

Registered Behavior Technician (RBT) Training

Creative Behavioral Consultants, Inc.

*This training is based on the Registered Behavior
Technician 2nd edition Task List and is designed to
meet the 40-hour training requirement
for the RBT credential.*

This training is offered independent of the BACB.

Applied Behavior Analysis (ABA)

- The science in which tactics derived from the principles of behavior are applied systematically to improve socially significant behaviors and experimentation is used to identify the variables responsible for behavior change (Cooper, Heron, & Heward, 2007).
- Social Significance: Target behaviors that are selected for change are based on importance to clients and individuals effected by their behaviors.
- Emphasis on behaviors that are observable and measurable.

Stimulus:

- Anything in the environment that effects an organism.

Antecedent Stimulus



Behavior



Consequence Stimulus



Behavior and Environment:

- **Behavior:** Anything a person says or does.
 - Overt behavior: Behavior that can be observed and measured by others other than the person engaging in the behavior.
 - Covert behavior: Behavior that are only observed and measured by the person engaging in the behavior.
- **Environment:** Everything around the individual that is not part of the individuals' behavior (e.g., people, settings, object, smells, written material, etc).

Operational Definition:

- Detailed definition of the target behavior.
- The operational definition needs to meet three criteria:
 1. Objective: Observable and measurable.
 2. Clear: Easy to understand.
 3. Complete: Specifies what is included and what is excluded from the definition.

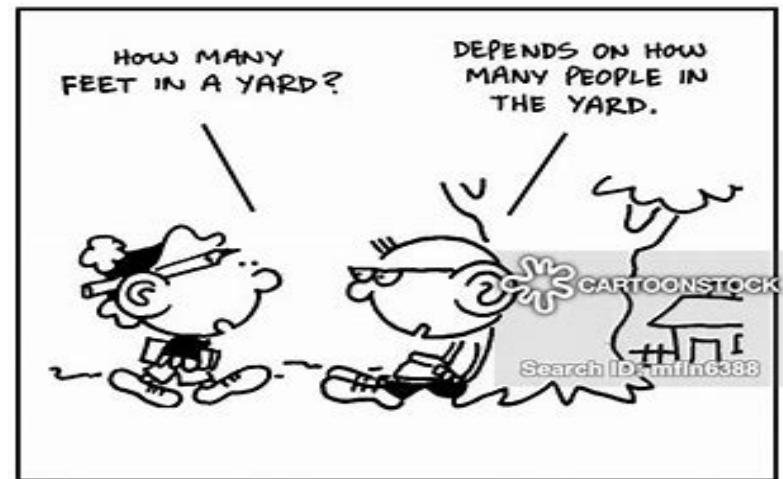
ASR #1:

Social significance refers to:

- A. Target behaviors are selected for change are based on importance to clients and individuals effected by their behaviors.
- B. Deficits in communication.
- C. Requires large group involvement.
- D. None of the above.

Measurement:

1. Compare the degree of change in a target behavior from baseline to treatment phase.
2. Determine if there is a need for implementing a treatment.
3. Determine when to stop or modify treatment.



Frequency:

- Number of times a response occurs in an observation period.
 - Response must have clear start and end.
 - Response must not occur at such high rates where one cannot count.
 - Each response must be roughly equal in duration.
Example: Pushing, kicking, throwing objects, slapping, and spitting.
- *Rate: (R=rate, F=frequency, T= time) $R=f/t$*

Time screamed 8 times in 10 minutes. What is the rate per minute?

Duration:

- The amount of time a behavior lasts.
 - Useful for wanting to know the amount of time an individual engages in a specific target behavior.
 - Example: Crying, tantrums, exercise, reading, on-task behaviors

- Percent of Session time:

(Total duration/observation period = % of session)

Rick cried for 25 minutes in a 90-minute observation period.

What percent of session time did he cry?

Latency:

- Duration from the onset of a stimulus and the initiation of a response.

Example:

The amount of time it takes to pick up the phone when it rings.

Example:

Amount of time it takes to press on breaks when light turns red.

Percentage:

- Expressed as a ratio.
- Occurrence of a response in relation to a learning trial. The higher the learning trials, the more representative the data.
- Percentage: X/Y multiplied by 100.

Example:

John complied with instruction 6 out of 10 times. What is the percentage of compliance?

Trials to Criterion:

- Number of response opportunities needed to achieve a predetermined level of performance.
- What do large and small trials to criterion mean?

