

Title: Conducting FBAs and Designing Behavior Interventions for Individuals with ASD: Keeping the Characteristics in Mind

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Recognizing when problem behaviors are a manifestation of ASD is a challenging task that requires more than “common sense.” Further, there must be a willingness and conscious determination to consider the possible role of the ASD in the behavior of concern. Those who do not understand the characteristics of autism are more likely to perceive those with the disorder as being poorly behaved or as “needing more discipline.” It is critical for teachers, parents, and others in helping roles to be able to recognize characteristics of ASD that underlie challenging behaviors. This presentation will discuss components of a functional behavior assessment and introduce a new approach to examining behaviors while considering the underlying autism spectrum disorder.

COMPONENTS OF A FUNCTIONAL BEHAVIORAL ASSESSMENT

The completion of an FBA is essential to designing interventions from a behaviorist’s perspective. The FBA process is also a good source of data for measuring progress later on. The process begins by looking at behavior and the contingencies that increase or decrease the likelihood of its occurrence.

BEHAVIOR

An FBA begins with identifying a behavior of concern and defining it in a way that is observable and clear. This objective description is known as an *operational definition*. For example, “acts badly” is too vague and would be difficult to measure. Observers might define “bad” differently. The operational definition, on the other hand, describes what it looks like when a child acts “bad”—interrupts teacher by shouting, throws papers on floor, and runs out of the classroom. Behaviors that are operationally defined meet two criteria:

1. Behaviors are observable and measurable
2. Using the definition, two people are able to identify the same behavior when it occurs.

Once a behavior is operationally defined, it is possible to collect data about its frequency, duration, and/or severity. After implementation of an intervention plan, data can again be collected in order to measure the effectiveness of the intervention.

ANTECEDENTS

The next step in the FBA process consists of describing antecedents or “triggers.” These are environmental factors that occur before the problem behavior, such as starting a new activity, working in a group of peers, or having a substitute teacher. Two types of antecedents, trigger stimuli and setting events, are important to understand. Trigger stimuli are the discrete events that occur immediately before a behavior. One can predict

that when a trigger stimulus is present, a specific behavior will occur. For example, the sound of a fire alarm, receiving a low grade, or a sudden change in routine may be trigger stimuli. Setting events, sometimes called “slow triggers,” occur outside of the immediate setting and influence behavior. Examples of setting events include missing breakfast, medical conditions, lack of sleep, and major life changes. Interventions addressing either trigger stimuli or setting events may result in behavior change (Carr, in press, Carter & Driscoll, 2007). These interventions are called antecedent interventions.

Antecedents may be readily identified by observation. In other situations, careful data collection is necessary in order to determine the related antecedents. The trigger may not always be apparent. Remember to consider biological factors, sensory differences, skill deficits, and environmental changes or circumstances in determining the pattern as illustrated in the following vignette.

Mark seemed more off-task at school today following a three-day weekend. He continuously asked his teacher if the class was going to art today. After asking for the fifth time, his teacher said, “No more questions.” During the days and weeks that followed, Mark cried in class every time his peers raised their hand to ask a question.

In this scenario, there was one obvious antecedent—the schedule change (a three-day weekend). While this initially helped to explain Mark’s agitation and repetitive questioning, his teacher was confused because there had been several three-day weekends, and even a week-long break, since school started. Mark had never taken this long to adjust. His teacher was mystified why this break caused more difficulties for him. It was not until she heard him crying and repeatedly mumbling, “No questions,” that she was able to piece together his concern. She realized that the actual antecedent was her initial comment, “No more questions.” Because of Mark’s concrete interpretation of language, he believed that asking questions was now against the rules in school.

CONSEQUENCES

The final component in identifying the function of behavior is to consider the consequences. This refers to both positive and negative events that occur after the behavior. Examples include private conversation with teacher, isolation from peers, loss of recess, earning stickers, shortening a task, delay of task, and receiving additional help.

Another example of an FBA is depicted in Figure 1. In this case, the *behavior*, “loner” on playground, was operationally defined as wandering the perimeter, flapping hands, shaking sticks in front of his eyes, talking to himself. The *antecedent* was being on the playground at recess and all related environmental factors—noises, reduced structure, and so on. The most obvious *consequence* of this behavior was isolation from peers.

