

# Function-Based Approach to Assessment and Treatment of Challenging Behaviors

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# Disclosures

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Eric Boelter has no financial relationships relevant to this presentation to disclose.

All planners have no relevant financial relationships to disclose.



# Objectives

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Gain knowledge of FBA process.

Gain knowledge of FA process.

Gain understanding of Function-Based treatment.

# Science of Behaviorism

Behavior is a function of interaction between environmental events and behavior.

Behavior is lawful, predictable, and able to be brought under environmental control.

These events may occur prior to behavior (antecedent events).

They may occur following behavior (consequences).

Cooper, Heron, & Heward, 2007

# Applied Behavior Analysis (ABA)

The process of:

Applying principles of behavior (e.g., reinforcement, punishment) to specific behavior.

Evaluating whether any changes that occur are indeed due to this application (single-case design).

Change socially significant behavior to a meaningful degree (significant to people).

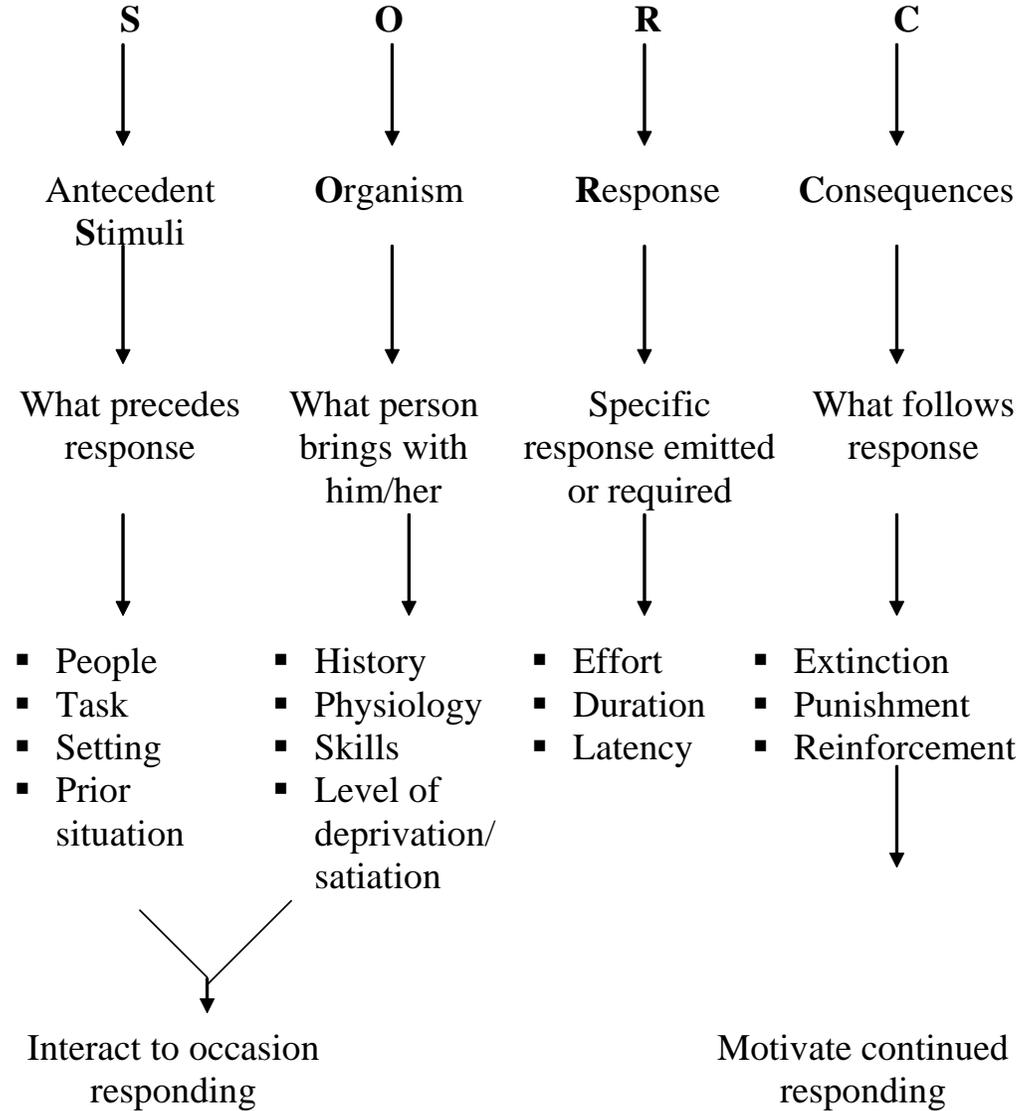
Baer, Wolf, & Risley, 1968

# Categories of Consequences

	<b>POSITIVE</b>	<b>AVERSIVE</b>
<b>PRESENT</b>	<p>POSITIVE REINFORCEMENT (<b>BEHAVIOR INCREASES</b>)</p>	<p>PUNISHMENT BY PRESENTATION (<b>BEHAVIOR DECREASES</b>) TYPE I</p>
<b>REMOVE</b>	<p>PUNISHMENT BY WITHDRAWAL (<b>BEHAVIOR DECREASES</b>) TYPE II</p>	<p>NEGATIVE REINFORCEMENT (<b>BEHAVIOR INCREASES</b>)</p>

**CONTEXT**

**Environmental Influences on Behavior**



# ABA Methodology: Key Considerations

Behavior is a function of:

Genetics/physiology

The past environment (history)

The immediate environment

The behavior's topography may provide little information about factors responsible for its occurrence, however function will.