Example:

Johnny required 12 practice trials to learn to put on his socks correctly.

Whole Interval:

- Observing whether behavior occurs throughout the entire interval.
- Observation period is broken into small intervals.

Example: Observation period is 10 minutes. Each interval is 30 seconds.
There are _____ Intervals.



55% of intervals

Partial Interval:

- Observing whether behavior occurs at any time within the interval.
- Observation period is broken into small intervals.

Example: Observation period is 10 minutes. Each interval is 30 seconds.
There are _____ Intervals.



70% of intervals

Momentary Time Sampling:

- Observing whether behavior occurs at specified interval.

Example:

You set a timer to go off every 10 minutes. At the end of the 10 minutes you record if Johnny engages in hand flapping.

Permanent Product:

- Measuring the effect the behavior has produced on the environment.
- Measuring the effect of the behavior on the environment at later time (after the target behavior has occurred).
- Advantage: Observer does not have to be observing the behavior, and therefore can engage in other activities.

Examples: Math problems completed, toys left out, and parts assembled.

ASR #2:

James throws a pencil at his mom. Which recording method would be most appropriate for this example?

- A. Duration
- B. Latency
- C. Frequency
- D. A and B

ASR #3:

The duration from the onset of a stimulus and the occurrence of a response.

- A. Duration
- B. Latency
- C. Frequency
- D. None of the above

ASR #4:

Number of response opportunities needed to achieve a predetermined level of performance.

- A. Percent of opportunities
- B. Trials to Criterion
- C. Latency
- D. Partial interval

ASR #5:

Recording whether the target behavior occurred at any time within the interval.

- A. Momentary Time Sampling
- B. Partial Interval Recording
- C. Whole Interval Recording
- D. Duration Recording

Activity:

Target Behaviors

1. Tantrum _____
2. Kicking _____
3. Throwing objects _____
4. Compliance _____
5. Hand flapping and vocal stereotypy _____
6. Sitting with peers in circle time _____
7. Completed math problems _____
8. Crying _____
9. Exercising _____
10. Picking up phone when rings _____

Measurement Methods

- Frequency
- Duration
- Partial interval
- Whole interval
- Permanent product
- Percent of opportunities
- Latency
- Trials to criterion

Videos and Data Collection:

https://youtu.be/bJw0_Fj4PGY?t=3

<https://youtu.be/CqTBbXLb32M>

<https://youtu.be/hLK3ui2m61U>

<https://youtu.be/x7I8N6NM4Rk>

Graphs:

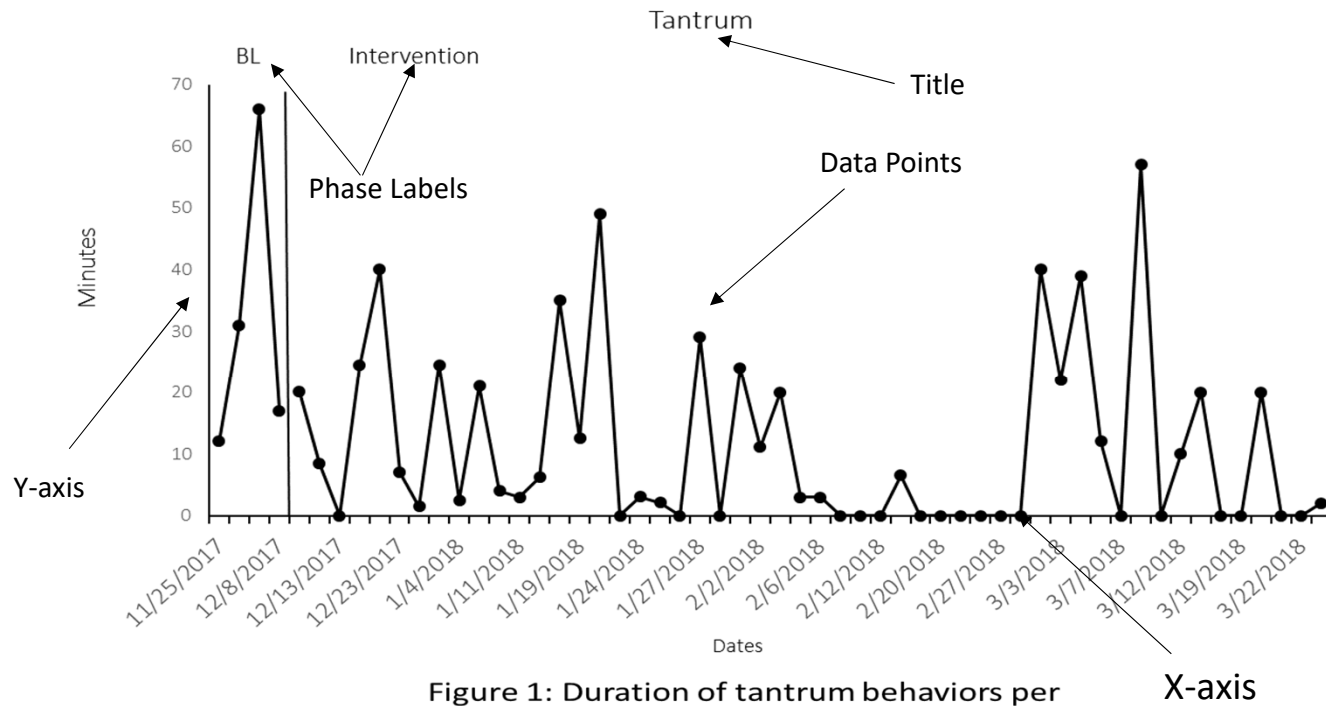


Figure 1: Duration of tantrum behaviors per two hour sessions.

Figure Caption

Positive Reinforcement:

- A stimulus is presented immediately after a response, which results in an increase in future probability of that response.
- Reinforcer: *The specific stimulus that follows a response (e.g., M&M, praise, tickles, etc.).*



Positive Reinforcement Examples:

Response → Consequence
Paul raises his hand → teacher calls on him

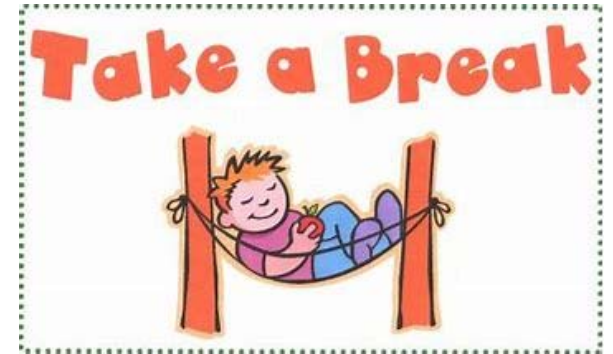
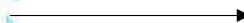
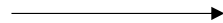
Response → Consequence
Mary tantrums → mom buys candy

Response → Consequence
Bob throws plate → mom gives him attention

What behaviors have increased?

Negative Reinforcement:

- A stimulus is removed, decreased or postponed immediately after a response, which results in an increase in the future probability of that response.



Negative Reinforcement Examples:

Response → Consequence
Ron puts on seatbelt beeping sound stops

Response → Consequence
Jane opened umbrella avoid getting wet

Response → Consequence
Tim asks for a break teacher gives him a break

What behaviors have increased?

Unconditioned, Conditioned and Generalized Conditioned Reinforcers:

- Unconditioned (primary) Reinforcer: Does not require a learning history. Functions as reinforcer the first time they are presented.
- Food, water, warmth, activity, etc.
- Conditioned (secondary) Reinforcer: Neutral stimulus that has been paired with one or more unconditioned or conditioned reinforcer.
- Toys, activities, games, etc.
- Generalized Conditioned Reinforcers: Paired with variety of conditioned reinforcers. Unlikely to lose value.
- Money.

Videos:

<https://youtu.be/XjwbZiBNceM>

https://youtu.be/BDwdXI7_Ca0

Premack Principle:

- Creating the opportunity to engage in a high-probability (preferred) behavior contingent on the occurrence of a low-frequency (non-preferred) behavior will function as reinforcement for the low-frequency behavior. In other words, following a non-preferred activity with a highly preferred activity can reinforce the non-preferred activity.

Example: First do your homework (non-preferred), then you can watch TV (preferred).

Increasing Effectiveness of Reinforcement:

- Deliver reinforcer immediately after the correct behavior.
- Deliver reinforcer each time the correct behavior occurs.
- Deliver variety of reinforcers.
- Individualize reinforcers for each person.
- Deliver high quality reinforcers for better behavior.

ASR #7:

Stimulus presented immediately after a response, which results in an increase in the behavior in the future.

