Day 5: Assessment, intervention, and resources for self-injury and aggression

2/9/2023

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Plan

Discuss self injury and aggression terminology

Review the available intervention

Discuss resources

Skill tutorial: AAC

Case based learning

Terms defined- scope of behaviors

Self- injurious behavior (SIB)- self-directed behaviors that result in tissue damage

- Head banging, self-hitting, self-biting, picking gouging, poking, scratching, PICA

Nonsuicidal self injury (NSSI)/ self –harm- intentionally inflicting harm to self without suicidal intent.

- Cutting, burning, ripping/pulling skin/hair, self-bruising

Aggression- directed towards other

- Verbal, Property destruction, Physical (hitting, pushing, scratching, punching etc.)

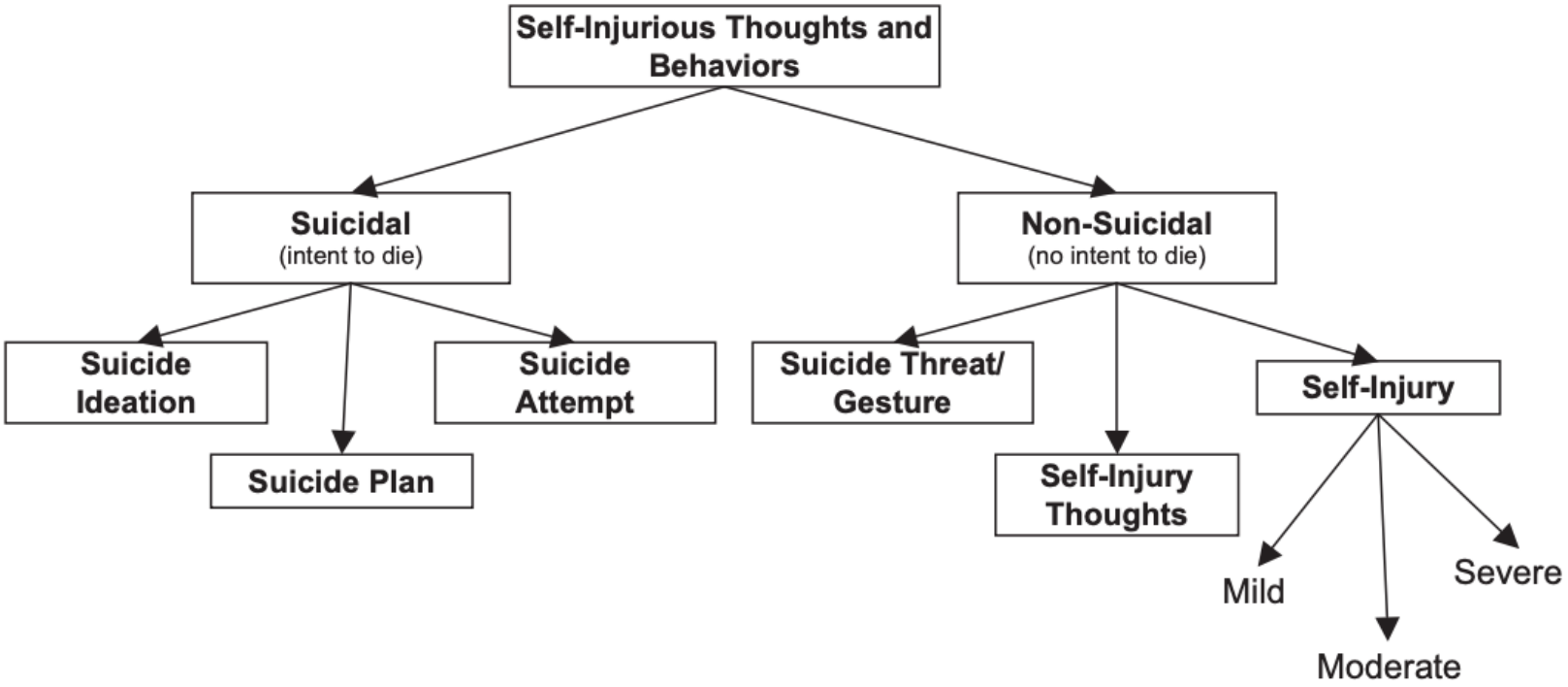


Figure 1

Classification of self-injurious thoughts and behaviors. Copyright © 2009 by the American Psychological Association. Adapted with permission. Source: Nock MK, ed. 2009a. *Understanding Nonsuicidal Self-Injury: Origins, Assessment, and Treatment*. Washington, DC: Am. Psychol. Assoc. The use of APA information does not imply endorsement by APA.

Let's look at the numbers

- **Prevalence**
  - SIB: Lifetime prevalence estimates range from 5 to 20% among individuals with I/DD (higher for autistic individuals, can emerge early)
  - NSSI:Lifetime prevalence estimates range 17-38% (highest onset in adolescents)
  - Aggression: 2-20% across I/DD
- **Persistence of SIB**: as high as 84%
- **Chronicity and severity**
- The relative risk of SIB increases until 30–40 years of age and starts to decrease after the age of 50 (Davies and Oliver, 2013).

Why self-injury and aggression needs to be addressed:

Quality of Life

- Permanent tissue damage possible or even death
- Community involvement
- Leisure activities
- Family and home life
- Interference with skill acquisition
- School or residential placement

Cost of care

- Estimates in 1989 for cost of care for people with disabilities with severe problem behavior was $3 billion (NIH, 1991)
- Frequent hospitalization and crisis management
