

Prioritizing Choice and Assent in the Assessment and Treatment of Food Selectivity



Presented by:

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TRIAD





- Recovered picky eater
- Incompetence in early career
- A chance for redemption at the Life Skills Clinic at Western New England University
- Many lessons learned



Spectrum of feeding disorders

Food selectivity affects up to 80% and 45% of individuals with and without disabilities.

Fernand et al., 2016; *Behavioral Interventions*



Avoidant/Restrictive Food Intake Disorder



Picky eating

food selectivity

food refusal



Common Behavior Analytic Treatments

- Escape Extinction + Differential Reinforcement of an Alternative Behavior (DRA) or Noncontingent Reinforcement (NCR)

Piazza (2008; *Dev Disabil Res Revs*)

Silbaugh et al. (2016; *Rev J Autism Dev Disord*)

- Escape extinction considerations
 - Effective, but not without issue
 - Clinic vs. in-home setting
 - Expert vs. caregiver implementer

Alternatives to escape extinction

- High-p procedures
 - Penrod et al. (2012)
- Shaping/stimulus fading/demand fading
 - Bloomfield et al. (2021, 2022)
- Simultaneous Presentation
 - Ahearn (2003)
- Antecedent/reinforcement procedures
 - Najdowski et al. (2012)
 - Tereshko et al. (2023)

Prioritizing choice and assent in the assessment and treatment of food selectivity

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Food selectivity affects up to 72% and 45% of individuals with and without disabilities, respectively, and there is a need for interventions that rely on positive, unrestrictive strategies. We evaluated an assessment and treatment package for food selectivity for young children with developmental disabilities that prioritized caregiver collaboration, client autonomy, and did not rely on restrictive procedures (e.g. escape extinction). The process involved: (a) collaborating with caregivers on the selection of foods and design of the children's functional analyses; (b) indirectly and directly measuring food preferences prior to treatment; (c) evaluating the sensitivity of mealtime problem behavior to environmental variables through an interview-informed synthesized contingency analysis (IISCA); and (c) incorporating the assessment results into a progressive treatment process consisting of choice-making opportunities and differential reinforcement of successive approximations to consumption. Children also had the ability to opt in and out of treatment sessions. The treatment was effective in increasing consumption of nonpreferred foods and successfully extended to caregivers. Practical implications and directions for future research are discussed.

Assessment

Open-Ended Interview

Appendix C-- Open-Ended Interview for Mealtime Problem Behavior/Food Selectivity

Developed: October, 2016

Developed by Holly Gover, M.S., Juliana Marcus, M.S., BCBA,

Kelsey Ruppel, M.S., BCBA, and Gregory P. Hanley, Ph.D., BCBA-D

Date of Interview: _____

Interviewer: _____

Child/Client: _____

Respondent/relation to child/client: _____

RELEVANT BACKGROUND INFORMATION

1. His/her date of birth and current age: ____ - ____ - ____ YS MOS Male/Female
2. Describe his/her language abilities.

QUESTIONS TO INFORM THE DESIGN OF A FUNCTIONAL ANALYSIS AND TREATMENT (a-c offer optional follow-up questions if not all desired information was obtained)

To get an overview of mealtime challenges (subsequent questions may be answered during this initial overview)

3. Please describe the challenges your child has with eating.

To develop objective definitions of observable problem behaviors:

4. What does your child do when s/he is offered food s/he doesn't want to eat?
 - a. How does s/he tell you s/he doesn't want to eat?
 - b. What happens if that doesn't work?
 - c. What does that look like? Intensity?

Food Preference Survey

Appendix B-- Food Preference Survey

To identify foods that your child/client does and does not eat, please circle your response (0 to 3) for the following statement:
When it is available, my child/client eats this item.

Respondent: _____ Date: _____

Child's Name: _____

	Not sure/no opportunity	Never	Sometimes	Always	Place check (✓) here if family DOES NOT eat this food
Apple	0	1	2	3	
Apple Juice	0	1	2	3	
Applesauce	0	1	2	3	
Avocado	0	1	2	3	
Banana Chips	0	1	2	3	
Banana or Plantains	0	1	2	3	
Blueberries	0	1	2	3	
Cantaloupe or Honeydew	0	1	2	3	
Cherries	0	1	2	3	
Cranberry Juice	0	1	2	3	
Dried Apricots	0	1	2	3	
Fruit Cocktail	0	1	2	3	
Grapefruit	0	1	2	3	
Grape Juice	0	1	2	3	
Grapes	0	1	2	3	
Kiwi	0	1	2	3	
Lemonade	0	1	2	3	
..	0	1	2	3	

	0	1	2	3
Raspberry	0	1	2	3
Strawberry	0	1	2	3
Watermelon	0	1	2	3

Other fruits always consumed by child:

Top 3 foods in this food group that you would like your child to eat:

1. _____

2. _____

3. _____

(if your child/client eats or drinks anything not included on this list, please add at the bottom.)

Notes (e.g., specific brands, specific ways of preparing or combining foods):

Preference Assessment

Food preparation

- Select between ~5-8 nonpreferred foods and ~3-5 preferred foods
- Cut into small pieces (~1" x 1")

Food presentation

- Preferred/nonpreferred foods randomized and presented twice
- Place on plate with spoon/fork
- No differential reaction if the child eats the food or not
- Food removed contingent on any bid

Selecting target foods

Foods to target for consumption:

- Caregiver/client preference
- Child does not have adverse history with the food
- Family also eats the food
- Convenient to prepare every day and cut into pieces
- Taste remains consistent across time*

Foods to be used as reinforcers:

- Child always eats the food
- Convenient to prepare every day and cut into small pieces

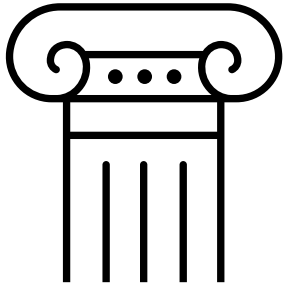
Functional Analysis

Dad's Attention
Snacks
Escape
Avoidance TV
Toys
Control Mom's Attention

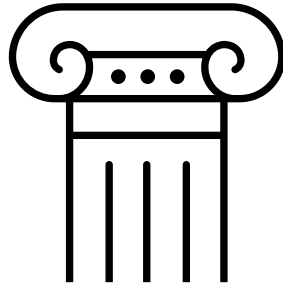
Treatment

Treatment

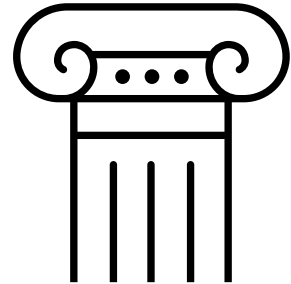
Choice making
opportunities



Synthesized
Reinforcement



Shaping without
escape extinction



Choice



Choice

What to do
with it

Nonpreferred
Food



Choice

What to do
with it

Nonpreferred
Food

Preferred
Food

Preferred
Toys



Choice

Participation

What to do
with it

Preferred
Food

Nonpreferred
Food

Preferred
Toys



RESEARCH ARTICLE



Minimizing Escalation by Treating Dangerous Problem Behavior Within an Enhanced Choice Model

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Effects of an enhanced choice model of skill-based treatment for students with emotional/behavioral disorders

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The enhanced choice model of skill-based treatment (ECM-SBT; Rajaraman et al., 2021) is a package of behavioral treatment procedures with modifications designed to reduce risks associated with extinction of problem behavior. The skill-based treatment component of this package (Hanley et al., 2014) has been investigated thoroughly in clinical settings, though fewer studies have been conducted in public schools. In this investigation, we systematically replicated Rajaraman et al.'s (2021) demonstration of the ECM-SBT with 3 children enrolled in a public special day school for students with emotional and behavioral disorders. Intervention procedures were associated with increases in targeted alternative responses (i.e., communicative response, tolerance response, and cooperation with instructions) and decreased precursor behavior relative to baseline. Severe problem behavior was rare in both assessment and treatment. Participants chose to spend most appointment time participating in ECM-SBT, indicating preference for treatment procedures over alternative contexts (i.e., free access to a break area with preferred activities; regular classroom instruction). These outcomes suggest ECM-SBT has promise for safely teaching alternatives to problem behavior to children with emotional and behavioral disor-

problem behavior exhibited by children while explicitly avoiding physical management procedures, with the enhanced choice model and extended the skill-based treatment procedures described by Hanley, Jin, Vanselow, and Hanratty.

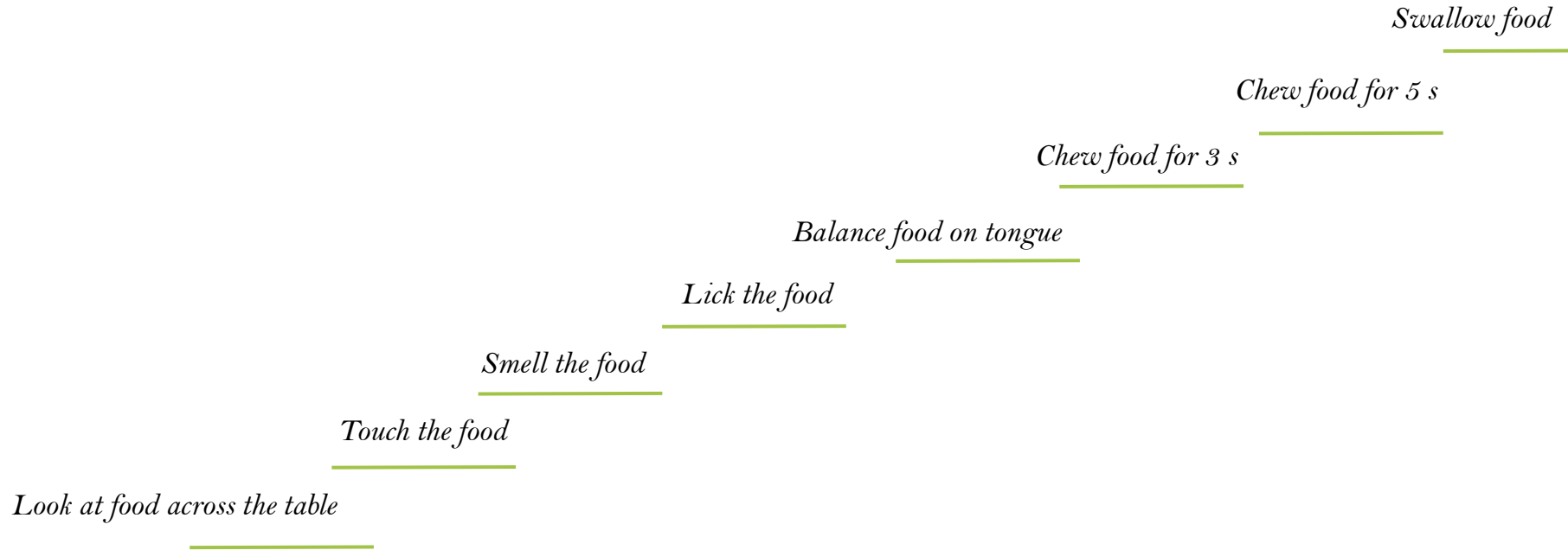


Synthesized reinforcers



Synthesize reinforcers.

Shaping without escape extinction





Leave the table, eat fruit snacks, watch YouTube videos of kids unwrapping toys, analyst watches with you and makes positive comments



Chat with the analyst at table



Sit quietly at table for ~30s until next trial

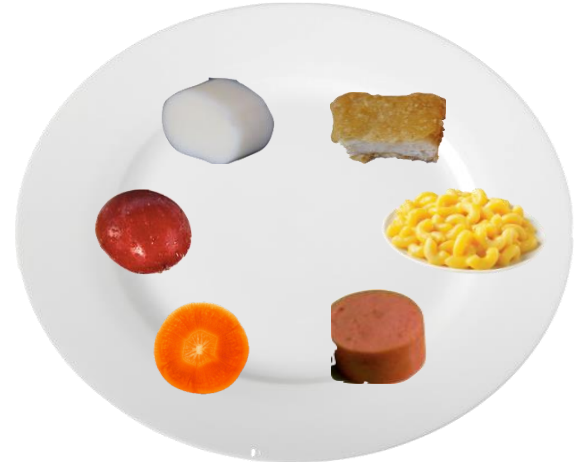
Differential Reinforcement

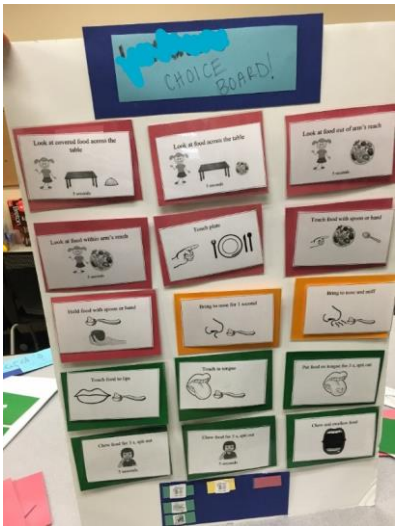
Phase 1: Bite Shaping

1 meal = 3-6 trials (depending on # target foods)

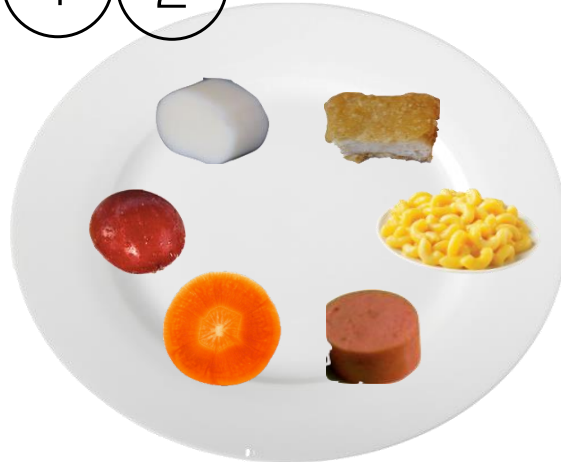
Each trial the child selects:

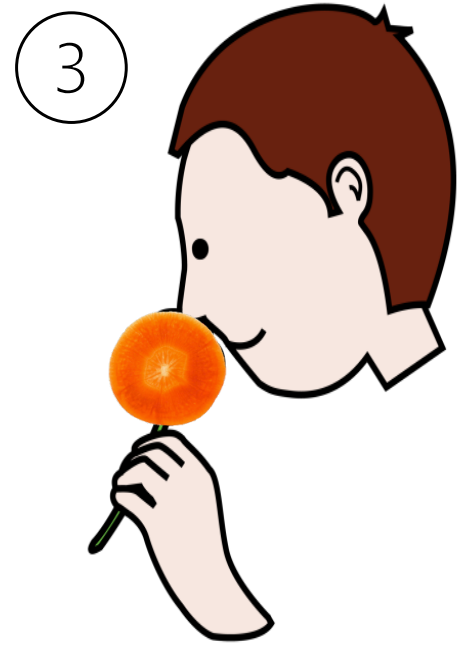
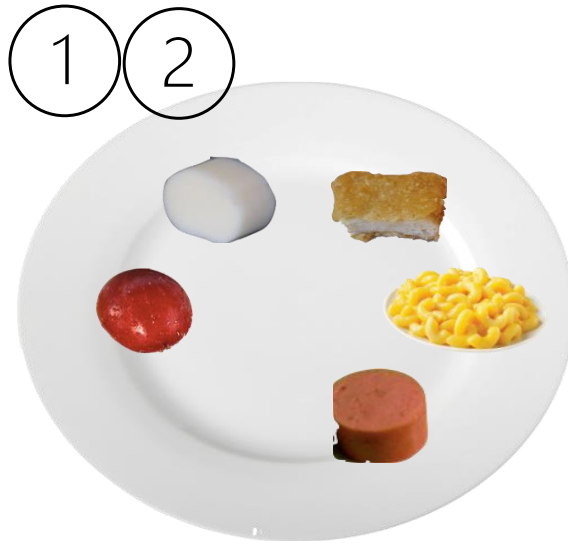
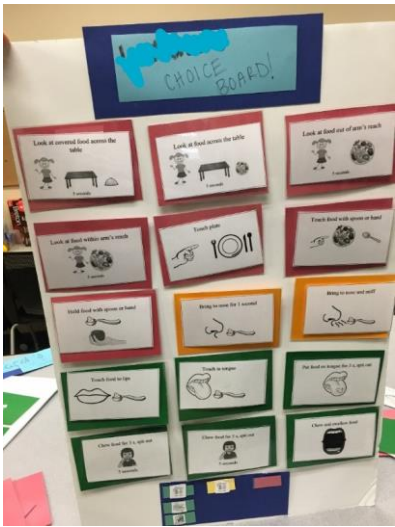
- A food
- And what to do with that food

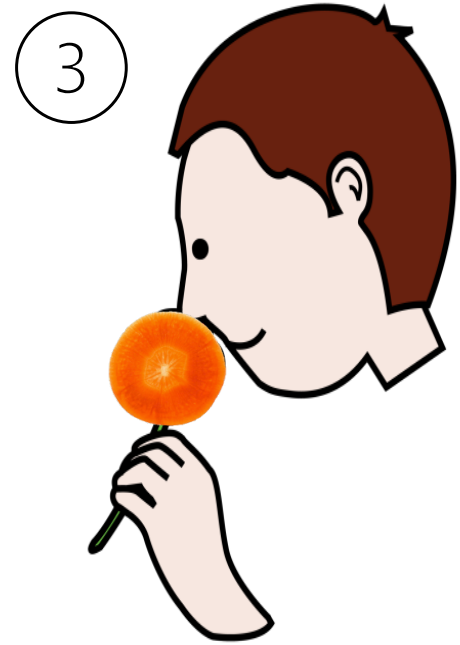
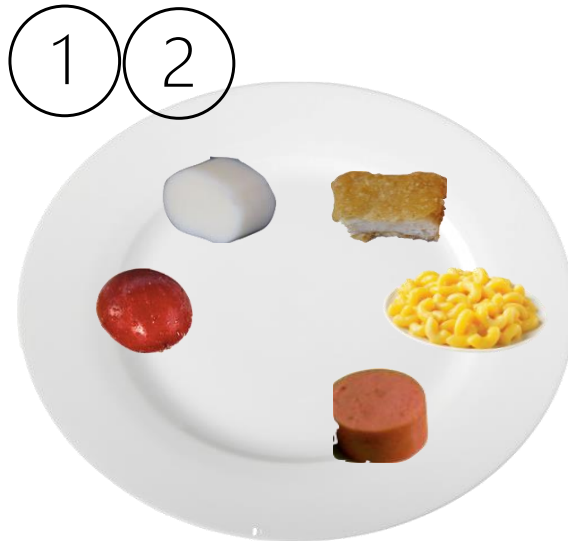
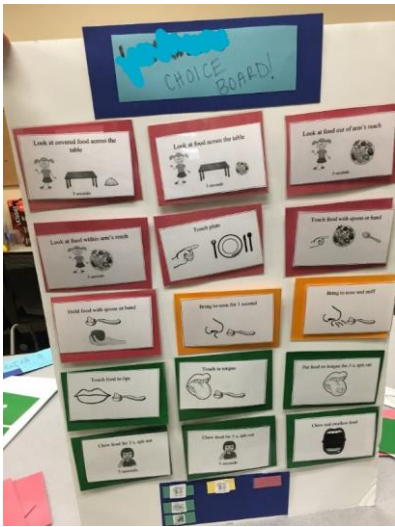




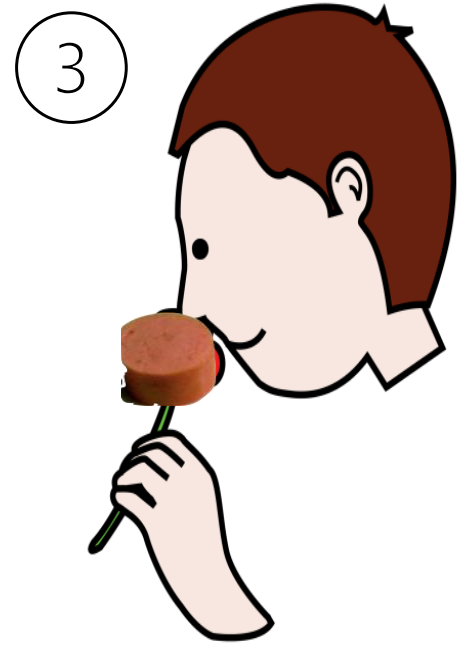
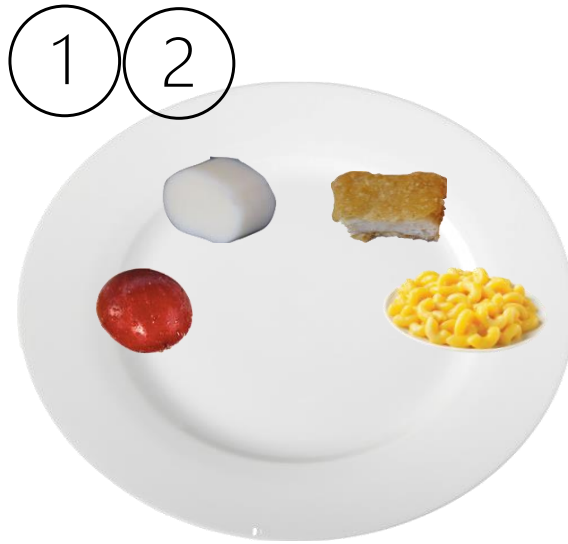
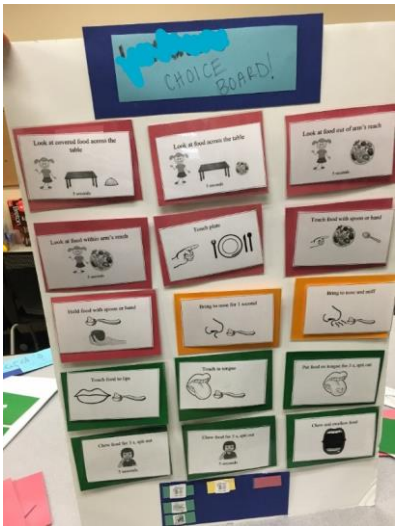
1 2



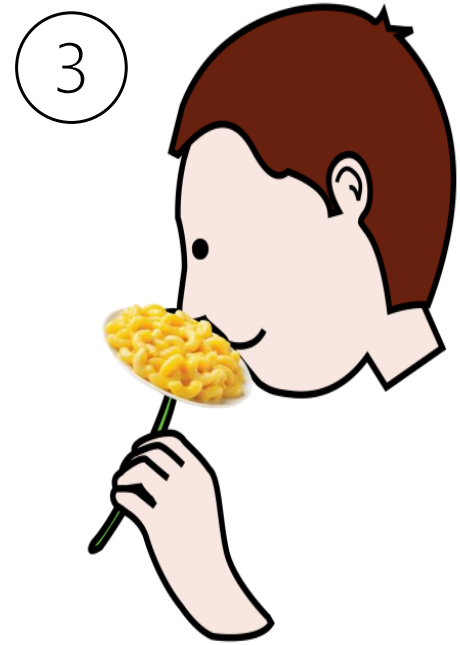
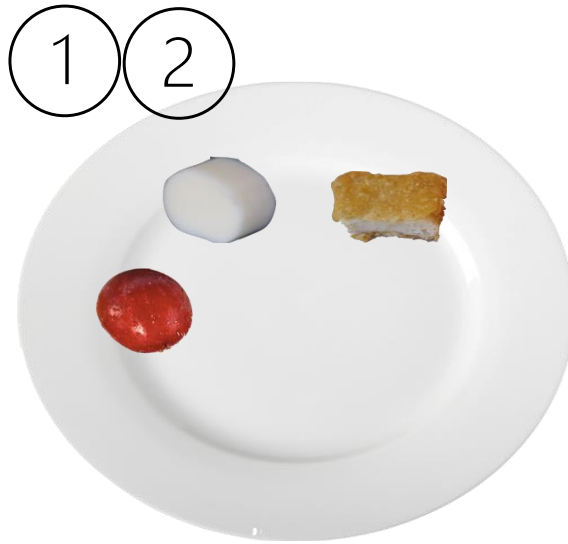
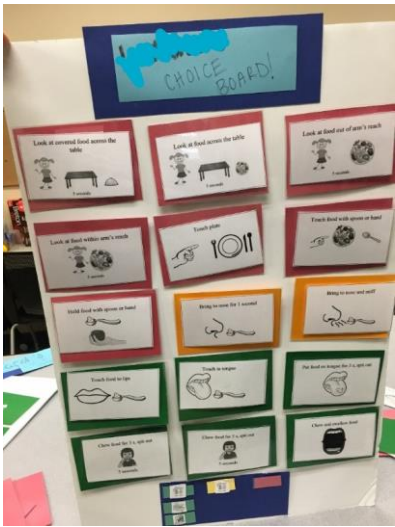




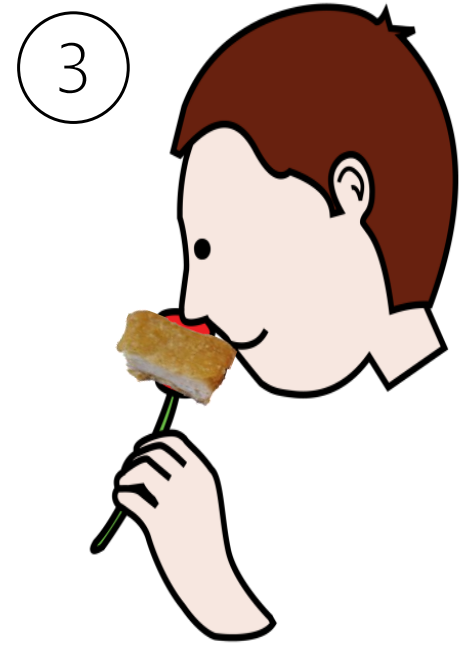
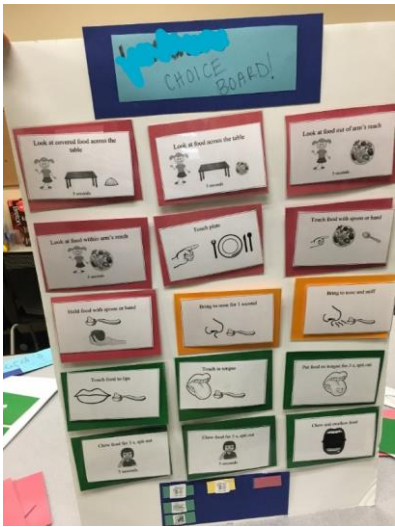
4 Corresponding consequence delivered



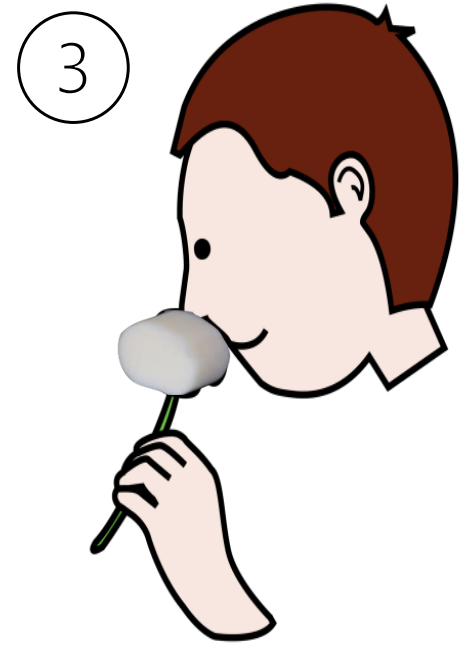
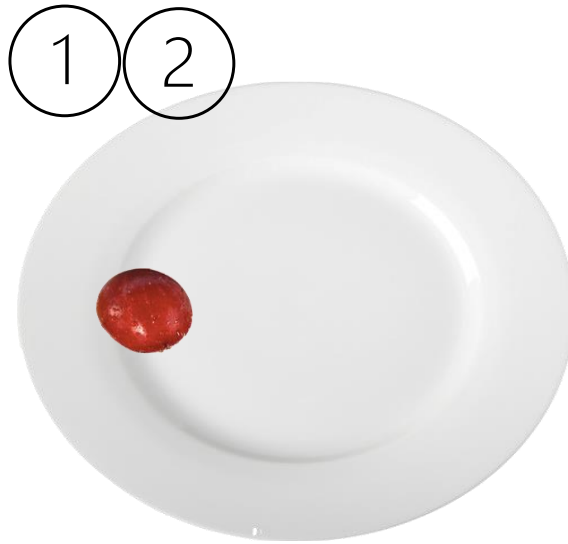
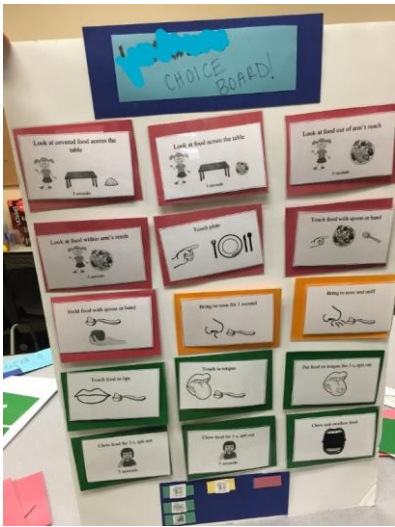
4 Corresponding consequence delivered