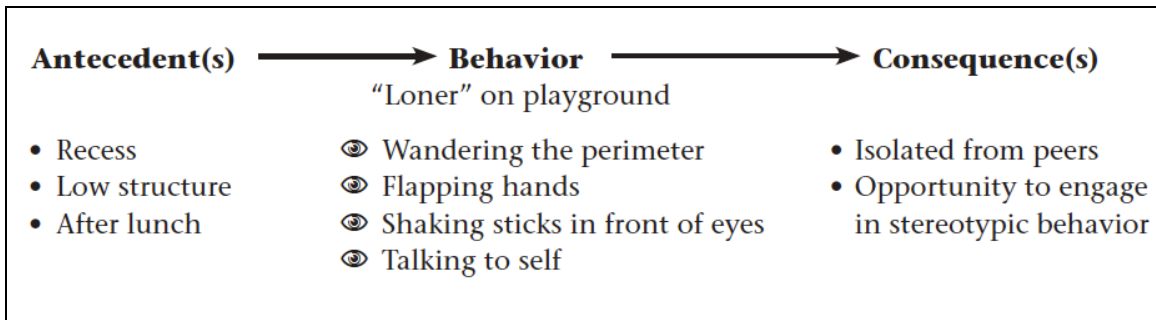


Figure 1. Functional behavioral assessment for social isolation.

This boy’s teacher decided that the function of his behavior was to escape something overwhelming to him (interaction with peers on the playground). She decided to assign him a peer buddy for recess and to allow him to work in the library for the first half of recess to decrease the length of time he was exposed to the stresses of the playground setting.

Figure 2 depicts an FBA for a student who had behavior problems in school. The antecedent was a request to complete a written task. His teacher said that he displayed “meltdowns,” which were operationally defined as episodes where he hit the teacher, yelled, cried, and/or put his head on the table. Consequences for the behavior were missing recess and completing the work in a specialized setting.

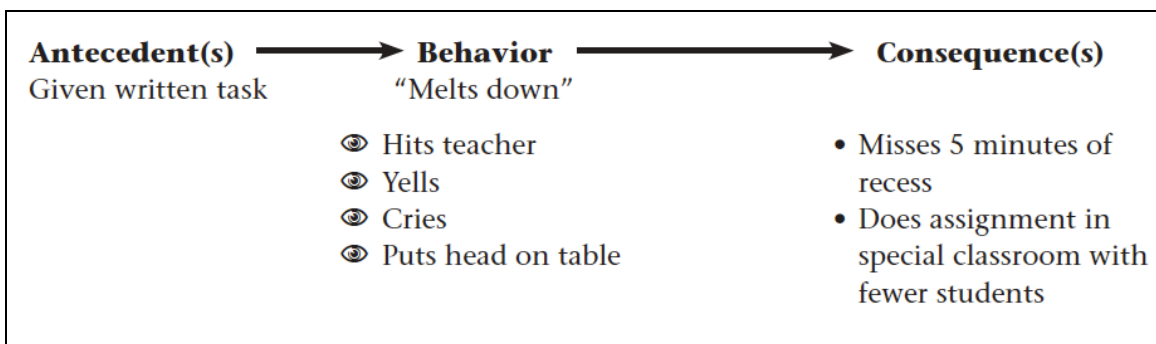


Figure 2. Functional behavioral assessment for melting down.

In looking at the patterns, the teacher determined that the function of the behavior was to escape or avoid written work. Based on this information, she developed an intervention to maintain the demands while rewarding the student for time spent working.

INTERVENTIONS BASED ON FUNCTIONAL BEHAVIORAL ASSESSMENT

After discerning the function of behavior, interventions can be developed. Interventions based on the FBA can be designed to make changes at three different points—the antecedent, behavior, or consequence.

- *Antecedent interventions* are best described as preventative. They prevent problem behaviors by changing environmental factors that precede them.

