ASK THE DOCTOR:

Self-Injurious Behavior

(Maintained by Automatic Reinforcement)
ASK THE DOCTOR:

• Last Forum:

• **Part I:** Self Injurious Behavior
  
  • (SIB)

February, 2010
First Forum's Topic was PICA

That's SIB Too
Part I SIB

• But Wait,

• What if you missed it?

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Not To Worry

• April 23\textsuperscript{rd}

• Part I: Self-Injurious Behavior

• Will Run AGAIN!!!
  • A few things in common....

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Essential Ingredient

• Self Inflicted

• Tissue Damage

Specific to Autism and other DD

Not Self-Abuse in Other Psychiatric Disorders

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Examples
Top Three Risk Factors

1. Severe or Profound Developmental Disabilities
2. Diagnosis of Autism
3. Deficits in Receptive or Expressive Communication

McClintock, 2003
Non-Evidence Based
But Found in the Media

- Aroma Therapy
- Massage Therapy
- Swimming Therapy
- Hot Tub Therapy
- Supplements; Herbs
- Music Therapy
- Acceptance and Nurturing Therapy

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Part I: SIB Maintained by Social Reinforcement

• Positive

• Negative

– Accounts for 70% of the SIB seen in School – Aged Children

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Prolonged Stage of Development—sets the stage

Richman & Lindauer-2005

• 12 Subjects: normal hand mouthing
• To SIB
• Undifferentiated across FAA conditions (alone, attention, escape)
So, TODAY's Topic: SIB Maintained by:

• Automatic Reinforcement

– It’s a case of:
– You’re Not Important!!
You Know It's True When:

1. SIB occurs across Conditions
2. Continues in the Alone Condition
3. Sensory Masking Influences the Behavior

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Automatic, Sensory Reinforcement

• Undifferentiated FAA, suggesting automatic reinforcement.

• Consider Other Models, or competing possibilities:
  • Absence of Reinforcement
    • Quality of $S^{r+}$
    • Depletion of dopamine
  • Lack of Discrimination of FAA Conditions
    – Also, remember Roscoe??

Vollmer, et al. 94  
February, 2010

Dr. Susan Clare
Establishing Operations for SIB - Automatic S r+
Self-Excoriation

- Nine year old boy with severe scratching and rubbing
- Only in Alone Conditions, but EXTREME
- Token economy for DRO

Cowdery, 1990
Stressors

Attempt to Self-Soothe or Block

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Preference Assessment

- **SIBs:**
  - Ron—Head hitting, ear poking, biting, sucking fingers
  - Korey—Head banging, head hitting, hand biting
  - Rhonda—Hand mouthing (arm brace prior to study)

- Note to self: These didn’t even require sensory matching, and they were present, not contingently present

Vollmer- 94cont
Results—All Successful, 2 with adjustments

• Ron: Rubber Circles, Blocks, and Magnets

• In the presence of Enriched Environment (EE+)
Ron's a Good Subject

Rubber circles, blocks, magnets

Too Good To Be True?? Let’s replicate ACROSS subjects

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Results—All Successful, 2 with adjustments

- Korey (Head Banger): See n Say, added Music Box
Check It Out: Korey

In the presence of EE+, began to recover SIB;
Added music box

And Repeated the Experiment

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More Reinforcer Assessment Necessary

- New Addition:
  - Switch Activation of Mechanical Toys
Added switch toy activation
Rhonda (Hand Mouthing): 3 Adjustments:

1. Sound-Making Toys,

2. Added--Cookies, Koosh ball
Rhonda, Well She Was Not Convinced

History of arm splint

Sound toys, cookies, Koosh ball

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New Addition for Rhonda

3. “Hands Down” (5 seconds T.O from Mouthing)
Voila:

Yeah Rhonda!
Part 2 of the Functional Analysis

• Part 1 Functional Conditions Presented

• Part 2 continues to probe WHAT the mechanism of Reinforcement Is…

Look for Piazza—Matched Sensory Substitution Ideas--WOW

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Sensory Match Beat EE+

**SIB**
- Dangerous Climbing, Jumping Out Windows
- Saliva Smearing
- Hand Mouthing

**Match for Sr+**
- Big Bouncey Ball
- Shaving Cream on a Mirror
- Twizzlers, Hand Massager

Piazza, 2000
Rumination

Sensory Reinforcement

- Oral and taste sensations

Replacement Source

- Flavored Sprays

Wilder, 2009
1. Determine the Sensory Property(ies)

2. Mask, or Block it-use it-pair it

3. Develop Complimentary, more adaptive leisure activity
Identify the $S^{r+}$

- Hair Pulling
- Billy

- Bald Spots
- Manipulating Hair
- Finger Rubbing

Rapp, et al, 2000
Sensory Block/Substitution

The Case of Mitchell

• During Functional Assessment
• Stimulus Preference assessment
• Reduction of glove surface Every week--Finally
• Wear a watch
BUT

WHAT IF THE TOY OCCASIONS THE SIB?
The Case of the Bumble Ball

Carole Van Camp, et al, 2000

- Timon, a hand biter, high levels of SIB across FAA conditions—BUT WAIT—that Toy....a Bumble Ball

![Graphs showing functional analysis of hand biting behavior.](image-url)
What is it about that TOY?

No Vibration included audio

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Vibrating Toys: train, bug doll. Plus See-N-Say, musical turtle, toy trucks.
Treatment?

- Remove Vibrating Toys—he plays with non-vibrating toys and does not bite his hand while doing so.
Clare's Case

The Computer is the Bumble Ball

Maybe Holding a Ball with the other hand will work

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Jason & Skin Picking

• Only occurred during reading instruction

• Gave him a choice of 3 textured balls to hold during reading instruction....No Skin Picking...

• I rest my case.

Lane, Kathleen, 2006
One Last Caution

• Beware of superstitious assumptions
Because SIB is Dangerous

• Sometimes long held assumptions just don’t work

• The solution, quasi-experimental design based on the literature.

Mason, Iwata (1990), Artificial effects of sensory–integrative therapy on self-injurious behavior
The End

B Y E

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