# Function

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The reason why problematic behavior continues to occur.

Social function refers to environmental events that maintain problematic behavior.

Treatment is based on identified function, not on topography.

# Maintaining Events or Functions

## **Positive Reinforcement: A “gain” function**

Social attention, tangibles, preferred items

## **Negative Reinforcement: An “escape” function**

Escape from nonpreferred activities

## **Automatic Reinforcement: Unknown or Intrinsic (gain or escape)**

Gain sensory pleasure

Escape pain or discomfort (bx of scratching removes the itch)

# Function

Bx: Banging head on floor

- He bangs his head b/c he has intellectual deficits.

OR

- He bangs his head b/c school staff stop presenting task demands to him.

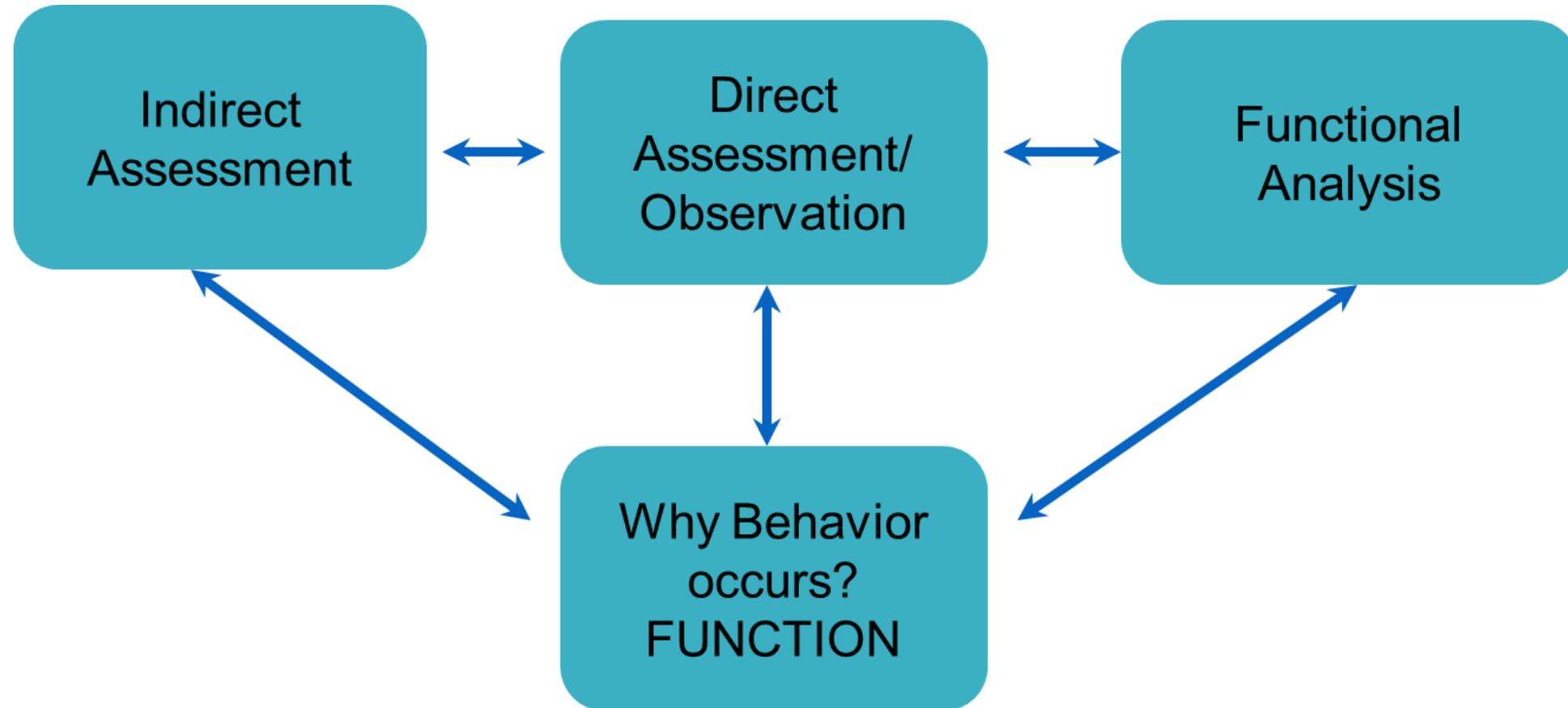
# What is a Functional Behavioral Assessment?

