Braden on Behavior

Behavior Modification in the Classroom

(Editor's note: This is the first of a four-part series addressing the subject of managing behavior in children with fragile X syndrome by longtime NFXF contributor Marcia Braden, PhD. Subsequent articles will address behavior at home, in social settings, and in the wider community. Contact: info@marciabraden.com)

During a recent school consultation, I was reminded of how the behavior of students with fragile X syndrome is often misunderstood in the classroom. Watching a student with FXS struggle is difficult when his behavior is affected by those characteristics that make up the Fragile X phenotype. (See chart below.) The fact that sensory input is difficult for him to interpret or that his speech production is cluttered and hard to understand or that his learning style is counter to the way teaching is traditionally conveyed may be the very reasons he is acting out or refusing to participate.

An example most parents and professionals familiar with FXS would recognize: The loud and unpredictable sound of the music class next door to our student's classroom causes him to become hyper-aroused, scanning the room waiting for the next sound to be made. After a while, he covers his ears, puts his head down on the desk and screams, unable to manage his anxiety any other way.

Obviously, the student's level of affectedness dictates just how much he can tolerate in his learning environment. His inability to tolerate certain input may result in challenging behaviors. But modifying his classroom behavior requires an understanding of the cause or function the behavior serves. Attempting to reduce the frequency of the behavior without considering its function is an exercise in futility.

In other words, in order to change or modify the behavior, we must understand why it occurs. When we understand, we can be more successful in helping the student with FXS become more adaptable and less disruptive in the classroom.

The idea of modifying behavior is not new. Now referred to as "Applied Behavior Analysis," it simply refers to a variety of strategies to increase or decrease the frequency of certain behaviors believed to enhance or interfere with learning. Many school systems use this term when discussing the treatment of problem behavior with parents. When necessary, a behavior intervention plan (BIP) is written as part of the student's Individual Education Plan (IEP). This plan includes a variety of strategies and supports to assist the student in "modifying" his behavior.

A few words of warning regarding BIPs: When rigid behavior analysis is applied without consideration for characteristics that are part of the FXS phenotype, the plan can be ineffective. In other words, pinpointing the function of the behavior is essential to effective behavior modification. But when the behavior is analyzed in isolation from the FXS phenotype, it may fit the behavioral model (determine the function and apply an intervention), but miss the mark in providing successful intervention.

The following example illustrates the difficulty of applying behavior analysis without considering the FX phenotype. A student with FXS is asked to write his name in class, but he throws the marker and tears up the paper. At first glance, the function of this behavior seems to be a willful attempt to escape or avoid the demands of the task. A behavior intervention plan might employ strategies to support the student to persevere through the task by offering substantial reinforcement such as a desired snack or free time. That's a traditional behavior modification approach, and it works with most children in most settings (with most adults, too, for that matter, though different rewards may apply).

However: This approach misses the point because the escape behavior of the student with FXS may not be willful but merely a reaction to what he experiences as overwhelming anxiety in having to write his name. Many students with FXS have motor planning and executive functioning deficits as well as fine motor delays, making writing extremely difficult. The anxiety and discomfort created by the writing task create a fight-or-flight reaction.

In this example, it is important to go beyond the typical identified function of escape or avoidance, and instead focus on determining the more relevant issue: From what is he trying to escape? When we realize what that is, we know that instead of providing motivation to have the student continue the task, it would be more effective to provide an alternative strategy for him to comply with it. Possible alternatives would be for him to use a stamp to write his name, or to spell it with letter tiles. This might eliminate his need to escape from the writing task.

Ultimately, the request to write would no longer elicit such a negative behavioral response. The student would learn that the expectation was no longer insurmountable and through repeated exposure and appropriate supports such as tracing, writing on a white board with a marker or using a keyboard, he would be more willing to attempt to write. This is the essence of behavior modification.

In another example, a student with FXS becomes anxious whenever a fellow student screams. The screaming is unpredictable and loud. The student with FXS reacts to the discomfort by hitting himself. The behavior is aggressive and could present a significant

risk to his welfare. This self-injurious behavior is not premeditated but rather, a reaction fueled by his anxiety. As the analysis is completed, it becomes clear that the only time this behavior occurs is when the other student is present. The mere anticipation of that student's screaming causes the student with FXS to become hyper-aroused and dysregulated.

How to handle this situation? The intervention might include graduated desensitization to the other student who screams. This might be accomplished by allowing the student with FXS to move away from the screaming, to wear headsets to muffle the sound or to leave the classroom to complete a contrived task. This process, however, might be so uncomfortable that the student with FXS continues to hit himself anytime he is in the presence of the other student. In this case, the success of the intervention is contingent on regulating the behavior, not spending time desensitizing him to the screaming by repeated incremental exposure.

Psychologists often use the ABC (Antecedent-Behavior-Consequence) model when analyzing behavior. The consequence actually becomes the intervention. Correct application of the model can mean the difference between successful and unsuccessful intervention. "Antecedent" means whatever was occurring just prior to the negative behavior. When we account for the FXS behavioral phenotype in analyzing the antecedent, the intervention (consequence) will be appropriate and successful. The chart below illustrates the ABC chart with the two different consequences/interventions.

Implementation of the A-B-C Model Without An Understanding of FX Behavioral Phenotype

Antecedent	*Behavior*	*Consequence/Intervention*
Writing Task	Tearing paper and throwing marker	Reinforce the student for every minute he perseveres through the task

Implementation of the A-B-C Model With Understanding of the FX Behavioral Phenotype

Antecedent	*Behavior*	*Consequence/Intervention*
Writing Task	Tearing paper and throwing marker	Offer alternative writing task, give opportunity to take a sensory break, provide letter stamps, use "backward chaining"*

* Backward chaining is a technique that breaks down a task into its sequential steps, with the adult initially doing all but the very last one. When the student is ready, the adult does all but the last two, and so on, until the student has accomplished each step on the "backward chain" and arrives at the beginning step.

The classroom is a place to learn a variety of behaviors. The student with FXS may need to learn to relate socially, complete academic tasks, demonstrate better speech production or tolerate certain sensory input without demonstrating challenging behaviors. When the intervention does not include an understanding of the behavioral phenotype, but rather requires behavior that is incompatible with what is possible, the intervention will fail. When the intervention fails, teachers and peers may come to view the student as less viable in the classroom, and the situation may needlessly deteriorate.

It is the responsibility of the educators and clinicians to observe the challenging behavior, analyze it, and decide on its function, based on a clear understanding of the characteristics that comprise the behavioral phenotype. This will ensure sound behavioral programming and successful behavior modification.

Characteristics of FXS Behavioral Phenotype

- Cognitive deficits
- Sensory integration dysfunction
- Speech and language delays
- Gross and fine motor delays
- Physical ailments
- Social/psychological deficits
- ADHD, anxiety, depression