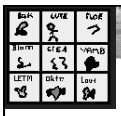

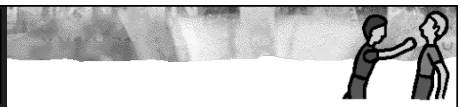

Communication Supports for Problem Behavior

April 11, 2015
UM-NSU CARD, Fort Lauderdale FL

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CIRCA
Center for Interdisciplinary Research and Collaboration in Autism

A Social Story for Today

- Sometimes, I go to a workshop to learn. When I go to the workshop, I usually get a handout with information that the presenter wants me to know.
- Sometimes, a presenter makes changes to the handout after it has already been printed or posted online. This is okay. When this happens, I can stay calm. I can take a deep breath or count to 10 or both. I will learn from the workshop even when the presenter makes changes.

Problem Behavior and ASD

- Problem behavior is not uncommon in individuals with ASD because:
  - They have difficulty processing social, language-based, and transient information
  - They are more comfortable in situations that are highly predictable and/or unchanging
  - They may have co-occurring anxiety, affective/mood, and/or attention disorders
  - They learn exactly what they are taught, including how to get what they want/need by engaging in problem behavior

AAC and Problem Behavior

- There is a clear relationship between problem behavior and communication
  - people communicate in the most efficient and effective manner available to them at any given point in time
- Some people have no way to communicate except through problem behavior
  - individuals with limited or no functional speech who use augmentative and alternative communication (AAC)

AAC and Problem Behavior

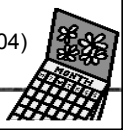
- Some people have other ways to communicate, but no one really "listens" until they use problem behavior
  - individuals whose usual communication behaviors are subtle or otherwise difficult to interpret
- Some people have other ways to communicate, but don't know how or are unable to access those other ways in some situations
  - individuals whose problem behavior is triggered by situations that are frustrating, stressful, or anxiety-provoking

AAC and Problem Behavior

- Augmented input supports to aid comprehension
  - Visual and computer-supported schedules
  - Visual contingency maps and wait signals
- Augmented output supports to aid expression
  - Functional communication training
    - Choice making supports
    - Conversation books

Visual Schedules

- Used to organize sequences of time or steps in a task
- Real objects, photographs, picture symbols (like Picture Communication Symbols, PCS), or written words can be used to represent the activities or environments
- VERY useful for transitions between environments and/or activities for many individuals (Bopp, Brown, & Mirenda, 2004)



Visual Schedule Research
(Lequia et al., 2012)

- Reviewed 18 methodologically strong studies, 43 participants with ASD, ages 3-18
- Calculated Non-overlap of all pairs (NAP) to evaluate strength of the evidence
- Target behaviors addressed:
  - Self-regulation: 4 studies; NAP *M* .96
  - Independence: 3 studies; NAP *M* .94
  - Transitions: 7 studies; NAP; *M* .95
  - Play: 4 studies; NAP *M* .97

Lequia et al. (2012)

- Positive outcomes were reported for 90% of participants in school settings and for 100% at home
  - All participants described as "nonverbal" or with severe communication deficits had positive outcomes
- No trends regarding the type of symbol
  - Photographs
  - Line drawing symbols
  - Video-based

Conclusion

- "Regardless of ASD severity and comorbid diagnoses, the majority of participants (95%) demonstrated decreased challenging behavior…" (Lequia et al. 2012, p. 487)

Between-Activity Schedules

Choiceworks for iPad

Within-Activity Schedules

First-Then for iPad

Contingency Maps

- Goal: to provide information about the "current" (i.e., problem) and "desired" behavioral pathways related to problem behavior
  - The aim is to help the individual understand what will happen if he/she engages in the behaviors associated with the "desired" pathway!

