

Food Exposure Interventions to Improve Food Selectivity Among Children With Autism Spectrum Disorder: A Systematic Review

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PURPOSE: Food exposure interventions with sensory approach to improve food selectivity in ASD (autism spectrum disorder) are highly expected interventions. The purpose of this research is to systematically analyze and review food exposure interventions for ASD, provide clinical information and provide the basis of evidence for generalization of food exposure interventions.

DESIGN AND METHOD: Data collection was conducted for all researches up to July 31, 2021, and the researches were selected through the 4 stages of the PRISMA Flowchart. The database used Pubmed, Web of science, Science direct, SCOPUS, Embase and ProQuest. Keywords are autism, selectivity, food, exposure. In the selected researches, those that could not compare the effects of intervention and drug use were excluded. The final selected 9 researches analyzed the quality of researches, the characteristics of participates, the effectiveness of intervention, the strategy used for intervention, the duration of intervention, environment for intervention, and the evaluation tool used for intervention.

RESULTS: The level of evidence of the research was 7 (77.8%) level 4, and single subject designs were the most researched. ASD was the subject in all the selected researches, and 5 (55.6%) were the most common in childhood. All studies of food exposure interventions for ASD confirmed an improve in food acceptance. As approach for food exposure intervention, systematic desensitization was used the most with 6 (66.7%), and systematic desensitization has been used in all researches since 2012. Most of the assessment tools used were those with an operational definition for each research (88.9%), and BAMBI (the Brief Autism Mealtime Behavior Inventory) that have been verified for reliability and validity was used in 2 (22.2%). The intervention duration ranged from as short as 5 days to as long as 9 months. Most of the intervention environments were conducted in the community (88.9%).

CONCLUSION: When we systematically reviewed and analyzed researches that provided food exposure interventions to ASD with food selectivity, it was confirmed that food acceptance was improved. Through this research, we provided clinical information on food exposure interventions for ASD and constructed evidence-based data for the development of generalized food exposure interventions. In the future, food exposure interventions are expected to be usefully applied to improve food acceptance in ASDs in clinical. After that, if a generalized food exposure intervention is developed for ASD, a food exposure intervention using a systematic desensitization approach for each sensory need to be developed according to the characteristics of ASD.

References

- Suarez, M. A., Nelson, N. W., & Curtis, A. B. (2014). Longitudinal follow-up of factors associated with food selectivity in children with autism spectrum disorders. *Autism, 18*(8), 924-932. <https://doi.org/10.1177/1362361313499457>
- Paul, C., Williams, K. E., Riegel, K., & Gibbons, B. (2007). Combining repeated taste exposure and escape prevention: An intervention for the treatment of extreme food selectivity. *Appetite, 49*(3), 708-711. <https://doi.org/10.1016/j.appet.2007.07.012>
- Murray, J. M., & Baxter, I. A. (2003). SENSORY EVALUATION | Food Acceptability and Sensory Evaluation. *Encyclopedia of Food Sciences and Nutrition*, 5130-5136. <http://doi.org/10.1016/b0-12-227055-x/01372-9>
- Kim, M. S., Kim, K. M., Chang, M. Y., & Hong, E. K. (2019). A Study on Correlation of Sensory Processing ability With Feeding of Preterm Infants and Toddlers. *Journal of Korean Academy of Sensory Integration, 17*(2), 31-40. <https://doi.org/10.18064/JKASI.2019.17.2.031>