Understudied Intervention Procedures in the Early Behavioral Treatment of Autism

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Behavior Analyst Certification Board

Early and Intensive Behavioral Intervention (EIBI)
• Key Characteristics
  – Hierarchically organized curriculum
  – Designed to produce the repertoire of a typically developing 4-5-year old
  – Operant instructional procedures
  – Reinforcement, prompting, fading, etc.
  – Intensive delivery
  – 2-3 years; 25-40 hours/week

Early and Intensive Behavioral Intervention

2-3 years

<table>
<thead>
<tr>
<th>Practice</th>
<th>2-3 years</th>
<th>4-5 years</th>
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</thead>
<tbody>
<tr>
<td>Compliance</td>
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<tr>
<td>Mand Training</td>
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<td>Yes</td>
</tr>
<tr>
<td>Block Imitation</td>
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<td>Yes</td>
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<tr>
<td>Motor Imitation</td>
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<tr>
<td>Matching</td>
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<tr>
<td>Play</td>
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<td>Songs</td>
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<td>Independent work andplay</td>
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<td>Play Scripts</td>
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<td>Receptive Instructions</td>
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<td>Receptive Labels</td>
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<td>Functional communication</td>
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<td>Vocal imitation</td>
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<td>Social Initiations</td>
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Specific EIBI Practices
• There are substantial between-program differences in:
  – Prompting
  – Error correction
  – Reinforcer delivery
  – Antecedent stimulus presentation
  – Mastery criteria
  – Program sequence
  – Measurement
  – Trial arrangements
  – Etc …
Sources of Procedural Variability

- The enormity of the EIBI task
  - Thousands of hours of treatment
  - Dozens of program areas
  - Thousands of skills
- Published treatment manuals
  - Lovaas (2003), Sundberg & Partington (1998)
- Approaches have been “branded” in the marketplace
  - Lovaas/UCLA, Verbal Behavior, Precision Teaching, etc.
- The workshop circuit and Internet permit rapid dissemination
- Demand for services exceeds quality supply
STUDY 1

A COMPARISON OF GENERAL AND DESCRIPTIVE PRAISE IN TEACHING INTRAVERAL BEHAVIOR TO CHILDREN WITH AUTISM

Amy S. Peck
Florida State University, Panama City

AND

James E. Carr and Nicole M. Hannay
Florida State University

Praise

- Types of Praise
  - Descriptive praise
    - Identifies to the learner the behavior for which he is being praised
    - e.g., “Good job raising your hand”
  - General praise
    - Does not specify the behavior
    - e.g., “Good job”

Common Recommendations

“Specify the particulars of the accomplishment” and “information about the value of their accomplishment”
(Brophy, 1981)

“Effects of praise may be bolstered when the praise is specific”
(Simonsen et al., 2008)

Comparative Research?

- 2 unpublished dissertations – no difference
  - Scheer (1977), Zahler (1975)
- Sellers and Higbee (unpublished)
  - Children with ASD
  - “receptive actions” program
  - General & descriptive praise equally ineffective
- Stevens, Sidener, Reeve, & Sidener (2011)
  - Children with ASD
  - Tact program
  - General & descriptive praise (with tokens) equally effective
The Current Study

- General & Descriptive Praise Comparison
- Intraverbal training for 4 children with ASD
- Initial Reinforcer Evaluation
- Adapted Alternating Treatments Design
  - 3 stimuli taught under each condition
- Praise \(\rightarrow\) + High-Preference Items \(\rightarrow\) + Errorless Prompts

### Acquisition Summary

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<th>Brad</th>
<th>Tina</th>
<th>Brett</th>
<th>Shaun</th>
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Maintenance Summary

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<td>😊</td>
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<tr>
<td>Eval. 2</td>
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<td>General</td>
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Conclusions

- **Findings**
  - Praise was rarely effective by itself (25% of evaluations)
  - No reliable within- or between-participant benefit of descriptive praise
  - Consistent with existing research

- **Prerequisites?**
  - Listener/receptive repertoires
  - Rule-governed behavior

- **No evidentiary support for the differential effects of descriptive praise**
  - Claims and fervor should be accordingly adjusted?
  - Consider staff training issues

- **Possible indirect effects?**
Discriminations

- Most commonly targeted skills in early intervention programming (Smith, 2001)
- Types of discriminations
  - Simple
  - Conditional

Conditional Discriminations

- "Eating"
- "Running"
- "Swimming"

Auditory-Visual Conditional Discriminations

Conditional Discrimination Programs

- Also known as
  - Receptive Labeling / Identification
  - Listener Responding
- Targets
  - Objects
  - Actions
  - Colors
  - Emotions
  - Feature, function, & class

Conditional Discrimination Training

- Two methods for teaching conditional discriminations in applied settings
  - Simple/Conditional Method
    - Based on procedures described by Lovaas (2003)
  - Conditional Only Method
    - Based on procedures described by Green (2001)
Simple → Conditional Discrimination Training

**STEP 1**

“Show me puppy.”

![Puppy Image]

**STEP 2**

“Show me apple.”

![Apple Image]

**STEP 3**

“Show me puppy.”

![Puppy Image] ![Apple Image]

**STEP 4**

“Show me apple.”

![Apple Image] ![Puppy Image]
Simple ➔ Conditional Discrimination Training

STEP 5

“Show me apple / puppy.”

STEP 6

“Show me guitar.”

STEP 7

“Show me guitar / puppy.”

STEP 8

“Show me guitar / apple.”
The Current Study

- Concern with the Simple/Conditional method
  - Steps requiring only simple discriminations may interfere with subsequent conditional discriminations (Green, 2001)

- Purpose
  - To compare the Simple/Conditional and Conditional Only training methods with children with autism

- Adapted Alternating Treatments Design
  - 3 stimuli taught under each condition
Overall Results

- Acquisition in **7 of 8** evaluations for the Conditional Only method
- Faulty stimulus control in **4 of 8** evaluations for the Simple/Conditional method
- Maintenance was better in the Conditional Only method

**STUDY 3**

A Comparison of Methods for Teaching Receptive Labeling to Children with Autism Spectrum Disorders:

A Systematic Replication

Grow, Kodak, & Carr (in press)

*JABA*
Clinical/Educational Implications?

- Teach A-V Conditional Discriminations as A-V Conditional Discriminations

Unanswered Questions

- Measurement
- PECS
- Mastery Criteria
- Program Order
- Array Size
- Task Interspersal
- Reinforcer Schedule Thinning
- Blocking Stereotypy
- Maintenance Programming
- Fading Methods
Getting the Job Done

- The resources available from the behavioral research community do not match:
  - the pace of clinical dissemination
  - the degree of unanswered questions
- Clinicians are potentially well suited to contribute to this mission
  - access to many clients
  - services are already being provided
  - influence over the training context
- Clinicians might collaborate with established researchers to help answer even more important questions