

Challenging Behaviors, Autism Spectrum Disorders, and Prevent- Teach-Reinforce

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Purpose of Presentation

- Describe a multi-tiered framework for addressing challenging behaviors --- including challenging behaviors of children with ASD
- Present an overview of individualized interventions – positive behavior support
- Describe a tertiary model for addressing the most serious challenging behaviors: “Prevent-Teach-Reinforce (PTR)”
 - Model description and research



Challenging Behaviors

- Destructive Behaviors
 - Aggression; SIB; Property Destruction
- Disruptive Behaviors
 - Long tantrums; Loud, Repetitive Noises; Running, etc.
- Irritating & Interfering Behaviors
 - Repetitive and perseverative speech or actions, cursing, inappropriate touching, etc.
- Social Withdrawal
 - Lack of responsivity and initiations



Importance of Challenging Behaviors

- **Barrier** to Inclusion, Community Participation, and Social Opportunities
- Most Significant **Impediment to Education**
- Present **Physical & Emotional Risk** for Individual and for Families, Teachers, Other Professionals, Peers and Friends
- -----
- Need to Prevent/Resolve Challenging Behaviors as Early and as Thoroughly as Possible

A Model of Prevention of Challenging Behaviors for Young Children

The Pyramid Model

Technical Assistance Center for Social
Emotional Interventions (TACSEI)