- Incarceration risk and legal ramifications

So what causes Self-injury?

- SIB is a heterogeneous disorder
- There is no one single or universal cause for SIB
- Severity/intensity/chronicity of SIB varies across individuals
- Therefore, generalizations and an one size fits all conceptual model to understand SIB is a difficult task.
- There may be an interaction between brain-behavior-environment that contributes to the emergence of SIB
- NSSI – can be related to arousal reduction and affect regulation/ emotional avoidance

Proposed conceptual models for what may cause SIB in I/DD

- Shaping of stereotypy or repetitive behavior into SIB over time (Guess & Carr, 1991)
- An underlying "movement or movement control disorder" (Muehlmann & Lewis, 2012)
- Opioid, dopaminergic, and serotonergic systems are involved in the pathophysiology of SIB (Sandman, 1990;Breese et al., 1995; Cook, 1999)
  - alterations in the basal ganglia; dysregulated opioid system
- Environmental/social deprivation (Beckett et al., 2002)
- Pain (Symons et al., 2004)

Potential Risk factors for SIB

- Lower self-help /daily living skills; receptive communication
- Severity of ASD
- Health problems or sensory impairments
- Overactive/impulsive behavior
- Chronological age

Among Adults with I/DD:

- Degree of intellectual disability (communication ability)
- ASD diagnosis
- Health problems or Sensory impairments
- Repetitive/stereotyped behavior
- *Genetic-specific disorders (e.g., Lesch-Nyhan, Cornelia de Lange, Cri du Chat, fragile X, Prader-Willi and Smith-Magenis)

Potential risk factors for NSSI

- Childhood abuse or trauma
- Eating disorders
- Substance abuse
- Post-traumatic stress disorder
- Borderline personality disorder
- Depression
- Anxiety

Potential risk factors for Aggression

- Physical abuse in childhood
- Substance abuse
- Family violence
- Trauma
- Mood disorder

Barriers to accessing support and treatment

- Service intensity and continuum of care (Crisis, respite, PRTFs, hospitalizations)
- Skill set and expertise- service deserts
- NSSI can be covert
- Aggression- workforce challenges and fear response

When to intervene?

