/0161-1461(2008/025)