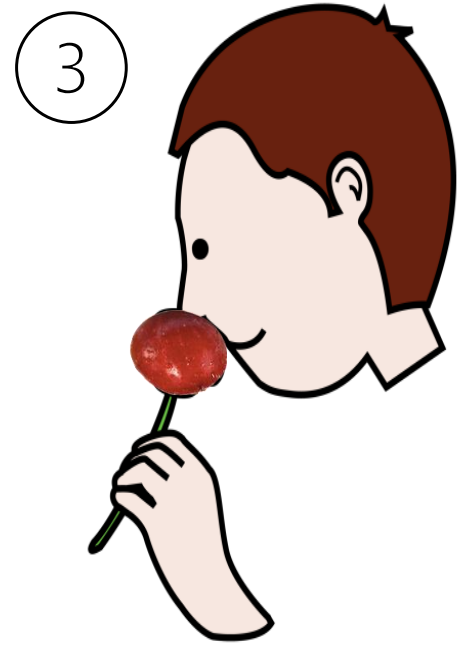
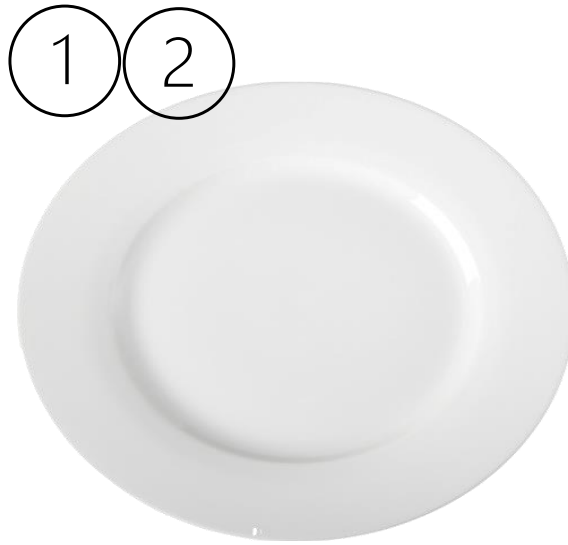
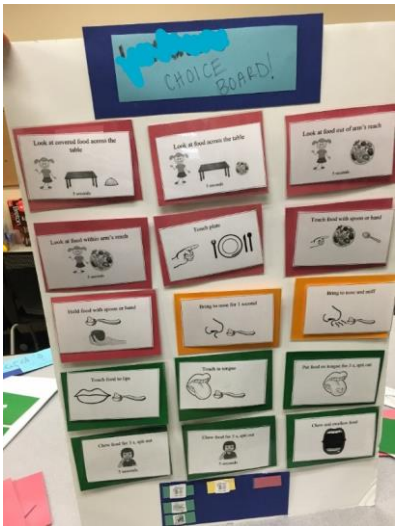
4 Corresponding consequence delivered



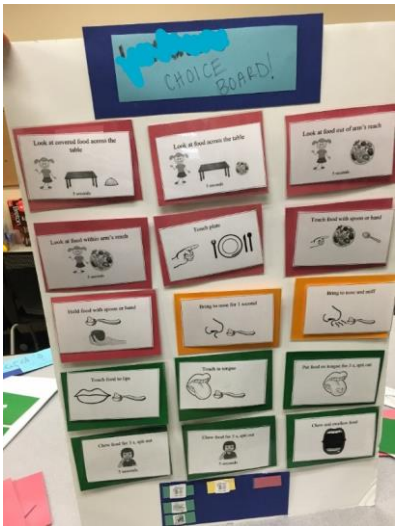
4 Corresponding consequence delivered



4 Corresponding consequence delivered



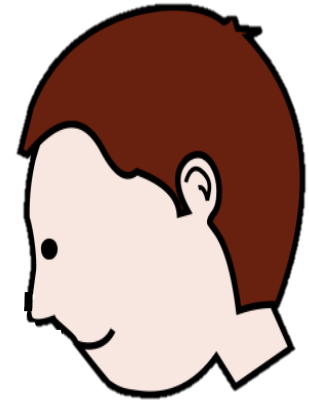
4 Corresponding consequence delivered



1 2



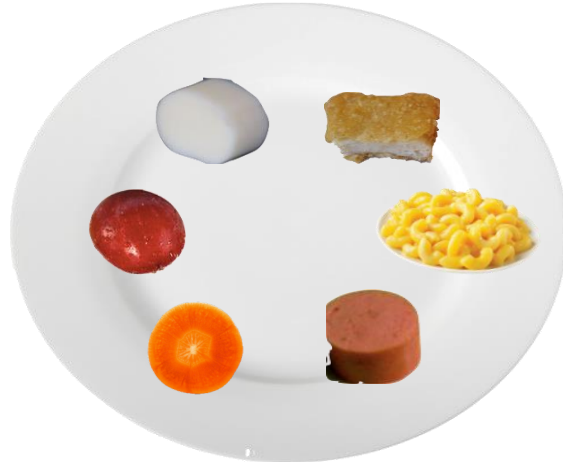
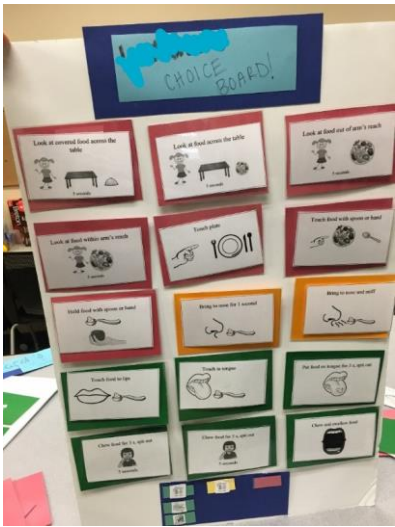
3



