If you are viewing this course as a recorded course after the live webinar, you can use the scroll bar at the bottom of the player window to pause and navigate the course.

This handout is for reference only. It may not include content identical to the powerpoint. Any links included in the handout are current at the time of the live webinar, but are subject to change and may not be current at a later date.
Introduction to Functional Behavior Assessment

December 13 2013

Tara Warwick, MS, OTR/L
twarwick@todaystherapysolutions.com
www.myautismnetwork.com

Today’s Objectives

• Identify the steps involved in conducting a functional behavioral assessment

• Identify 2-3 ways to collect data for the functional behavioral assessment

• Identify the components needed for writing a hypothesis
## Agenda

- Purpose of a Functional Behavior Assessment (FBA)
- Step involved in performing a FBA
- Writing a hypothesis
- Report

## Comprehensive (FBA) vs. Practical Assessment

<table>
<thead>
<tr>
<th>Comprehensive Plan</th>
<th>Practical Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous behavior</td>
<td>Exhibit high frequency behaviors that are not dangerous</td>
</tr>
<tr>
<td>3 or more routines</td>
<td>Have received interventions that did not improve behavior</td>
</tr>
<tr>
<td>Litigation involved</td>
<td></td>
</tr>
<tr>
<td>Patterns in behavior are not apparent</td>
<td>Exhibit behaviors in 1 or 2 routines</td>
</tr>
</tbody>
</table>
FBA Description

A systematic method of assessment for obtaining information about the purposes (functions) a problem behavior serves for a person; results are used to guide the design of an intervention for decreasing the problem behavior and increasing appropriate behavior.

(Cooper, Heron, Heward 2007)

Focus of an FBA

- Understanding the relationship between environmental events and problem behavior, on how to change the environment, not the student.

- Less concerned about he etiology of the behavior and more concerned with the environmental conditions that currently maintain the behavior.

(Heron et al)
What FBA is not?

- A step for determining special education eligibility
- Process for producing a diagnosis
- Process for determining if a behavior problem is a manifestation of a disability
- Only for students with a special education label
- Specific form
- Intervention

www.pbis.org (Horner et al)

Steps of an FBA

1. Operationally define behavior
2. Collect data
3. Analyze Data
4. Create hypothesis
1. Define the Problem Behavior

- Measureable – can be counted or timed
- Observable – an action that can be seen
- Clearly defined
- Try to target only 1-3 behaviors (behaviors interfering most with education)
- Avoid making assumptions about the cause of the behavior

<table>
<thead>
<tr>
<th>Problem Behavior</th>
<th>Descriptive Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trisha is aggressive.</td>
<td>Trisha hits other people on recess.</td>
</tr>
<tr>
<td>Julie is hyperactive.</td>
<td>Julie leaves her assigned area without permission. Julie only finishes a portion of her assignment during independent work. Julie blurts out answers without raising her hand and getting permission from the teacher.</td>
</tr>
<tr>
<td>Carlos is disruptive.</td>
<td>Carlos makes inappropriate and irrelevant comments during class discussion.</td>
</tr>
</tbody>
</table>
2. Collect data

• History

• Journals

• Interviews

• Data of behavior
Why do we collect data?

- Develop hypothesis
- Establish baseline
- Design an intervention plan

Types of Data Collection

Indirect
- Record review
- Behavior Interviews
- Behavior Questionnaire

Direct (Observations)
- ABC
- Frequency
- Duration
- Scatter Plots
- Narrative Recording (Journaling)
Record Review

- Current schedule and routines
- Any recent changes
- Relevant health or medical information
- Attendance history
- When was the last time student did not demonstrate significant challenging behavior?
- Previous interventions
- Have any strategies been effective in preventing the challenging behavior?
- Strengths
- Possible reinforcers

Behavior Interviews

- Range from casual conversation to highly structured processes
  - The more structured, the easier to analyze

- Familiar people

- Helps formulate the hypothesis statement
Functional Assessment Interview

Student_________________________ Date_________________
Person Interviewed__________________, Interviewer__________________
Describe the behavior of concern.
How often does the behavior occur?
How long does it last?
How intense is the behavior?
What is happening when the behavior occurs?
When/where is the behavior most/least likely to occur?
With whom is the behavior most/least likely to occur?
What conditions are most likely to precipitate ("set-off") the behavior?
How can you tell the behavior is about to start?

