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Welcome to Special Learning's

The Use of Preference Assessment in Applied Settings

Presented by: Amanda Yeager, M.A., BCBA

Begin Code: ay14012s

The Use of Preference Assessments in Applied Settings

presented by Amanda Yeager, M.A., BCBA

From this presentation, you will be able to:

- Identify stimuli for use in preference assessments
- Implement a Multiple-Stimulus Without Replacement preference assessment
- Train direct-care staff to conduct preference assessments

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The power of choice

Brief exercise

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Choice interventions

- Choice interventions are considered to be an evidenced-based practice for individuals with severe to profound disabilities (Tullis et al., 2011)
- Choice alone could serve as a reinforcer (Tiger et al., 2006).
- Allowing choice can be a parsimonious, yet effective way to reduce challenging behavior and increase appropriate behavior (Cannella et al., 2005; Hanley et al., 2006; Lancioni, O'Reilly & Emerson, 1996).

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Preference Assessments

- A method of identifying potential reinforcers
- Can provide a hierarchy of preferred items
- Reinforcement is VITAL in the development of operant behaviors

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What does the literature say about preference assessments?

- First formal preference assessment was by Pace and colleagues in 1985 (i.e., the single-stimulus approach method)
- A plethora of recent research examines specific components of preference assessments to increase the efficiency and efficacy of identifying reinforcers (e.g., Ciccone, Graff, & Ahearn, 2006; Daly et al., 2009; Hanley, Iwata, & Roscoe, 2006; Horrock & Morgan, 2009; Reid et al., 2007)
- A recent literature review of choice and preference assessments (Tullis et al., 2011) state that research seems to be shifting toward more of a complete explanation of the mechanisms of preference and are refining the methodologies

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Types of Preference Assessments

- Single-stimulus (SS)
- Paired-choice (PC) or paired-stimulus (PS)
- Multiple-stimulus with replacement (MSW)
- Multiple-stimulus without replacement (MSWO)
- Free operant (FO)
- Response restriction (RR)
- Concurrent operant (CO)
- Questionnaires

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Which one should I use?

- There is no criterion on how to select which PA format will be most effective and should be determined considering an individual's:
  - Time allotted for PA
  - Ability to choose from several different items at one time
  - Visual and motor capabilities of the student
  - Ability to "wait" appropriately
  - Ability to give up preferred items readily without displaying challenging behaviors
  - Respond to simple commands, such as "pick one."

Also consider…

- DeLeon & Iwata (1996) examined the efficacy and efficiency of the MSW, MSWO, and PS.
- Results indicated:
  - The MSWO & PS produced most consistent results, but the MSWO took substantially less time than the PS
- *The MSWO appears to be more of a practical choice for use in applied settings*, which has been confirmed and extended by additional research (Carr et al., 2000; Daly et al., 2009; Paramore & Higbee, 2005).

How to select stimuli for PA

- Questionnaires for caregivers and teachers
  - e.g., the Reinforcer Assessment for Individuals with Severe Disabilities (RAISD) (Fisher, Piazza, Bowman, & Amari, 1996).
- Interviews
- Observation
- Familiarity

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Types of stimuli

- Tangibles (e.g., tambourine)
- Pictures (e.g., preferred item/activity)
- Activities (e.g., watching a video)
- Olfactory (e.g., cinnamon)
- Vocations (in vivo or video clips of)
- Edibles (e.g., candy)

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Multiple-Stimulus Without Replacement

- DeLeon & Iwata (1996)
  - 7 stimuli in a straight line, 5 cm apart
  - Participants sat .3 m from stimulus array
  - Participant had 30 s to select an item
  - 30 s access with selected item
  - Remove item from array
  - Rotate items, taking the item at the left end of the line and moving to the right end, shifting items so they are equally spaced

Before starting…

- Define “selection”
- Define and demonstrate selection versus non-selection and procedures necessary
- Latency time between “pick one” and selection
- Duration with selection

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Demonstration of MSWO video clip

Scoring your results

	Session 1	Session 2	Session 3	Session 4	Session 5
iTouch	0 **1** 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
Skittle	0 1 2 **3** 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
Putty	0 1 **2** 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
Jelly Bean	0 1 2 3 4 **5**	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
Beads	0 1 2 3 **4** 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5

Scoring your results

- Hierarchy/Categorization first developed by Pace et al. (1985)
  - > 80% high-preference
  - > 50% moderate-preference
  - < 49% low-preference
- Ciccone et al., (2006) used an alternative scoring method for MS preference assessments
  - Assigning points
  - Example: 5 items, first item chosen earns a “5”

