

## Intervention for Repetitive and Restricted Behaviors in Autism

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## Repetitive and Restrictive Behaviors in Autism



The purpose of this webinar is to help professionals understand the range of repetitive and restricted behaviors in autism, assess the underlying reasons why ritualistic behaviors occur and understand the multiple components needed in a treatment plan to reduce the frequency or intensity of the behaviors.

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## Autism Spectrum Disorder

**A neurological, developmental condition with 3 main characteristics**

1. Social Impairment
2. Communication Impairment
3. Repetitive and Restrictive Interests and Behaviors (RRB)



**“OBSTACLE OR OPPORTUNITY”**

**Limited research on the effect of RRB to BOTH STRENGTHEN AND LIMIT learning and development**

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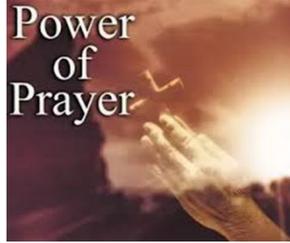
## Rituals and Routines serve a purpose for everyone

- Developing a daily routine can help us remember what to do and feel more in control.**
- Routines can aid our mental health. They can help us cope with change, form healthy habits, and reduce our stress levels.**



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## Rituals central to Religious Life



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## Rituals are studied in Sport Psychology

### Rituals Increase Focus and Decrease Stress



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## Part 1: Repetitive and Restricted Behavior in Autism

The term Ritualistic behavior is used to explain a wide range of repetitive body movements, repetitive ways to manipulate objects, and repetitive verbal actions. Rituals include unusual and/or intense interests, and strict adherence to routines.



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## The frequency and intensity of rituals differs in autism



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## Rituals – common questions (found on parent blogs)

- ✓ What is it about children with autism and trains?
- ✓ Why does my child resist changing from winter to summer clothes
- ✓ Why is my child obsessed with visiting his favorite places?
- ✓ Why does my child run back and forth, shaking things all the time?
- ✓ Why does my child have thousands of Amazon logos in his room?
- ✓ Why does my child ask the same question when he knows the answer?

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## Repetitive and Restricted Behavior in Autism

- Each child with autism will manifest repetitive and restricted behaviors in a unique way.
- Repetitive and restricted behaviors in autism is a concern **ONLY** when they interfere with learning, interfere with social interactions, and/or negatively impact an individual's emotional well-being



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## DSM-V Definition has 4 categories of RRB with examples

### 1. Stereotyped or repetitive motor movements, use of objects, or speech

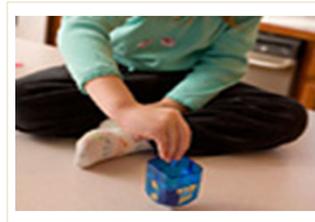
- Body stereotypies
- Object stereotypies
- Verbal stereotypies



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## Case Illustration: Object Rituals

**Sara likes to spin objects. She appears to enjoy it. She will spin her pencil whenever she is at her desk without the teaching assistant next to her. She will find objects of interest and spin them whenever she can. When told to stop, she claps her hands loudly and jumps up and down.**



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## Case Illustration: Verbal Rituals

**Maria repeats the same question over and over each time she walks into her classroom, saying “chocolate milk today?”**



**Maria screams if she doesn't get the same response from the adult in the room.**

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## DSM-V Definition of RRB with examples

### **2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of behavior**

- extreme distress at small changes
- difficulties with transitions
- rigid adherence to activity routines
- rigid thinking patterns
- communication rituals
- self-care rituals



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## Case Illustration: Resistance to Change

**Larry insists on finishing all of his work before he will line up to leave the classroom. He loudly protests whenever the daily schedule is changed and refuses to go to the next activity. This can escalate into self-injurious behavior.**



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## DSM-V Definition of RRB with clinical categories

### **3. Highly restricted, fixated interests that are abnormal in intensity or focus**

- strong *attachment* to or preoccupation with unusual objects
- strong *attachment* to 1 object or part/feature
- excessively circumscribed or perseverative interest
- limited range of interests or activity
- preoccupation with 1 topic or activity



