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2016-17 Autism Speaker Series
Method Behind the Mystery:
Understanding and Managing
Pica and Stereotypic Behavior

Method Behind the Mystery:
Understanding and Managing Pica and Stereotypic Behavior
Lisa Rettig, B.A.
University of Houston - Clear Lake
December 10, 2016

Types of Reinforcement

Social
• Access to attention
• Access to items
• Escape from instructions or situations

Automatic (Sensory)
• Feels good
• Relieves discomfort

Iwata, Durieux, Slifer, Baum, & Rinchick (1994)
Meyer et al. (1998)
FOR BEHAVIOR THAT PRODUCES SOCIAL REINFORCEMENT

Attention or tangible
- Making Teachable Moments out of Meltdowns for Toys, Treats, and Attention
  Presented by Kyle Dawson and Christie Stehl
  Video at http://prtl.uhcl.edu/autism-center/speaker-series/previous-lecture-materials

Escape from demands
- Don’t Sweat the Hard Stuff: Managing Problem Behavior During Work Time
  Presented by Channing Langlinais
  February 11, 2017

AUTOMATIC REINFORCEMENT

- May seem to occur “out of the blue”
- Nothing in the environment causes the behavior
- Many behaviors fall into this category
  - Eating or drinking
  - Running
  - Pica
  - Stereotypy

PICA
A PATTERN OF EATING NON-FOOD MATERIALS
**COMMON PICA ITEMS**

- Dirt
- Paint chips
- Chalk
- Coffee grounds
- Cigarette butts
- Feces
- Glue
- Hair
- Paper
- Toothpaste
- Soap

**WHAT IS KNOWN?**

- Can occur in disabled or neurotypical individuals of all ages
- Can be dangerous
  - Lead-based paint chips
  - Sharp objects
- Can lead to nutritional deficiencies
- Can be caused by medical or psychological problems

1: KRUCIK (2005)
2: WEB MD, (N.D.)

**CONSIDERATIONS BEFORE TREATMENT**

- Medical causes (eliminate first)
- Developmental level
- Persistence
- Ingestion of dangerous items
- Frequent ingestion of inedible items

1: AMERICAN PSYCHIATRIC ASSOCIATION (2013)
STEREOTYPY
REPEITIVE MOTOR AND VOCAL RESPONSES
—AHEARN, CLARK, MACDONALD, & CHUNG (2007)

TYPES OF STEREOTYPY

VISUAL
• Hand flapping
• Shaking objects

AUDITORY
• Repeating sounds
• Tapping ears

VESTIBULAR
• Rocking
• Stomping
• Spinning

TACTILE
• Mouthing objects
• Rubbing
• Scratching

WHAT IS KNOWN?

• Part of typical development3,7
  – May occur earlier and more in people
    with autism spectrum disorder (ASD)18
• Part of diagnostic criteria for ASD1
• Believed to occur because the
  individual enjoys the sensation6
  – May also occur for other reasons5,3

1: AMERICAN PSYCHIATRIC ASSOCIATION (2013)
2: BRODISH, SYMONS, PARKER, & LEWIS (2000)
3: HOLDER (1998)
4: KENNEDY, MURDOCH, & LIFS (1978)
5: MAC, BRODISH, & LIFS (1978)
6: RINCOVER (1978)
7: TENNANT (1994)
8: WATT, WETHERBY, BARBER, & MORGAN (2008)
WHEN SHOULD IT BE ADDRESSED?

- Interfering with learning and well-being\(^2,5\)
- Creating social stigma\(^4,6\)
- Affecting family functioning\(^1,3\)

1: BISHOP RICHLER, CAIN, & LORD (1997)
2: DUNLAP, OTER, & KOOS (1983)
3: GREENBERG, SELTZER, KRAUS, CHOU, & ORSHOVICH (1992)
4: JONES, WINT, & ALLS (1990)
5: FIERCE & COUCHINESS (2001)
6: WOLERY, KIRK, & DART (1981)