Use in Applied Settings

- Items scored as high-, moderate-, and low-preference may serve as reinforcers.
- Utilizing moderate- and low-preference stimuli (as opposed to only the high-preference stimuli) may prevent satiation
- Items can be used to teach new skills and to decrease unwanted behaviors
- Reassess over time

Potential Challenges

- Edibles vs. tangible stimuli
  - DeLeon et al., 1997 and Taravella et al., 2000 noted tangible items can be displaced when edible items are available during a multiple-stimulus preference assessment
- Challenging behaviors
- Frequent change in preferences
- Time allocated to train staff

Training direct-care staff

- Research focusing on staff training report positive results, indicating the potential to successfully teach direct-care staff members to implement PA

(Roscoe & Fisher, 2008; Roscoe et al., 2006).

Effective Methods of Training

- Provide brief summaries of the preference assessment format, which are outlined in the methods section (e.g., paired-stimulus in Fisher et al., 1992 and the MSWO in DeLeon & Iwata, 1996).
- Provide a data sheet for scoring selection
- Role play
  - Demonstrating each potential student response
- Provide feedback!
  - Record staff and allow them to review the tape prior to their next session

Refer to Roscoe and Fisher (2008) & Roscoe et al., 2006

Research In An Applied Setting

Preference Assessments with Individuals with Severe Disabilities

The Utility of Moderate- and Low-Preference Stimuli

Amanda R. Yeager, Diane M. Sainato, Helen I. Cannella- Malone, Senny Schnell

The Ohio State University

Ciccone, Graff, & Ahearn (2006)

- Conducted preference assessments to examine if moderate- or low-preference items would be ranked as high preference when reassessed.
- Concluded moderate-preference items were more likely to be identified as high-preference when reassessed versus low-preference items.

Purpose of Study

- Extend research on preference assessments using the Multiple Stimulus Without Replacement (DeLeon and Iwata, 1996) and point weighting method (Ciccone, Graff, and Ahearn, 2005)
- Examine high-, moderate- and low-preference stimuli, including edibles and tangibles, as reinforcers

Description of Participants and Setting

- Three students
  - **Levi**: 11-year-old male, severe intellectual disability
  - **Alvin**: 10-year-old male, severe intellectual disability, autism
  - **Jake**: 8-year-old male, severe intellectual disability, autism
- Setting: self-contained school
  - Preference assessments: in classroom and/or in an unoccupied room
  - Reinforcer assessments: in classroom

Preference Assessments Measures

Independent Variable

- Edible and tangible items stimuli
  - 9 per participant

Dependent Variable

- Choice- item selection

Preference Assessments Procedures

- *Multiple Stimulus Without Replacement (MSWO)* (DeLeon & Iwata, 1996)
  - 9 stimuli (edible and tangible)
- Items ranked using the point weighting method (Ciccone, Graff, & Ahearn, 2005)
- Moderate- and low-preference stimuli reassessed

Point weighting method

- Ciccone, Graff, and Ahearn (2005)

Item name	Order selected	Points assigned
Bubbles	1	9
Cheese	2	8
Truck	3	7
M&M®	4	6
Spinner	5	5
Puzzle	6	4
Ice	7	3
Microphone	8	2
Chocolate chip	9	1

Preference Assessments Results

Rank order	Levi	Points	Alvin	Points	Jake	Points
1	Craisin ®	75	chip	67	Spinner	67
2	M&M®	74	Chocolate chip	66	Windmill	63
3	Ice	52	M&M®	63	Bubbles	51
4	Puzzle	45	microphone	51	Tambourine	50
5	chest	31	Picture collage	38	String	49
6	Bubbles	26	Top	37	Wand	40
7	Fish	22	Truck	29	Juice	37
8	Playdoh®	17	Spinner	19	Cheese	17
9	Mirror	16	Bubbles	6	Chip	9