Problem solving approach that uses a variety of assessment procedures to identify the function for the occurrence of behavior.

Goal is to develop positive behavioral supports that reinforces appropriate behavior while reducing inappropriate.

Gresham, Watson, & Skinner (2001)

# Functional Behavioral Assessment



# FBA: Functional Analysis

Methodology to test, validate, and eliminate hypotheses of functional relationships using single-case designs.

Test conditions contain relevant antecedents and consequences for problem behavior.

Control condition does not contain those variables.

Document behavior across conditions and assess trends.

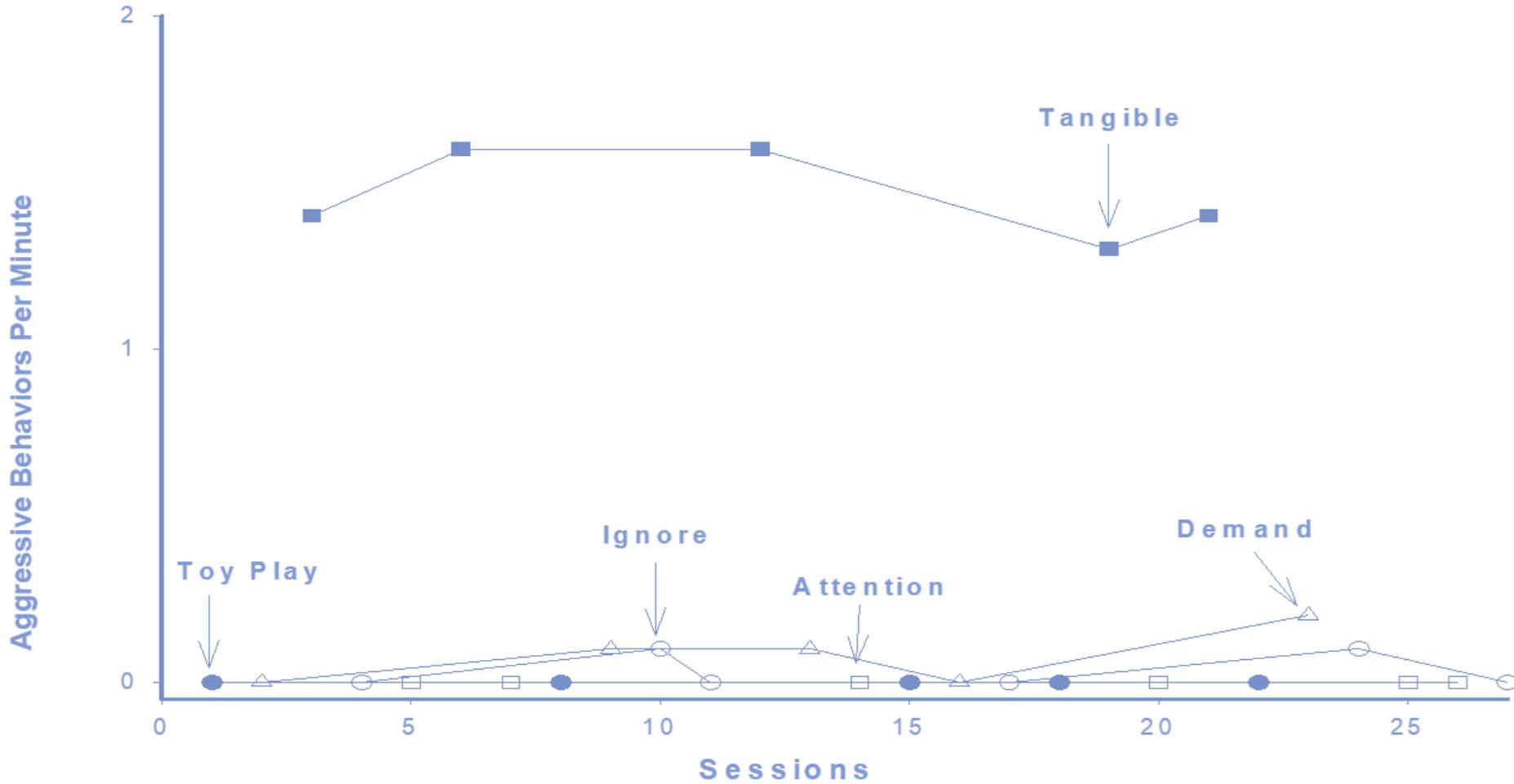
# FBA: Functional Analysis

Most common approach to FA is explained by Iwata et al. (1982/1994) for assessment SIB.