Routines Inventory

• Structured way to assess when the behavior is more likely to occur across the child’s day

<table>
<thead>
<tr>
<th>Schedule (Times)</th>
<th>Activity</th>
<th>Likelihood of Problem Behavior</th>
<th>Specific Problem Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>
Behavior Questionnaires

- Motivation Assessment Scale (MAS)
- Functional Analysis Screening Tool (FAST)
- Questions About Behavioral Function (QABF)

Motivational Assessment Scale (MAS)

- 16 questions regarding function of the behavior
- Usually presented in an interview format
- The number that best describes the observations of this behavior is circled.
- The highest ranked column is the specific function.
- Typically the conducted with 2-3 different individuals on the same target behavior
Functional Analysis Screening Tool (FAST)

- Identifies a number of factors that may influence the occurrence of problem behaviors
- 27 yes/no questions
- Use only as an initial screening tool
- Should be administered to several individuals who interact with the person frequently
- Results used as the basis for conducting direct observations

Questions about Behavioral Function (QABF)

- Parents/caretakers rate items.
- 25 items scored along a Likert type scale
- Yields five categories reflecting the behavioral functions of Attention, Escape, Physical, Tangible, and Nonsocial.
- Sample items include: 'Engages in the behavior to get attention'; 'Engages in the behavior to get access to items such as preferred toys, food, or beverages'
Types of Direct Assessment (Observations)

- ABC
- Frequency
- Duration
- Scatter Plots
- Narrative Recording (Journaling)

Observations

- Objective

- Use a data collection tool

- Identify:
  - Triggers
  - Consequences/Rewards
  - Current supports
ABC Data

- Record Antecedent, Behavior, Consequence

- Any behavior that resulted from consequence can also be recorded.

- Sometimes recorded in narrative form.

<table>
<thead>
<tr>
<th>A-antecedents</th>
<th>B-behaviors</th>
<th>C-consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>What specific activity or event happened before the behavior?</td>
<td>What specifically did the child say or do?</td>
<td>What happened after or as a result of the behavior?</td>
</tr>
<tr>
<td>Teacher says, “John, sit down.”</td>
<td>John screams</td>
<td>Teacher says, “no screaming” and takes John to time out.</td>
</tr>
<tr>
<td>John screams (in reaction to being in time-out).</td>
<td>Teacher ignores John.</td>
<td></td>
</tr>
<tr>
<td>John screams louder and kicks chair.</td>
<td>Teacher says, “No kicking.”</td>
<td></td>
</tr>
<tr>
<td>John starts to cry.</td>
<td>No response from teacher.</td>
<td></td>
</tr>
<tr>
<td>Teacher asks, “Are you ready to sit down?”</td>
<td>John screams.</td>
<td>Teacher says, “Now you can stay in time-out.”</td>
</tr>
</tbody>
</table>
Frequency Recording

• Counting of how many times a behavior occurs during a designated period of time.

• Used when a target behavior has a definite, observable beginning and ending and the target behavior does not occur at high rates
Different Ways to Collect Frequency Data

- Tally marks on a data sheet
- Tally marks on a dry erase board
- Wrist of golf counters
- Moving items from one pocket to a different “target” pocket as each behavior occurs (e.g. paperclips, pennies, buttons)
- Place a removable sticker on your shirt or pants

Frequency Data

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>200-215</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>215-230</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>230-245</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>245-300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300-315</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>315-330</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>330-345</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>345-400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400-415</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>415-430</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>430-445</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>445-500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tantrum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Behaviors Included:

Appendix C-2
Frequency Example

**Procedures**
- Write down the behavior that you will be looking for and its definition.
- Every time that you are “on the look out” for the behavior:
  - Write down the date.
  - Write down the time.
  - Make a tally mark every time that the behavior occurs (if the behavior does not occur, make sure to enter “0” - zero).
- At the end of your observation period, total the number of tally marks for that day (if using a different method to keep track of behavior, enter the total in the Total column) (This is what you graph).