- Assess individual risk and context the behavior is occurring in
  - What does the behavior look like
  - Is there a risk of associated suicidal behavior
  - What is the intensity
  - Are there patterns?
- Rule out medical problems
- Intervene early and be consistent
- Use your team; collaboration and level of support may change to ensure success
- Time to practice alternative skills and behaviors **PROACTIVELY**

Behavioral Assessment of SIB, NSSI, aggression

- Functional Behavior Assessment (FBA)
- FBA uses indirect and direct observation methods to identify the antecedents (what is happening behavior the behavior occurs) and the consequences (what is happening after the behavior occurs).
- Functional analysis (FA; Iwata et al., 1982/1994) utilizes experimental design to isolate the consequences that may be maintaining the challenging behavior:
  - Positive reinforcement (attention and tangible)
  - Negative reinforcement (escape from demands)
  - Automatic (sensory)

Evidence- based Behavioral Interventions

Functional communication training: teaching a functionally equivalent communicative response (function-based intervention)

Reinforcement-based interventions: using extinction (withholding reinforcement for interfering behavior), differential reinforcement (alternative behavior, other behavior, incompatible behavior)

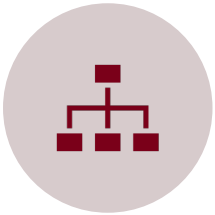
Antecedent-based interventions*:* decreasing the likelihood that the challenging behavior will occur by adjusting the setting or signaling a response. (Descalation)

245D compliance

- Chemical and manual restraints – doesn't teach skills
- Emergency and BIRF planning
- Protective equipment and restraints (e.g., arm limiters, helmets)
  - May address the form and safety concerns associated with SIB, but not the function or reason why SIB may be occurring

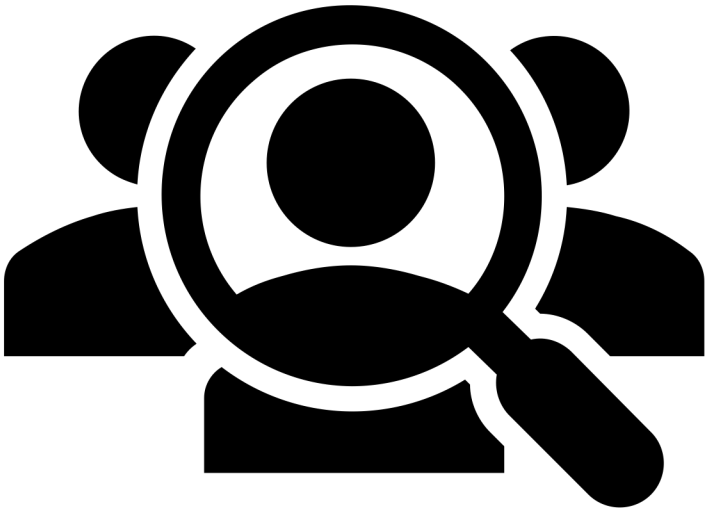
Behavior Principles

Behavior changes due to changes in the **environment**



Effective **management** procedures are based on consideration of the **relationship** between **environment** and **behavior**

Functional Behavior Assessment



Questions that can be answered from an FBA

1. Patterns of antecedents frequently leading to the target behavior?
2. Other behaviors that the student engages in that typically precede the target behavior?
3. Patterns of consequences frequently following the target behavior?
4. Can we **match** an appropriate behavior to achieve this same function for the student?

Why do we need to know the function?

We can modify setting events so the likelihood of interfering behavior is **REDUCED**

We can remove triggers, or use prevention strategies that will minimize the impact of the triggers

Alter consequences to limit their reinforcing effect on the target interfering behavior

Functional Assessment Tools

Interview/
records review

A-B-C Data
Collection

Direct
Observation

The 3-term contingency- ABCs

Antecedent: What is happening before the behavior occurs?

Behavior: What is the target behavior?

Consequence: What is happening after the behavior occurs?

Setting events: conditions or events that influence behavior my temporarily changing the value or effectiveness of reinforcers. Ex) being sick, sleep deprivation, new medications.

