Positive Behavior Support for Toddlers with Challenging Behavior in Typical Routines

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www.challengingbehavior.org
www.csefel.uiuc.edu
To provide families, caregivers, and others with positive strategies and skills that will result in the child’s acquisition of appropriate social and communication skills.

To assist young children with challenging behavior and their families with support to achieve quality of life outcomes.
Goals of the Program

- Provide comprehensive and effective services to young children (birth to three) who have challenging behavior in Hillsborough County, Florida.

- Conduct research that will evaluate the effectiveness of the program and contribute to the evidence-base on effective practices for children with challenging behavior.

- Provide data that facilitate the development of a system of care for young children with challenging behavior.
Program Perspectives

- Individualized
- Natural environments
- Family systems
- Ecological
- Strength-based
- Focused on skills
- Comprehensive
Intervention Components

- Screening to determine potential eligibility

- Family/Child Care visit to determine severity of behavior within natural environment and daily routines

- Person-centered planning with family system and circle of support

- Functional assessment within home and child care environments
Intervention (continued)

- Family-centered, comprehensive behavior support plan development

- Modeling and coaching in natural environments

- Family support and education

- Ongoing evaluation and monitoring
Process of Positive Behavior Support

**Step 1:** Convene a team and identify goals of intervention

**Step 2:** Gathering information (functional assessment)

**Step 3:** Developing hypotheses

**Step 4:** Designing behavior support plans

**Step 5:** Implementing, monitoring, and evaluating outcomes
Functional Assessment

A process for developing an understanding of a person’s challenging behavior and, in particular, how the behavior is governed by environmental events.

- Observe the child in target routines and settings
- Collect data on child behavior, looking for situations that predict problem behavior and that are linked with appropriate behavior
- Interview persons most familiar with the child
- Review records
Hypothesis Statement

- Description of the problem behavior
- Triggers of the problem behavior
- Purpose of the behavior
- Maintaining consequences
Think Outside the Box:

CHILD
There are Many Variables to Explore

- **Interactions**
  - Communication to the child,
  - Emotional support,
  - Attachment…

- **Friends**
  - Shared interests & experiences,
  - Relationships…

- **Outings/Events**
  - Places family goes,
  - Activities…

- **Home & Family**
  - Routines, Resources,
  - Siblings,
  - Environment, Respite,
  - Predictability,
  - Extended family…

- **Health**
  - Trauma, Illness,
  - Stamina,
  - Medication…

- **Learning Environment**
  - Schedules, Room arrangement, Materials,
  - Adaptations, Resources,
  - Predictability,…

- **Instruction**
  - Transitions, Cues,
  - Prompts, Supports,
  - Accommodations…

- **Play**
  - Toys, Level of play,
  - Opportunities, Choice,
  - Expectations…

- **Transitions, Cues, Prompts, Supports, Accommodations…**

- **Siblings**
  - Environment, Respite,
  - Predictability,…

- **Places family goes,**
  - Activities…

- **Shared interests & experiences,**
  - Relationships…

- **Communication to the child,**
  - Emotional support,
  - Attachment…
Support Plan

- **Behavior Hypotheses** - Purpose of the behavior, your best guess about why the behavior occurs

- **Prevention Strategies** - Ways to make events and interactions that predict problem behavior easier for the child to manage

- **Replacement Skills** - Skills to teach throughout the day to replace the problem behavior

- **Responses** - What adults will do when the problem behavior occurs
Max, Zak, & Emmy

PBS Application in a Family Home Environment
Who: Max (30 months)

- **Strengths:**
  - Loving & affectionate
  - Determined to try new things

- **Medical Concerns/Challenges:**
  - History of failure to thrive & feeding difficulties
  - Difficulties with expressive language & articulation

- **Problem Behaviors:**
  - Tantrums, hitting, biting, throwing toys, excessive crying, turn taking, off-task, elopement
Step 1: Identify Goals

- Family’s Initial Concerns
  - Wanted help with Max only

- Team Building/Rapport

- Interventionist’s Observations
  - Quickly realized concerns were related to all three children (Max, Zak, & Emmy)

- Identify Parent Responses & Strengths
Who: Zak (30 months)

Strengths:
- Very inquisitive
- Loves vehicles (very knowledgeable)

Problem Behaviors:
- Hitting, food dumping, spitting, off-task, biting, throwing toys, excessive crying, turn taking, elopement
Who: Emmy (5 ½ years)

Strengths:
- Artistic
- Demonstrates leadership
- Likes to help mother with household chores

Problem Behaviors:
- Hitting, kicking, taking toys away, throwing objects, negative interactions with mother
- Models & encourages inappropriate language & behavior with younger brothers
Step 2: Functional Assessment