www.challengingbehavior.org

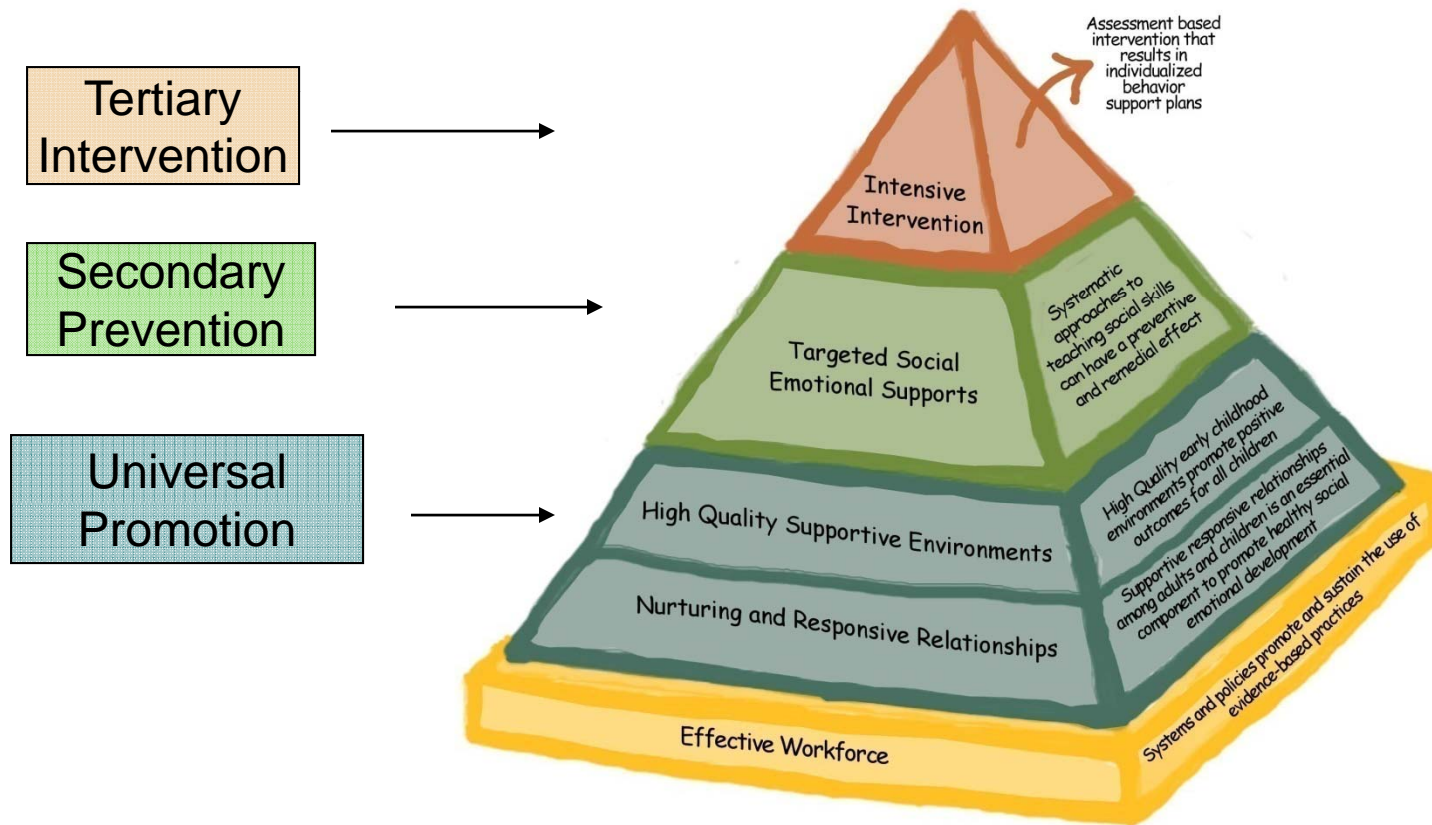


Multi-tiered Prevention Frameworks

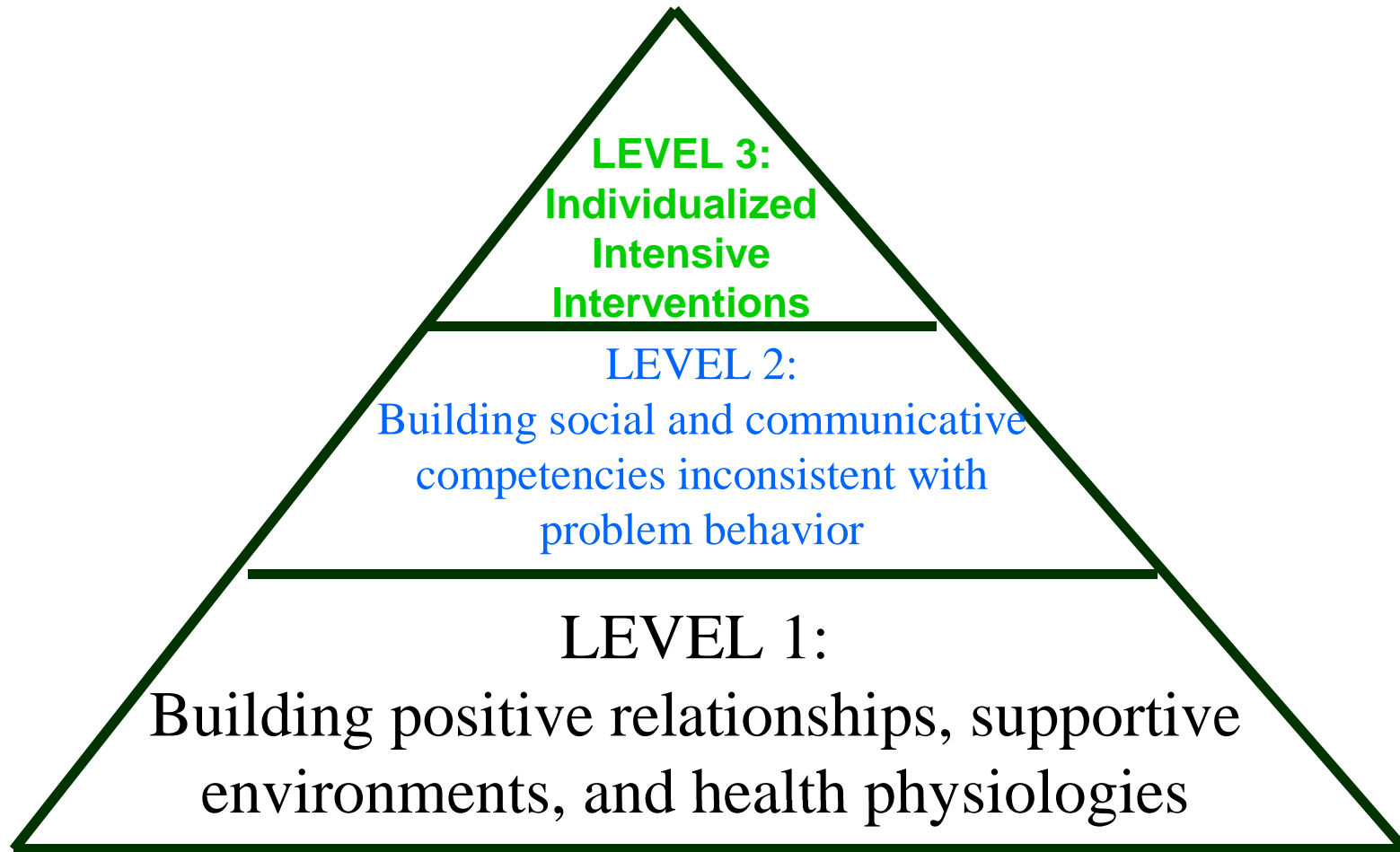
- Increasingly common in community and behavioral health disciplines (e.g., SW-PBS)
- Basic framework has 3 levels:
 - (1) Universal strategies (primary prevention)--- for everybody; low intensity prevention practices
 - (2) Targeted strategies (secondary prevention) --- for particularly high risk groups; higher intensity
 - (3) Indicated strategies (tertiary prevention/intervention)--- for individuals already affected by problem; usually intensive and individualized strategies