Reinforcer Assessment Measures

Independent Variables

- High-Preference Stimuli
- Moderate-Preference Stimuli
- Low-Preference Stimuli

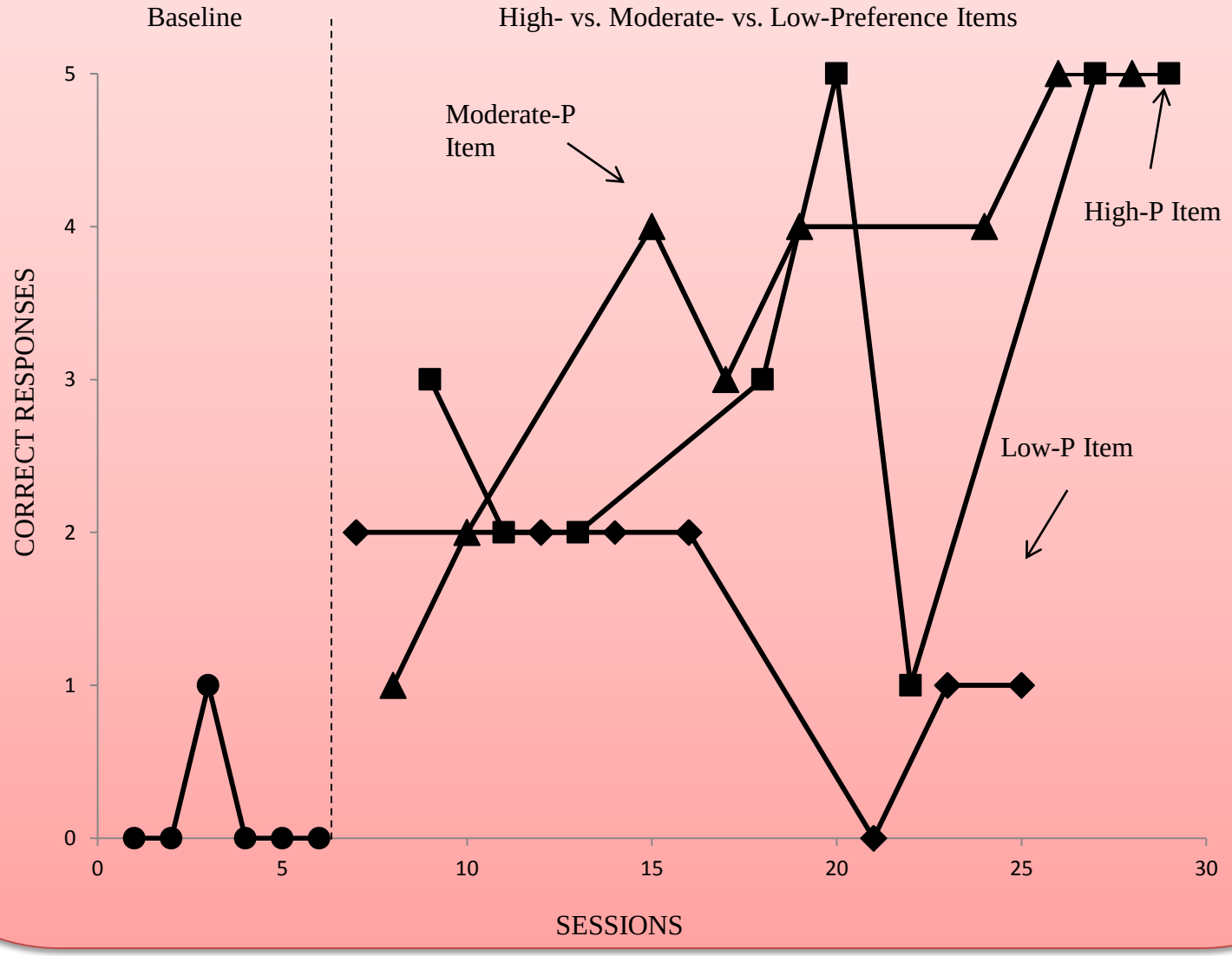
Dependent Variable

- Number of accurate task completions
  - 5 trial sessions

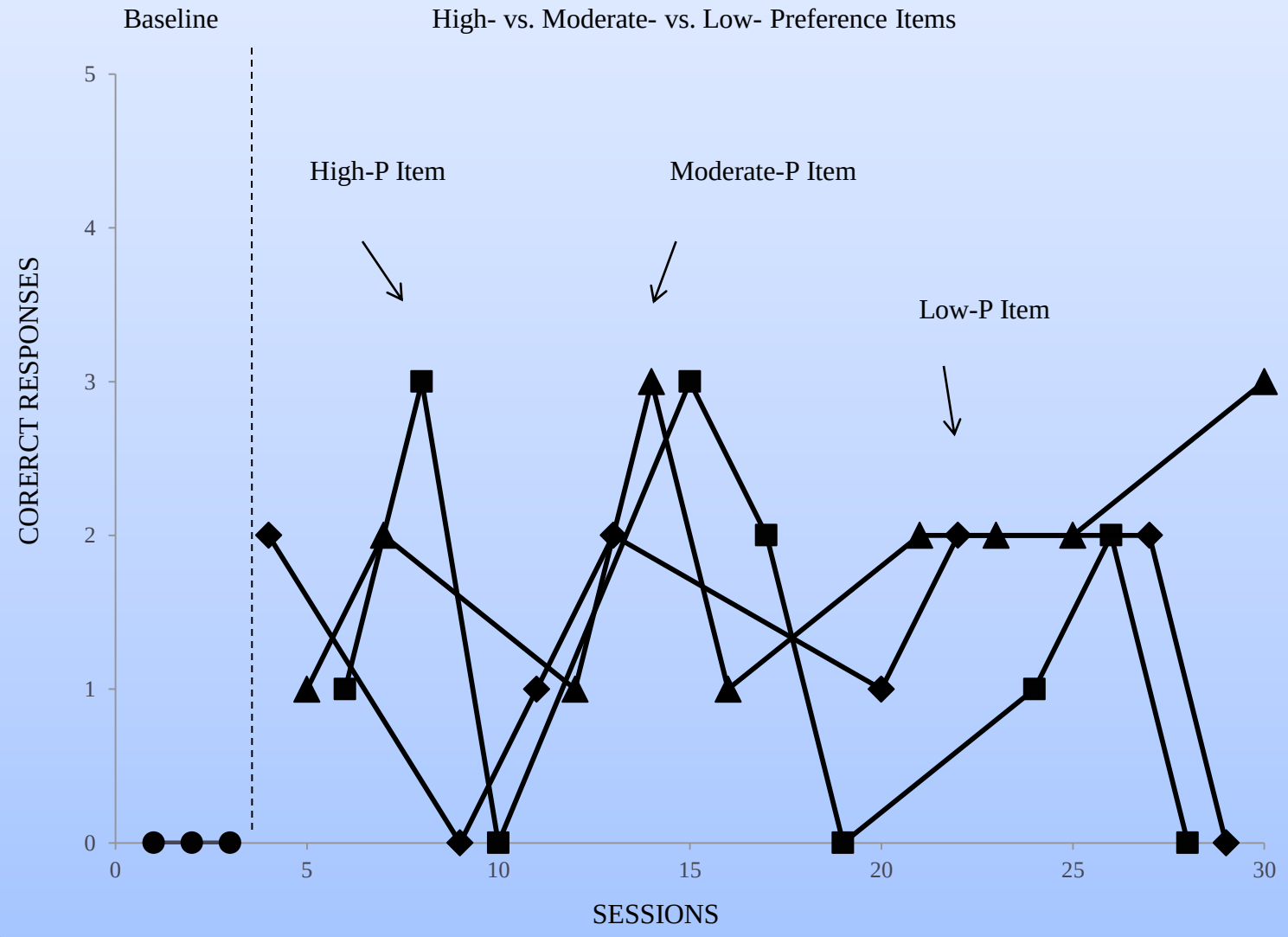
Reinforcer Assessments Procedures

- Alternating Treatments Design
- Reinforcer Assessments
  - Baseline: Students were instructed to complete tasks
    - No reinforcement contingencies
  - Intervention: High-, moderate-, and low-preference stimuli were provided contingent upon completion of task.