Contingency Map

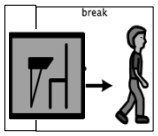
- A contingency map depicts
  - The antecedent that typically triggers a problem behavior
  - The problem behavior
  - The consequences that will follow **if it occurs**
    - **Ideally, the *natural consequences;* if not, artificial**
  - A functionally-related (desired) alternative behavior
  - The consequences that will follow **if it occurs**
    - **Again, ideally, the *natural consequences***




Marco

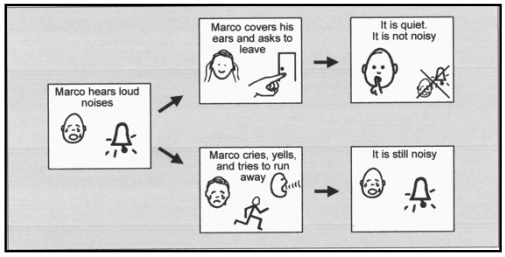
- 5-year-old boy with autism, in kindergarten
- Communicated primarily with gestures (and problem behavior)
- PBs: tantrums (crying, running away, screaming, hitting)
  - One day, ran away from his aide at school, was hit by a car and broke his leg
- Trigger: loud, sudden noises (crying children, sirens, alarms, motorcycles, etc.)
- Function: escape from unpleasant noise

Intervention



- Teach Marco to
  - cover his ears with his hands if he hears a loud noise, and
  - ask to leave the environment by signing or pointing to a "break" symbol
- Aide provided verbal, physical prompts to teach
- No change in Marco's behavior after 2 weeks

Contingency Map



Result

- Shown to him at the beginning of the day and every 1-1.5 hours thereafter
- Immediate, dramatic increase in desired behavior and decrease in problem behavior

Antonia

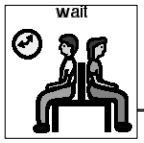
- Grade 2 student with autism, little speech
- Included for half of the day; remainder in resource room because of problem behavior
- Problem behaviors: head-butting, hitting, and pinching classmates and adults when she had to wait
  - For her turn during buddy reading
  - In line
  - For the computer to boot up, etc.
  - Waiting was also an *enormous* problem at home

Wait Signal

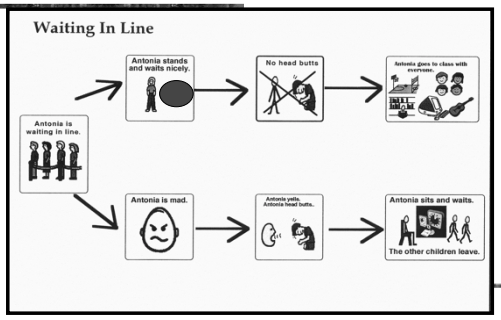
- Antonia's speech-language pathologist, Vicki, decided to teach her to wait, using a "wait symbol" (a red circle that symbolized "wait")
- Vicki provided systematic instruction in a simulated "buddy reading" activity to teach her the meaning of the red circle: "you will get what you want, but not quite yet…"

Generalization

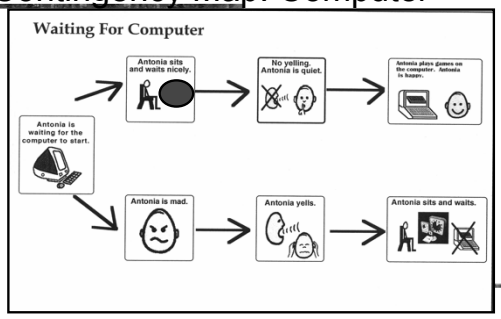
- Once Antonia learned what the wait signal meant in buddy reading, contingency maps were created to help her generalize this understanding to other situations at school and at home….



Contingency Map: Waiting in Line

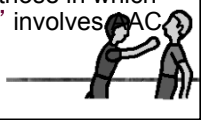


Contingency Map: Computer



FCT/AAC

- Functional communication training (FCT) involves "both the assessment of the function of the challenging behavior and the teaching of a more appropriate form that serves the same function . . ." (Durand, 1990, p. 23)
- FCT/AAC interventions are those in which the "more appropriate form" involves AAC (Mirenda, 1997)



FCT and AAC

- Walker & Snell (2013) conducted a meta-analysis of research using AAC to address problem behavior
- 54 studies, 111 participants, ages ranged from <5 years to >18 years
- 35% had ASD, 75% had severe intellectual/ developmental disability
  - Pre-intervention: 37% speech; 32% nonsymbolic; 19% manual signs; 13% picture-based systems

Walker & Snell (2013)