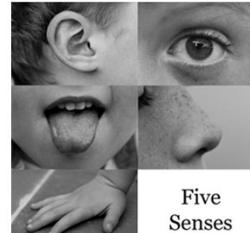
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## DSM-V Definition of RRB with clinical categories

### 4. Atypical reaction to sensory input or unusual interests in sensory aspects of the environment

- apparent indifference to pain/temperature
- adverse response to specific sounds or textures
- excessive smelling or touching of objects
- visual fascination with lights or movement
- Self-Injurious Behavior \*



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## Case Illustration: Eating Ritual

**Michael only eats pasta and bread for breakfast, lunch and dinner.**

**He eats by breaking the bread into small pieces. He squeezes the pasta between his fingers before each bite.**

**His family is very concerned about his diet and poor nutrition.**



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## Family concerns with Rituals within Daily Living Skills

Types of Specific Problems	Examples
Sleeping	Difficult to put to bed, wakes crying often during the night, wanders house at night
Eating	Only eats 'white food', refuses new foods, refuses cold or crunchy food, only drinks from 1 cup
Toileting	Ritual or resistance to bowel movements
Grooming	Only wears certain clothing, only uses specific grooming products
Travel	Must carry specific item in the car or school bus; must sit in specific location

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## Case Illustration: Self-Injury (RRB chain)

**Jorge is a 6-year-old boy who hits his own head in the food store. His mother takes him to the store every afternoon. He does this everyday, hitting himself 3-4 times in a row.**



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## Part 2: Assessment of RRB

Rituals are often a coping mechanism. Repetitive behaviors can sometimes help a child feel calm in a situation that seems chaotic to them. Other times it is the child's way to communicate confusion or frustration.

A Ritual becomes a problem when it is disruptive in public places.

A Ritual becomes a problem when it causes emotional distress for the child.



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## Range of Reasons for Repetitive & Ritualized Behavior

- Emotional - increase focus, calmness, sensory input
- Anxiety – decrease stress, frustration, discomfort
- Social – pleasurable, meaningful
- Communication – means of communication
- Cognitive – poor generalization
- Executive Function – disorganized, confusion
- Physical – response to hunger, pain, discomfort, sleep deprivation (i.e., medical)

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## Every Child is Different

**Many children can have the same challenging repetitive restricted behavior; for example, persistent questioning, but each child is doing it for a different reason; for example, Rocking body back-and-forth or self-injury can be:**

**Child 1 RRB response to physical pain (medical)**

**Child 2 RRB due to the loud noises (anxiety)**

**Child 3 RRB for attention and means of communication (social)**

**Child 4 RRB due to frustration with e (confusion)**



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## The Assessment Process for RRB: FBA plus more!

**Before you begin: Does the student require intervention for RRB? Why?**

**If yes, assessment is conducted to answer 4 questions:**

- 1. What RRB behaviors and related obstacles to learning are in the child's repertoire?**
- 2. What stressors are in the child's life?**
- 3. What function does RRB serve? (i.e., what maintains the behavior?)**
- 4. What internal and external factors may be contributing to the RRB?**

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## Goal of the Assessment

1. Describe complete repertoire of all ritualistic behaviors that are *obstacles* in order to find patterns
2. Identify possible child stressors to consider physical and mental health factors
3. Assess the function of the behavior to determine what purpose the behavior serves for the child
4. Identify environmental factors and triggers that may be impacting the frequency and intensity of the RRB



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## Informal Assessment Tools for RRB

- The Repetitive Behavior Scale – revised  
(Lam, 2007)
- The Stress Survey Schedule for Persons with Autism  
(Goodwin, Groden, Velicer, & Diller, 2007)
- The Behavioral Inflexibility Scale (BIS)  
(Bodfish, LeCavalier et al Jan. 2020)
- Motivation Assessment Scale-R (MAS)*  
(Durand, & Crimmins, 1992)
- Functional analysis screening tool (FAST)  
(Iwata, et.al, 2005)