Identify Target Routines

Functional Assessment:
- Functional Assessment Interview-Revised for young children (O’Neill et al., 1997)
- Systematic behavioral observations across times & routines
- Record Review—included CBCL, PSI, MSEL
- Quality of Life Survey with mother
- Sibling interview-Emmy
- Unstructured interview with mother
## Target Routines

<table>
<thead>
<tr>
<th>Routines</th>
<th>Max</th>
<th>Zak</th>
<th>Emmy</th>
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<tbody>
<tr>
<td>Clean Up</td>
<td>✗</td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Twin Play</td>
<td>✗</td>
<td>✗</td>
<td></td>
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<tr>
<td>All Play</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Dinner</td>
<td>✗</td>
<td>✗</td>
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</tbody>
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Methodology

**Single Subject Design:**
- Multiple baseline across routines (Kazdin, 1982)
- Used to evaluate changes in composite & individual data

**Supplemental Data:**
- Procedural Fidelity

**Dependent Variables:**
- Percentage of observed intervals with challenging behavior
- Percentage of observed intervals with engagement

**Independent Variable:**
- Process of PBS (i.e., development & implementation of comprehensive assessment-based intervention)

*Interobserver agreement calculated for 30% of sessions at minimum of 96% reliability for all behaviors coded.*
Step 3: Hypothesis for Twin Play

Function: The children displayed challenging behavior in order to obtain their mother’s attention.

TWIN PLAY

Hypothesis:
- When their mother left the area or stopped playing with them, Max & Zak displayed challenging behavior in order to obtain their mother’s attention.

Parent responses:
- Stopped her activity
- Came into room
- Consoled child
Step 3: Hypothesis for Dinner

**Function:** The children displayed challenging behavior in order to both obtain their mother’s attention and escape (nonpreferred food and/or area).

**DINNER**

- **Hypotheses:**
  - When engaged in the dinnertime routine, the children displayed challenging behavior in order to obtain attention from their mother.
  - When engaged in the dinnertime routine, Zak threw or dumped his food and/or beverages in order to escape nonpreferred food and/or to leave area.

- **Parent responses:**
  - Gave in to demand
  - Excused from dinner
  - Verbal reprimand
Step 4: Behavior Support Plans

- Developed based upon family’s goals & functional assessment data.

- Created in collaboration with the natural intervention agent (i.e., the mother).

- Plans included prevention & teaching components.

- Incorporated preference.

- Customized to fit within the family’s natural environment and routines.
Step 5: Implement Intervention

- Implementation was initiated **sequentially** across routines.

- Coaching was provided during each session to ensure mastery of prevention & intervention components.

- **Procedural fidelity** data were collected to:
  - Ensure accurate implementation of each support plan
  - Determine which intervention components the mother was most comfortable using independently.
Twin Play: Plan Components

Prevention Strategies
- Choice given (toys)
- Structure activity (clear beginning & end)
- Length of activity shortened to 15 min.
- Toy selection (quantity & ability for independence)
- Clear expectations (visual & verbal)

Parent Responses
- Noncontingent specific praise
- Ignoring
- Redirection (using expectations)

Skill Building
- Teach children how to play independently & follow age-appropriate expectations
Twin Play: Plan Components

Family’s Goals:
- Increase rate of engagement.
- Decrease rate of disruption toward mother.
- Decrease rates of challenging behavior.
Dinner: Plan Components

Prevention Strategies
- Structure (Consistently follow same sequence such as prayer)
- Choice for food (back-up)
- Seating arrangement (mother stayed at table, next to Emmy)
- Food on table to prevent need for mother to leave area
  - Emmy’s preferences embedded within plan

Parent Responses
- High rates of specific praise
- Ignoring
- Redirection (using expectations)

Skill Building
- Emmy takes on role of helping/taking lead
- Emmy’s self-management plan:
  - Emmy & mother independently evaluate her performance & compares ratings after dinner (i.e., the steps Emmy reported completing versus the number of steps the mother observed Emmy completing)
  - Menu of reinforcers provided for 80% of steps completed
Dinner: Plan Components

Family’s Goals:

- Increase rate of engagement.
- Increase rate of appropriate prosocial skills (e.g., “all done”).
- Teach Emmy to monitor her own behavior.
Emmy can be a SUPERSTAR at Dinner Time
I can be a SUPER STAR at Dinner!

Today is:___________________

I helped set the table.......................... Yes____ No___
I said a prayer........................................ Yes____ No___
I talked nicely to Max and Zak .............. Yes____ No___
I talked nicely to Mommy....................... Yes____ No___
I used a fork and spoon....................... Yes____ No___
I sat in a chair like a big girl................. Yes____ No___
I sat at the table until I was done.......... Yes____ No___

I asked to be excused when I was done... Yes___ No___

Was I a SUPER STAR at dinner?............. Yes___ No___

“YES”-----Hooray! I did it! I get special time with Mommy.
“NO”------Oops. I will try harder next time to be a good helper for Mommy and show that I CAN be a SUPER STAR.
SUPERSTAR MENU

- I was a SUPERSTAR at dinner!
- I CAN be a big girl and help Mommy with my brothers.