Meal Complete

4

Corresponding consequence delivered



Luke

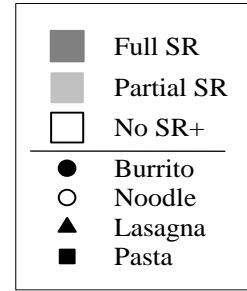
Age: 6

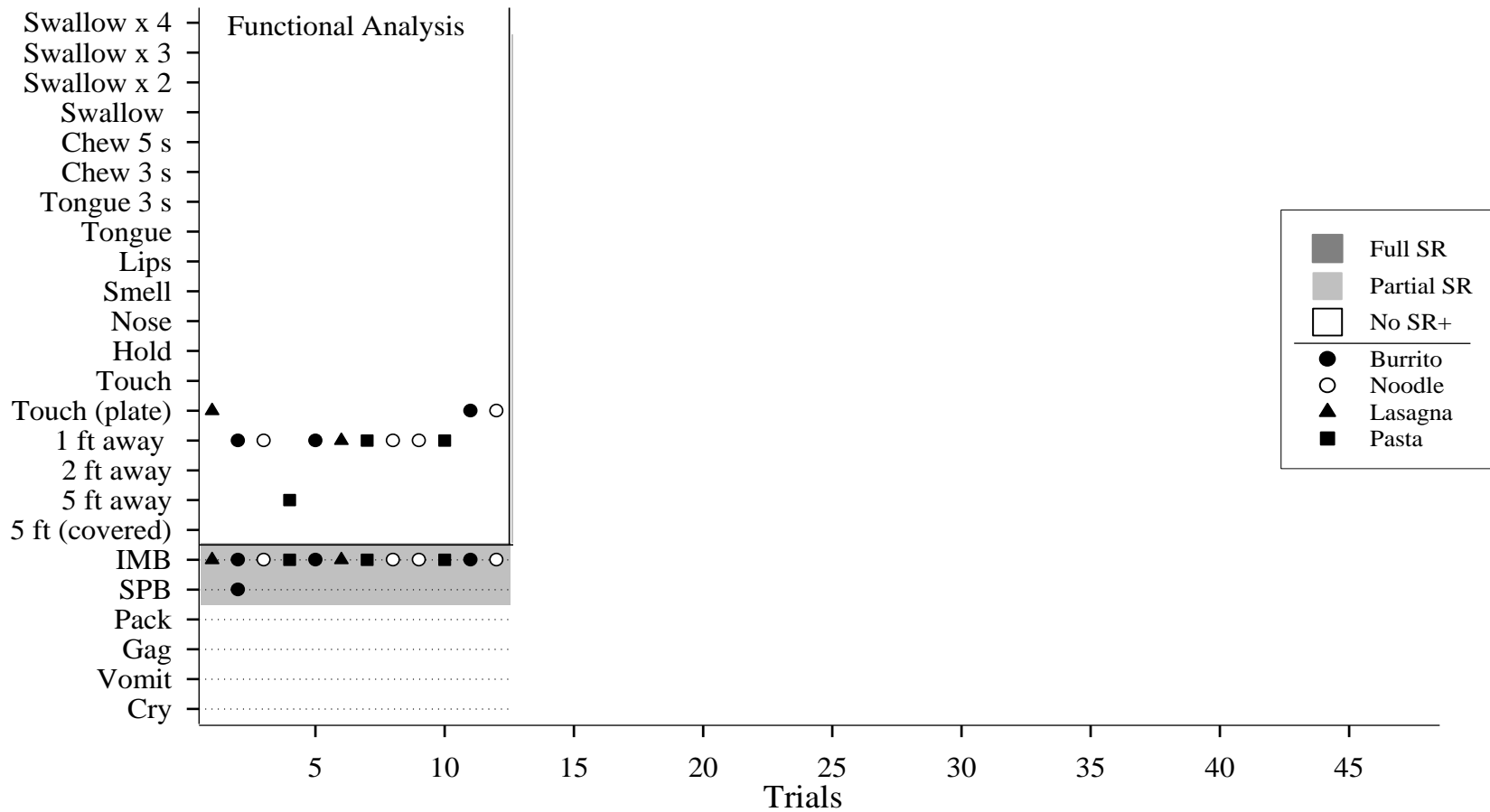
Language Level: Age appropriate

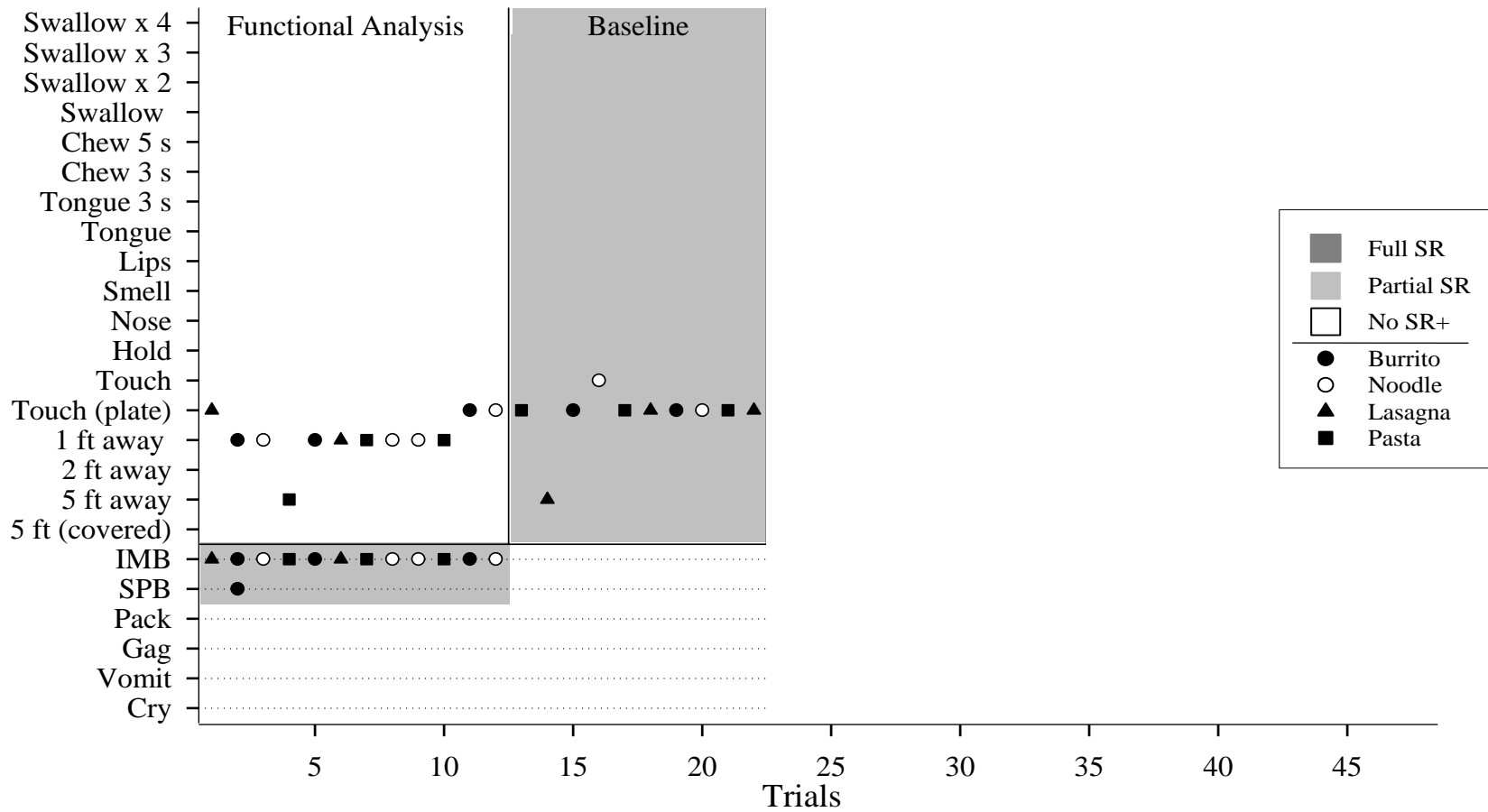
Diagnosis: Autism; ADHD

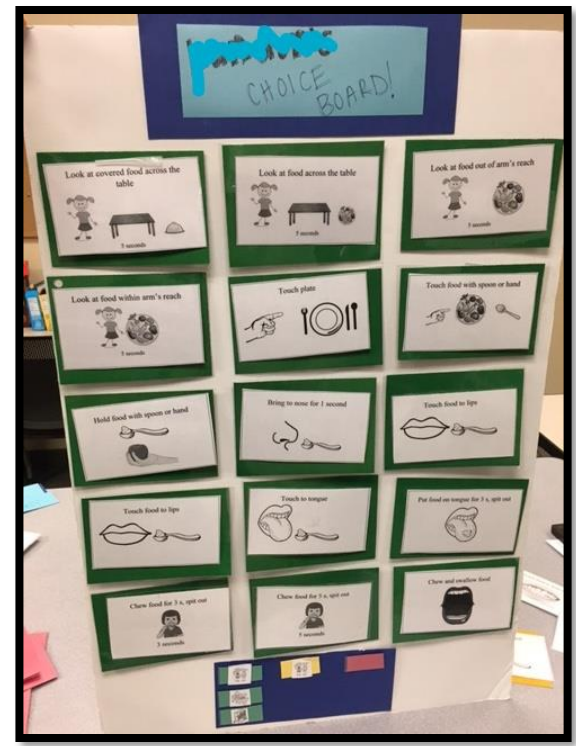
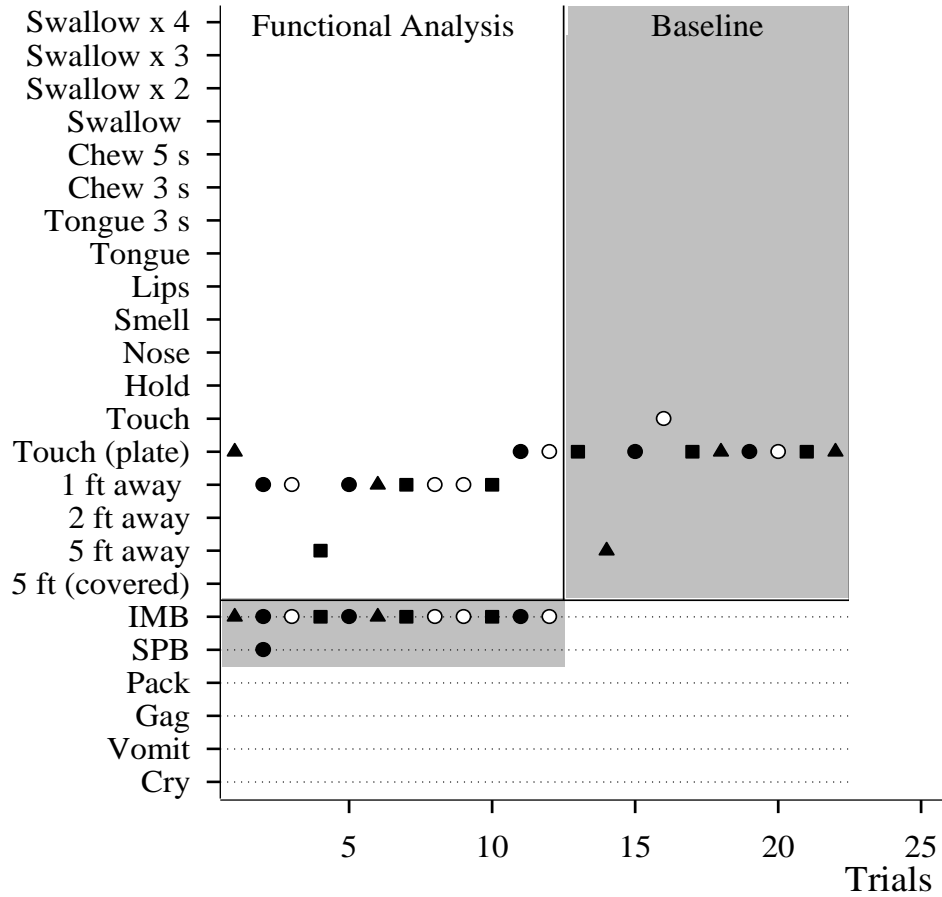
Referred for: Food selectivity, mealtime problem behavior

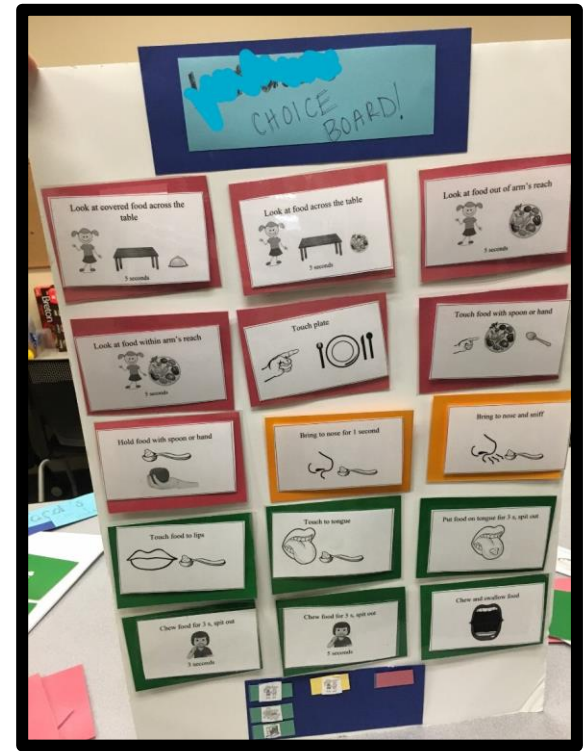
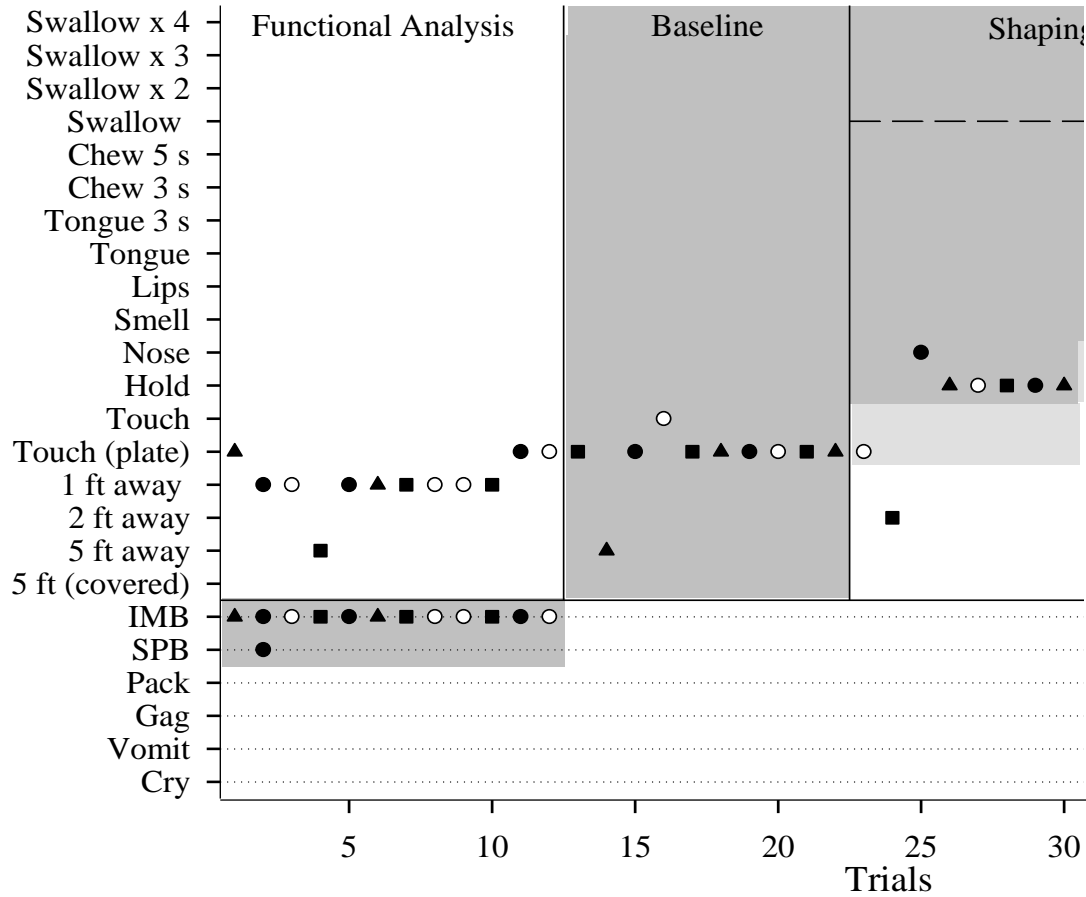
Swallow x 4
Swallow x 3
Swallow x 2
Swallow
Chew 5 s
Chew 3 s
Tongue 3 s
Tongue
Lips
Smell
Nose
Hold
Touch
Touch (plate)
1 ft away
2 ft away
5 ft away
5 ft (covered)
IMB
SPB
Pack
Gag
Vomit
Cry



