



## *Evidence-based Practices for Treatment of Stereotypy* **Tips for Addressing Stereotypic Behavior**



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Stereotypic behavior often involves repetition and inflexibility that can interfere with learning (Cunningham & Schreibman, 2008). Forms of stereotypic behavior may include fixation on parts of objects or engagement in rituals. Stereotypy can be found in individuals with or without disabilities (MacDonald et al., 2007). However, problematic stereotypy is more often seen in individuals with autism spectrum disorders (ASD) and developmental disabilities (Cunningham & Schreibman, 2008). This article defines stereotypy, presents evidence-based practices for treating stereotypy, and provides examples of possible solutions to address stereotypies.

### **What is Stereotypy?**

The term *stereotypy* is used to classify repetitive behavior that does not appear to serve an adaptive function. Stereotypy is also known as self-stimulatory behavior or “stimming” due to the individual engaging in sensory input. Common examples of stereotypy are hand flapping, body rocking, spinning objects, immediate and delayed echolalia, and running objects across one’s peripheral vision (McLaughlin & Fleury, 2018). More complex stereotypy may include fixation on routines or parts of objects. For example, a child may line up objects or become fixated on the

wheels of a car (Cunningham & Schreibman, 2008). Additional types of stereotypies include vocal stereotypy, defined as any instance of contextually unrelated speech (Ahearn, Clark, MacDonald, & Chung, 2007). Since stereotypy may be maintained by automatic reinforcement, it can become problematic in finding a replacement behavior with the same reinforcing quality.

### **Addressing Stereotypy**

Determining when to address stereotypy can be challenging, as some stereotypic behaviors can decrease with skill acquisition. However, if stereotypy is interfering with learning, or results in social isolation or disruption, the teacher should develop a plan to decrease the behavior (Sheehey & Wells, 2018).

### **Evidence-Based Interventions**

Fortunately, there are evidence-based practices that can be implemented to reduce interfering stereotypic behavior. Lanovaz and Sladeczek (2012) report that there are both antecedent and consequence-based interventions that are effective in treating stereotypy. Table 1 provides an overview of the identified evidence-based practices.

**Table 1. Evidence-Based Practices**

Practice	Definition	Example
Environmental modification	Modification of environment to decrease interfering behavior by increasing engagement in appropriate activities (Odom, Collet-Klingenberg, Rogers, & Hatton, 2010).	The teacher embeds three preferred activities within the 15-minute circle time activity to keep students on task.
Differential reinforcement	Reinforcement on alternative or low rates of behavior as a means to replace interfering behavior (Odom et al., 2010).	During circle time, a teacher reinforces holding a book or object instead of hand flapping. Once a rate of vocal stereotypy is determined, teacher provides reinforcement every 5 minutes when the child demonstrates a reduced rate in stereotypy.
Non-contingent reinforcement using matched or unmatched stimuli	Access to reinforcing stimuli based on a time schedule or continuously. Reinforcing stimuli can match the stereotypic behavior. Reinforcing stimuli can be unmatched, but should be preferred and a reinforcer for the child (Lanovaz & Sladeczek, 2012).	A student engages in vocal stereotypy. The teacher provides access to preferred songs throughout the day. Delivery is based on the number of minutes without vocal utterances. A student engages in motor stereotypy (e.g., running/jumping). Access is provided to a preferred toy based on the specific duration of time unengaged in the stereotypic behavior.
Response redirection	Blocking of behavior with redirection to more incompatible behavior (Odom et al., 2010).	When a student begins vocal stereotypy, the teacher asks the student, "What is your name?" If the student responds, praise and redirection are provided. Student's behavior is reinforced for participating in the task.

Environmental modifications are the least intrusive and require observation as the first step. Students often demonstrate stereotypy when they are not engaged in reinforcing activities. Environmental changes should be made that limit the amount of time the child is unengaged. If the stereotypy continues to interfere with learning, a Functional Behavior Assessment (FBA) should be conducted.

