

Article Review 1

Using Graduated Exposure and Differential Reinforcement to Increase Food Repertoire in a Child with Autism

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Purpose, Participants, Settings

The purpose of this study was to provide a treatment to augment the edible repertoire of a highly selective participant. Only one participant was used for this study. The participant was a 3.5 year old male that had been diagnosed with ASD. He had begun receiving ABA services for 6 months prior to developing the selective feeding intervention plan. During the 9 months of the study, the participant received therapy services at a clinic five days per week that spanned over his lunch period. The dependent variables (DV) were identified as “independent oral consumption of target foods during treatment...[and] outside of treatment” (Tanner & Andreone, 2015, p. 5). The independent treatment (IV) utilized a 12 step graduated exposure procedure of novel foods accompanied with positive reinforcement upon meeting criterion.

Method

Prior to enacting treatment conditions, a three day food journal, parent interview, and food selectivity questionnaire were administered to applicable parties. This information was used to determine the type of foods preferred and what foods were being avoided and was used as a pre baseline component of the study. For treatment conditions, the participant was seated at a table in the treatment room at the clinic and allowed to play with the present NCR. The therapist would display on the table four novel foods that had been prepared in very small portions. After conducting a preference assessment of six preferred non edible reinforcers, the graduated

exposure procedure would commence. Four blocks of novel foods were implemented during the procedures. Physical prompting was not allowed by the therapist. The authors kept data based on frequency and task completion. The twelve steps during the graduated exposure treatment were: tolerate food in therapy room, tolerate food on therapy table, tolerate food within 1 ft., touch food and throw away, smell food and throw away, kiss food and throw away, lick food and throw away, lick food five times and throw away, break food with teeth and throw away, chew food five times and throw away, eat a small piece, and eat an entire piece. The therapist modeled the action with the participant during every step. A trash can was located next to the table for disposal. Reinforcement was delivered upon successful completion of the mastery step. After a food was ingested twice without the graduated exposure procedure, it was eliminated from treatment and labeled as a mastered food that did not require further attention.

Results and Discussion

Results indicated after 9 months of treatment a functional relationship was established as the participant had expanded his food choices from 4 foods to over 50. Additionally, the participant began to generalize to different brands and variations of already acquired foods in his repertoire. The article discusses limitations of accuracy for the generalization data due to parent reports and lack of interobserver reliability to confirm the reported findings. Other factors highlighted in the discussion, bring questions to arise about the home environment and what foods are being consumed by other family members. Data was displayed on a line graph. Phase 1 (carrots, cheese, cracker, grape) resulted in 36 session to meet criterion; phase 2 (cracker #2, cheese #2, dried cranberry, cucumber) resulted in 22 sessions to meet criterion; phase 3 (granola bar, yogurt, mango banana chip) resulted in 8 sessions to meet criterion; phase 4 (ham, almond,

noodle, cookie) resulted in 8 sessions to meet criterion. Criterion was defined as eating a spoonful size portion of the target food without physical prompting. Reinforcement included earning a token for proper imitation and after five were accumulated playing with a highly preferred reinforcer for 3 minutes was allowed. The article also says at the conclusion of each session he was allowed to earn preferred social reinforcement with peers, but does not give the description or criteria.

Implications

This article was very informative for developing a procedure for graduated exposure to novel foods for selective eaters. The article did not explain the conditions if he would not eat any of the foods offered during the experiment, however the authors did say the boy was extremely compliant during the treatment sessions and gagging, avoidance, or escape were not observed. It may not be necessary to have the entire 12 step process for every participant. The first three steps involve the food only being present in the environment. These may be omitted if the student is not having issues to that degree. The article does recommend an Occupational and Speech therapist should assess the participant's condition for proper motor development and musculature. Without the ability to chew and swallow different topographies, food selectivity may be challenging. The literature review incorporated a wide breadth of contemporary research for food selectivity. As noted by the authors, most interventions pertaining to this subject have utilized negative reinforcement or escape-extinction strategies. The aim for this research was to incorporate different strategies and show their effectiveness than previous research models.

Reference

Tanner, A., & Andreone, B. E. (2015). Using graduated exposure and differential reinforcement to increase food repertoire in a child with autism. *Behavior Analysis in Practice, 8*(2), 233–240. <https://doi-org/10.1007/s40617-015-0077-9>