- *Interventions at the point of behavior* take the form of teaching skills sometimes called replacement behaviors. For example, rather than interrupting a lesson, one can teach a student to raise her hand. Or instead of yelling and hitting others, one can teach an individual to ask for help or take deep breaths to calm down.
- *Consequence interventions* change the factors that follow and sustain behavior. Ideally, this type of intervention consists of designing rewards or reinforcement for replacement or productive behaviors. Rewards are an essential component in teaching skills. *It is not possible for learning to occur without reinforcement.*

Regardless of the function of behavior, understanding of antecedents, behaviors, and consequences provides three points of intervention—antecedent interventions (preventative), behavior interventions (teaching a skill), and consequence interventions (reinforcement of new skills). For example, knowing that an individual has difficulty with writing, we can reduce the work (antecedent strategy), teach him to use a word processor (behavior strategy), and reward for completing written tasks (consequence strategy). Use of all three points of the ABC framework ensures more thorough and effective interventions.

The FBA focuses on observable behaviors, while knowledge of specific diagnoses, such as ASD, is treated as irrelevant for intervention planning. Thus, a strict behavioral approach fails to take into account the underlying characteristics that Schopler (1994), as well as the current authors, considers to be critical to understanding behaviors and designing interventions. In other words, *interventions based only on an FBA are created without consideration of the autism context.*

THE ICEBERG ANALOGY

The iceberg is a universal analogy for describing critical aspects of objects or circumstances that are not apparent without careful observation. The creators of the Treatment and Education of Autistic and Communication handicapped Children (TEACCH) approach applied this analogy to aid in understanding the behaviors of individuals with autism. The Ziggurat Model expands this analogy.

THE TEACCH ICEBERG

In contrast to the behavioral approach that focuses mainly on observable behaviors, the TEACCH approach emphasizes identifying underlying strengths and needs related to the disorder itself. Schopler's (1994) use of an iceberg, in which the observed behaviors are represented by the tip of the iceberg, while the unseen causes lie beneath the surface of the water, best depicts this approach. Thus, interventions based on the iceberg concept are designed to address underlying deficits or characteristics associated with autism.

There are several routes to determining the underlying factors of a behavior. Knowledge of underlying factors comes from formal and informal assessment and awareness of the

characteristics of ASD. With experience and training, it is often possible to begin to theorize about underlying factors without in-depth assessment. For example, if a child is socially isolated on the playground, we immediately begin to consider possible underlying causes such as: sensory factors – heat, noise; weak theory of mind – difficulty knowing what other children enjoy doing; obsessions – interests not shared by peers; and poor communication skills – not knowing how to ask to join a game. The iceberg analogy, while emphasizing the underlying characteristics of ASD, fails to include an analysis of patterns of behavior; therefore, it is limited in its usefulness for addressing specific behavior concerns.

A more structured assessment will help to identify additional underlying factors. The Ziggurat Model incorporates a special assessment—the Underlying Characteristics Checklist (UCC)—to accomplish this task.

Consideration of patterns of behavior in addition to underlying characteristics will lead to a better understanding of specific behavioral concerns and their unseen causes. The next section will describe one of the two assessment tools of the Ziggurat Model—the ABC-I. While overcoming limitations of both the FBA and the iceberg analogy, the ABC-I benefits from the strengths of each.

THE ABC ICEBERG

The traditional iceberg analogy (Schopler, 1994) examines the relationship of underlying characteristics of ASD and a given behavior. The combined ABC-Iceberg (ABC-I), has the added benefit of looking at events that occur before and after a behavior (antecedents and consequences). The ABC's have been added to the iceberg. Examination of these patterns indicates additional aspects of the underlying disorder that may be involved. Compare the example in Figure 3 depicting the analysis of a “melt down,” which includes only the description of the behavior, to the example in Figure 4, which includes descriptions of both the antecedents and the consequences along with the behavior. The inclusion of the before and after events brings more aspects of the ASD into the light. Consequently, with the additional information—that written tasks were an antecedent and missing recess was a consequence—it becomes apparent that difficulties with low frustration tolerance, poor handwriting and motor coordination, and difficulty making friends are additional factors that intervention must address.

In short, the relationship between the behavior and the characteristics of the disorder becomes more evident when the antecedent and consequences are included in the assessment.