Pyramid Model

(Fox, Dunlap, Hemmeter, Joseph, & Strain, 2003)



Preventing Challenging Behavior for Children with ASD





Prevention – Universal (Level 1)

- Positive Relationships
 - Nurturing, secure, stimulating, instructional
 - Enhances influence of adult caregiver
- Physical and Emotional Health
 - Physical health and nutrition
 - Social-emotional well being
 - Safe, responsive, friendly, stimulating and comprehensible environment



Prevention – Level 1 Practices

- High quality environment
 - Structure, routine, schedule, predictability
- Adult-child interactions
 - Positive attention
- Ongoing instruction
 - Useful communication
 - Social skills
 - Clear, consistent behavioral expectations



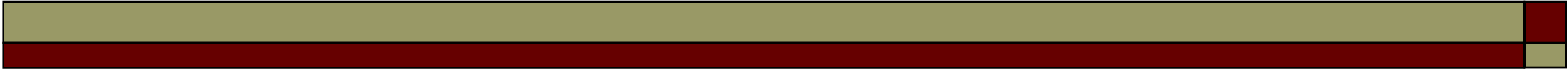
Level 2 Prevention Practices

- Differences from Level 1 Practices
 - Intensity of Intervention
 - Planfulness of Intervention
 - Intensity of Data Collection
 - Intensity of Family Involvement
- For children at high risk for problem behavior:
 - Parent training classes
 - Social-emotional teaching curricula



Building Functional Competencies

- Interventions focused on teaching and building appropriate engagement
- Intervention supports for enhancing motivation
 - e.g., Pivotal Response Training for children with ASD
- Group strategies (classroom models) with direct focus on teaching and motivating social interaction



Level 3 (Tertiary) Practices - Intensive Individualized Interventions

- Are used for children with persistent and severe problem behavior - when children do not respond to preventive practices, child guidance procedures (e.g., redirection), or social-emotional teaching strategies
- Are used with children who have multiple and severe risk factors
 - Intellectual-Communicative Disability (e.g., autism)
- Positive behavior support



General Approach - PBS

- Teaming, Planning
 - Goal Setting; Definition of Roles
- Functional (Behavioral) Assessment
- Development of Behavior Support Plan
- Implementation and Evaluation of BSP



Core Elements of a Behavior Support Plan

(Linked to Assessment Information)

Prevention Strategies – Arrangements of antecedent environment

Teaching Strategies – Building skills to teach throughout the day to replace the problem behavior

Reinforcers – Providing effective reinforcement schedules (contingency management)

+ Evaluation strategies

Prevent-Teach-Reinforce

A Standardized and Individualized Model
For School-based Interventions
A Practical Model of Positive Behavior Support



Why P-T-R?

- We've known about functional assessment and assessment-based interventions for more than 20 years. And we've conducted many, many trainings on PBS for serious behavior problems for a long time. And this is well and good, however....
- We see optimal outcomes too rarely
- A big concern involves insufficient implementation of PBS procedures of assessment, intervention and data collection. A problem of implementation fidelity.



