

Operational Definitions

Elements of an Operational Definition

- A title or brief description of the behavior
- The topography (physical movements involved) of the behavior
- Frequency of the behavior
- Length or duration of the behavior
- Description of the behavior's intensity

There are three important criteria for defining behavior.

Criterion	Definition	Good Example	Bad Example
Objectivity	Refers to observable characteristics of the behavior or to events in the environment that can be observed.	The number of cigarettes smoked.	The amount of time spent studying.
Clarity	The definition is so clear that another person unfamiliar with the behavior could measure it consistently.	A tantrum is defined as screaming, shouting, whining, stomping feet, throwing things, or slamming doors.	Count each time the person seems depressed.
Completeness	The boundaries of the behavior are clearly delineated so that responses can be easily included or excluded. This usually includes a time frame for measurement as well.	A new episode of tantrums is counted if there is at least 10 minutes of calm between behaviors.	Keep track of how often the person seems to be in a good or a bad mood.

Units of Measurement

Frequency

Frequency measures are the best choice when the onset and offset of each instance of a behavior can be clearly observed. The frequency of a behavior is the number of times the behavior occurs in a specific time period. Frequency is measured by simply counting the

number of occurrences of the behavior. It is important to note the time frame during which frequency data are collected because often the best way to report this type of information is by using rate. The rate of the behavior is defined as the number of responses (frequency) within a specific interval of time

Duration

The duration of a behavior is the total amount of time occupied by the behavior from start to finish. The duration is measured by timing it from its onset to its offset. Examples include: the number of minutes a person watches TV per day, the number of seconds holding your breath, or the length of time it takes to drive to work. A duration measure is important if what you want to know is how long the behavior lasts.

Duration is often reported as percentage duration or percentage of the time period, which is the time the behavior occurred divided by the time of the entire observation period. In addition, if the onset and offset of each behavior is recorded, the information can also be used as a frequency count.

Latency

The latency of a behavior is the time from some event to the onset of the behavior. You measure latency by recording how long it takes the person to initiate the behavior after a particular event occurs. For example, a parent may be interested in how long it takes a child to start putting her toys away once she has been asked. The time between the request and picking up the first toy would be a measure of latency.

