

Caregiver Training Modules for Children with Autism Spectrum Disorder and Restricted Eating

H. Edrees, M.D., R. Rice, SA., A. Lonnemann, M.A., K. Harpster, PhD, OTR/L, K. Burkett, PhD, RN

Background. The majority of children with Autism Spectrum Disorder (ASD) have unusual or restricted eating habits, such as food sensitivity, rigid mealtime behaviors, and limited food repertoire. These behaviors put the children at risk for nutritional deficits. Many behavioral interventions are effective at decreasing unusual behaviors and increasing food intake, including caregiver education.

Objective. This project was designed to add to the existing interventions that address feeding difficulties of children with ASD with restricted eating. Using an evidenced-based intervention of video training, we created video modules to educate caregivers on ways to tackle restricted eating during mealtimes at home. Using a completed module, we obtained caregiver feedback and evaluation to achieve this goal.

Methods. This study included caregivers of children with ASD who experience restricted eating. The participants were caregivers who had participated in previous research related to this area. We developed a script, then integrated visuals and the script into a PowerPoint presentation. One researcher then completed a voice over of the script and all components were combined into a 15-minute video. The video was sent to participating caregivers, who viewed it and then completed an online, 8-question feedback form.

Results. Four participants answered all 8 questions, and three participants provided qualitative feedback. Caregivers strongly agreed with positive statements related to video length, speaker pace, accessibility, visuals, and language within the presentation. Several caregivers indicated concern regarding their engagement with the video (i.e., too long), the appeal of the presentation, and then the overall purpose of the presentation. Qualitative information included several suggestions for improvement, including the speaker's voice (e.g., too robotic), improving engagement (e.g., shortening video, breaking video into multiple videos), and the color scheme of the PowerPoint (e.g., make it brighter).

Discussion. The video production process was lengthier and more complex than we anticipated. Furthermore, the completed trial video module was longer than originally intended at 15 minutes. We had originally planned for a 5 to 7-minute video. We received positive feedback for our trial video module from caregivers, with only a few areas for improvement. Feedback we intend to incorporate includes adjusting the video length to help with participant engagement and including training videos of children with more difficult mealtime behaviors to show flexibility of strategies.

Next Steps. We submitted a research proposal to fund the development of additional training modules. If the grant is obtained, the goal will be to develop modules for all of the core education topics (e.g., what's on the plate, using visual schedules). Fifteen caregiver participants will be recruited to investigate the feasibility of using these modules to educate caregivers on strategies for children with ASD who are restricted eaters.

References: Caregiver Training Modules for Children with Autism Spectrum Disorder and Restricted Eating

- Barnhill, K., et al., *Analysis of Dietary Intake in Children with Autism Spectrum Disorder*. Autism-Open Access, 2015. **2015**.
- Chatoor, I., et al., *Attachment and feeding problems: a reexamination of nonorganic failure to thrive and attachment insecurity*. Journal of the American Academy of Child & Adolescent Psychiatry, 1998. **37**(11): p. 1217-1224.
- Cooke, L., *The importance of exposure for healthy eating in childhood: a review*. Journal of human nutrition and dietetics, 2007. **20**(4): p. 294-301.
- Ekstein, S., D. Laniado, and B. Glick, *Does picky eating affect weight-for-length measurements in young children?* Clinical pediatrics, 2010. **49**(3): p. 217-220.
- Galler, J.R., et al., *The influence of early malnutrition on subsequent behavioral development: II. Classroom behavior*. Journal of the American Academy of Child Psychiatry, 1983. **22**(1): p. 16-22
- Johnson, C.R., et al., *Relationships between feeding problems, behavioral characteristics and nutritional quality in children with ASD*. Journal of Autism and Developmental Disorders, 2014. **44**(9): p. 2175-2184.
- Johnson, C.R., et al., *Behavioral Parent Training to Address Feeding Problems in Children with Autism Spectrum Disorder: A Pilot Trial*. J Developmental Physical Disability, 2015. **27**: p. 591-607.
- Johnson, C. R., Foldes, E., DeMand, A., & Brooks, M. M. (2015). Behavioral parent training to address feeding problems in children with autism spectrum disorder: A pilot trial. *Journal of Developmental and Physical Disabilities*, **27**(5), 591-607.
- Kaluzna-Czaplinska, J. and J. Jozwik-Pruska, *Nutritional strategies and personalized diet in autism-choice or necessity?* Trends in Food Science & Technology, 2016. **49**: p. 45-50.
- Kodak, T. and C.C. Piazza, *Assessment and behavioral treatment of feeding and sleeping disorders in children with autism spectrum disorders*. Child and Adolescent Psychiatric Clinics of North America, 2008. **17**(4): p. 887-905
- Oates, R.K., A. Peacock, and D. Forrest, *Long-term effects of nonorganic failure to thrive*. Pediatrics, 1985. **75**(1): p. 36-40.
- Ruiz-Zaldibar, C., Serrano-Monzó, I., & Mujika, A. (2017). Parental competence programs to promote positive parenting and healthy lifestyles in children: a systematic review. *Jornal de pediatria*.