- Target behaviors (some had more than one):
  - Destructive (e.g., aggression, self-injury): 86%
  - Disruptive (e.g., teasing, yelling, screaming, running away, poking): 25%
  - Distracting (e.g., ignoring a request, saying 'no,' stereotypic behavior): 15%

Walker & Snell (2013)

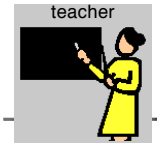
- FCT was the most effective, with a "high medium" effect (NAP score of .87)
  - FCT based on a functional behavior assessment (FBA) was more effective than FCT without
- FCT interventions were most effective for younger participants (<5-12 years of age)
  - No significant differences for target behavior, pre-intervention communication modality, other relevant variables)

Ron (Durand, 1999)

- Age 9 1/2, had autism and "severe mental retardation"
- Spoke a few words, out-of-context
- Very aggressive; hit teachers, other students, family members
- Variety of other interventions had failed (DRO, DRI, time-out, restraint, etc.)

Assessment

- Functional assessment conducted to identify function of problem behaviors
- Appeared to be attention-motivated -- Ron engaged in the behaviour to get attention from his teacher or other adults



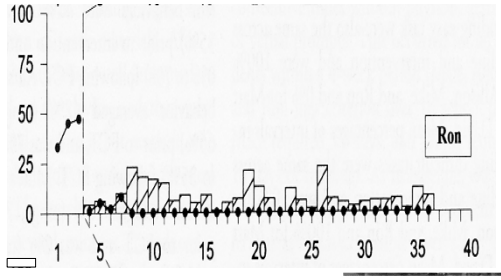
Intervention

- Provided with a SGD (BIGmack) that was programmed to make a request that would result in attention:

Instruction

- Instruction provided during regular classroom routines that were appropriate to the message being taught
  - graduated guidance prompts and fading used to teach
  - brief attention (in the form of "help") was provided when communication device was activated

Results



Key Requirements for FCT/AAC

- Identify the specific function of the problem behavior
  - Tangible: "I want item/activity"
  - Attention: "I want social interaction"
  - Escape: "I don't want item/activity/person"
- How? Functional behavior assessment (e.g., O'Neill et al., 2015)

Key Requirements

- Identify a related "message" that will be acceptable to the people and in the contexts where it will be used
  - e.g., "Pay attention to me" vs "Would you help me with this?" vs. "Can I help you?" vs "Am I doing good work?" for attention-motivated behavior
  - How? Input from and negotiation with parents, teachers, etc. in the settings where the behavior occurs

Key Requirements

- Identify an AAC technique that will enable the person to communicate the "message" to both familiar and unfamiliar partners
  - Manual sign/gesture
  - Object/picture symbol
  - Written word
- How? Symbol assessment, input from speech-language pathologist

Key Requirements

- Teach use of the new communicative behavior in context
  - Look for "whispers" of the problem behavior
  - Provide "clean" instruction *before* the problem behavior occurs
  - **Be sure the new behavior results in the same (desired) consequence!**

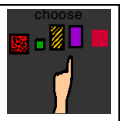
FCT: Matt (Mirenda, 2004)

- 19 years old, lived at home at beginning of intervention, integrated in regular high school classes with support
- Some speech (1-2 word phrases) but not when stressed
- Behavior: severe aggressive outbursts toward family, support staff over several years
  - at least one episode per week serious enough to cause bruising