- A. Negative Reinforcement
- B. Negative Punishment
- C. Positive Reinforcement
- D. Automatic Reinforcement

ASR #8:

David goes to Target with his mom. He sees his favorite candy and starts to cry. His mom buys him the candy. This is an example of:

- A. Extinction
- B. Negative Reinforcement
- C. Positive Reinforcement
- D. Negative Punishment

ASR #9:

Neutral stimulus that has been paired with one or more unconditioned or conditioned reinforcer.

- A. Generalized conditioned reinforcer
- B. Negative Reinforcement
- C. Conditioned reinforcer
- D. Primary reinforcer

ASR #10:

James, first do your homework, then you can play with your cars. This is an example of:

- A. Negative reinforcement
- B. Extinction
- C. Primary reinforcer
- D. Premack Principle

Schedules of Reinforcement:

Continuous (FR-1)

- A schedule of reinforcement in which every occurrence of the target behavior is reinforced
- Powerful when first establishing a new behavior or strengthening a previous behavior
- Not a good long-term schedule

Extinction

- A schedule of reinforcement in which no occurrence of the target behavior receives reinforcement
- Used to reduce behaviors
- Extinction is also a procedure to reduce behaviors

Intermittent

- A schedule of reinforcement in which some, but not all, instances of the target behavior are reinforced
- The most powerful schedule because it is resistant to extinction
- Occurs on either a ratio or an interval schedule

Fixed Ratio Schedule:

- Fixed Ratio (FR): Reinforcers are delivered after set amount of responses.

-FR-1: Reinforcer delivered after each occurrence of the response (aka. continuous reinforcement).

-FR-3: Reinforcer is delivered after three responses.

-FR-8: Reinforcer is delivered after eight responses.

Fixed Ratio of Reinforcement Example:

- John receives a token every 5 times that he correctly imitates an action.
- Craig receives \$1.00 for every 3 chores he completes.
- Sam receives praise when he completes 7 math problems.

Variable Ratio Schedule:

- Variable Ratio (VR): Reinforcers are delivered after a variable number of responses.

-VR-4: Reinforcer is delivered after an average of 4 responses. (sometimes the 2nd, 4th, or 6th response produces reinforcer, but the average number of responses is 4.

Variable Ratio of Reinforcement Example:

- Dan receives a token after completing an average of 4 math problems. Sometimes he receives a token after completing the 2nd problem, 4th problem, or 6th problem, but the average is completing 4 problems before receiving reinforcer.
- Slot machines are programmed to deliver reinforcer on a VR schedule. For example, the gambler will receive money after an average of 25 responses. However, he can not predict when the reinforcer will be delivered.

Fixed Interval Schedule:

- Fixed Interval (FI): Reinforcers are delivered after the first response following the expiration of a fixed interval of time.

-FI-8 minutes: The first response that occurs after 8 minutes has elapsed, results in the reinforcer.

Fixed Interval of Reinforcement Example:

- Jan's teacher calls on her the first time she raises her hand when 5 minutes has passed.
- Greg receives a token the first time he asks to play outside after 30 minutes elapses.

Variable Interval Schedule:

- Variable Interval (VI): Reinforcers are delivered after the first response following the expiration of a variable interval of time.
- The length of the interval is not the same each time.

-VI-15 minutes: The first response that occurs after an average of 15 minutes has elapsed, results in the reinforcer.

Variable Interval of Reinforcement Example:

- Jan's teacher calls on her at different intervals (20 min, 25 min, 35 min, 40 min). However, the average of the intervals is 30 minutes.

Extinction Schedule:

- Extinction: Reinforcer for a particular response discontinued.
- Individual can engage in the response, but reinforcer is not delivered.

Extinction Schedule Example:

- Michael puts money in the vending machine but doesn't get his snack.
- Cindy cries for candy at the store, but her mom does not buy candy.
- Tina yells at her mom and her mom ignores her.

ASR #11:

Teacher calls on Pam every time she raises her hand. This is an example of:

- A. Variable Ratio
- B. Negative Ratio
- C. Fixed Interval
- D. Fixed Ratio

ASR #12:

Robert is given a cookie when on an average of every 4 times he responds correctly to an instruction. This is an example of:

- A. Variable Ratio
- B. Variable Interval
- C. Fixed Interval
- D. Fixed Ratio

Preference Assessment:

- Procedures used to determine what a person prefers, the value of those stimuli (high, medium, low), and the conditions under which those values change.
- Preference assessments may need to be conducted once per session, multiple times per session, or on a weekly basis. This depends on the specific client.

