

Tri-State Autism Spectrum Disorder Webinar Series

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THE SECOND STEP TO BEHAVIOR CHANGE: OBTAIN A BASELINE MEASURE

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LEARNER OBJECTIVES

1. Participant will be able to explain the measurable dimensions of behavior (e.g., rate, duration, latency, or inter-response times).
2. Participant will know how and when to use measures such as percent of occurrence and sampling techniques (e.g., partial- and whole-interval recording, momentary time sampling).
4. Participant will be able to state some of the advantages and disadvantages of using continuous measurement procedures and sampling methods.
5. Participant will be able to determine the appropriate measurement procedure to use.

SELECT AND DEFINE THE PROBLEM BEHAVIOR(S)

- Write a problem definition that defines the behavior in clear, observable and measurable terms.



Baseline data reflects the behavior under current conditions and prior to the implementation of the intervention

WHY COLLECT BASELINE DATA?

- **May prevent us from starting an intervention that isn't necessary.**
- **May prevent us from continuing an intervention that isn't effective.**
- **May prevent us from stopping an intervention that really is helping.**

LET'S GET REAL.....

- **Time is limited!**
- **We often don't have the staff resources.**

But the REALITY is that you will waste time and resources in the long run if you don't collect baseline data!

TWO TYPES OF MEASUREMENT

- **Continuous measurement (measuring every instance) over time yields a complete record of behavior but many times this is not practical and so discontinuous measurement is used.**
 - Tally every time the student bites another person, or each time a bell rings record the response latency between the bell ringing and the student arriving at the next class period, every time the child responds with a greeting when he is greeted.
- **Discontinuous measurement involves observing and recording behavior during intervals or specific moments in time.**

DIMENSIONS OF BEHAVIOR

- **Count** is the number of occurrences of behavior.
- **Rate/frequency** is the number of instances of behavior per unit of time. Unit of time: seconds, minute, hour, day, week, month, year
- **Duration** is the amount of time in which the behavior occurs.
- **Response latency** is the measure of elapsed time between the onset of a stimulus and the initiation of the response.
- **Inter-response time** is the amount of time that occurs between two consecutive instances of a response class.

When we measure the dimensions of behavior, we are using a continuous measurement.

WHICH DIMENSION?

The classroom teacher reports Jenny is laying her head down on the desk all of the time instead of paying attention and working.

1. count
2. rate/frequency
3. duration
4. latency
5. inter-response time



WHICH DIMENSION?

The teacher is wanting to reduce the amount of time it takes Jeremy to log off the computer when told to do so.

1. count
2. rate/frequency
3. duration
4. latency
5. inter-response time



WHICH DIMENSION?

Jessica finishes an addition problem. Her teacher measures the time it takes her to start the next addition problem.

1. count
2. rate/frequency
3. duration
4. latency
5. inter-response time



(www.montrealmom.com)

HOW TO RECORD DIFFERENT DIMENSIONS



Count: Tally instances of behavior

Frequency/Rate: Tally instances of behavior within a set period of time

Duration: Use stop watch, clock or timer to determine how long behavior lasts

Response Latency: Use stop watch, clock or timer to determine the time between the stimulus and the start of the behavior

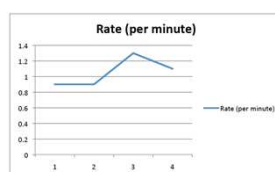
Inter-response time: Use stop watch, clock or timer to determine the time between consecutive responses

A PRACTICAL APPROACH TO COLLECTING BASELINE DATA

- **Collect data for a limited sample of the total length of time (e.g. 15 to 30 mins.)**
 - Rate (dividing count/time unit) can be measured and compared across observation periods as long as the unit of time (e.g., seconds, minute, hour) is standard across those observation periods.
 - Measure total duration per session during the sample period (report total duration of problem behavior as a percentage of total time observed).
- **Allows for flexibility**

BASELINE DATA USING RATE

Date	Count	Observation Period	Rate (per minute)
11/10/13	13	15 mins	0.9
11/12/13	9	10 mins	0.9
11/12/13	15	12 mins	1.3
11/13/13	17	15 mins	1.1



USING DISCONTINUOUS DATA COLLECTION

- Also known as "Time Sampling"
- Recording the presence or absence of behavior
- Three types:
 - Whole Interval Recording
 - Partial Interval Recording
 - Momentary Time Sampling

WHOLE-INTERVAL RECORDING

- Use to record continuous behaviors (ex: interactive play with peer, sitting during calendar time, on-task behavior)



WHOLE-INTERVAL RECORDING

- **Divide the observation period into small intervals of time (5 to 15 seconds) and at the end of the interval record if the behavior was or was not present for the entire interval**
- **Usually underestimates behavior**
- **Good to use for behavior you want to increase**

LET'S PRACTICE

You will need a paper and pen for this activity.

Positive Behavior Definition:

Sitting-both buttocks making contact with the seat

10-second intervals

WHOLE INTERVAL RECORDING

PARTIAL-INTERVAL RECORDING

- Record whether the behavior occurred at any time during the interval
- Don't worry how often it occurred, or how long it was present, simply did it occur - "yes" or "no"
- Tends to overestimate behavior
- Good for behavior you want to reduce
- Tends to underestimate rate of high-frequency behavior
- Allows you to measure a number of behaviors at same time

MOMENTARY TIME SAMPLING

- Use to measure continuous activity behaviors
- Record whether target behavior is present or absent at the moment each time interval ends
- Advantage is that you do not have to observe the subject except at the precise moment that ends the interval
- Disadvantage is that you miss behavior
- It can both overestimate and underestimate behavior if intervals are greater than 2 minutes
- It provides the best estimate of duration

LET'S PRACTICE

You will need a paper and pen for this activity.

Problem Definition:

Rocking- upper body moving back and forth repeatedly

10-second intervals

MOMENTARY TIME-SAMPLING RECORDING

TIME SAMPLING PROCEDURES

- **Clear, observable and measurable problem definition**
- **Record the Setting and/or Ongoing Activity**
- **Record the time observation starts and stops**
- **Determine length of intervals**
- **Always record something, so you don't lose your place. Use a Y or N or + or -**
- **Use a timer or audio recording of beeps or vibration to keep track of time (e.g., sports timers, MotivAider)**

HOW TO REPORT TIME SAMPLING DATA

- Report as percentage of total intervals in which behavior was present
- This is used to estimate what proportion of the observation time the behavior was present
- Report the length of observation along with the percentage



PERMANENT PRODUCTS AS DATA

- Some behaviors can be measured by the effect produced on the environment
- Record audio or video of behavior to view and record on data sheet later
- Ex: spelling words, drawings, worksheets completed, homework assignments turned in, test questions answered, folding laundry
- Allows teachers to do other things, may be more accurate and continuous.



NARROW DOWN THE TIME TO OBSERVE

- **Look at the information you already have from interviews with teachers, teacher notes, office referrals, etc.**
- **Pick times to observe that yield data that is most representative of behavior**
 - Behavior targeted for reduction should be measured during times when the behavior is most likely to occur
 - Conversely, behavior targeted for increase should be measured during times when behavior is least likely to occur.
- **Decide the length of the observation periods.**
- **Observe in multiple settings/situations over multiple sessions/days**

BASELINE DATA IS CRITICAL

- **Helps you determine if intervention is necessary.**
- **Allows you to measure when, where and how much behavior has changed.**
- **Allows you to measure if your intervention was successful.**