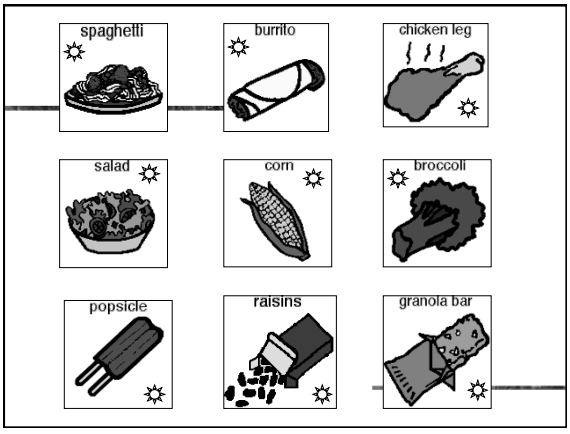
Assessment

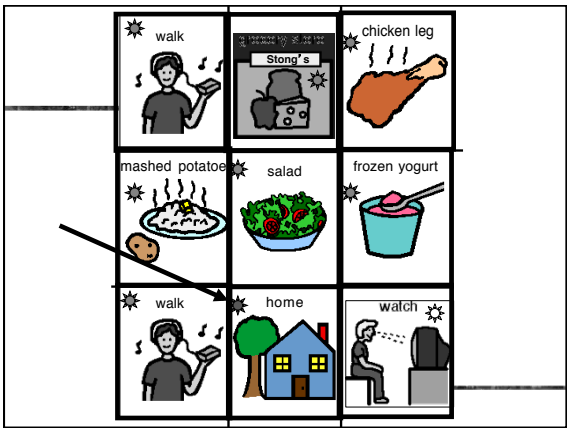
- Functional assessment to determine the functions of the behavior
  - tangibles: "I want ----": Matt wanted something (food, activity) and had no way to ask for it; aggression led to "20 questions"
  - escape: "I don't want ----": Matt was offered a food or activity and did *not* want it
  - escape: "I don't understand": the schedule of activities was unpredictable

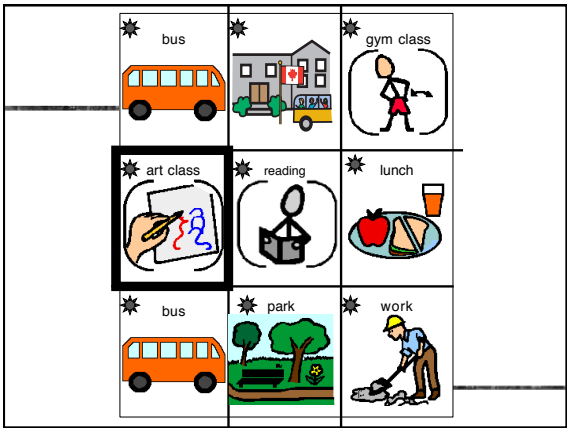
Intervention

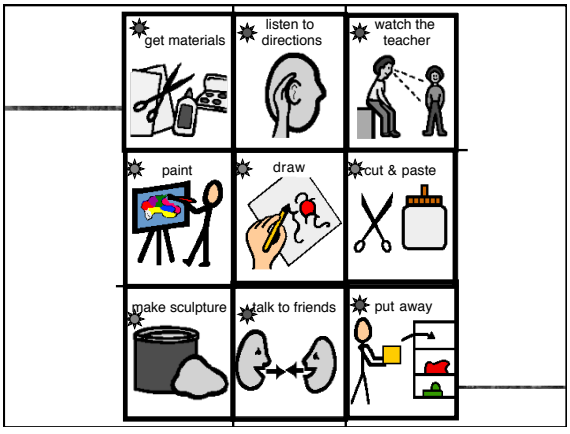


- Picture Communication Symbols were provided to
  - clarify what choices were available
  - enable Matt to initiate and make choices, and thereby reduce the frequency of having to tell him what would happen next
- Within- and between-task visual schedules were also provided to increase predictability

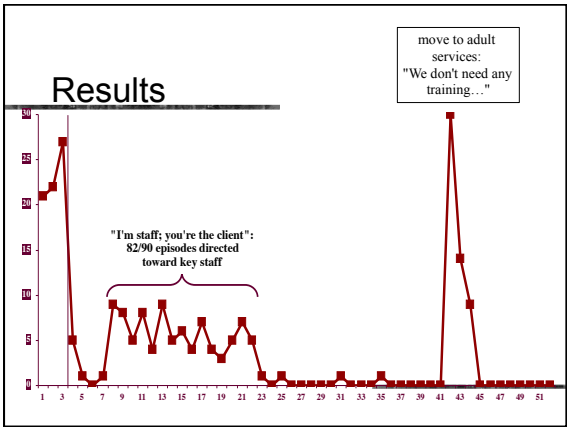








Results



Stuff for You

- www.praacticalaac.org
- Autism Apps app: https://itunes.apple.com/us/app/autism-apps/id441600681?mt=8
- Pictello: https://itunes.apple.com/us/app/pictello/id397858008?mt=8
- Scene Speak: https://itunes.apple.com/us/app/scene-speak/id420492342?mt=8

