Michigan Autism Training Videos Presents:

**Functional Analysis of Problem Behavior**

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University of Florida

Date of Production: December, 2014
<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>ANTECEDENT EVENT</th>
<th>CONSEQUENT EVENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>social positive reinforcement</td>
<td>deprivation (no attention)</td>
<td>attention or tangibles</td>
</tr>
<tr>
<td>social negative reinforcement</td>
<td>aversive stimulation (task demands)</td>
<td>removal of task</td>
</tr>
<tr>
<td>automatic reinforcement</td>
<td>sensory deprivation</td>
<td>sensory stimulation</td>
</tr>
</tbody>
</table>
**FAST**

*Functional Analysis Screening Tool*

**Client:**

**Date:**

**Informant:**

**Interviewer:**

*To the Interviewer:* The FAST identifies factors that may influence problem behaviors. Use it only for screening as part of a comprehensive functional analysis of the behavior. Administer the FAST to several individuals who interact with the client frequently. Then use the results to guide direct observation in several different situations to verify suspected behavioral functions and to identify other factors that may influence the problem behavior.

*To the Informant:* Complete the sections below. Then read each question carefully and answer it by circling "Yes" or "No." If you are uncertain about an answer, circle "N/A."

**Informant-Client Relationship**

1. Indicate your relationship to the person: 
   - Parent
   - Instructor
   - Therapist/Residential Staff
   - (Other)

2. How long have you known the person? __Years __Months

3. Do you interact with the person daily? Yes No

4. In what situations do you usually interact with the person?
   - Meals
   - Academic training
   - Leisure
   - Work or vocational training
   - Self-care
   - (Other)

**Problem Behavior Information**

1. Problem behavior (check and describe):
   - Aggression
   - Self-Injury
   - Stereotypy
   - Property destruction
   - Other

2. Frequency: __Hourly__ __Daily__ __Weekly__ __Less often

3. Severity: __Mild__ Disruptive but little risk to property or health
   - M o d e r a t e: Property damage or minor injury
   - S e r i o u s: Significant threat to health or safety

4. Situations in which the problem behavior is most likely to occur:
   - Days/Times
   - Settings/Activities
   - Persons present

5. Situations in which the problem behavior is least likely to occur:
   - Days/Times
   - Settings/Activities
   - Persons present

6. What is usually happening to the person right before the problem behavior occurs?

7. What usually happens to the person right after the problem behavior occurs?

8. Current treatments

---

**Scoring Summary**

Circle the number of each question that was answered "Yes" and enter the number of items that were circled in the "Total" column.

<table>
<thead>
<tr>
<th>Items Circled “Yes”</th>
<th>Total</th>
<th>Potential Source of Reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social (attention/preferred items)</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7 8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social (escape from tasks/activities)</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11 12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Automatic (sensory stimulation)</td>
</tr>
<tr>
<td>13</td>
<td>14</td>
<td>15 16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Automatic (pain attenuation)</td>
</tr>
</tbody>
</table>

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A–B–C FORM

LAYOUT
• Client info
• Time
• Location
• Antecedent: Precedes PB
• Behavior: Target PB
• Consequence: Follows PB

RECORD
• Occurrence of PB serves as occasion for recording

SUMMARY
• Organize A & C events into functional groupings
# STRUCTURED ABC (Antecedent-Behavior-Consequence) ANALYSIS

**Date:**

**Time:**

**Staff:**

**Individual:**

**Residence:**

**Behavior (list specific problem):**

1. 
2. 
3. 

**Location where behavior occurred:**

- Residence
- Worksite
- School
- Outside
- Community outing
- Other:

**General activity in progress:**

- Leisure/solitary (TV, music, etc.)
- Leisure/social (with another person)
- Meal (preparation, eating, clean up)
- Self-care or household chore
- Academic, work, or training activity
- Alone (sitting, in bed, etc.)
- Other: SHOPPING IN MALL

**Immediate antecedent (A):**

- Ignored by staff or staff walked away
- Leisure material or food removed/denied
- Other request denied
- Given instruction/prompt to work
- Provoked by peer
- None (individual alone/doing nothing)

**Immediate consequence (C):**

- Attention, response block, told to "stop"
- Redirected to another area/activity
- Leisure material/food given
- Work requirement terminated
- Staff walked away
- Staff did nothing

Use this form to identify situational factors related to the occurrence of behavior problem. Each time a target behavior occurs, record the date, time, and your initials. Use check marks to identify target behavior, location, activity, and what happened immediately before and after the behavior.

Data on antecedents (As) and consequences (Cs) are summarized in the boxes below. As and Cs are organized under likely behavioral functions (Note: some As or Cs may reflect more than one function). In each box, enter the number of times an A or C was checked (use the arrows as guides). Enter the overall totals at the bottom of each column.