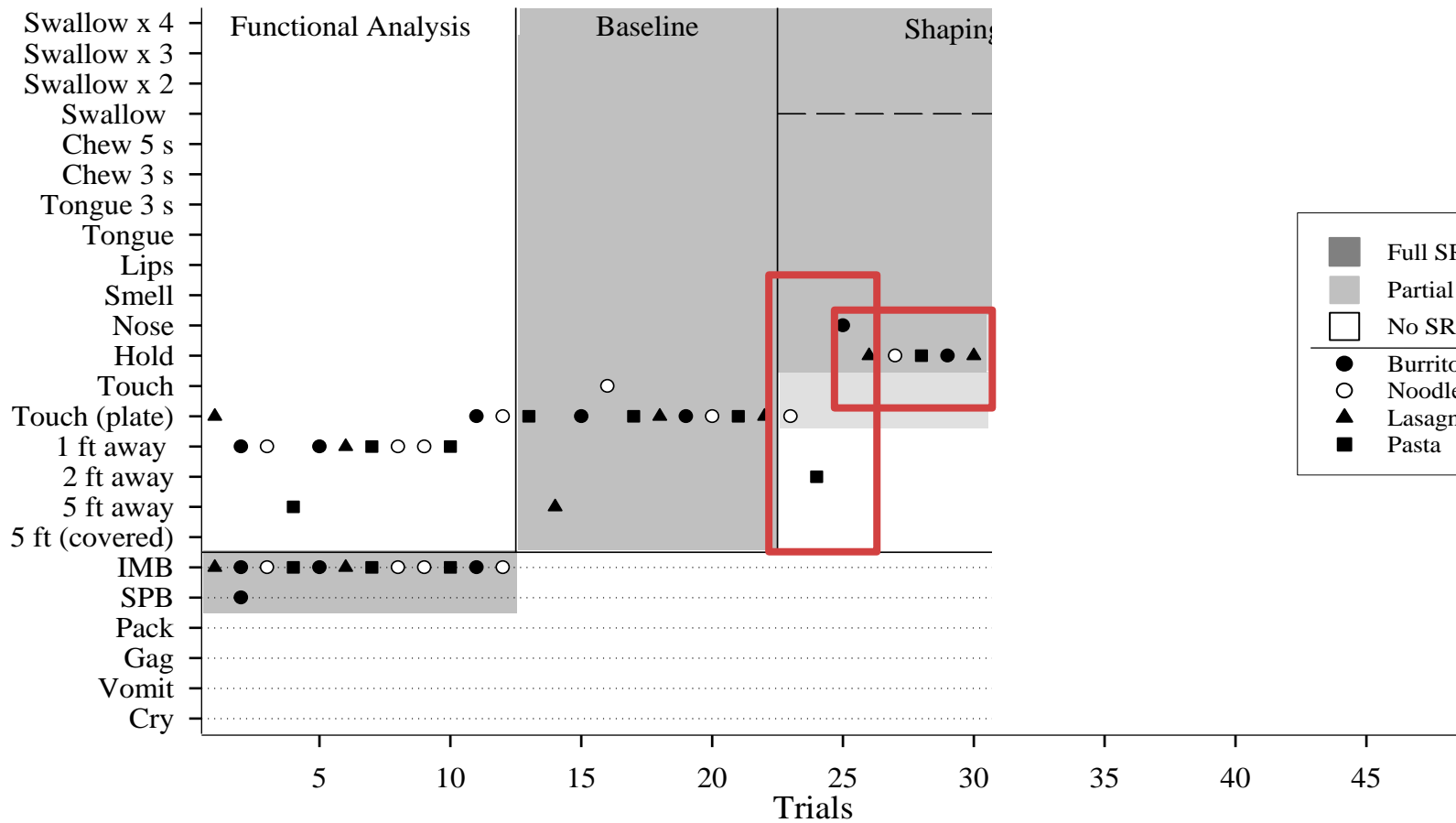


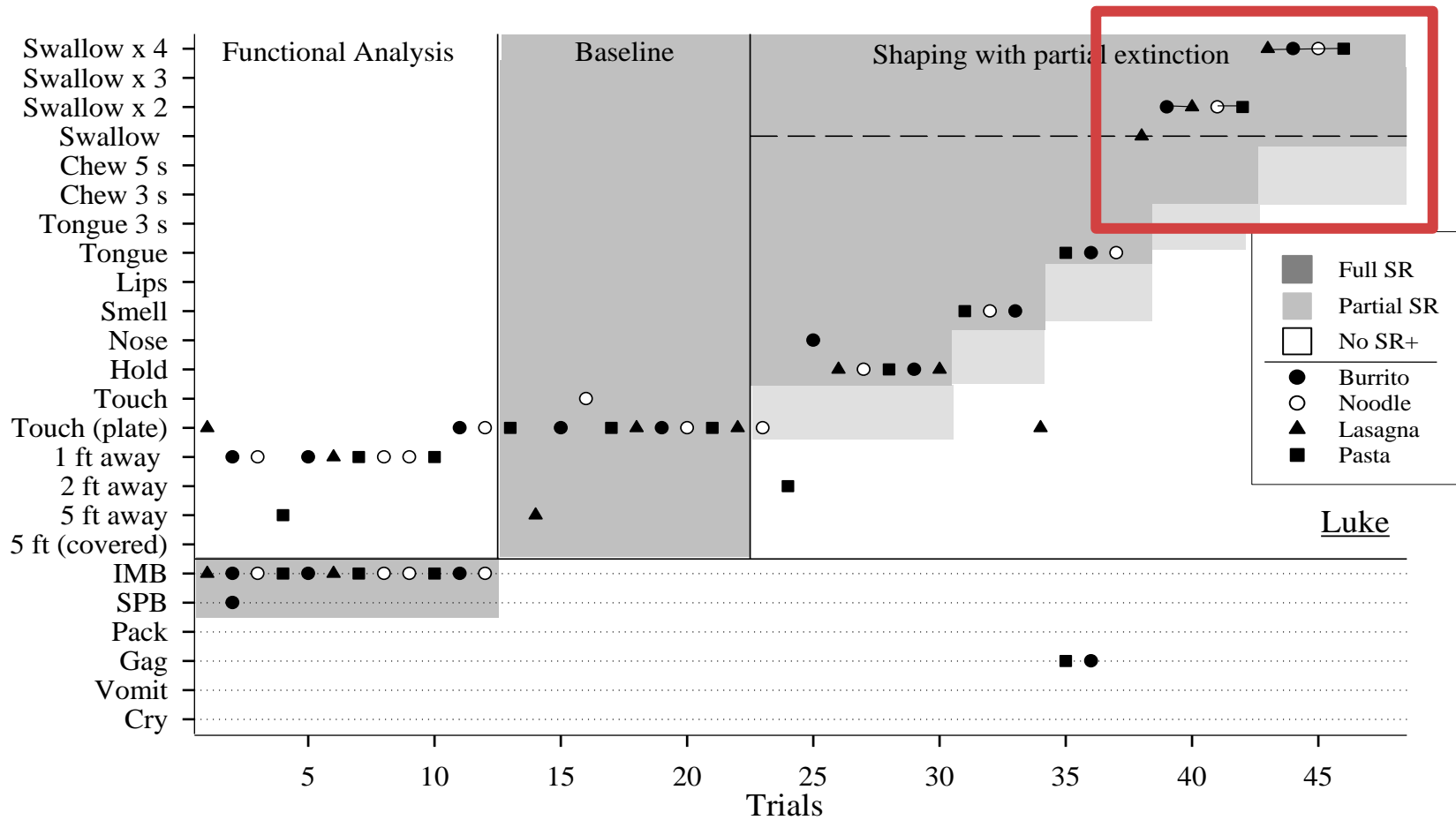




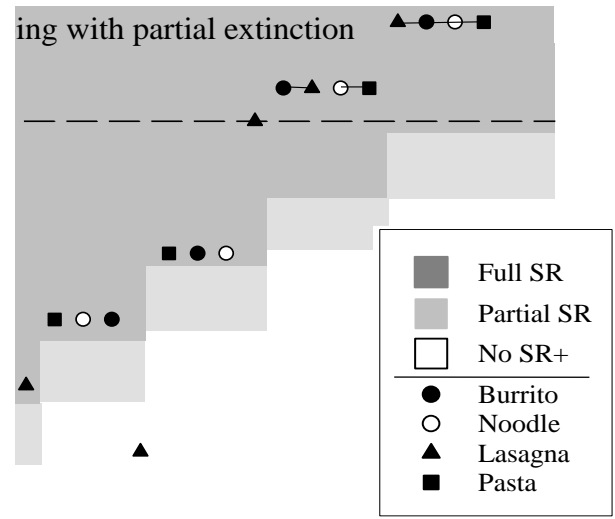
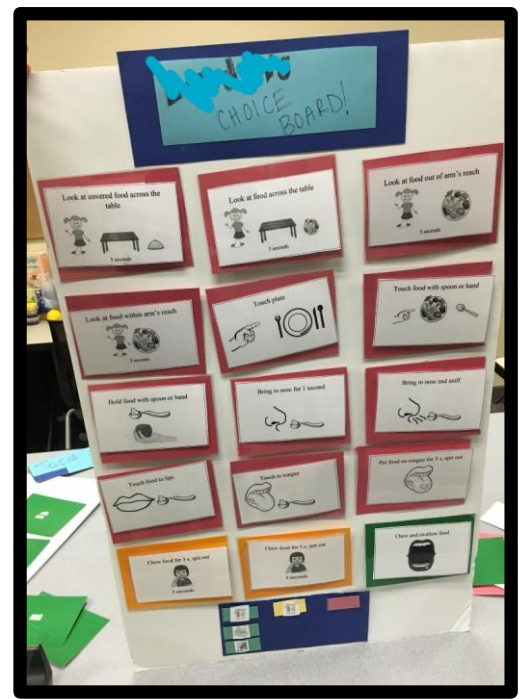


35 40 45





- Swallow x 4
- Swallow x 3
- Swallow x 2
- Swallow
- Chew 5 s
- Chew 3 s
- Tongue 3 s
- Tongue
- Lips
- Smell
- Nose
- Hold
- Touch
- Touch (plate)
- 1 ft away
- 2 ft away
- 5 ft away
- 5 ft (covered)
- IMB
- SPB
- Pack
- Gag
- Vomit
- Cry