Purpose of P-T-R

- To provide schools with a standardized, easy-to-use model with which to apply research-based, behavioral strategies for addressing the most serious problem behaviors of students.
 - For all students with serious problem behaviors --
- special education, general education.
 - Intended for pre-K through high school
 - Most research to date has been conducted in grades K-8



PTR Model

- Research-based Practices
 - Assessment and Intervention
- Team-driven decision-making
- Steps are scripted as much as possible
- Each step ends with self-evaluation (checklist)
- Selection of interventions is menu-driven
- Entire process is manualized

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Foreword by George Sugai



PREVENT

TEACH

REINFORCE

THE SCHOOL-BASED MODEL OF
INDIVIDUALIZED
POSITIVE BEHAVIOR SUPPORT



The PTR Model

□ 5-Step Process

- Developing a Team
- Establishing clear goals (short and long term)
- Functional Assessment
- Designing and Implementing a Behavior Intervention Plan
- Evaluation (ongoing) and Revision (as necessary)



Step 1: Teaming

- Purpose: Establish group involved with developing and implementing intervention

- Members: Teacher(s), Para-educator(s), School professionals, Family members, etc.
 - 3-8 individuals
 - At least one administrator who can deliver resources and develop/interpret policies
 - At least one person knowledgeable in behavioral theory and principles and experienced in FA and BIP



Step 2: Goal Setting and Data Collection

- Purpose: (1) to establish clear long and short-term objectives; (2) to establish a unified vision for desired outcomes; (3) establish feasible strategies for valid data collection
- Kinds of goals: (1) Reducing specified problem behaviors; (2) Develop academic competencies; (3) Improve social competencies, problem solving, and interpersonal relations/interactions



Data Collection

- Data instrument(s) decided by team

- Recommendations are often for Behavior Rating Scales –
 - Usually 5-point scales with specific anchors indicating frequencies, durations, and/or intensities of problem behavior



Step 3: Functional Assessment

- Purpose: Identify function(s) and antecedent variables influencing target behavior(s)
- Strategy: (1) Detailed, structured questionnaires for each team member focused on antecedent variables, functions, and maintaining consequences. (2) Team meeting to produce consensus.
- Outcomes: Hypothesis statement(s) with each component specified.

Examples of Assessment Questions: “Prevent”

- ❖ 1. Are there *times of the day* when problem behavior is *most likely* to occur? If yes, what are they?
- ❖ 1a. Are there *times of the day* when problem behavior is *least likely* to occur? If yes, what are they?
- ❖ 2. Are there specific activities (for example, independent work, arithmetic, recess, transitions) that problem behavior is *very likely* to occur? What are the activities?
- ❖ 2a. Are there specific activities (for example, independent work, arithmetic, recess, transitions) that cooperative and prosocial behavior is *very likely* to occur? What are the activities?



Examples of Assessment Questions: “Teach”

- ❖ 1. Does the problem behavior seem to be exhibited in order to gain attention from peers?
If so, are there specific peer(s) whose attention is solicited?

- ❖ 2. Does the problem behavior seem to be exhibited in order to gain attention from adults?
If so, are there particular adult(s) whose attention is solicited?

- ❖ 3. Does the problem behavior seem to be exhibited in order to obtain objects (toys, materials, food) from peers or adults?
If so, what objects are solicited?

Examples of Assessment Questions: “Reinforce”

- ❖ 1. What consequence(s) usually follow the student's problem behavior? (For example, reactions from classmates? Reprimand from teachers? Removal from an instructional activity or delay of a transition?)
- ❖ 2. Does the student enjoy praise from teachers? Does the student enjoy praise from some teachers more than others?
- ❖ 3. What is the likelihood of the student's positive behavior (e.g., on-task behavior; cooperation; successful performance) resulting in acknowledgment or praise from teachers?