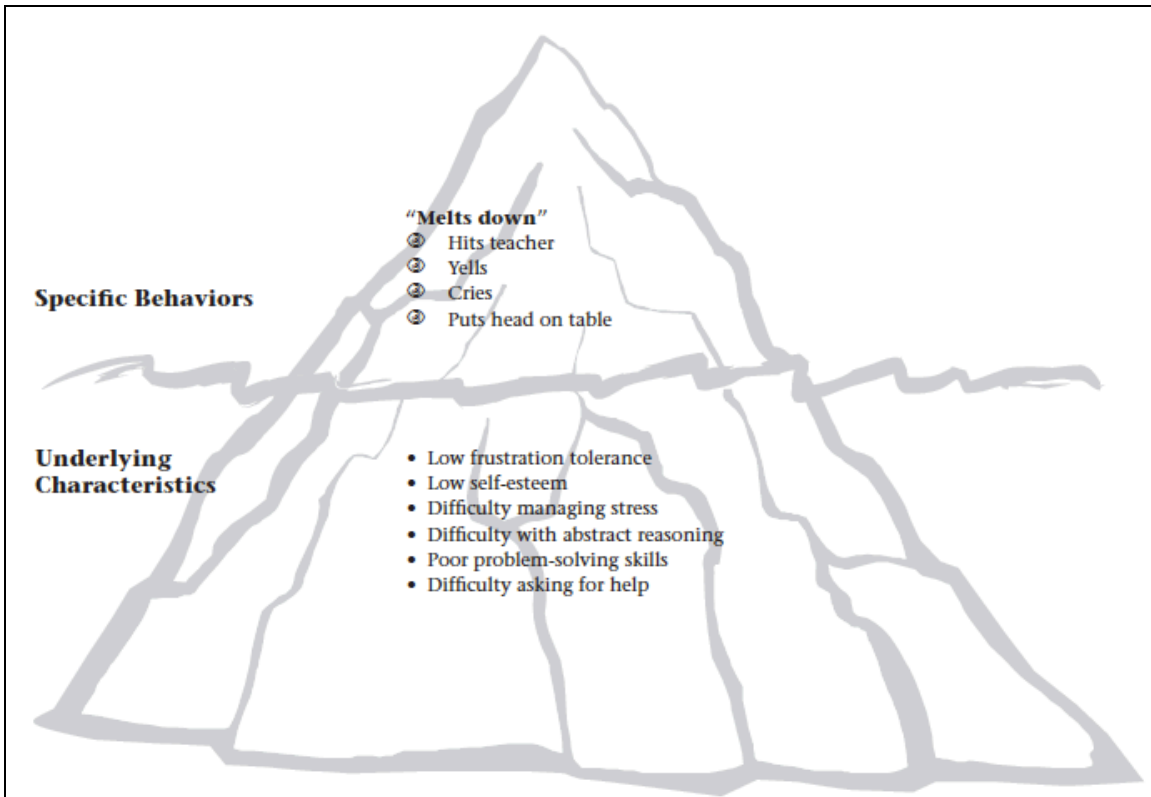


Figure 3. Schopler's iceberg (1994) applied to meltdowns.