Along with self-stimulation, stereotypy can be multi-controlled as the student learns the behavior can function as a form of escape and attention (Cunningham & Schreibman, 2008). After an FBA is conducted, interventions should be developed that address the needs of the student. If multiple functions are identified, separate intervention plans may be needed. Factors that influence intervention type include context of the environment and student characteristics.

Once an intervention is implemented, data is collected to monitor the effectiveness of the intervention. Table 2 provides examples of teacher concerns and possible solutions.

**Conclusion**

For children with developmental disabilities and ASD, stereotypic behavior may occur at higher rates and can become problematic. If this occurs, an effective intervention plan should be developed and implemented. If stereotypy interferes with learning and/or socialization, or is dangerous, teachers need to conduct an FBA and develop and implement effective intervention plans (McLaughlin & Fluery, 2018). Since stereotypy can be difficult to address, teachers should seek assistance from and consult with a board-certified behavior analyst for additional support. ■

**Table 2. Teacher Concerns and Possible Solutions**

Teacher Concern	Justification	Suggested Interventions
Demonstrates stereotypy	Behavior interferes with learning, socialization or becomes dangerous.	Upon observation, determine if environmental modifications can be made to increase time on task and decrease “down time.”
Demonstrates high levels of stereotypy	Stereotypy shaped into escape/attention-seeking behaviors.	Conduct a functional assessment for intervention (Cunningham & Schreibman, 2008).
Demonstrates either/both vocal or motor stereotypy	Engages in multiple types of stereotypy.	If the child has a vocal or motor response under stimulus control, use Response Interruption and Redirection (RIRD).
No vocal responses under stimulus control	Early learner with no vocal imitation.	Use a motor response to block the vocal stereotypy if the child has a motor response under stimulus control.
No motor or vocal responses under stimulus control	Early learner with no acquired motor/vocal imitation.	Use non-contingent reinforcement (NCR) with matched/unmatched stimuli.
Difficulty delivering NCR in applied classroom setting	Staff has many responsibilities and forgets to deliver the NCR.	Use a timer to prompt staff. Start with a high level of scheduled NCR and slowly decrease NCR to a variable schedule. A routine of behavioral momentum using reinforcing tasks can be used as NCR.

### References

- Ahearn, W. H., Clark, K. M., Macdonald, R. P., & Chung, B. I. (2007). Assessing and treating vocal stereotypy in children with autism. *Journal of Applied Behavior Analysis, 40*(2), 263–275. doi:10.1901/jaba.2007.30-06
- Cunningham, A. B., & Schreibman, L. (2008). Stereotypy in autism: The importance of function. *Research in Autism Spectrum Disorders, 2*(3), 469–479. doi:10.1016/j.rasd.2007.09.006
- Lanovaz, M. J., & Sladeczek, I. E. (2012). Vocal stereotypy in individuals with autism spectrum disorders: A review of the literature. *Behavior Modification, 36*(2), 146–164. doi: 10.1177/0145445511427192
- MacDonald, R., Green, G., Mansfield, R., Geckeler, A., Gardenier, N., Anderson, J., . . . Sanchez, J. (2007). Stereotypy in young children with autism and typically developing children. *Research in Developmental Disabilities, 28*, 266–277.
- Mclaughlin, A. & Fleury, V. P. (2018). Flapping, spinning, rocking, and other repetitive behaviors: Intervening with young children who engage in stereotypy. *Young Exceptional Children*, online first, doi:109625061879833.
- Odom, S., Collet-Klingenberg, L., Rogers, S. J., & Hatton, D. D. (2010). Evidence-based practices in interventions for children and youth with autism spectrum disorders. *Preventing School Failure, 54*(4), 275–282. doi: 10.1080/10459881003785506.
- Sheehey, P. H., & Wells, J. C. (2018). Using response interruption and redirection to reduce vocal stereotypy. *Intervention in School and Clinic, 53*(3), 171–176. doi: 10.1177/1053451216659470