Luke

5 10 15 20 25 30 35 40 45

Trials

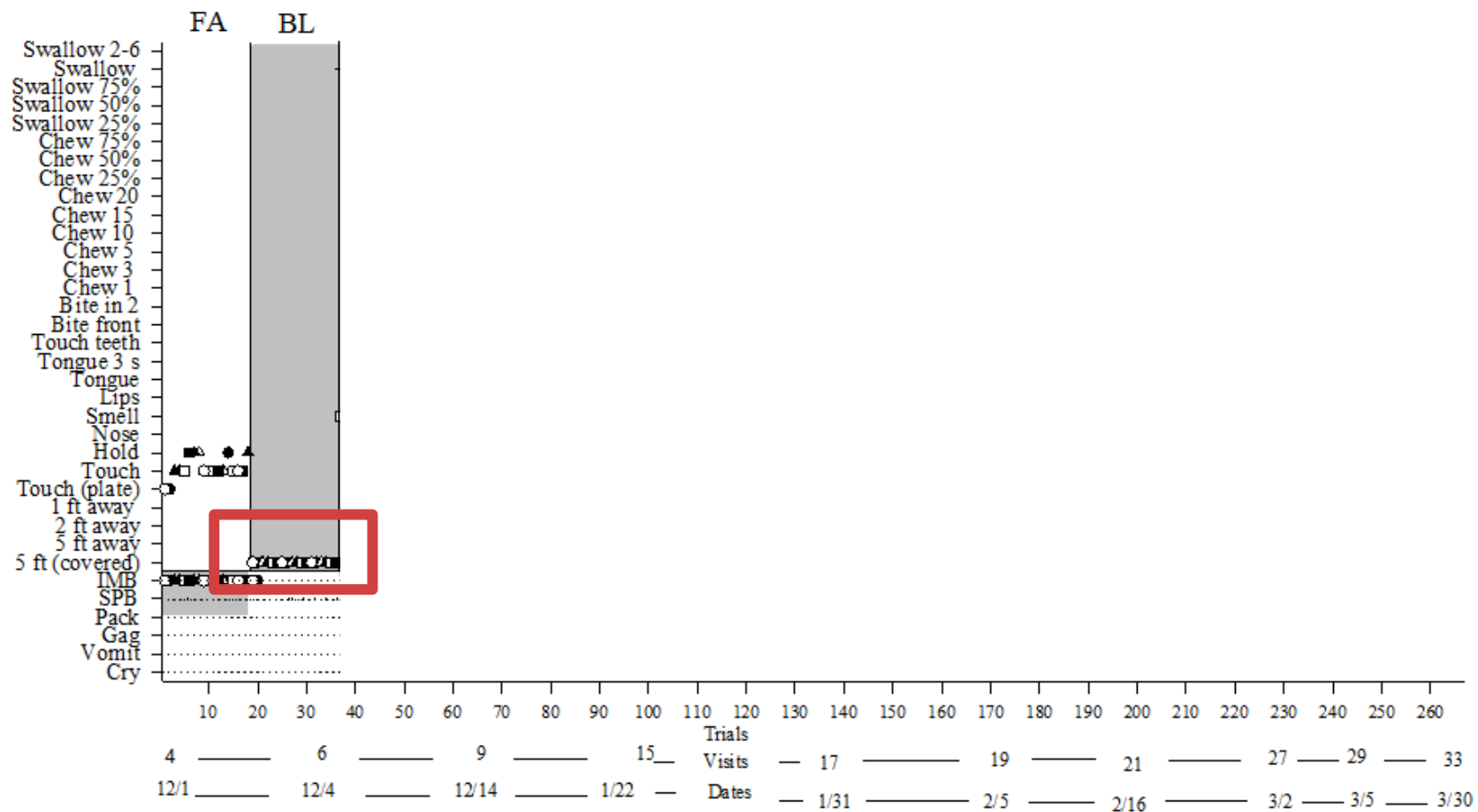
Ali

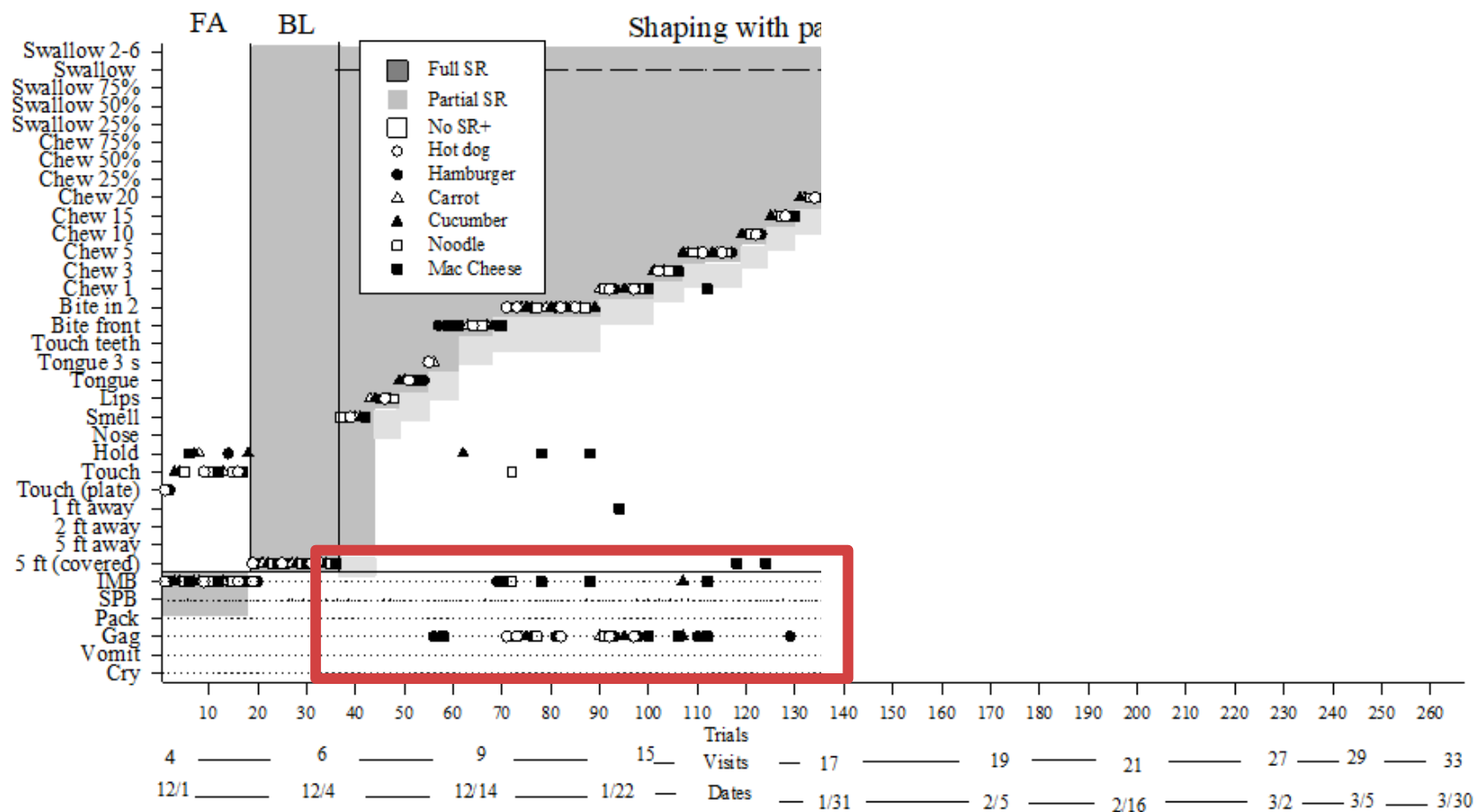
Age: 5

Language Level: Age appropriate

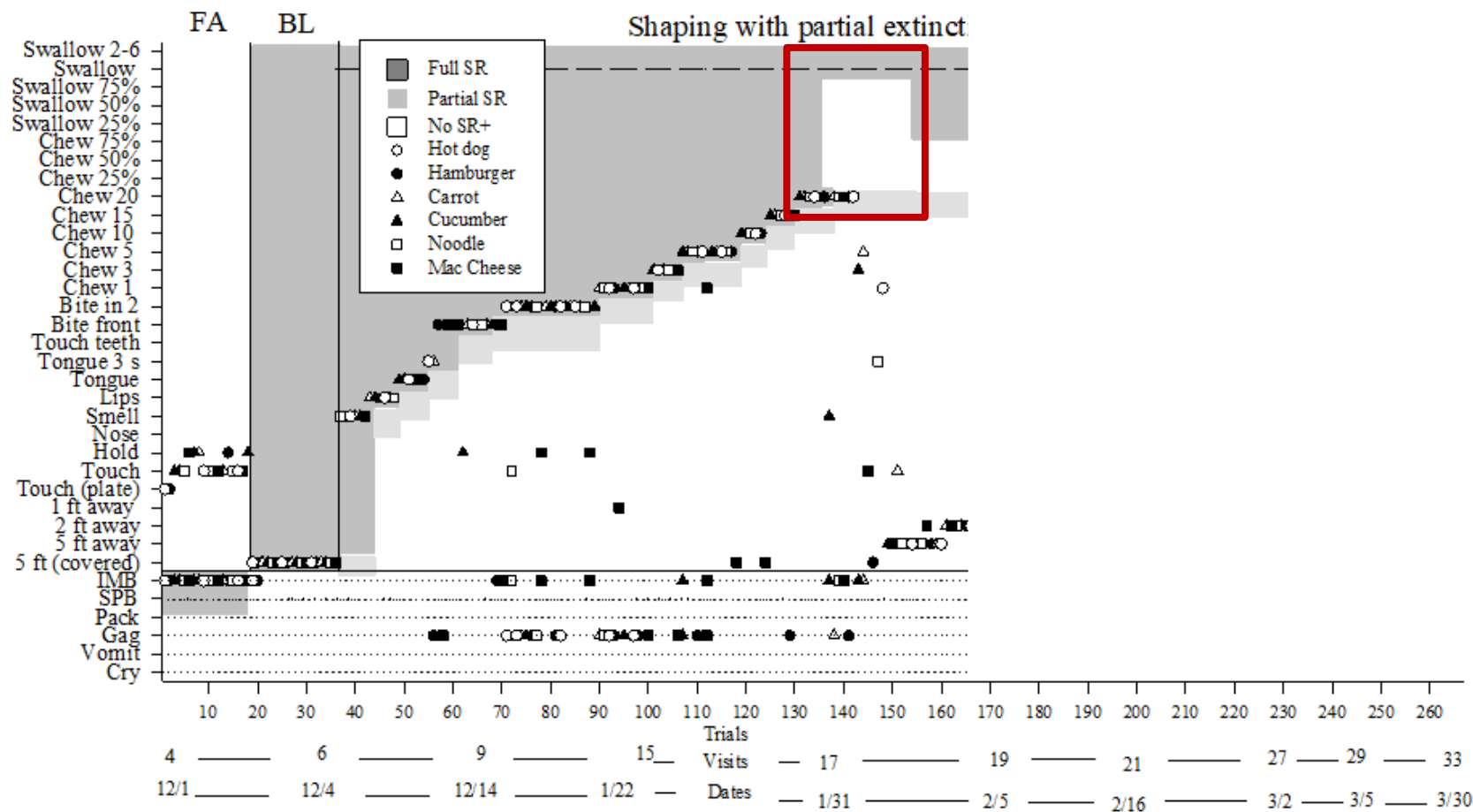
Diagnosis: Autism

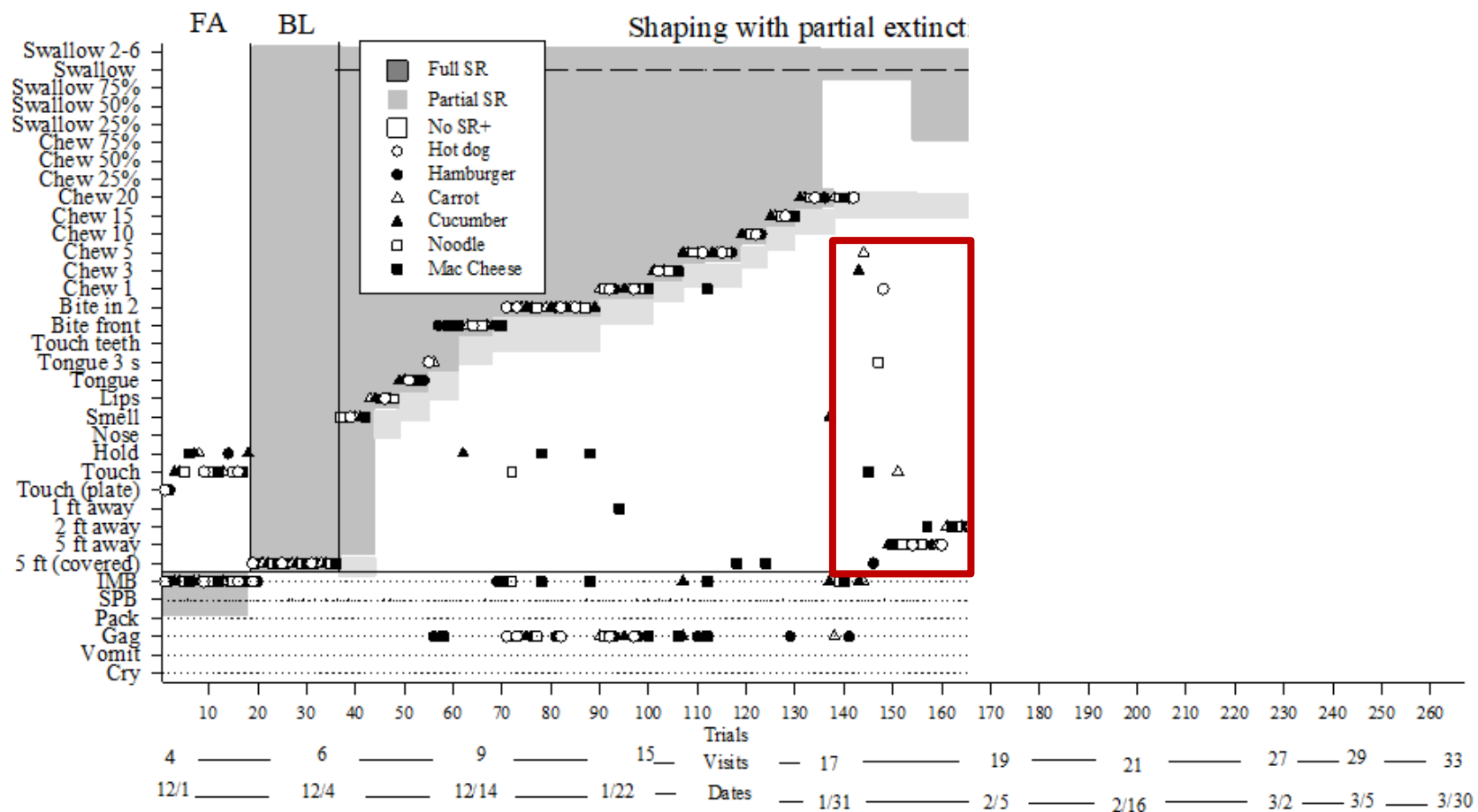
Referred for: Food selectivity, mealtime problem behavior