Preference Assessment Methods:

- **Asking the client:** Asking the client what they prefer (“like”).
- Advantage:
 - Easy and time efficient.
 - Does not require much training.
- Disadvantage:
 - Not very objective.
 - Can’t use if client is not verbal.

Preference Assessment Methods:

- **Ask significant others:** Asking parents and others familiar with the client to provide a list of reinforcers.
- Advantage:
 - Easy and time efficient.
 - Does not require much training.
- Disadvantage:
 - Not very objective.
 - Rank ordering of stimuli often not accurate.

Preference Assessment Methods:

- **Free operant Observation:** Observing the client in their natural environment.
- What does the client engage with most often during free time? Make a list of all the objects/activities the client engages with.
- How long does the client engage with certain objects/activities? The longer they engage with a certain item, the higher the preference value.

Video:

https://youtu.be/GA_6-zmAQbA

Preference Assessment Methods:

- **Single Stimulus Presentation:** A stimulus is presented and the persons reaction (approach, frequency and duration of engagement) is recorded.
- Advantage:
 - Does not require a lot of time to complete.
- Disadvantage:
 - They will select the item since it is the only thing provided.

Videos:

<https://youtu.be/G6I2AWtaAoU>

Preference Assessment Methods:

- **Paired Stimulus Preference Assessment:** Each trial consists of simultaneously presenting two stimuli and recording which stimulus is selected. Each stimulus is randomly matched with all other stimuli. The stimuli are then rank ordered.
- Advantage:
 - Objective and consistent in identifying preferences.
- Disadvantage:
 - Time consuming.

Video:

<https://youtu.be/CnBraS9rmz4>

Preference Assessment Methods:

- **Multiple Stimulus without Replacement:** Individual selects an item presented in an array of 4-6 stimuli.
- After each selection, the item is removed, the array is rearranged and the client is asked to choose another item.
- Continued until all the stimuli are selected.

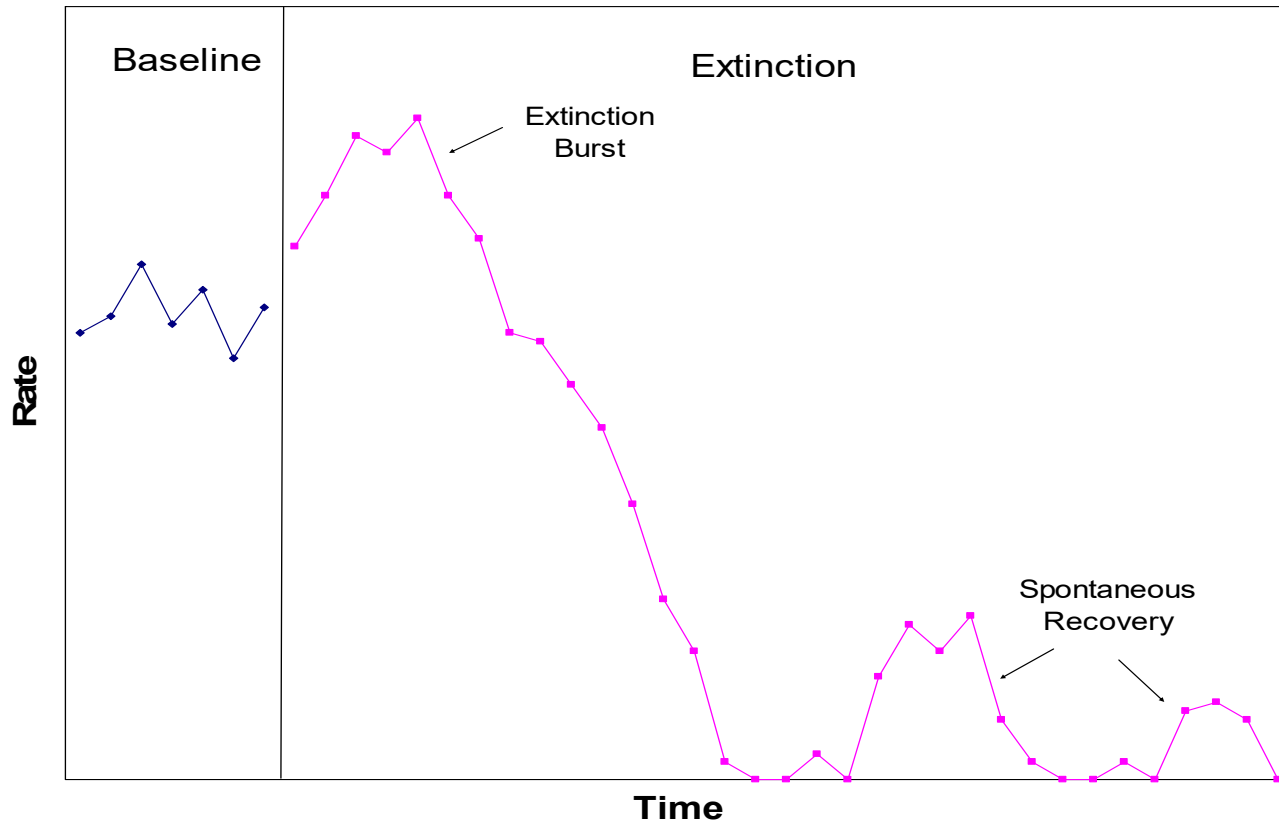
Video:

<https://youtu.be/fEEelCgBkWA>

Extinction:

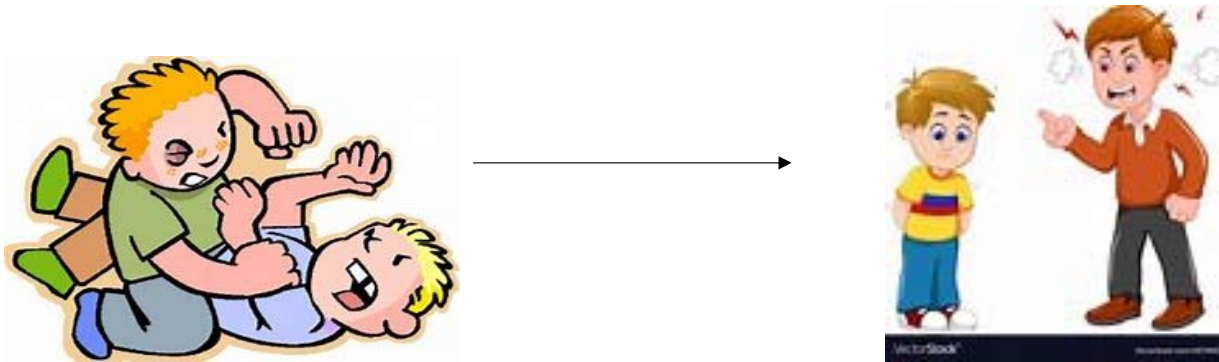
- Reinforcement of previously reinforced behavior is discontinued.
- When someone engages in a problem behavior, the reinforcer is withheld; that is, the reinforcer is not provided for that specific behavior.
- Extinction Burst: Temporary increase in frequency, duration, or intensity of a behavior when extinction is implemented.
- Spontaneous recovery: Reemergence of an extinguished behavior.

Extinction:



Positive Punishment:

- A stimulus is presented immediately after a response, which results in a decrease in future probability of that response.
- Punisher: *The specific stimulus that follows a response (e.g., Reprimand, push-ups, dirty looks, etc.).*



Positive Punishment Examples:

Response → Consequence
Cindy breaks the phone father scolds her

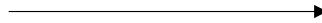
Response → Consequence
Jane touches the stove burns her finger

Response → Consequence
Jack threw chair on floor made to pick up the chair and go around
rearrange all chairs perfectly.

What behaviors have decreased?

Negative Punishment:

- A stimulus is taken away immediately after a response, which results in a decrease in future probability of that response.



Negative Punishment Examples:

Response → Consequence
Cindy broke the TV dad placed her in time out

Response → Consequence
Dan hit his sister dad took away his tablet

Response → Consequence
Rick ran out of the house his mother took away his video games

What behaviors have decreased?

ASR #13:

Which preference assessment method requires observing the client engage with stimuli in the natural environment?

- A. Offering pre-task choice
- B. Free operant observation
- C. Single stimulus presentation
- D. Multiple stimulus without replacement

ASR #14:

Presenting stimuli in an array of 5-7 and recording the individual's selection.

- A. Offering pre-task choice
- B. Free operant observation
- C. Single stimulus presentation
- D. Multiple stimulus without replacement