**Example**

**Behavior:** Leaving seat during class time

**Definition:** Being at least one foot away from desk/seat during class, anytime after tardy bell rings. Includes times when has asked for permission to leave seat.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Tally every time that the behavior occurs</th>
<th>Total number of times behavior occurred</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/5</td>
<td>1-2 PM</td>
<td>1 1 1 1 1 1 1</td>
<td>7</td>
</tr>
<tr>
<td>11/6</td>
<td>1-2 PM</td>
<td>1 1 1 1 1</td>
<td>5</td>
</tr>
<tr>
<td>11/7</td>
<td>1-2 PM</td>
<td>1 1 1 1 1 1</td>
<td>6</td>
</tr>
<tr>
<td>11/8</td>
<td>1-2 PM</td>
<td>1 1 1 1 1</td>
<td>5</td>
</tr>
<tr>
<td>11/9</td>
<td>1-2 PM</td>
<td>1 1 1 1 1 1</td>
<td>7</td>
</tr>
</tbody>
</table>

Duration Data

- Records the total time that a behavior occurs within a specified time period.

- Behavior is measured from the moment of onset until the moment it stops. (A watch/clock that can measure in seconds is needed.)
Duration Example

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Enter time when behavior began</th>
<th>Enter time when behavior stopped</th>
<th>Length of time that the behavior lasted for</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/5</td>
<td>9:30 - 10:30 AM</td>
<td>9:55 AM</td>
<td>10:00 AM</td>
<td>11 minutes</td>
</tr>
<tr>
<td>11/5</td>
<td>9:30 - 10:30 AM</td>
<td>10:19 AM</td>
<td>10:28 AM</td>
<td>9 minutes</td>
</tr>
<tr>
<td>11/6</td>
<td>9:30 - 10:30 AM</td>
<td>9:43 AM</td>
<td>9:51 AM</td>
<td>8 minutes</td>
</tr>
<tr>
<td>11/7</td>
<td>9:30 - 10:30 AM</td>
<td>10:04 AM</td>
<td>10:19 AM</td>
<td>15 minutes</td>
</tr>
<tr>
<td>11/7</td>
<td>9:30 - 10:30 AM</td>
<td>10:13 AM</td>
<td>10:23 AM</td>
<td>10 minutes</td>
</tr>
</tbody>
</table>

www.tips.org

Scatter Plots

• Uses predetermined time intervals to plot or record occurrences of behavior

• Used to identify patterns of behavior that relate to specific contextual conditions

• Can be useful in determining optimal times for someone to directly observe the occurrence of the target behavior
Sample Scatter Plot
15 Minute Data Sheet

15 MINUTE SCATTERPLOT DATA SHEET

Student Name: ___________________ School: ___________________ Grade: ______
Observer(s): ____________________

Describe Behavior:
(be specific, ex: list behaviors such as hitting, kicking, spitting, NOT Aggression)

Key: ☐ = Behavior Occurred
☐ = Did not Occur
☐ = No Data

Instructions: Fill in the data at the top of the chart. For each 15 min interval, fill in the box according to the key provided.
If you were unable to collect data, leave the box blank.

<table>
<thead>
<tr>
<th>Time</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>R</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7:00   7:15
7:15   7:30
7:30   7:45

Sample Activity Scatter Plot

ACTIVITY SCATTERPLOT DATA SHEET

Student Name: ___________________ School: ___________________ Grade: ______
Observer(s): ____________________

Describe Behavior:
(be specific, ex: list behaviors such as hitting, kicking, spitting, NOT Aggression)

Key: ☐ = Behavior Occurred
☐ = Did not Occur
☐ = No Data

Instructions: Fill in the data at the top of the chart. List the student's daily activities in chronological order in the left column. For each activity, fill in the box according to the key provided. If you were unable to collect data, leave the box blank.

<table>
<thead>
<tr>
<th>Activity</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>R</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Narrative Recording (Journaling)

• Observer notes the behaviors, characteristics and interactions that seem significant.

• Can provide a very detailed summary of what occurred

• Allows team members to recall each event

• Tend to be anecdotal, unique, and subjective

• Can serve as a basis for identifying specific items for more systematic observation.

Narrative Recording (Journaling)

**POSITIVES**

• Can provide detailed notes

• Can help people remember each specific event

**NEGATIVES**

• Emotionally involved

• Time consuming
  • To write
  • To summarize

• Subjective

• Hard to determine which information is necessary and/or useful
Journal from a mom

• When Johnny was getting ready for school yesterday, I told him to go put his shoes on. After I told him to put his shoes on, he went into his room. His sister was in his room playing with his legos. He saw she was playing with his legos and he went over to her and hit her on the head. She started crying and I went and got her, took her out of his room, and shut him in his room by himself.