Intensity

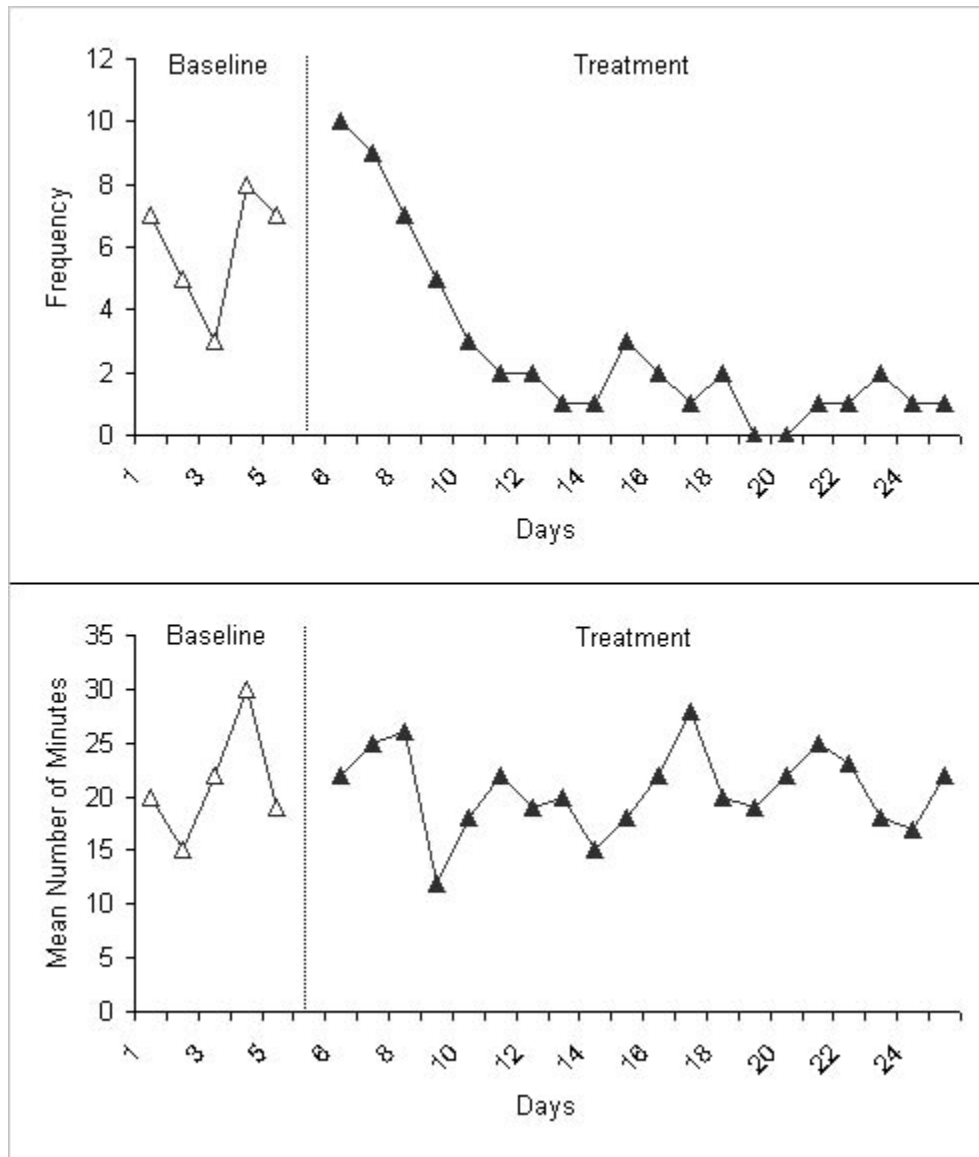
Intensity refers to the magnitude, strength, amplitude, force, or effort of a response. Examples include, the loudness of a voice or the force with which someone hits another person. This measure is not used as often as frequency or duration because it is often difficult to obtain an objective measure of intensity.

Interobserver Agreement

Two people who independently observe the same behavior and record the information in the same way to assess the extent to which observers are consistently recording the occurrence of a behavior. Inconsistent measurement can add variability making data making it more difficult to interpret. Determining the agreement between two observers also decreases the likelihood of individual observer bias. This is particularly true if the person who is collecting the data is "invested" in a particular outcome that may affect the way in which data are recorded.

Example of Using Multiple Measures

In the figure below tantrums were recorded both as a frequency and as a duration measure. In the top panel, the frequency of the behavior across days during baseline and treatment is shown. It appears from this first graph that the intervention is effective in reducing the number of tantrums per day. The bottom panel shows the duration of tantrums during baseline and then during the treatment phase. Even though the frequency of the child's temper tantrums has decreased, the duration has not.



Commonly used rating scales

	Scale	Reference
Adaptive Behavior		
	Vineland Adaptive Behavior Scale	Sparrow, Balla, & Chicchetti, 1984
	Matson Evaluation of Social Skills (MESSIER)	Matson, LeBlanc, & Weinheimer, 1999
Problem Behavior		
	Questions About Behavioral Function (QABF)	Dawson, Matson, & Cherry, 1998
	Motivation Assessment Scale (MAS)	Durand & Crimmins, 1988
	Reiss Screen for Maladaptive Behavior	Reiss, 1988
	Functional Analysis Interview Form (FAIF)	O'Neill et al., 1997
Diagnosis		
	Autism Diagnostic Observation Schedule (ADOS)	Lord et al. 1989
	Diagnostic Assessment for Individuals with Severe Handicaps (DASH)	Matson, Coe, Gardner, & Sovner, 1991
	Wechsler Intelligence Scales (WAIS, WISC)	Wechsler, 1981;1991

Useful References

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