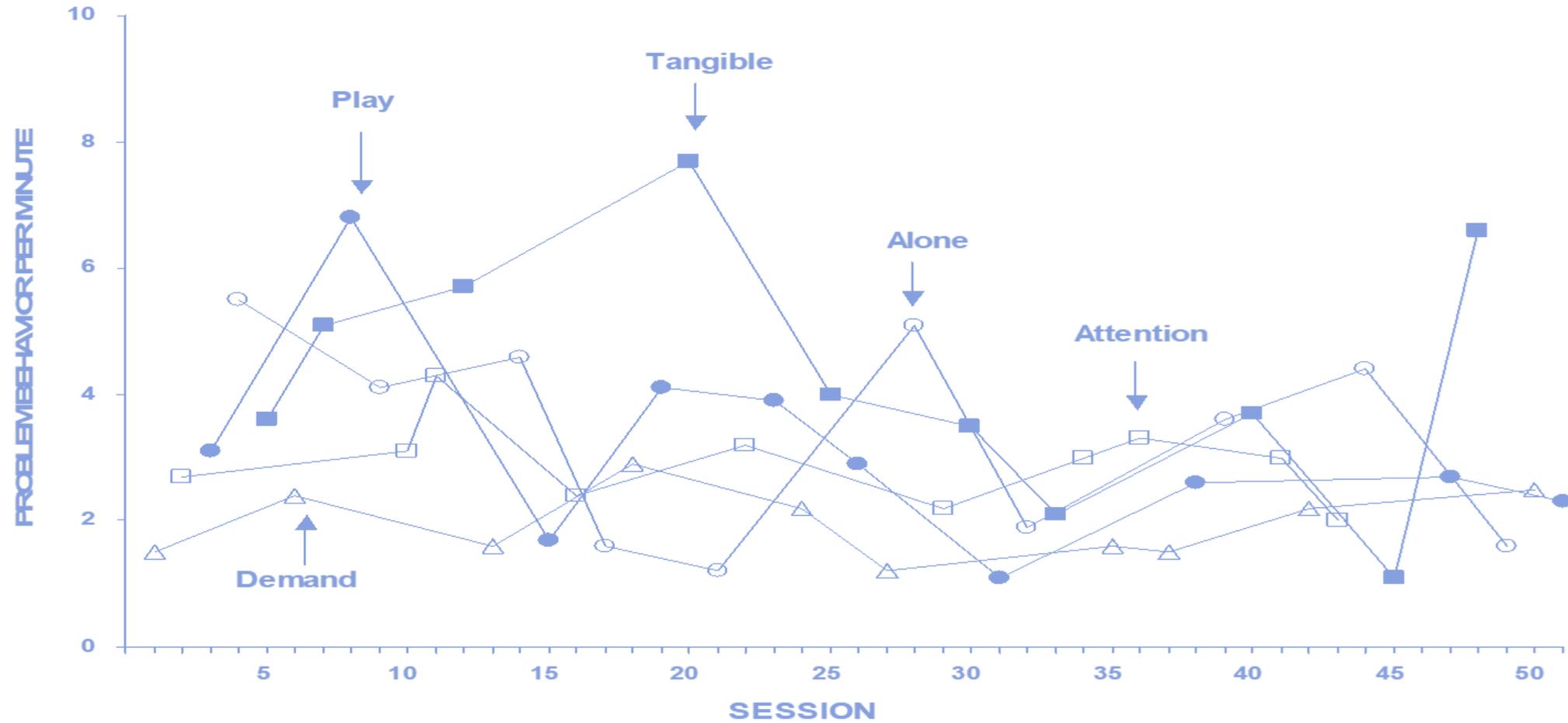
Several hypotheses tested in same analysis using a multi-element experimental design.

Compare levels of problem behavior in each condition to levels in control condition.

# Differentiated Results



# Undifferentiated Results



# Advantages of Functional Analysis

## ■ Advantages

- Greatest internal validity: Provides greatest precision and confidence in understanding behavior (causal relationships).
- Might observe treatment effects during assessment.

## ■ Disadvantages

- Technical skill.
- Failure to identify the full range of the controlling variables beyond the “usual suspects”.
  - Generic escape vs. escape from type of work.

# Rationale for Treatment based on Function

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When function of problem behavior is known, treatment involves:

- Disrupting the response-reinforcer relation (e.g., extinction).
- Providing known reinforcer contingent on desired behavior (e.g., DRA).

# Function-Based Treatments

## Social Functions (Escape, Tangible, Attention):

- FCT: provide functional reinforcer contingent on communicative behavior.
- Differential reinforcement: DRO, DRA, DRI, DRL, DRH.
- Antecedent Tx: fading, shaping, picture schedules, prompts, choice, SD/MOs.
- NCR: reinforcer provided on fixed time schedule, enriched environment.
- Extinction: withhold reinforcer for disruptive behavior.
- Timeout, Response Cost.

## Automatic Functions:

- NCR: Competing Items (matched sensory stimuli), enriched environment.
- Antecedent Tx: picture schedules, SD/MOs (increase effort).
- Differential reinforcement: DRO, DRA (play skills), DRI, DRL.
- Response Blocking.
- Time out, Response Cost.
- Protective Equipment.