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Analysis of 18 Cases - Common Antecedents			
<b>Most common Setting Events</b>  <b>and</b>  <b>Environmental Triggers</b>	1.	Specific staff member present	2
	2.	Specific staff member missing	6
	3.	Specific object missing	1
	4.	Specific noise present in the environment	2
	5.	Observation of a Specific Event	1
	6.	Transition into or out of context	4
	7.	Presence of Pain or Discomfort (toothache, headache, sore throat )	12
	8.	Information missing "When can I ...."	6
	9.	Information Missing "Where is .....?"	6
	10.	Staff touching or moving objects	10

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Example - Charlie's Rituals	
<ul style="list-style-type: none"> <li>❑ Perseverates on a specific part of a video (rewinds and replays).</li> <li>❑ Perseverates on specific iPad application.</li> <li>❑ Negative reaction when iPad or computer is limited or <u>removed</u> (screaming, aggression)</li> <li>❑ Increases when Dad's work schedule changes and he is not home at bedtime</li> </ul>	

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## Example: John's Repetitive Behaviors

**Cyclic presentation with low/high rates of repetitive behaviors:**

- Hand rubbing
- Vocal screeching
- Perimeter pacing
- Jumping
- Torso scratching
- Hand biting
- Aggression



- Rates increase when familiar adults “come and go”
- Self-injury began after the death of his grandfather

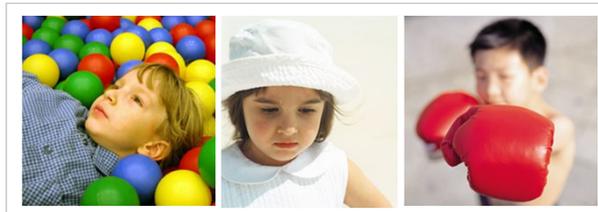
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## Part 3: Intervention Planning

**Assessment information and treatment plans will look different in each child with RRB**

**Two children may have the same RRB but their intervention goals and strategies will be different.**

**Intervention is complicated.**



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## The Four Pieces of Intervention Planning

- 1. Behavioral Support – Antecedent Management**
  - Environmental Accommodations - Visuals, choices
  - Non-contingent Reinforcement
  - Establish New Replacement Routines
- 2. Emotional Support – EBP to decrease anxiety**
  - Teach Replacement Relaxation Skills
  - Increase Exercise
- 3. Social & Communication Support**
  - Teach Replacement Social Skills
  - Teach Replacement Communication
- 4. Medical Treatment (sometimes)**



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## Antecedent Management

### VISUAL SUPPORTS

- Establish daily routines
- Clarify “when” to access materials
- Clarify “how long” time and transitions
- Clarify who
- Clarify expectations
- What to do when “change” happens

Get Dressed 	Eat Breakfast 
Clean Up 	Brush Teeth 
Screen Time 	Baking 
School 	Play Outside 
Color 	Play Dough 
Walk 	Play Time 

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## When will I see you again?

- So many people coming and going**
- Visually clarify who is with the child**



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## Transition Helpers

- Use “First-Next” routine**
- Clarify how many more (turns, puzzle pieces, work problems) before the end**
- Visually illustrate how long by using a clock or timer**
- Establish a concrete transition routine using objects, songs, visual**  
**Have child carry something to next activity**
- Clarify when child can go back to a favored activity**



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## Video Modeling – Teach Replacement Skills



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## Teach Replacement Routine for Comfort

**Provide alternative to RRB that provides the same sensory input**  
**Structure time to engage in ritual to fulfill a need but with clear end point**

**Example: Philip's ritual of touching hair**



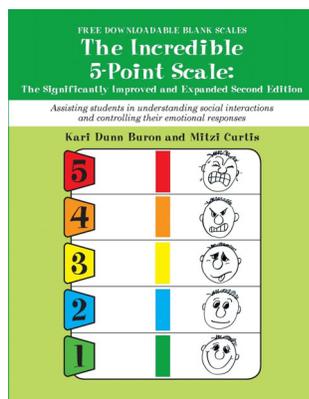
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## Teach: I need a Break