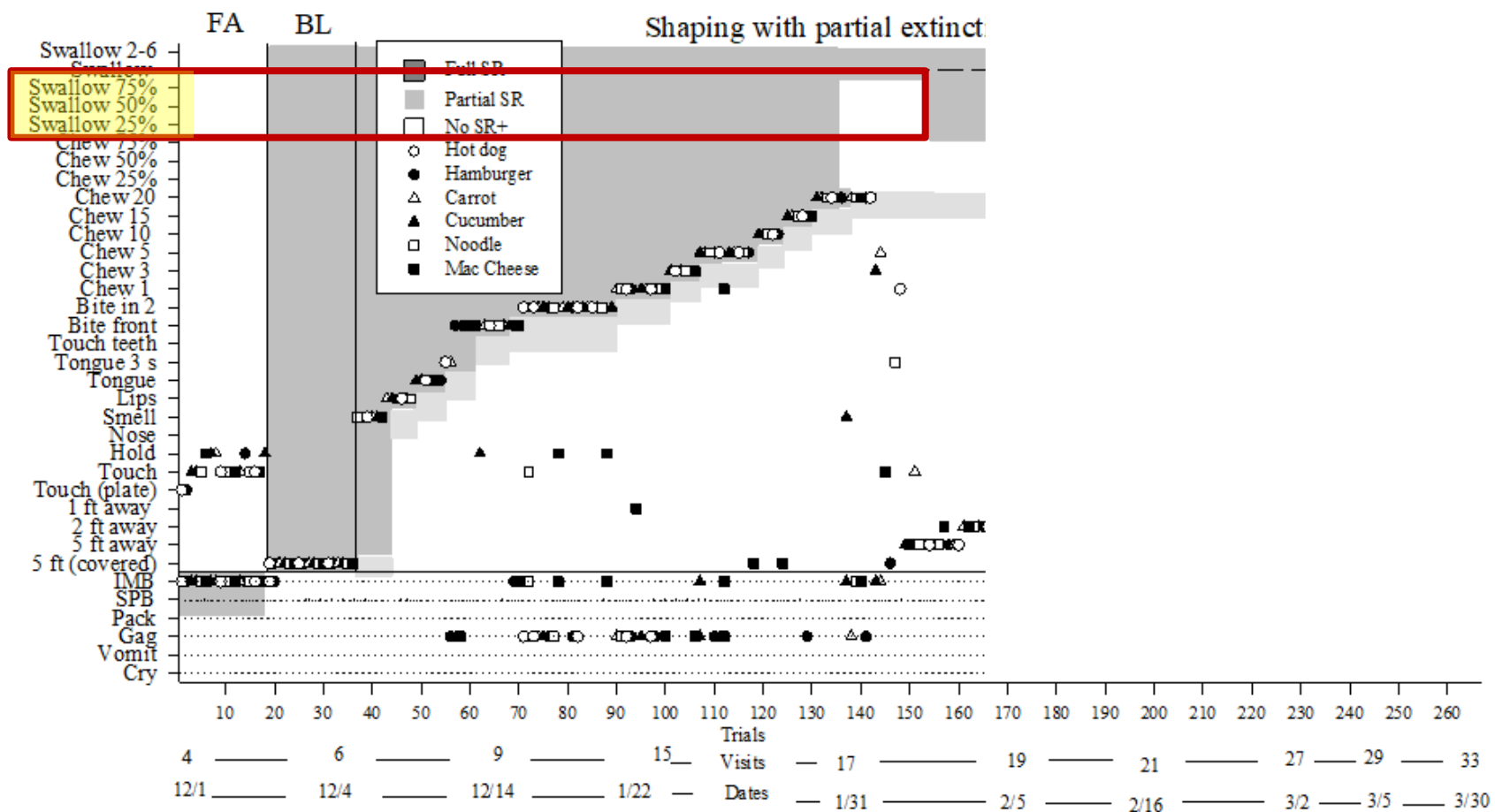




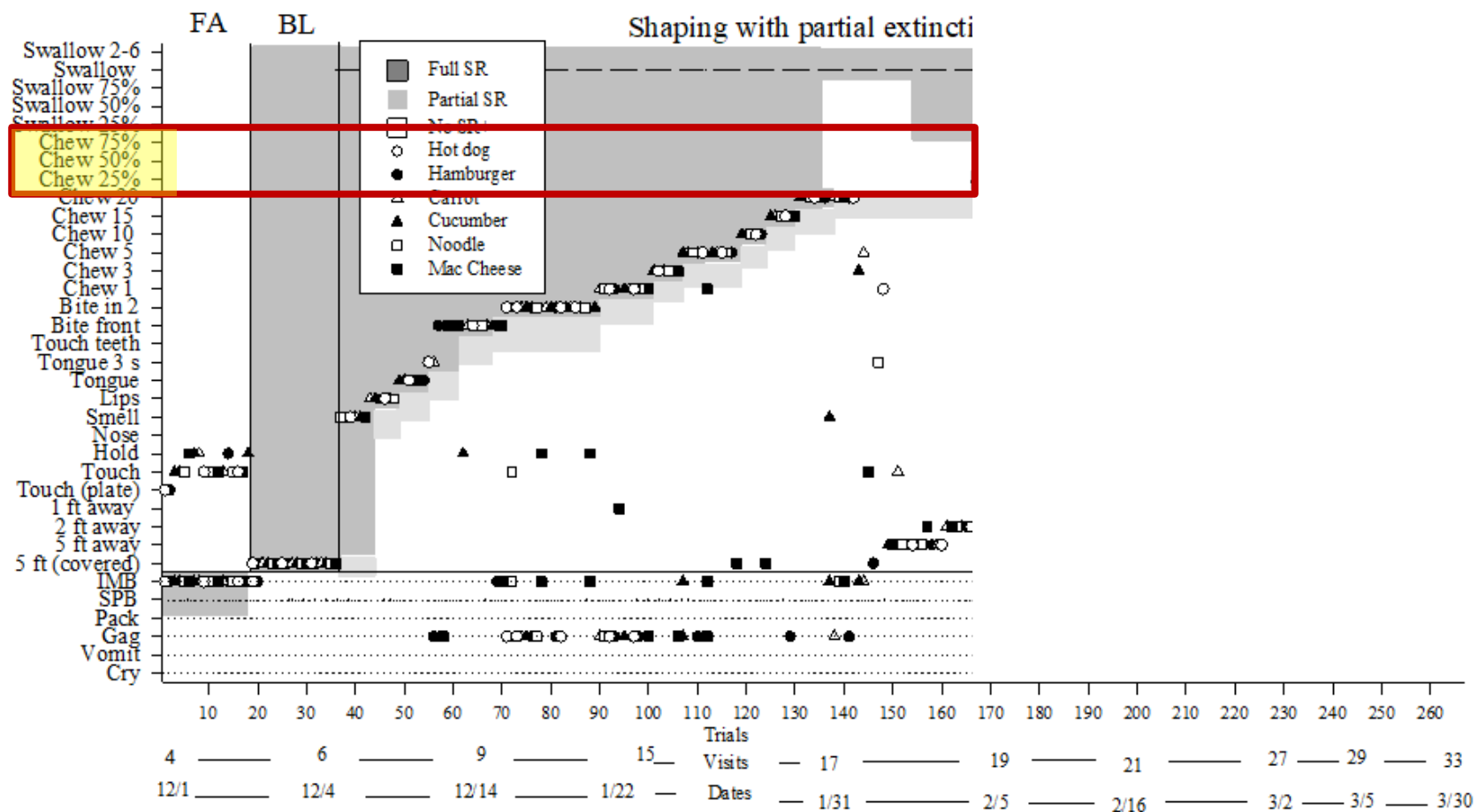
Shaping with partial extinct



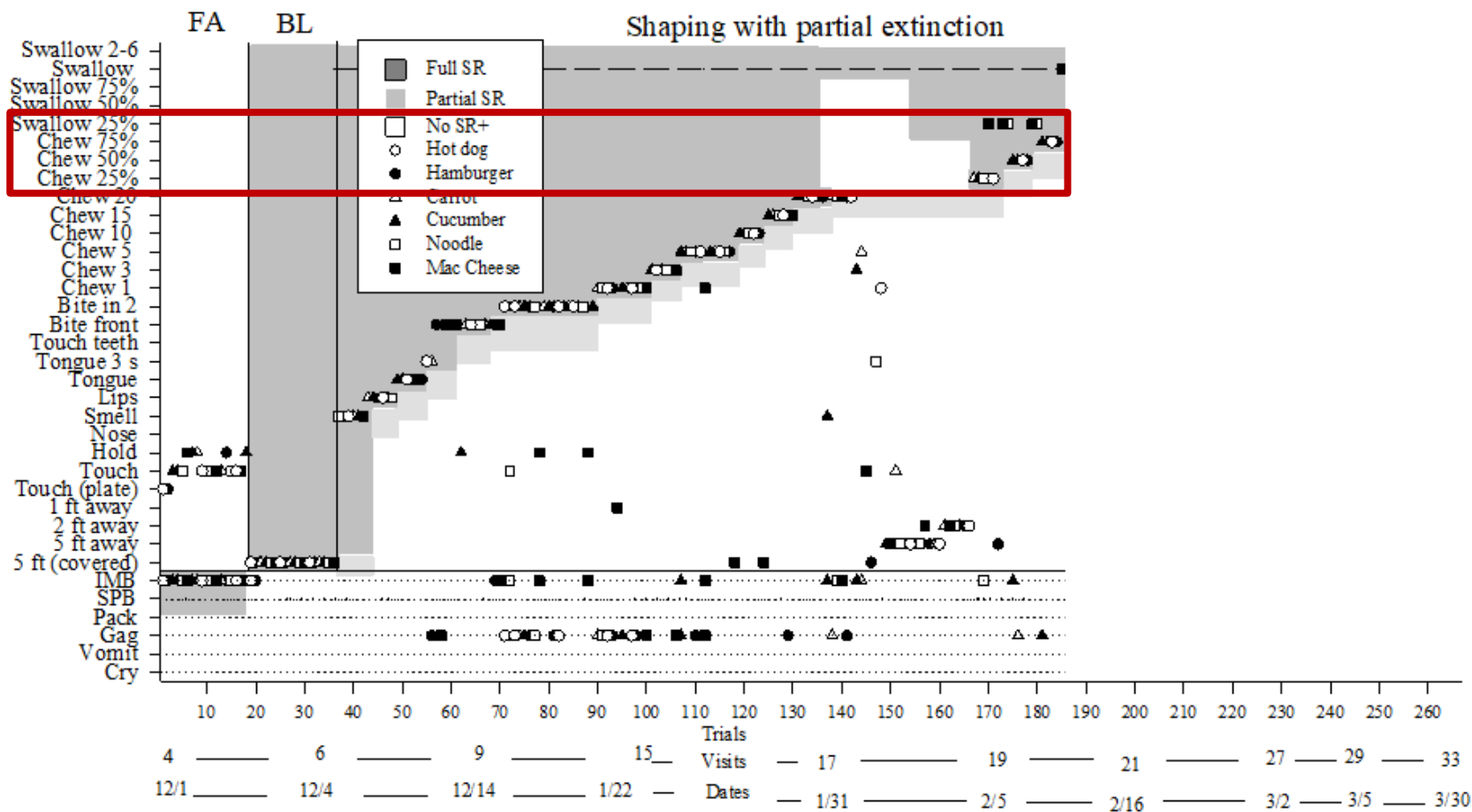




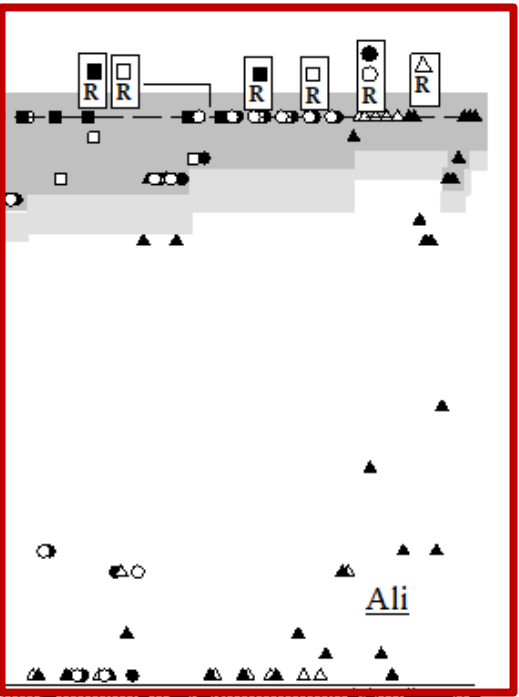
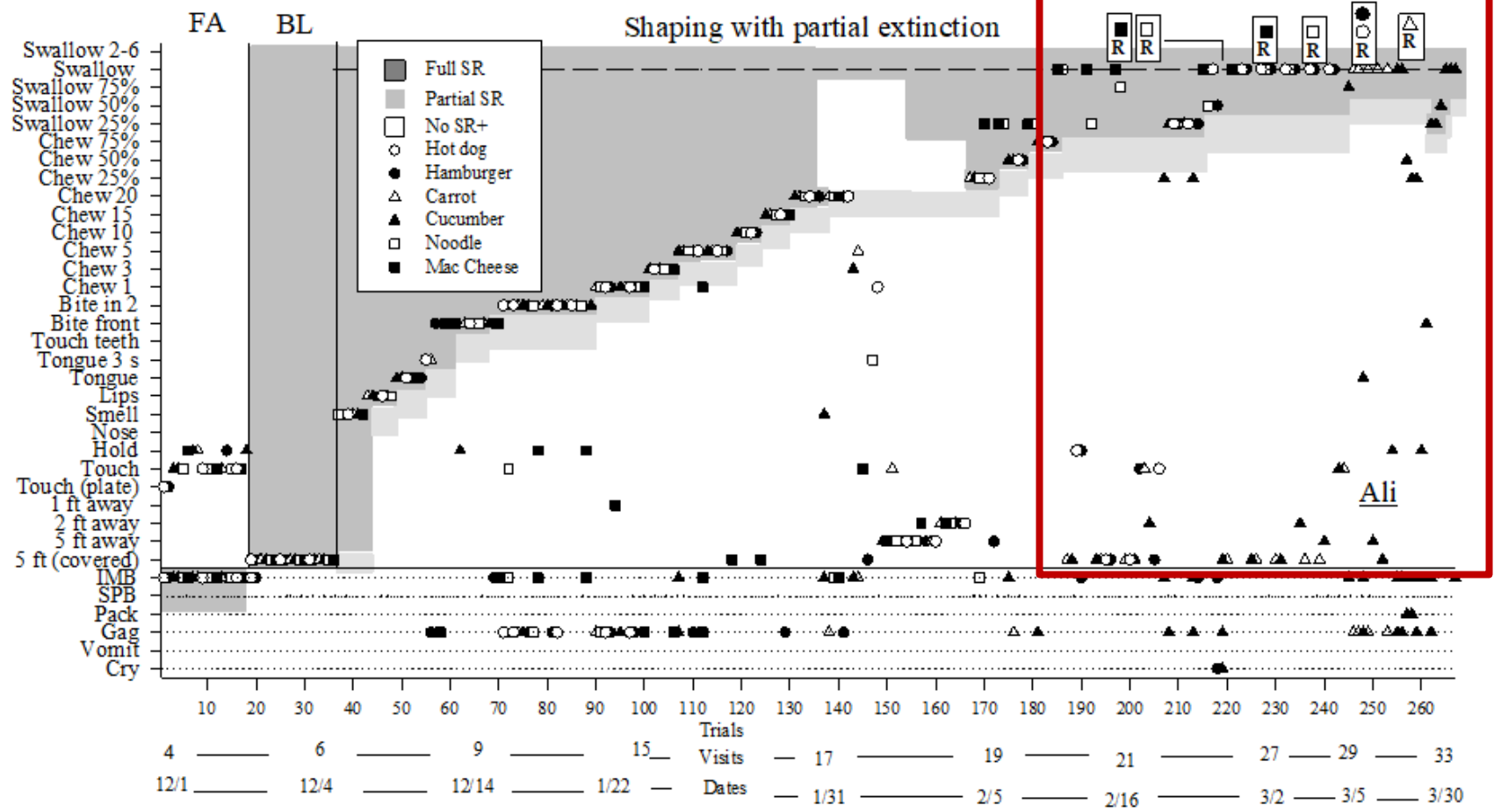
Swallow 2-6
Swallow 75%
Swallow 50%
Swallow 25%