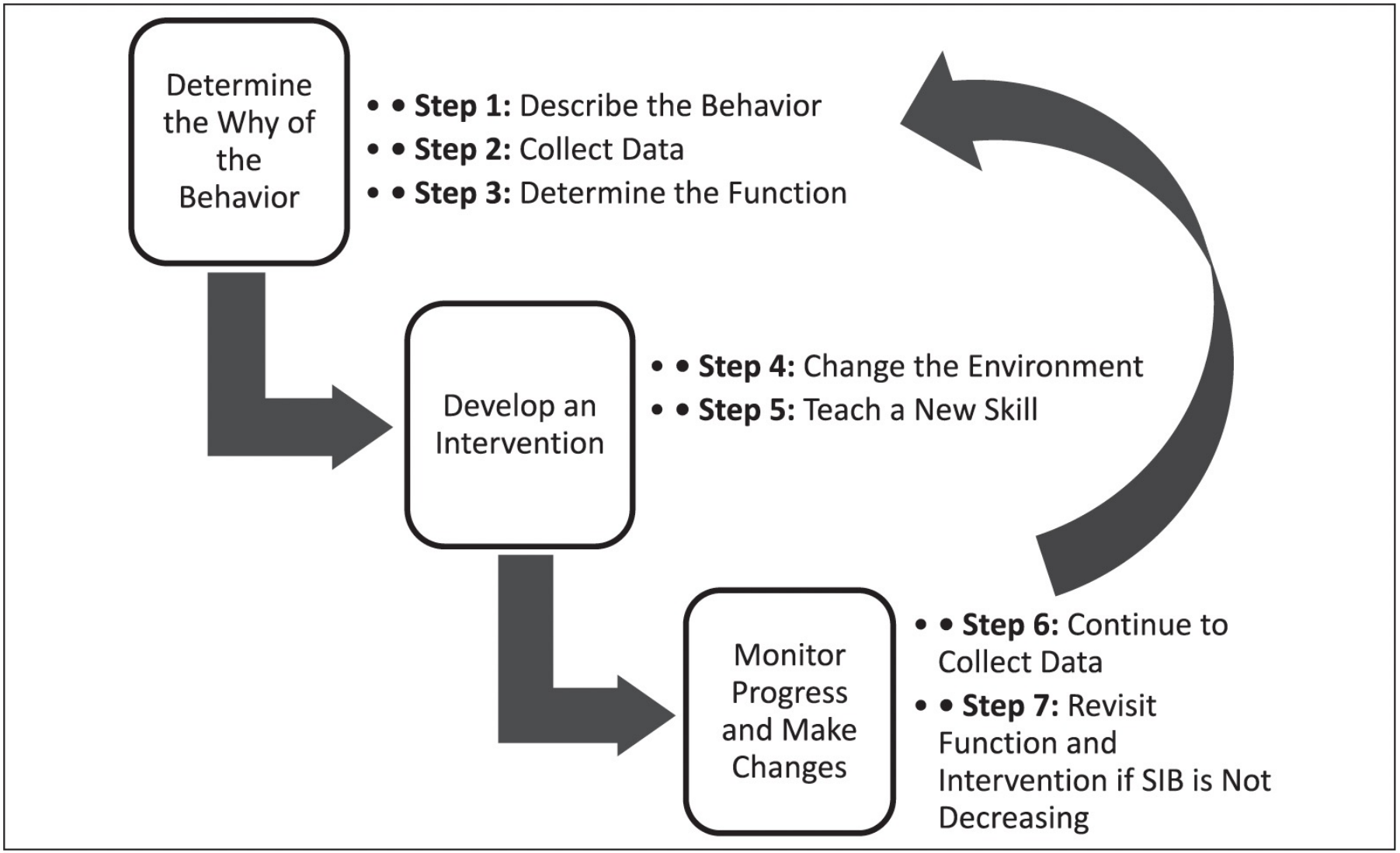


Figure 1. Steps of intervention for self-injurious behavior (SIB).