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## Incredible 5-Point Scale



Let's Check In	What does it feel like?	What does it look like?	What should I do?
 <b>5</b>	<b>Out of Control</b> Feels like Bowser and you panic (terrified, heart racing, "elephant in your stomach")	<ul style="list-style-type: none"> <li>Hide my face</li> <li>Screams</li> <li>Runs away</li> <li>Crying or yelling</li> </ul>	<ul style="list-style-type: none"> <li>Walk with an adult</li> <li>Hug my mom or dad or teacher</li> <li>Think about Mario big and brave</li> <li>Draw</li> </ul>
 <b>4</b>	<b>Really Worried</b> Feels like Bowser Jr and it feels like my stomach is tied up in a knot	<ul style="list-style-type: none"> <li>"Pickle face"</li> <li>I talk about the same thing again and again</li> <li>My voice sounds like a little girl</li> </ul>	<ul style="list-style-type: none"> <li>Take a break</li> <li>Draw</li> <li>Look at a picture of my plushie</li> <li>Think about Mario big and brave</li> </ul>
 <b>3</b>	<b>A little worried,</b> Feels like a Toad and my face gets hot	My fists are tight My legs won't move My body is tense.	<ul style="list-style-type: none"> <li>Take a few breathes</li> <li>Close my eyes</li> <li>Ask for help</li> <li>Think about Mario big and brave</li> </ul>
 <b>2</b>	<b>I think I can</b> Feels like Yoshi who thinks "Something doesn't feel right"	My "thought bubble" is full My face is a little tense	<ul style="list-style-type: none"> <li>Take a few breathes</li> <li>Close my eyes</li> <li>Ask for help</li> <li>Power Up!</li> </ul>
 <b>1</b>	<b>Just right</b> Feels like Mario I'm calm, happy, and ready to!	<ul style="list-style-type: none"> <li>Happy</li> <li>Calm</li> <li>Relaxed</li> <li>Ready to work and play</li> </ul>	<ul style="list-style-type: none"> <li>Keep having fun</li> </ul>

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## Responses to Behavior - Step 1

**Step 1: Never attempt to block or stop a ritual without warning. No physical redirection without warning**

**”Tell” the child in a consistent predictable way that you will help them**

**Ex: “\_\_\_\_\_ will stop in 5-4-3-2-1”**



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## Step 2 Redirect to Replacement Skill

**Step 2: Redirect to a new skill/behavior.**

**This requires “teaching” the replacement social and/or communication skill**

**Making choice of preferred activities to do**

**Nonverbal requesting ritualized activity for designated period of time**



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### Step 3 - Reinforcement

**Step 3: Reinforce new skill/behavior.**

- NON-CONTINGENT REINFORCEMENT** – intermittent schedules of reinforcement
- Do NOT explicitly reinforce the ABSENCE OF BEHAVIOR (it will BACKFIRE)**
- Reinforce use of replacement skill**



**Ben's program for verbal scripting quickly lead to self-injury**

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### John's Intervention

- Visual schedule (what & who)**
- Schedule of choices with preferred items available**
- Photo album to clarify who is at home/school and when**
- Exercise Routine**
- Variable schedule of non-contingent reinforcement**
- FCT "Wait, I have a question" When are you coming back?"**



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## Change Takes Time



**We often want immediate, simple solutions to stop challenging behaviors, but this is not realistic. There are no simple solutions to address the many complex behaviors observed in autism.**



**A multi-tiered intervention model offers many long-term benefits, but it takes time to work effectively.**

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**Thank  
You**

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## REPETITIVE AND RESTRICTED BEHAVIOR IN AUTISM

### ASSESSMENT RESOURCES \*

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Groden, J., Diller, A., Bausman, M., Velicer, W., Norman, G. & Cautela, J. (2001). The Development of a Stress Survey Schedule for Persons with Autism and Other Developmental Disabilities, *Journal of Autism and Developmental Disorders*, Vol. 31, No. 2, pp. 207-217.

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Lecavalier, L., Bodfish, J., Harrop, C., Whitten, A., Jones, D., Pritchett, J., Faldowski, R. & Boyd, B. (2020). Development of the Behavioral Inflexibility Scale for Children with Autism Spectrum Disorder and Other Developmental Disabilities. *Autism Research, INSAR*, 06 January.

\*Most of these assessment tools can be found in Pdf format through a Google search.