- Tonight, for my special time with mommy, I would like to:

  - Help wash the dishes
  - Help clean the table
  - Help clean in the kitchen
  - Read a story
  - Call daddy to tell him I was a SUPERSTAR
  - Do some arts and crafts
  - Play a game
  - Play on the computer
Show me the... Composite Data

- Looks at rate of challenging behavior from the parent’s perspective.

- Data scored using a 10-sec continuous interval system.

- Challenging behavior was scored if displayed by ANY child.

- Explores behavior in the context of a family systems approach.
Both engagement and challenging behavior were scored for each individual child across all four routines.

Data scored using a 10-sec continuous interval system.

Helped monitor intervention plan (i.e., comparing rates of engagement and challenging behavior).

Helped us acknowledge how each child was progressing.
Mean Challenging Behavior Across Child Participants & Routines

- **Clean Up**: Baseline (80%), Intervention (50%)
- **Tw in Play**: Baseline (80%), Intervention (30%)
- **All Play**: Baseline (60%), Intervention (20%)
- **Dinner**: Baseline (70%), Intervention (10%)
- **Max**: Baseline (80%), Intervention (60%)
- **Zak**: Baseline (70%), Intervention (30%)
- **Emmy**: Baseline (80%), Intervention (20%)

**Children & Routines**: Clean Up, Tw in Play, All Play, Dinner.
Mean Composite Challenging Behavior Across Conditions and Routines

Routine

- Clean Up
- Twin Play
- All Play
- Dinner

Mean Percentage of Intervals

Baseline
Intervention
Contributions of the Study

**Contributions:**
- Illustration of PBS model applied to a sibling set of preschool-aged children with challenging behavior across four routines.
- Natural intervention agents (mother & Emmy) within a natural setting (home).
- Looked at data from the parents perspective with respect to the amount of stress and effort from multiple children.
- Demonstrated maintenance of support plan implementation.

**Current Status:**
- Family has reported that they engage in more social activities (i.e., going out to eat, church dinners).
- Happier affect, less stress, less community isolation.
- Mother independently implementing routines a year after intervention (as well as independently choosing which specific intervention components to use).
- A year later, the children have maintained high rates of engagement/prosocial skills and low rates of challenging behavior.
Follow Up - Mean Composite Challenging Behavior across Routines

- Clean Up: 39
- Twin Play: 15
- All Play: 13
- Dinner: 15
Follow Up - Individual Mean Challenging Behavior and Engagement Across Routines

- **Max**
- **Zak**
- **Emmy**

**Mean Percentage of Interval**

- **Routine**: Clean Up, Twin Play, All Play, Dinner
- **Engagement** is represented by green bars.
- **Total Challenging** is represented by blue bars.

Comparison across routines shows varying levels of engagement and challenging behavior for each individual.
PBS Application in a Pre-K Program
Who: Bradford, 2 years, 7 months

Lives with parents, one brother (age 3 1/2 years)
Attended private preschool

Strengths: Smart, social, likes music, good fine motor skills, strong family support system

Challenges/Medical Concerns: Expressive Receptive Language Delay, Speech Delay Possible Adjustment/Behavioral Disorder

PART C Services: Received Speech Therapy.
Early Intervention PBS for Behavior Concerns

Problem Behaviors: Aggression, Noncompliance, Property Destruction, Self-Injurious Behavior, Elopement
**Process:** Complete PBS Assessment and Intervention within Preschool Activities

**Team:** Parents, Preschool Director, 2 Preschool Teachers, Speech Therapist, EIPBS Behavioral Consultant

**Selected Routines:**

1. **Structured Activities:** Circle, Art

2. **Unstructured Activities:** Center, Freeplay

3. **Outside Play Activities:** Organized Play, Playground
A-B Case Study Design  Outcome data collected across routines

Dependent Variables:

Challenging Behavior: Frequency of Aggression (i.e., hitting, biting, kicking, head butting, pulling hair, spitting)

Social Initiations: Frequency of child appropriate/inappropriate initiations

Happiness: Positive affect, smiling, laughing

Supplemental Data:

Replacement Skills: Frequency of new skills demonstrated by Bradford

Social Validation: School staff ratings of goals, procedures and outcomes
Independent Variable: **PBS Process** development and implementation of comprehensive assessment-based intervention

Step 1: Identify Goals

Step 2: Gather Information/ Functional Assessment

Step 3: Develop Hypotheses

Step 4: Design Behavior Support Plan

Step 5: Implement intervention
## Information Gathered from Functional Assessment