More et al., 2021

Functional Behavior Assessment

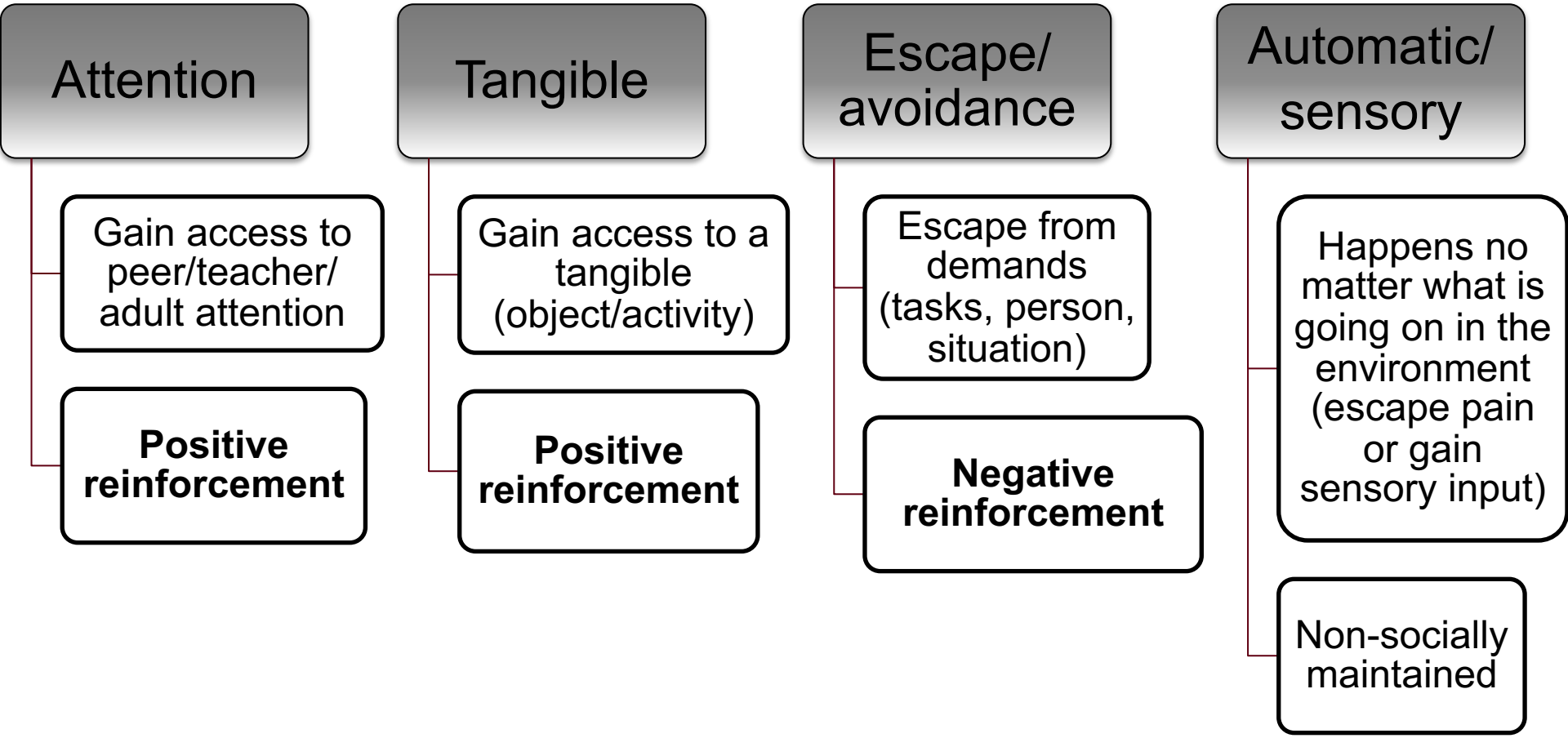
- A systematic, individualized, and data-based **process** of determining the *function* of a challenging behavior
  - ***Function*-** what is the cause of the behavior? what kind of reinforcement is maintaining (or increasing) the behavior?