**Pos. Reinf.**  **Pos. Reinf.**  **Neg. Reinf.**  **Auto. Reinf.**

- (attention)  **(materials)**  **(escape)**  **(sensory)**

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## STRUCTURED ABC (Antecedent-Behavior-Consequence) ANALYSIS

### Behavior (list specific problem):

<table>
<thead>
<tr>
<th>Behavior (list specific problem):</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 HEAD BANGING (SIB)</strong></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

### Location where behavior occurred:

<table>
<thead>
<tr>
<th>Location where behavior occurred:</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Worksites</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>School</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Outside</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Community outing</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Other:</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

### General activity in progress:

<table>
<thead>
<tr>
<th>General activity in progress:</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leisure/social (TV, music, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leisure/social (with another person)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meal (preparation, eating, clean up)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care or household chore</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic, work, or training activity</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Alone (sitting, in bed, etc.)</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Other: SHOPPING IN MALL</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

### Immediate antecedent (A):

<table>
<thead>
<tr>
<th>Immediate antecedent (A):</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignored by staff or staff walked away</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Leisure material or food removed/denied</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Other request denied</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Given instruction/prompt to work</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Provoked by peer</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>None (individual alone/doing nothing)</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

### Immediate consequence (C):

<table>
<thead>
<tr>
<th>Immediate consequence (C):</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention, response block, told to &quot;stop&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redirected to another area/activity</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leisure material/food given</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Work requirement terminated</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Staff walked away</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Staff did nothing</td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

### Totals:

- **TOTAL:** 20 6 22 1

---

Individual: ____________________  

Residence: ____________________  

Use this form to identify situational factors related to the occurrence of behavior problem. Each time a target behavior occurs, record the date, time, and your initials. Use check marks to identify target behavior, location, activity, and what happened immediately before and after the behavior.

Data on antecedents (As) and consequences (Cs) are summarized in the boxes below. As and Cs are organized under likely behavioral functions (Note: some As or Cs may reflect more than one function). In each box, enter the number of times an A or C was checked (use the arrows as guides). Enter the overall totals at the bottom of each column.

- **Pos. Reinf.**  
- **Pos. Reinf.**  
- **Neg. Reinf.**  
- **Auto. Reinf.**

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SUGGESTIONS FOR A → C ORGANIZATION

SOCIAL SR+
- Attention unavailable or removed ➔ Attn delivered
- Tangible unavailable or removed ➔ Tang delivered
- Request denied ➔ Request granted
- Nothing ➔ Attn or Tang delivered

SOCIAL SR-
- Task demand ➔ Task removed
- Social interaction ➔ Interaction removed
- Provocation ➔ Provocation removed

AUTOMATIC SR+
- Nothing ➔ Nothing
- Anything ➔ Anything
<table>
<thead>
<tr>
<th>Condition</th>
<th>SD</th>
<th>EO</th>
<th>Consequence</th>
<th>Contingency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention</td>
<td>S1</td>
<td>Th. ignores Cl.</td>
<td>Th. attends to beh. Problem</td>
<td>Positive rfmnt (attention)</td>
</tr>
<tr>
<td>Demand</td>
<td>S2</td>
<td>Th. presents learning trials</td>
<td>Timeout for beh. problem</td>
<td>Negative rfmnt (escape)</td>
</tr>
<tr>
<td>Alone</td>
<td>N/A</td>
<td>No stimulation</td>
<td>N/A</td>
<td>Automatic reinf</td>
</tr>
<tr>
<td>Play</td>
<td>S3</td>
<td>N/A Attn: Free Demands: None Toys: Free</td>
<td>N/A</td>
<td>N/A Control</td>
</tr>
</tbody>
</table>
TYPICAL RESPONSE PATTERNS

Function: Social Positive Reinforcement (attention)

Function: Social Negative Reinforcement (escape)

Function: Automatic Reinforcement (self-stimulation)
CHALLENGES TO FUNCTIONAL ANALYSIS METHODOLOGY

- Complexity of assessment: It’s too difficult
- Time constraints: It takes too much time
- Setting constraints: I don’t have a controlled setting
- High-risk behavior: It’s too dangerous
TIME CONSTRAINTS
BRIEF FUNCTIONAL ANALYSIS (BFA)
EXAMPLES OF SINGLE FUNCTION TESTS

First graph

Second graph

Third graph
**FA TRIALS**

Attention (no tasks present)
- Control: Stand near student; initiate pleasant conversation
- Test: Stand near student but ignore; deliver attention only following problem behavior

Task Demand
- Control: Observe while no task demands are present
- Test: Deliver frequent prompts to engage in difficult work; remove work following problem behavior

Alone
- Two consecutive test segments. Observe when student is not working, not interacting with others, and has no access to leisure items
TRIAL BASED FUNCTIONAL ANALYSIS
SOCIAL SR- (ESCAPE)

Parameter: Ryan

- **Control**
- **Test**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Control</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Demand</td>
<td>N/A</td>
<td>100</td>
</tr>
<tr>
<td>Ignore</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Tangible</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Aggression (% of Trials):**

- **Y-axis:** Percentage of trials ranging from 0 to 100
- **X-axis:** Conditions: Attention, Demand, Ignore, Tangible
REINFORCEMENT-BASED APPROACHES TO BEHAVIOR REDUCTION

1) Eliminate the behavior’s establishing operation or antecedent event (deprivation or aversive stimulation)
   • Noncontingent reinforcement (NCR)

2) Eliminate the behavior’s maintaining contingency
   • Extinction (EXT)

3) Replace the behavior with an alternative response
   • Differential reinforcement (DRA)