# Putting it all together

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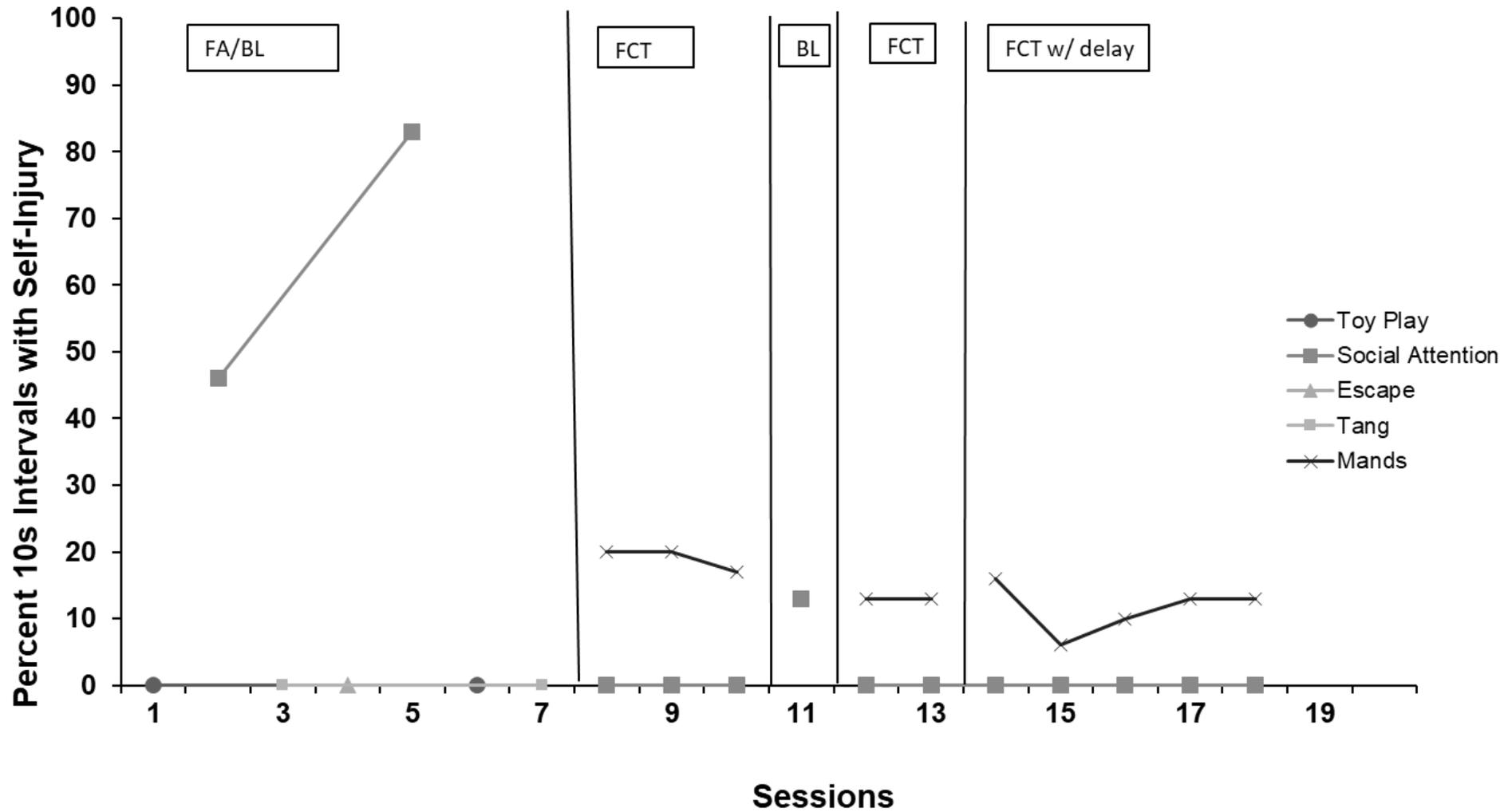
FBA

Treatment development and evaluation (multiple functions?)

Maintenance of treatment effects over time

Generalization of treatment effects across settings, people etc.

# Standard Outpatient



# Tools to ID Function

## Functional Assessment Interview

O'Neill, R. E., Horner, R. H., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). *Functional assessment and program development for problem behavior: A practical handbook*. Pacific Grove, CA: Brooks/Cole Publishing.

## Functional Assessment Screening Tool

Iwata, B., & DeLeon, I. (2005). *The functional analysis screening tool*. Gainesville, FL: The Florida Center on Self-Injury, University of Florida.

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# Questions

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**THANK YOU!**

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