- Function-based intervention is the BEST kind of intervention for challenging behavior. It treats the FUNCTION of the behavior- and not the form
  - Can be done in conjunction with other interventions
  - Combine antecedent and other reinforcement-based interventions to help acquire, maintain, and generalize the replacement behavior

Steps of the FBA

1. Identify & operationally define target behavior
2. • Collect **indirect information** & data on the behavior (context)
3. • Select measurable dimension of behavior and collect data (**direct data collection)**
4. • Compile and analyze data
5. • Determine hypothesized function
6. • Create behavior plan & test (**function-based intervention**)
7. • Monitor effectiveness & modify as necessary

Functions of behavior



ABC observation example

Antecedent-Behavior-Consequence Data Sheet

Setting	Antecedent		Behavior (describe)	Consequence	
Date/Time: Location: Inx/peers involved:	*Access to tangibles:* ❑ Item removed	*Access to attention:* ❑ Verbal attn. removed ❑ Physical attn. removed ❑ Peer attn. removed ❑ Eye contact removed		*Access to tangibles:* ❑ Removed item returned ❑ New item presented	*Access to attention*: ❑ Verbal attn. given ❑ Physical attn. given ❑ Peer attn. given ❑ Eye contact given
	Escape: ❑ Task direction given ❑ Transition/activity change ❑ Attention given ❑ Item presented	*Other/Automatic:* ❑ No items given/removed ❑ No attn. given/removed ❑ No tasks/activity given/removed Other: _____		*Escape:* ❑ Task direction removed ❑ Transition/activity no longer required ❑ Attention removed ❑ Item removed	*Other/Automatic:* ❑ No items given/removed ❑ No attn. given/removed ❑ No tasks/activity given/removed ❑ Other: _____
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POSITIVE SUPPORTS

Functional Behavior Assessment Quality Checklist

Assessment developers use the Functional Behavior Assessment Quality Checklist for guidance when developing a functional behavior assessment (FBA). This document includes further explanation of FBA required components (Minn. Rules 9544.0040) and suggestions for additional information that may help the expanded care team identify effective positive support strategies for the person. This document is not required: It is simply a tool to help improve the quality of the plan.

For more information on developing functional behavior assessments, see that section in the Guidelines for Positive Supports in DHS-Licensed Settings: A resource manual for Minnesota's DHS-licensed providers, DHS-6810C (PDF).

Note: Each licensed or certified staff (such as a RN, LP, BCBA or LICSW) is responsible for meeting requirements of their professional licensure or certification and accompanying codes of ethics.

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Positive Support Transition Plan

A person's expanded support team (and, specifically, plan authors) must use this form to develop a Positive Support Transition Plan (PSTP) to implement positive support strategies and phase out prohibited or restricted interventions. Support providers use the content entered into this form as a training guide for direct support professionals who assist the person who receives services.

Common terms used in the document include:

- Interventions, which also are called procedures or targeted interventions
- Interfering behaviors, which often are called behaviors targeted for elimination or challenging, targeted, dangerous, problem or difficult behaviors
- Desired alternative behavior(s), which often are called replacement or functionally equivalent behaviors.