Key Requirements

- Teach use of the new communicative behavior in context
  - Look for "whispers" of the problem behavior
  - Provide "clean" instruction *before* the problem behavior occurs
  - **Be sure the new behavior results in the same (desired) consequence!**

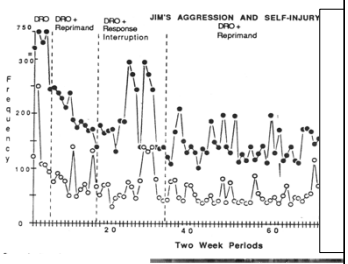
"Jimmy"

(Bird, Dores, Moniz, & Robinson, 1989)

- 32-year old man, labeled as having profound intellectual disability and autism
- Institutionalized for 25 years; attended a day program for persons with severe behavior disorders
- Nonverbal, knew two manual signs (bathroom, food) but rarely used them spontaneously
- Problem behavior: severe aggression (biting, scratching, head butting, hitting) and self-injurious behavior (face slapping, head banging, self-biting)

Treatment and Assessment

- Previous (unsuccessful) treatments included extinction, DRO, verbal reprimands, response interruption, extinction
- Current treatment: 15 min DRO + verbal reprimand



FCT

- FCT was implemented to teach use of a "break" sign using a time-delay prompting procedure
  - One 30 minute instructional session per day for 4 weeks
  - Jim was provided with a simple, familiar assembly task
  - Instructor modeled the sign for "break" and immediately prompted Jim to produce it; task was pulled aside briefly when he did so to give him a break

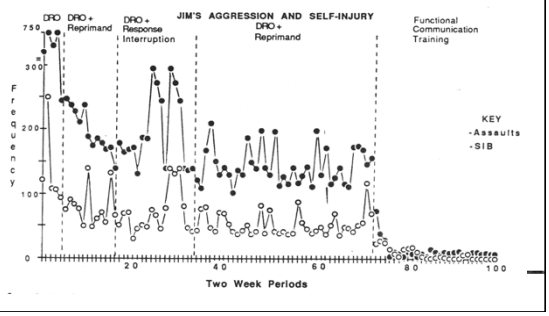
FCT

- After two 30-minute sessions, Jim was able to imitate the modeled sign correctly, so the prompt was delayed for 5-10 seconds
  - All problem behavior was ignored or physically re-directed
- Delay was increased by 10-15 seconds each time he requested a break spontaneously on three consecutive trials

FCT

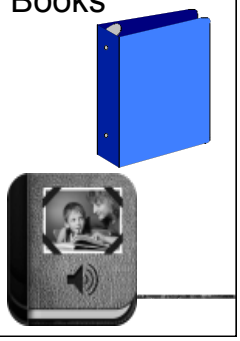
- Prompts were discontinued when Jim requested a break on 90% of all trials
- He was also taught to request preferred activities such as *music, food, bathroom,* and even *work*
- Gradually, new instructors were introduced
- Over 6 months
  - New and more difficult tasks were introduced gradually
  - A red/green sign was introduced to let Jim know when *break* requests would be honored (green) and when they would not (red)

Jim



FCT: Conversation Books

- Based on the work of Pam Hunt and colleagues in the 1980s
- Especially relevant for problem behaviour that is peer attention-motivated



Talking Conversation Book

- Place photos, remnants, photocopies of book pages, etc. on the page
- Record a short message to describe the picture
- Touch a button to "speak" the message

Conversation Book (Con't)

- Use activity remnants, photographs, other media
- Include written captions with comments and questions
- Update book regularly, so topics are dynamic
- Be sure book is portable, so that it can be carried around easily

Conversation Book (Con't)

- Teach use of conversation books
  - short (2-5 min.) teaching sessions
  - natural settings for conversation
  - use student, partner, and coach
  - provide partner with basic information
- Prompt responses, comments, AND questions
- Teach turn-taking during conversations
- Teach "fillers" (uh-huh, yeah, etc.)
- Don't be rigid with the structure

Punchline

- AAC interventions play a key role in interventions for problem behavior
- Need to base communication supports on information from functional behavior assessment
- Need to individualize for easy access and minimal learning

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