<table>
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<tr>
<th>Strengths:</th>
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<tr>
<td>- Wants to interact with others</td>
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<tr>
<td>- Fine motor skills</td>
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<td>- Curious and interested in how things work</td>
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<tr>
<td>- Good memory</td>
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<tr>
<td>- Smart</td>
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<tr>
<td><strong>Medical:</strong></td>
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<td>- Verbal/receptive deficits, severe language delay</td>
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<td>- Sensitivity to noise, easily overstimulated</td>
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### Teacher Responses:

- Removal of demands
- Removed from activity
- One to one
- Reprimands
- Threats
- Coax
- Lecture
- Time out

### Difficulties:

- Transitions
- Unstructured activities
- Changes in routine
- Nonpreferred activities
- Social interactions
- Demands
- Large groups of people
- Loud noise
- Peers close proximity
Hypothesis Statements:

Bradford engaged in challenging behavior:

1. In an attempt to escape from school activities that were unpredictable or had unclear expectations

2. In an attempt to escape from activities that were nonpreferred (difficult, boring)

3. In an attempt to escape from activities associated with high levels of noise or people

4. In an attempt to gain peer or teacher attention
Specific Intervention Strategies

Prevention Strategies

- Visual cues/photo schedule/Stop signs
- Social stories for routines
- First/Then boards
- Choice chart
- Preferred items
- Manipulatives
- Modified materials
- Remove distractions
- Add quiet area in room
- Add breaks
- Peer buddy
Specific Intervention Strategies

**Teacher Responses**

- Clear instructions
- Redirect and ignore
- Specific praise
- Provide choice
- Materials ready
- Provide consistent verbal “All done”, countdowns
- Promote active participation with modeling
- Encourage verbal communication
- Monitor and anticipate difficult play activities provide option to leave area
Specific Intervention Strategies

Skill Building

- Teach how to verbally initiate/terminate interactions
- Teach how to initiate appropriate physical affection
- Teach how to appropriately ask for “break” or “help”
- Teach how to respond to loud or overstimulating situations
- Teach how to make and express choice
Challenging Behavior Data

Mean Frequency of Aggression During Unstructured Activities

- Freeplay
  - Baseline: 24
  - Intervention: 3

Mean Frequency of Aggression During Structured Activities

- Circle
  - Baseline: 8
  - Intervention: 1

- Organized Play
  - Baseline: 7
  - Intervention: 0.5

Mean Frequency of Aggression During Outside Activities

- Centers
  - Baseline: 19
  - Intervention: 2

- Art
  - Baseline: 2
  - Intervention: 0

- Playground
  - Baseline: 5
  - Intervention: 2
Happiness Behavior Data

Mean Percentage of Intervals with Positive Affect Across All Routines

Baseline: 10%
Intervention: 19%
Appropriate and Inappropriate Social Initiations

Mean Frequency of Social Initiations During Unstructured Activities

- Freeplay
  - Baseline: 4
  - Intervention: 10.9

Mean Frequency of Social Initiations During Structured Activities

- Circle
  - Baseline: 6
  - Intervention: 7.6

- Organized Play
  - Baseline: 1.5
  - Intervention: 8.7

Mean Frequency of Social Initiations During Outdoor Activities

- Centers
  - Baseline: 5.9
  - Intervention: 11

- Art
  - Baseline: 0.7
  - Intervention: 0.5

- Playground
  - Baseline: 1.9
  - Intervention: 6.2
Replacement Skill vignettes

New skills taught

Verbal Examples:
“I want to share”
“Go away”
“I need help”
“I want a break”
“All done”
“I want a hug/kiss”

Nonverbal Examples:
Gesture with toy to share
Gesture for hug/kiss
Gesture with STOP sign
to end or break
Point to picture to leave area
Replacement Skills Data

Mean Frequency of Replacement Skills During Unstructured Activities

- **Freeplay**
  - Baseline: 1
  - Intervention: 11

Mean Frequency of Replacement Skills During Structured Activities

- **Circle**
  - Baseline: 1
  - Intervention: 6

- **Organized Play**
  - Baseline: 1
  - Intervention: 7

Mean Frequency of Replacement Skills During Outside Activities

- **Centers**
  - Baseline: 2
  - Intervention: 9

- **Art**
  - Baseline: 0
  - Intervention: 2

- **Playground**
  - Baseline: 1
  - Intervention: 4
Current Status:

Turned three in September, 2005

Successfully transitioned to Early Childhood Special Education Classroom

Contributions of Case study:
PBS study with a toddler in preschool setting
Preschool teachers intervention agents
Supplemental data
Strategies generalized to new classroom
Thanks...

Questions or Comments?

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