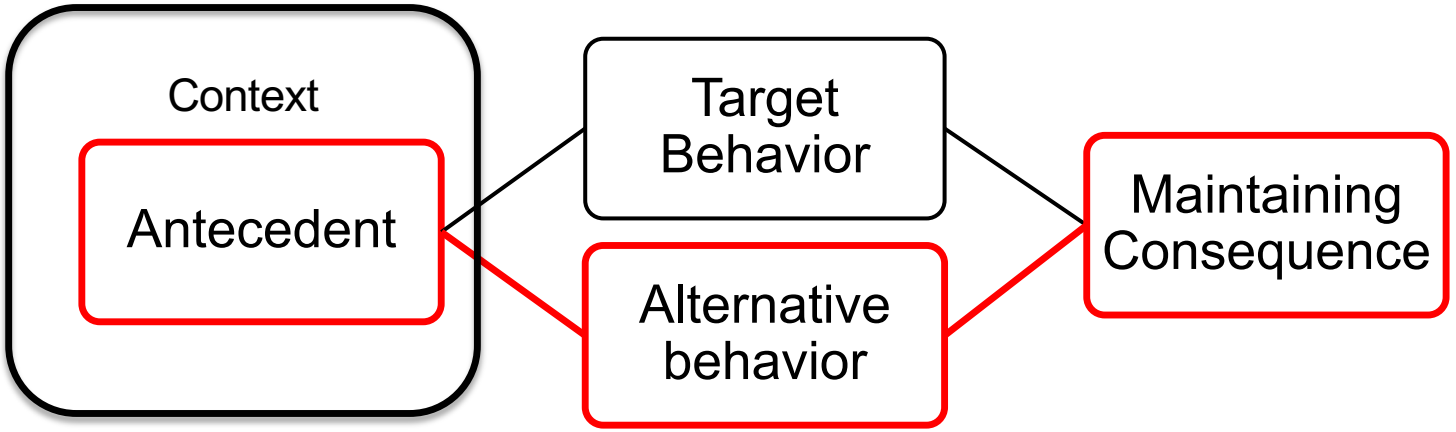
This template is helpful because it:

- Acts as a guide to organize the information you document in the plan
- Contains technical language to encourage accuracy/effectiveness
- Has examples/explanations to support understanding
- Allows multiple support providers to work together to develop content
- Provides space to consolidate additional behavior information, such as behavior support plans, into the PSTP
- Allows attachments. If the author cannot fit information into the boxes provided (e.g., a graph or chart), or if the information is already available on another document within the person's plans (e.g., medication records), the author may reference the other materials in the boxes instead of rewriting the information. All referenced materials must be submitted with the signed PSTP to DHS.