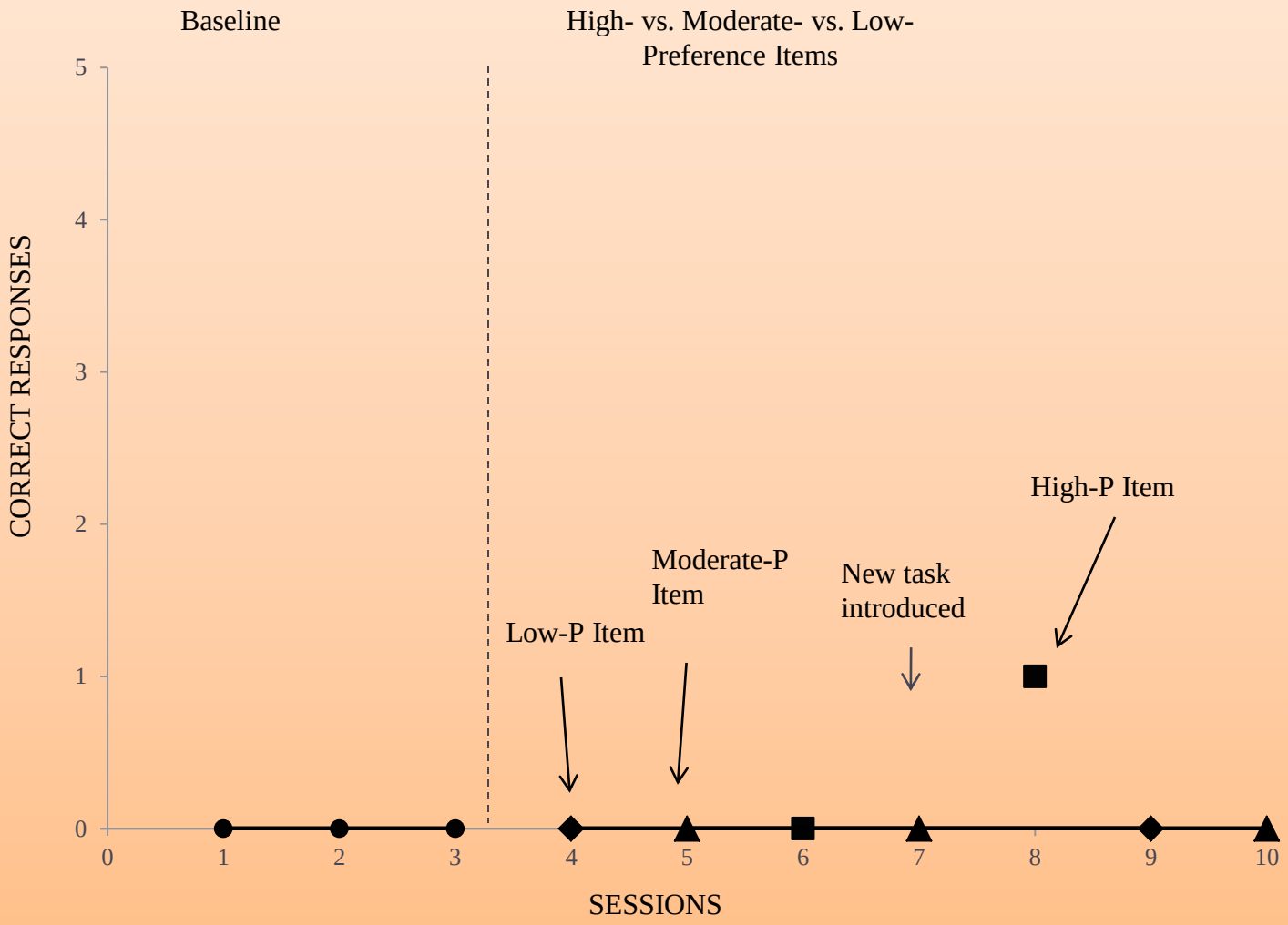
Levi


Baseline
High- vs. Moderate- vs. Low-Preference Items
Moderate-P Item
High-P Item
Low-P Item
CORRECT RESPONSES
SESSIONS
0
1
2
3
4
5
0
5
10
15
20
25
30

Alvin


Baseline
High- vs. Moderate- vs. Low- Preference Items
High-P Item
Moderate-P Item
Low-P Item
CORERCT RESPONSES
SESSIONS
0
1
2
3
4
5
0
5
10
15
20
25
30

Jake


Baseline
High- vs. Moderate- vs. Low-Preference Items
CORRECT RESPONSES
5
4
3
2
1
0
0
1
2
3
4
5
6
7
8
9
10
SESSIONS
Low-P Item
Moderate-P Item
New task introduced
High-P Item

Discussion

- Levi
  - The moderate- and high-preference stimuli produced the highest responding at 100% and were most effective
- Alvin
  - Responding increased when reinforcement contingencies were implemented
- Jake
  - Challenging behaviors
    - Lack of clear data on reinforcing effect

Conclusion

- Stimulus preference assessments have a strong empirical basis *(Daly et al., 2009)*
- Research has been increasingly sensitive to the needs of practitioners *(Carr et al., 2000)*
- Choice interventions and preference assessments can be used as an aid to guide the Individual Education Programs (IEP) process and enhance person-centered planning *(Cannella et al., 2005)*

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Thank you for attending our live webinar

with Ms. Amanda Yeager, M.A., BCBA

We would appreciate your feedback!

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