

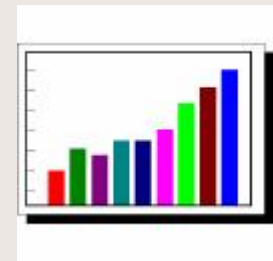
# **Module 4**

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## **Data Collection and Hypothesis Development**

# Why collect data?

- to insure consistency in identifying behaviors
- to verify the severity of the problem
- to identify environmental conditions affecting behavior
- to develop valid hypotheses to guide intervention
- to monitor and evaluate effectiveness of support plan
- to insure accountability for plan implementation



**DATA . . .**



**IS NOT JUST  
ANOTHER  
FOUR LETTER  
WORD!**



# Defining Target Behaviors



**A behavior identified for change because the frequency, form, or intensity is problematic for the context.**

- **observable**
- **measurable**



# Records Reviews

**Reviewing information generated apart from the functional assessment to obtain additional insights into factors affecting the person's behavior.**

- **medical records**
- **psychological assessments**
- **developmental information**
- **previous interventions**
- **IEPs and ISPs**
- **anecdotal records**



# Interviewing



**Indirect gathering of information through discussions with people regarding the focus individual and their behavior.**

**Interviews provide:**

- **information from multiple viewpoints**
- **potential variables influencing behavior**
- **a broader lifestyle perspective**
- **an opportunity to build rapport**

# Direct Observation



**Information gathered by recording samples of the target behavior as it is actually occurring.**

**Direct Observations provide:**

- **measurable units of information**
- **additional insights about variables**
- **influencing behaviors**

# Measurement of Behavior

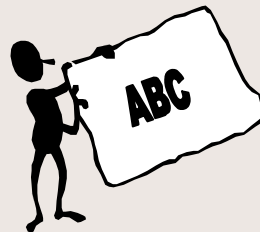
- **Frequency**
- **Duration**
- **Latency**
- **Magnitude/Intensity**
- **Interval Recording**



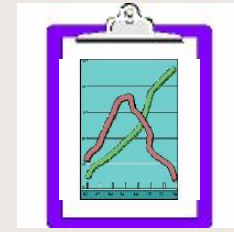
# ABC Recording

**A method of recording the antecedents and consequences of specific target behaviors.**

- identify events that precipitate the behavior
- identify variables that maintain the behavior
- identify behavior x environment patterns



# Scatter Plots



**A method of recording occurrence and non-occurrence of behavior across activities, routines, and time periods, providing a visual display of patterns.**

- identifies patterns of responding in natural settings
- suggests possible sources of environmental control

# Selecting the Right Data Collection System

- Which aspects of the behavior should be captured?
- Which elements of the context should be considered?
- How long should data be collected?



# Guidelines for Data Collection



- Define behavior in observable and measurable terms.
- Select a data collection system that fits the behavior and circumstances.
- Provide training for the individuals collecting data.
- Collect data across people, time, and circumstances.
- Analyze trends and patterns in the data.



# Pattern Analysis



- Conditions in which behavior is most likely and least likely to occur.  
(who, what, where, when)
- Function(s) of the problem behaviors. (why)



# Guidelines for Hypothesis Development

**Hypothesis**: One's best guess about the relationship between environmental events or conditions and person's challenging behavior, and approach for narrowing the field of possible influences until eventually the governing variables are identified.

## **Criteria for Useful Hypotheses**



Observable

Testable

Accurate

Parsimonious

# What is a Hypothesis Statement?

- A hypothesis statement is an informed, assessment-based explanation of the target behavior.
- It is an informed guess about the relationship between environmental events or conditions and student's target behavior.



# How Do I Develop a Hypothesis Statement?



- Examine the information collected
- Develop statements that:
  - Describe the relationship between behavior and the event
  - Describe the circumstance in the environment
  - Describe the way that behavior interacts with the environment
  - Are based on observations
  - Are phrased to manipulate environment and change behavior
  - Should lead to intervention
  - Should be effective and positive

# Hypotheses Development

- When this occurs (describe context)
- the student does (describe the behavior)
- to access or avoid (describe functions)



# A sample hypothesis



When Beverly...

*(fast trigger)*

- is not engaged with others or when she's engaged in activities for 15 minutes or longer (especially during lunch or free time)

*(slow trigger)*

- did not get to sleep before 11 p.m. the previous evening or does not feel well,

*(the student does)*

- she screams, slaps her face and pulls her hair

*(in order to get)*

- to gain access to teacher attention.

# How to link hypothesis statements to behavior interventions



## The hypothesis statements link behavior interventions to:

- short-term prevention of problematic situations,
- teaching alternative skills,
- responses to problem behaviors (including crisis management), and
- long-term prevention.