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sister playing with legos</td>
<td>His her on the head</td>
<td>Sister removed from his room</td>
</tr>
</tbody>
</table>

Choosing a Data Collection Method

<table>
<thead>
<tr>
<th>Type of Behavior</th>
<th>Data Collection Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>I want to know how often the behavior occurs.</td>
<td>Frequency</td>
</tr>
<tr>
<td>I want to know what happens before or after the behavior occurs.</td>
<td>ABC Chart, narrative recording</td>
</tr>
<tr>
<td>I want to know how long the behavior lasts. The behavior I am concerned about doesn’t happen all the time but when it does it impedes the student’s learning.</td>
<td>Duration</td>
</tr>
<tr>
<td>I need to know how often the behavior occur and at what times of the day.</td>
<td>Scatter Plot, Frequency</td>
</tr>
</tbody>
</table>
3. Analyze the data

Triangulation

What is Triangulation?

• Provides a framework to pull data together and visually compare

• At least three sources of information should be used to develop the hypothesis.

• The following link from CECP provides examples of charts that can be used to show data triangulation: http://cecp.air.org/fba/problembehavior2/appendixf.htm
## Triangulation Worksheet

### Data Triangulation Worksheet

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Problem Behavior:**

<table>
<thead>
<tr>
<th>Source 1</th>
<th>Source 2</th>
<th>Source 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary:</strong></td>
<td></td>
<td><strong>Summary:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Summary:</strong></td>
</tr>
</tbody>
</table>

**INTERPRETATION:** Based on the tools you used, determine the antecedents, maintain consequences, and function.

### Sample Triangulation Charts

#### Data Triangulation Chart

<table>
<thead>
<tr>
<th>Student</th>
<th>Date</th>
<th>Source 1</th>
<th>Source 2</th>
<th>Source 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>ABC Chart:</strong></td>
<td><strong>Interview with playground supervisor:</strong></td>
<td><strong>Scatterplot:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trish yells at students when they don't do what she says. She hits students when she doesn't get her way.</td>
<td>Trish yells at and hits other girls when she doesn't get her way. This usually happens when there are no adults nearby.</td>
<td>Trish engages in inappropriate behavior on the playground about 7% of the time; verbally aggressive behavior about 17% of the time, and physical aggression 8% of the time.</td>
</tr>
</tbody>
</table>

**Function:**

1. Precipitating events: Playground, undersupervised games involving girls.
2. Maintaining consequences: Trish usually gets her way when she becomes verbally or physically aggressive. She also gets to spend time with the playground supervisor.
3. Function(s): Trish's behavior allows her to get her way (either for a short time) and play with other girls. She thinks this is an effective way to join groups.
Other Considerations

• Other behaviors that may occur before or with the target behavior
• Potential Reinforcers
• Skill deficits
• Times, activities and persons present when behavior is most or least likely to occur
• Setting events and conditions which are associated with the behavior

“There's two possible outcomes: if the result confirms the hypothesis, then you've made a discovery. If the result is contrary to the hypothesis, then you've made a discovery.”

Enrico Fermi
4. Create the hypothesis

- Patterns are summarized into written statements, these statements are based on the data
  - Clear, concise, accurate

- Team agrees on patterns addressed and forms a hypothesis

- Statement stating “why” you think the behavior is occurring
  - Based on the information you have gathered so far

- Could be multiple hypotheses for the problem behavior

Function behind behavior (why)

- Get something
  - Tangible
  - Attention
  - Sensory

- Get away from something
  - Tangible
  - Attention
  - Sensory
Components of the hypothesis

1. When this occurs...
   (describe circumstances/antecedents)

2. the child does...
   (describe target behavior)

3. to get/to avoid...
   (describe consequences)

Examples

• When Abby needs a break from the situation, Abby may destroy materials or hit in order to escape the activity.

• When Hank has to wait for an activity, Hank may scratch another person in order to communicate to someone that he does not know what to do.

• When presented with a difficult worksheet, Marcus may hit another person in order to get help.
Putting it all together

• Writing the report

• See example

References

• www.autisminternetmodules.org
• http://cecp.air.org/fba/problembehavior2/appendixf.htm
• http://cecp.air.org/fba/
• http://www.educateautism.com/functional-behaviour-assessment.html#.UqTrGWeA1Ms
• New Mexico FBA Guide (http://www.pbisworld.com/tier-2/behavior-intervention-plan-bip/)
• www.pbis.org
Questions?

Thank you!

Tara Warwick, MS, OTR/L
twarwick@todaystherapysolutions.com
www.myautismnetwork.com