Shaping with partial extinction

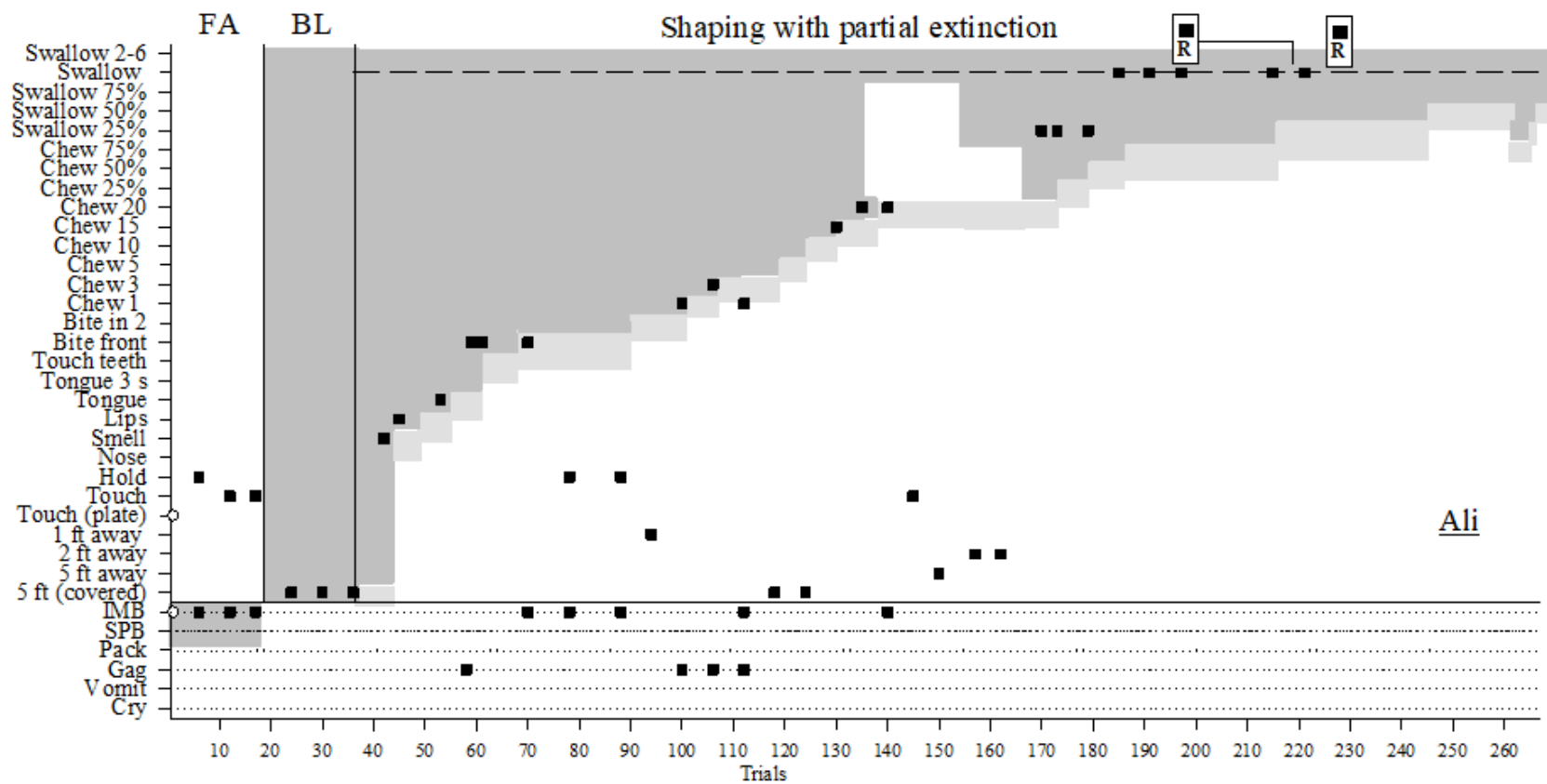


Shaping with partial extinction

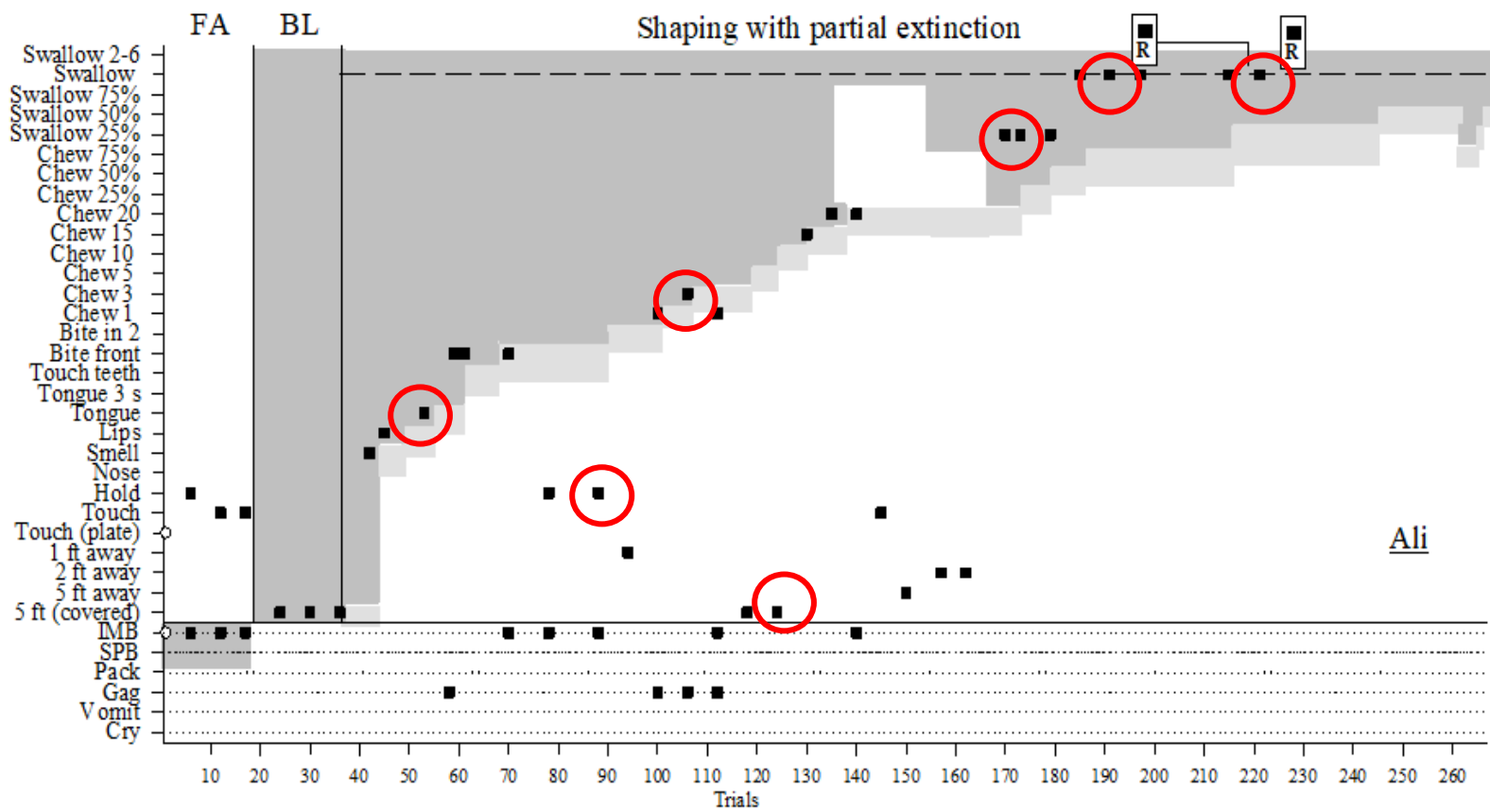


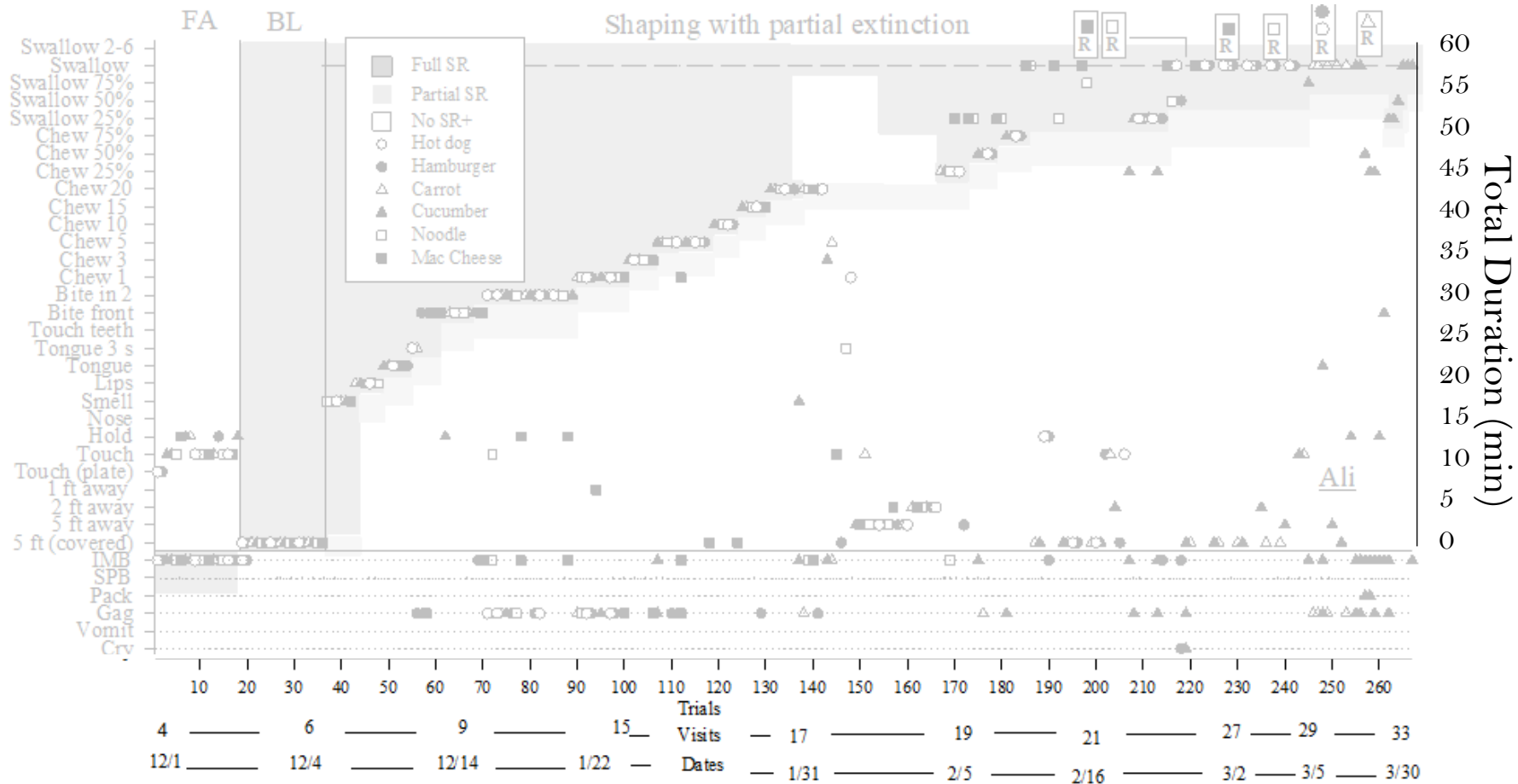
Ali

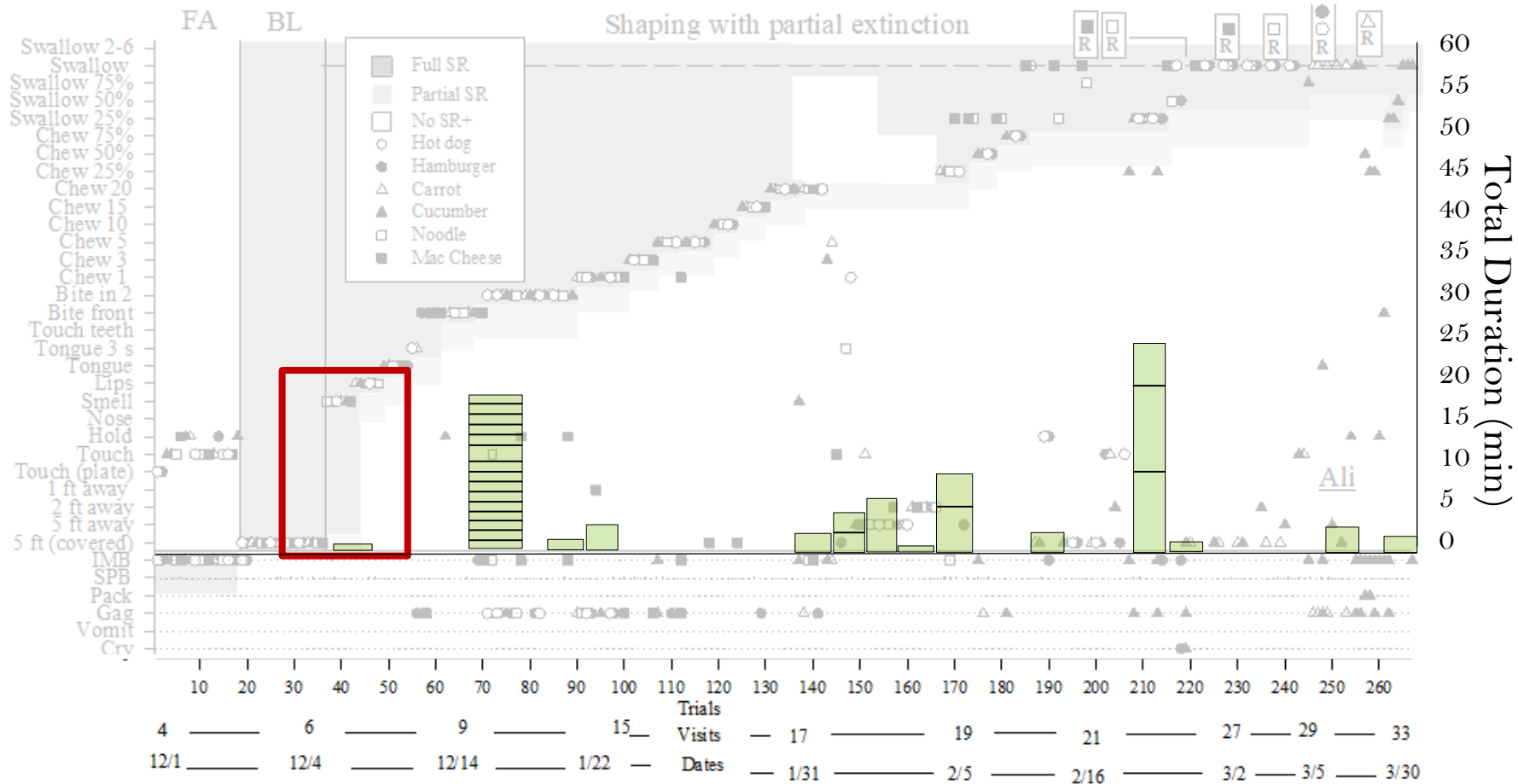
Shaping with partial extinction

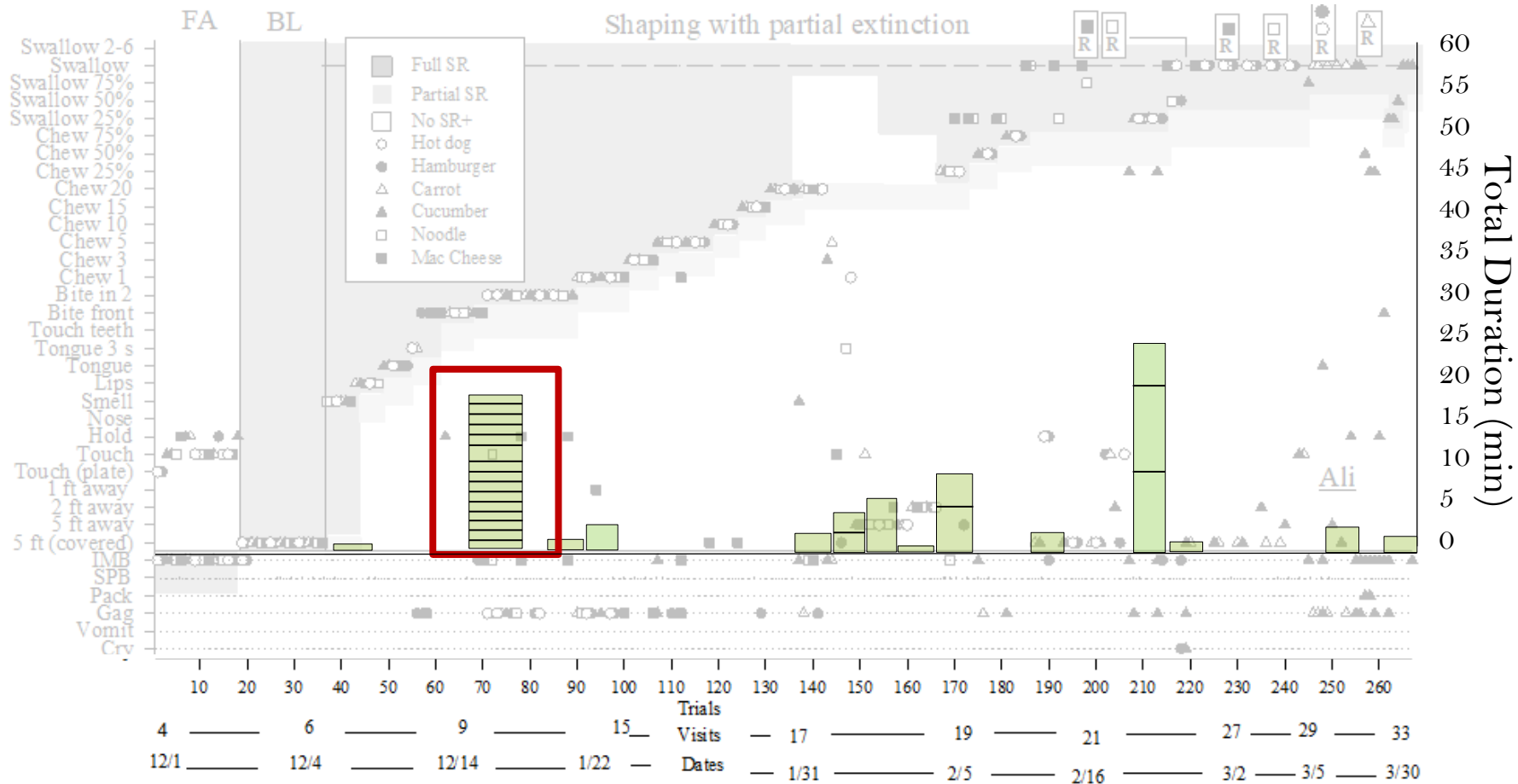


Ali









Closing Notes

- Behavior analysts can address food selectivity*
- Time is not always of the essence
- Keep your ego in check
- **Don't practice on an island, get supervision, consult other professionals, if necessary, start with "easier" cases to build competency**

Extensions of Assessment and Treatment of Food Selectivity



VANDERBILT KENNEDY CENTER

TREATMENT & RESEARCH INSTITUTE FOR AUTISM SPECTRUM DISORDERS



Thank you!

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Safety

- Anyone running sessions
 - CPR/First Aid Certified
 - Trainings available for identifying choking:
(<https://opwdd.ny.gov/providers/choking>)
- Recruit professional advice from SLPs/OTs
 - Specializing in feeding/swallowing, if needed
- Do not practice on an island
- Allergy and medical history informed
- Ensure emotional safety
 - History with feeding interventions
 - History with certain foods