ASSESSMENT

FUNCTIONAL ANALYSIS

ACCESS TO ATTENTION

IWATA, DORSLEY, SLIFER, BAUMAN, & RICHARD (1994)
ESCAPE FROM INSTRUCTIONS

ACCESS TO TANGIBLES

AUTOMATIC (STIMULATION)
PROVIDE A COMPETING STIMULUS

- Identify an item that's better than the behavior
  - Give your learner a variety of items one at a time for a minute
  - Record how often they engage in the problem behavior and if they play with the item
  - Find items that they will play with instead of misbehaving
- When you find an item keep it around all the time

HAGIWARA, GONZALEZ, RIVET, & CLARK (2011)
Pizzag,et al. (1998)

<table>
<thead>
<tr>
<th>Item</th>
<th>Trial 1</th>
<th>Trial 2</th>
<th>Trial 3</th>
<th>Does he/she generally interact with the toy?</th>
<th>TOTAL PB</th>
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<tr>
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<td>Y N</td>
<td>O Y N</td>
<td>N Y N</td>
<td>III</td>
<td>Y N</td>
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<tr>
<td>Ball</td>
<td>Y N</td>
<td>Y N</td>
<td>Y N</td>
<td>Y N</td>
<td>Y / N</td>
</tr>
<tr>
<td>Book</td>
<td>Y N</td>
<td>Y N</td>
<td>Y N</td>
<td>Y N</td>
<td>Y / N</td>
</tr>
</tbody>
</table>
** BLOCK **

- Block when the learner is picking up potential pica items or putting them in his mouth
- Block when the learner begins engaging in stereotypy

HAGOPIAN, GONZALEZ, RIVET, TRIGGS, AND CLARK (2011)
MCCORD, GROSSER, JINHA, & POWERS (1996)
WINTON & SINGH (1980)

** REINFORCE MORE APPROPRIATE BEHAVIOR **

- Teach the learner to engage in more appropriate behavior
  - Play
  - Social
- Reward the learner when he engages in more appropriate behavior
- Redirect the learner to engage in the appropriate behavior

AHEARN, CLARK, MACDONALD, & CHUNG (2007)
HAGOPIAN, GONZALEZ, RIVET, TRIGGS, & CLARK (2011)
KERN, KOEGEL, DYER, BLEW, & PENTON (1982)
LANG, KOEGEL, KROEGER, REGISTER, SITZE, & SMITH (2010)
LEE, GOOCH, & LOFTIN (2007)
MAZZA, MARLET, & FISCHER (1996)
POWERS, THIBADEAU, & ROSE (1992)

** TREATMENT **

PIA
SET UP A SAFE ENVIRONMENT

• Place toxic materials out of reach and locked away
• Scan and clear out each new environment upon entering
• Keep an eye on the learner as much as possible
  – If you are unable to watch the learner for a period of time, ensure that he is in a safe location
• Notify day care and friends

SELECTING TREATMENT FOR PICA

SAFE ENVIRONMENT ➔ COMPETING STIMULUS ➔ TEACH PLAY AND SOCIAL BEHAVIORS ➔ BLOCK PICA

TREATMENT
Stereotypy
**ENCOURAGE EXERCISE**

- Have your learner exercise throughout the day
  - May replace sensory input
  - May help tire them out

Morrison, Roscoe, & Atwell (2011)

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**TEACH APPROPRIATE SETTINGS**

- Stereotypy is not always inappropriate
- Teach your learner when it is appropriate
- Only apply treatment to times that it is inappropriate
- Redirect your learner to appropriate location

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**SELECTING TREATMENT FOR STEREOTYPY**

- Competing Stimulus
- Block Stereotypy
- Teach Play and Social Behaviors
- Teach Appropriate Settings
- Encourage Exercise

These treatments should be used when stereotypy is inappropriate
KEY POINTS TO REMEMBER
• Pica and stereotypy often occur for sensory reasons
  – This is not always the case
• There are many ways to treat pica and stereotypy
  – Use the decision-making flowchart provided to determine which might be best
• Contact a BCBA for dangerous behaviors or if these suggestions don’t work

METHOD BEHIND THE MYSTERY:
UNDERSTANDING AND MANAGING PICA AND STEREOTYPIC BEHAVIOR
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