Behavioural, my dear Watson!
Community-based assessment and treatment of operant vomiting and head banging
Concurrent session
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Objectives

✦ Service background

✦ Case 1: Demi

✦ Case 2: Christina

✦ Questions

Service background

✦ Our target population

✦ Interdisciplinary team

✦ Collaborative community partnerships
Demi

- Dx: ASD (severe range)
- Age: 2 y 9 mo
- Referring issues: vomiting, head banging, tantrums
- Home enviro: mom, dad, two siblings
Operant vomiting

What does the research say?

✦ Associated health risks (Fredericks et al., 1998)
✦ Medical vs. operant causes
✦ Lang et al. (2011) review - 21 studies; five with operant vomiting


Demi

Assessment

✦ Parent interview: FBA Inventory (2002), FAST (2005) (see Iwata et al., 2013)
✦ Direct observations in natural enviro
✦ Baseline data?

Demi

Assessment

✦ Preference assessment
✦ Functional analysis
 ✦ Response latency (Thomason-Sassi et al., 2011)
 ✦ Precursor functional analysis (Najdowski et al., 2008; Smith & Churchill, 2002)
Demi

Treatment planning concerns

✦ A well established problem behaviour; a history of failed attempts to “fix it”

✦ What about the “child effects” on caregiver behaviour? (Carr et al. 1991)

✦ Extinction? (Goh & Iwata, 1994)

✦ Differential reinforcement? NCR? Either? (Kahng et al., 1997; Vollmer et al., 1993)

Demi

MORE treatment planning concerns

✦ Limitations to DR (Vollmer et al., 1993)

✦ Limitations to NCR (Iwata & Kahng, 2005; Ringdahl, 2005)

✦ Noncontingent delivery of alternative stimulus, e.g., Fisher et al. (2004); Fischer et al. (1997); Hanley et al. (1997); Lomas et al. (2010)

✦ We’re running out of time!
Demi

Treatment: Practice trials

✦ What are we actually trying to achieve?
✦ A shaping procedure and the stepwise criterion change design (Hartmann & Hall, 1976)
✦ Introduce a new discriminative stimulus

Demi

Treatment: Practice trials

✦ Reinforcement – continuous delivery of highly preferred items
✦ DRO – if we have to!
✦ $30 shopping trip at Walmart

Protocol: Seven steps

1. Ensure a variety of highly preferred items
2. Deliver the cue
3. Show and set the timer
4. Mom leaves
5. Dad provides high quality praise and engagement with preferred items/activities
6. Mom returns when bell rings
7. Two possible outcomes for mom’s re-entry
Date:

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<th>Trial</th>
<th>Duration goal (min.sec)</th>
<th>Achieved?</th>
<th>Location of mom during trial</th>
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Practice trials for increasing "time away" from mom

Demi

- Getting down to the brass tacks
  - No further vomiting observed after the first trial
  - Intervention terminated after four days
  - Over a year later...
Christina

- Dx: chromosomal abnormalities (one deletion and one duplication), global developmental delay, complex medical history
- Age: 2 y 0 m
- Referring issue: severe head banging
- Home enviro: foster care

Self-injurious behaviour

What does the research say?
- Three decades of research on effective assessment and treatment (Beavers et al., 2013; Hanley et al., 2003)
Christina

Assessment
- Direct observations in the natural enviro
- Baseline data collection?
- Collateral service providers

Christina

- Paediatrician
- Developmental paediatrician
- Child protection worker
- Early interventionist
- Behaviour consultant
- SLP
- OT
- PT
- Geneticist
- ENT
- Neurologist
- Psychologist
- Nurse
- Ophthalmologist

Christina

Assessment
- Functional analysis
  - Trial-based FA (Bloom et al., 2011)
  - Latency-based FA (Thomason-Sassi et al., 2011)
- Use of protective equipment during FA? (Borrero et al., 2002; Le & Smith, 2002)
Christina

Treatment

♦ Input from collateral service providers

♦ Functional communication training (FCT) (Carr & Durand, 1985; Durand, 1990; Durand & Carr, 1991; Kurtz et al., 2011)


The BIGmack

♦ Benefits of assistive technology in FCT (Durand, 1999)
Christina

Treatment planning concerns

✦ Application of FCT as part of a treatment package – what’s in the rest of the package? e.g., prompting, fading, extinction, punishment, response blocking (Fisher et al., 1993; Shirley et al., 1997)

✦ FCT with toddlers in home environments (Dunlap et al., 2006; Harding et al., 2009)

Christina

More treatment planning concerns

✦ What if FCT doesn’t reduce the TB? Why? (Fisher et al., 1993; Hagopian et al., 1998)

✦ Excessively high rates of requesting following FCT training and subsequent reinforcement fading (Betz et al., 2013; Fisher et al., 1993; Hanley et al., 2001; Vollmer et al., 1993)

Data sheet based on Durand (1990)
First 28 days of tx

Last 28 days of tx
Christina

Getting down to the brass tacks

✦ No head banging during the day after three weeks of intervention
✦ Day time helmet use
✦ Thinning the CRF schedule - the plan vs. what actually happened
✦ Almost a year later…

In summary

✦ Community-based assessment & treatment, can we do it? YES we can!
✦ Hindsight is 20/20
  ◦ One thing I’ll KEEP doing
  ◦ One thing I’ll DO for next time

A special thank you to

✦ Demi, Christina & their caregivers
✦ Collateral service providers
✦ ACWA (SPC)
✦ Placement student - Leah Plumley (Autism & Behavioural Science Program, St. Lawrence College)
Thanks for attending!

Questions?

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References