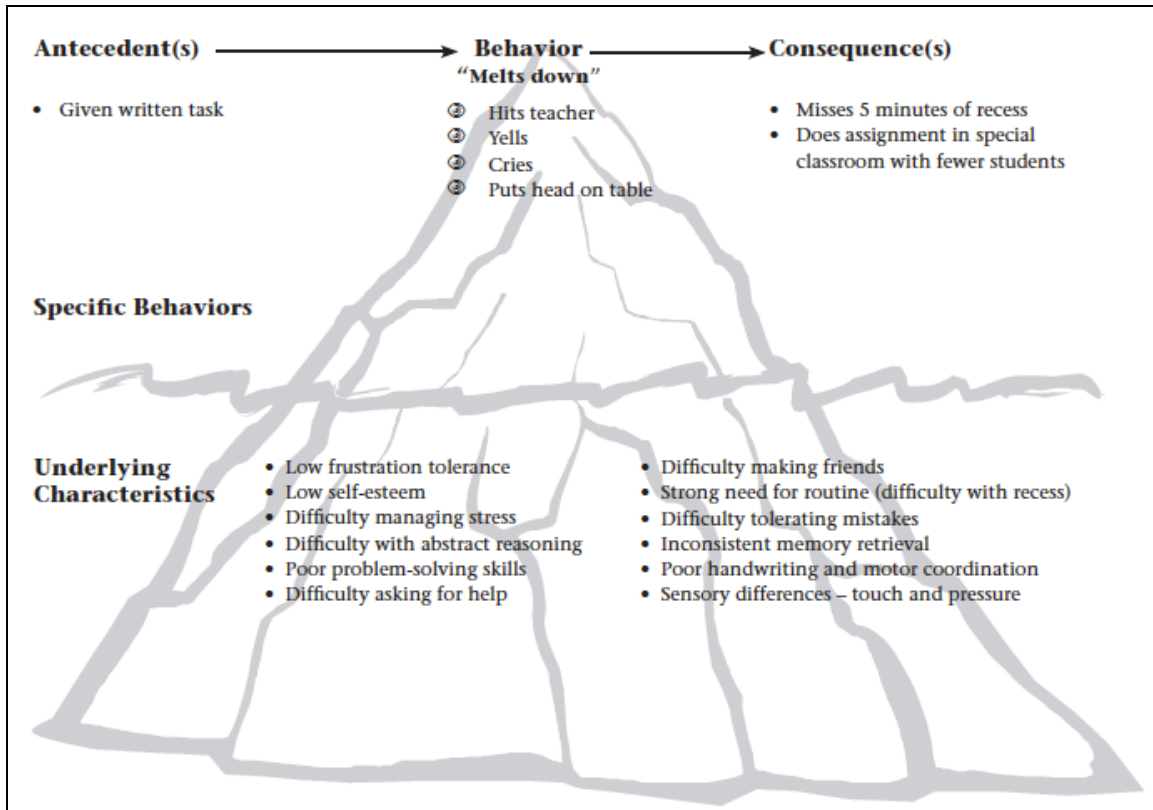


Figure 4. ABC-I applied to social isolation.

The ABC-I also helps to overcome limitations of the FBA. As mentioned earlier, interventions based solely on an FBA do not address underlying factors or the impact of ASD on behavior. That is, without understanding the behavior in the context of the disorder, interventions are designed as if the ASD is not a factor. For example, the “meltdown” scenario depicted in Figure 4 (ABC portion) leads to the conclusion that the function of the behavior is to escape written tasks (or at least to avoid doing them independently). Several interventions could be designed based on this hypothesis without considering the underlying autism. They might be effective; however, without considering the disorder, they could cause more harm than good or be merely “band aids” because they ignore critical underlying areas for intervention.

An intervention strategy for a child who cries and hits when asked to write might be to double the amount of recess missed from five minutes to ten minutes for each incident of “melting down.” Such an intervention may be effective for the typical child who enjoys recess; however, for the child with autism, it might be negatively reinforcing. In other words, because removal from recess provides escape from the overwhelming social and sensory demands of the playground, it may be highly rewarding for a child on the spectrum and would, therefore, result in an *increase* in meltdowns. This example demonstrates how failing to take the underlying characteristics into consideration might lead to unanticipated, harmful results.

Again, consider the student who melts down when given written tasks. An intervention based strictly on the antecedents and consequences might be to strongly reinforce each two minutes of writing without yelling and crying, and so on. While it is possible that this intervention would result in increased time writing without meltdowns, similar to the proverb of “teaching a man to fish,” addressing underlying factors, such as low frustration tolerance, social skills deficits, and sensory differences, would have a more lasting impact. Further, these skills are more likely to transfer (generalize) outside of the specific classroom setting (e.g., playground) to other situations that may be frustrating (e.g., math and spelling). As a result, interventions based solely on the FBA may simply be “band aids” that temporarily alter the behavior, without any true change or growth.

One of the greatest challenges in designing interventions is the ability to “see the autism.” That is, one must have a strong enough grasp of the characteristics of ASD to be to see past the surface behavior—recognizing the importance of what lies beneath. In this manner, it becomes apparent that an intense need for routine and sameness may explain what appears to be oppositional and defiant behavior. This shift in perspective is crucial. Without an accurate perception, we are more likely to punish behaviors than to work to prevent them and teach missing skills. This is not to say that all behaviors are related to ASD; *however, when uncertain, it is always better to intervene as if the behavior is related to the disability.*

The ABC-I is an essential tool that builds on the strengths of the FBA and iceberg analogy. Assessing the patterns of behavior with an understanding of the characteristics of ASD provides the information necessary to develop comprehensive interventions that target the behaviors in addition to the core features of the disorder.

References

- Schopler, E. (1994). Behavioral priorities for autism and related developmental disorders. In E. Schopler & G.B. Mesibov (Eds.), *Behavioral issues in autism* (pp.55-75). New York: Plenum Press.