Problem Behaviors (PBs)

- Self-injurious behavior (SIB) is considered the most chronic form of problem behavior in individuals with ASD (Waters & Healy, 2012)
- Risk of SIB is higher in individuals with ASD than other populations
- Prevalence rates of SIB range from 33% to 71% (Richards et al., 2012; Richman et al., 2013)

Communication

- Children with ASD & limited functional communication skills
  - Often exhibit problem behaviors due to communication deficits
- PB can serve a communicative function:
  - Gain access to items or activities
  - Escape aversive situations/activities
  - Seek attention
- Receptive & Expressive skills = ↑ SIB

Empirical Research: PECS, PB, & ASD

- Buckley & Newchok (2005)
  - Aggression decreased (PND=97%)
  - Mands increased
- Charlop-Christy et al. (2002)
  - PB decreased (PND=53%, 78%)
  - Speech & social behavior increased
- Frea, Arnold, & Vittimberga (2001)
  - Aggression decreased (PND=86%)

Empirical Research: SGD, PB, & ASD

- Cafiero (2001)
  - PB decreased
- Durand (1999)
  - PB decreased to near zero levels
  - Communication increased
- Olive, Lang, & Davis (2007)
  - PB decreased to near zero levels

Empirical Research: Overall AAC & PB

- Walker & Snell (2013)
  - Meta-analysis
    - AAC intervention moderately effective across participants with ASD (NAP=.86)
    - More effective for younger children than adults
    - Interventions that used FBA had higher effect sizes
**Functional Communication Training (FCT)**

- Empirically supported intervention (Fettig, 2013)
- Aim is to decrease problem behavior by teaching a functionally equivalent communicative behavior
  - Process includes conducting a functional analysis (FA) and a preference assessment (Powers et al., 2011)

**Case Study**  
(Boesch, Taber-Doughty, Wendt, & Smalts, under review)

- **Purpose:**
  - Assess the effects of FCT as part of behavioral training package on the SIB of an adolescent with severe autism
- **Participant:**
  - Mike, 14-year old with autism
  - Nonverbal; indicated needs/want by leading other by the hand to the item(s); occasionally pointed to items & inconsistently used ~2 manual signs

**Case Study (cont.)**

- **Setting:**
  - Secondary, self-contained special education classroom
- **Dependent Variables:**
  - SIB (face slapping)
  - Manual sign ("want") [ancillary measure]
  - Time on task w/o SIB [ancillary measure]
- **Research Design:**
  - Changing condition design (ABCD; Alberto & Troutman, 2013)

**Functional Behavioral Assessment / Functional Analysis**

- **A-B-C checklist**
- **SIB occurrence with and without wrist weights during a task demand condition**
- **Function:** gain access to wrist weights

**Target Goals**

1. Decrease SIB
2. Increase appropriate communication
3. Increase time on-task w/o wrist weights
4. Fade wrist weights as a reinforcer

**Intervention**

- **Behavioral training package:**
  - **Functional Communication Training (FCT)**
    - Manual sign "want" (RB) to replace SIB (PB)
  - **Delayed schedule of reinforcement**
    - 1-min. then increase by 30-sec. for each phase thereafter
  - **Reinforcer**
    - 2-min. access to wrist weights contingent upon appropriate requesting (after allotted time expired)
  - **Extinction**
    - SIB was ignored; blocking procedures used when behavior was excessive (3+ continuous slaps)
Specific Trial Procedures

Remove wrist weights
Provide access to wrist weights; set timer to 2 min.
Give task & start timer
When time expires, provide verbal cue “it’s break time”; wait for appropriate request
Provide intermittent verbal praise; ignore SIB; if “want” is signed, say “it’s not time for a break yet”

Training Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Schedule of Reinforcement</th>
<th>Reinforcer</th>
<th>Criterion Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (Phase A)</td>
<td>Upon task completion (~2-3 minutes)</td>
<td>2.5 lb. wrist weights</td>
<td>---</td>
</tr>
<tr>
<td>“Want” training (Phase B)</td>
<td>1 minute</td>
<td>2.5 lb. wrist weights</td>
<td>3 consecutive opportunities of independent requesting</td>
</tr>
<tr>
<td>Phase C</td>
<td>1.5 minutes</td>
<td>1.25 lb. wrist weights</td>
<td>1 session at 0% SIB</td>
</tr>
<tr>
<td>Phase D</td>
<td>2 minutes</td>
<td>1.25 lb. wrist weights; wrist band</td>
<td>1 session at 0% SIB, then modified to 2 consecutive sessions at 0% SIB</td>
</tr>
</tbody>
</table>

Results: SIB

<table>
<thead>
<tr>
<th>Condition</th>
<th>Mean</th>
<th>SD</th>
<th>PRD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase A (BL)</td>
<td>49%</td>
<td>8.93</td>
<td>--</td>
</tr>
<tr>
<td>Phase B (1 min)</td>
<td>64%</td>
<td>35.6</td>
<td>-25%</td>
</tr>
<tr>
<td>Phase C (1.5 min)</td>
<td>33%</td>
<td>24.3</td>
<td>48%</td>
</tr>
<tr>
<td>Phase D (2 min)</td>
<td>11%</td>
<td>23.12</td>
<td>56%</td>
</tr>
</tbody>
</table>

Note: BL = baseline; PRD = percentage reduction data; SD = standard deviation.

Percentage Reduction Data (PRD) (O’Brien & Rapp, 1990)
- Magnitude of intervention effect b/n BL & intervention phase
- Avg. of last 3 BL data points & last 3 intervention data points

Video Demonstration

Number of Requests (manual signing)
### Results: Manual Sign “want”

<table>
<thead>
<tr>
<th>Phase</th>
<th>Mean</th>
<th>SD</th>
<th>PND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase A (BL)</td>
<td>0</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>Phase B (1 min)</td>
<td>6</td>
<td>1.97</td>
<td>100%</td>
</tr>
<tr>
<td>Phase C (1.5 min)</td>
<td>4</td>
<td>1.26</td>
<td>100%</td>
</tr>
<tr>
<td>Phase D (2 min)</td>
<td>4</td>
<td>1.5</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: BL = baseline; PND = percentage of non-overlapping data; SD = standard deviation.

- Magnitude of intervention effect b/n BL & intervention phase
- Identify highest BL data point & determine % of intervention data points that exceed this level

### References


### References (cont.)


### References (cont.)