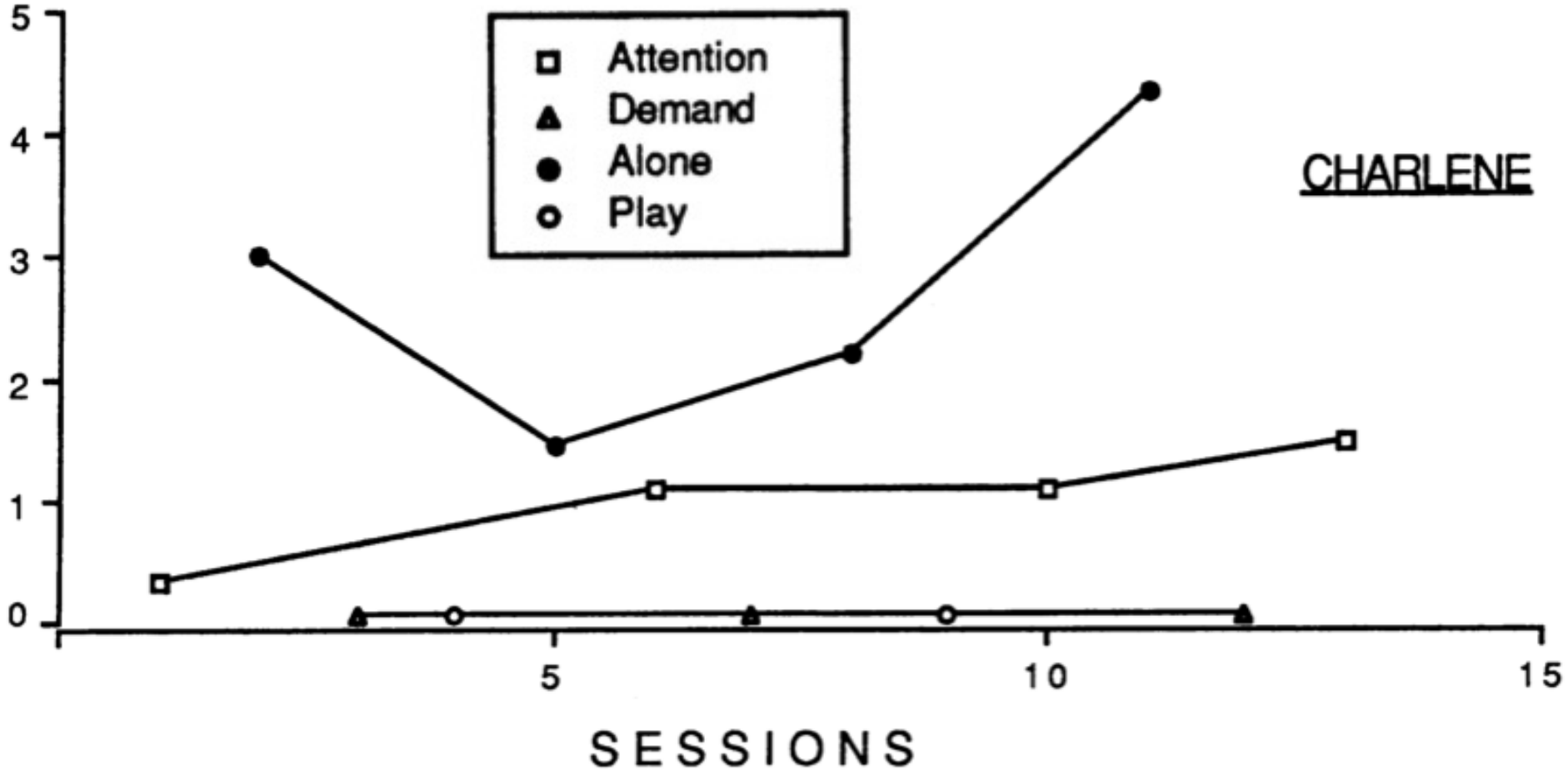
Hypothesis and Function- based plan

- Use the information collected during assessment to create a hypothesis
- This hypothesis guides the functional equivalent response we will program for during intervention
- FA/FBA directly informs functional communication training or function based intervention

Develop a plan- teaching a replacement behavior



FA example (Smith et al., 1993)



Antecedent Focused Intervention Examples

Choice	Schedules and routines: visual or electronic	Preferred Items as Distracters
Competing schedules of Reinforcement	Prep for difficult times of day or experiences	Assess potential setting events (feeling sick, pain, etc.)

NSSI treatment and intervention

- Cognitive behavioral therapy
- Dialectical behavioral therapy
- Emotional regulation group therapy
- Dynamic deconstructive psychotherapy
- Focusing on collaborative therapeutic relationships and motivations

Pharmacological interventions

- Opiate antagonists: Naltrexone and Naloxone can attenuate SIB (Sandman, 1990)
- Atypical neuroleptics: block both dopaminergic and serotoninergic receptors
- Atypical antipsychotics: Risperidone has been demonstrated to effectively address irritability and SIB in some individuals (Canitano, 2006)
- Oxytocin: supplements have been shown to reduce repetitive behavior in adults with ASD (Hollander et al., 2003)

Alternative and supplemental assessments/ treatment

Sensory assessments and interventions

Motivational interviewing

IAPP/ Behavior problems inventory

Medical evaluation

Take Home Messages:

- Rule out health problems and assess pain when appropriate
- Medication on its own may not be effective at eliminating SIB; work with BCBA, psychologists, or other service providers to address the needs of the individual and family
- SIB and aggression can be highly persistent and chronic, intensive and consistent support may be needed
- Person centered practices and culturally relevant resources needed
- There is no one size fits all treatment; best practices requires collaboration

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