PTR FUNCTIONAL BEHAVIOR ASSESSMENT CHECKLIST

Problem behavior: Tattling Person responding: Mrs. Jones (classroom teacher) Student: Clara

PTR Functional Behavior Assessment **PREVENT Component**

- 1a. Are there *times of the school day* when problem behavior is most likely to occur? If yes, what are they?
- Morning Before meals During meals After meals Arrival
 Afternoon Dismissal Other: _____
- 1b. Are there *times of the school day* when problem behavior is least likely to occur? If yes, what are they?
- Morning Before meals During meals After meals Arrival
 Afternoon Dismissal Other: _____
- 2a. Are there *specific activities* when problem behavior is very likely to occur? If yes, what are they?
- Reading/LA Writing Math Science
 Independent work Small-group work Large-group work Riding the bus
 One-on-one Computer Recess Lunch
 Free time Peer/cooperative work Centers Discussions/Q&A
 Worksheets, seatwork Specials (specify) _____ Transitions (specify) End of Art & Music / Going to Reading & Math
 Other: _____
- 2b. Are there *specific activities* when cooperative and prosocial behavior is very likely to occur? What are they?
- Reading/LA Writing Math Science
 Independent work Small-group work Large-group work Riding the bus
 One-on-one Computer Recess Lunch
 Free time Peer/cooperative work Centers Discussions/Q&A
 Worksheets, seatwork Specials (specify) Art & Music Transitions (specify) _____
 Other: _____
- 3a. Are there *specific classmates or adults* whose proximity is associated with a high likelihood of problem behavior? If so, who are they?
- Peers (specify) _____ Bus driver
 Teacher(s) (specify) Mrs. Jones (classroom teacher) Parent
 Paraprofessional(s) (specify) _____
 Other school staff (specify) Ms. Diaz (behavior specialist)
 Other family member (specify) _____
 Other: _____
- 3b. Are there *specific classmates or adults* whose proximity is associated with a high likelihood of cooperative and prosocial behavior? If so, who are they?
- Peers (specify) _____ Bus driver
 Teacher(s) (specify) _____ Parent
 Paraprofessional(s) (specify) _____
 Other school staff (specify) Art teacher, Music teacher, Behavior specialist
 Other family member (specify) _____
 Other: _____



Step 4: Intervention Design and Implementation

- Purpose: To build a Behavior Intervention Plan (BIP) based on FA information
- Features:
 - (1) BIP must include *at least* one strategy from each of the 3 components: **Prevent, Teach, Reinforce**
 - (2) Menus of research-based strategies for each component; forms and templates to build plan
 - (3) Selection of strategies is made by team, based on FA and on team's ability/resources to implement



Step 5: Evaluation

- Purpose: (1) Measure effects of intervention on problem behaviors and academic/social behaviors (progress monitoring); (2) Measure fidelity of implementation
- Features: Simple (easy-to-use) instruments --- behavior rating scales; checklists; etc.



Research on PTR

- Randomized Control Group Evaluation
 - Including students with ASD
- Case Study (A-B) Analyses
 - Behavior rating scale (BRS) data
 - Direct observation data
- Multiple Baseline Across Participants (with ASD) Design

A Randomized Controlled Evaluation of PTR

Iovannone, Greenbaum, Wang, Kincaid,
Dunlap, & Strain, (2009), *Journal of Emotional
and Behavioral Disorders*, 17, 213-225



Participants

- N = 245 students
 - Randomly assigned to PTR or Services as Usual
- Nominated as the students with the most serious problem behaviors in their class
- Grades K-8; from 5 school districts in FL and CO
- Ages 4-15 ($X = 8.17$)
- 48% had IEPs; 33% in self-contained special education programs
- Variety of Disability labels, including ASD (N = 25)
- 50% White; 29% Hispanic; 18% African American
- 38% on free or reduced-price lunch programs



Procedures

- All Assessment and Intervention Steps Carried out by School-based Teams
 - Almost all interventions conducted by students' teachers
- Process facilitated by PTR research staff and implementation manual
- Data collected by Teachers and by PTR staff



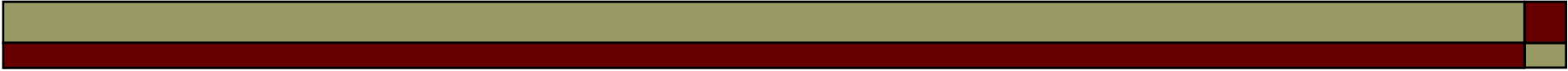
Principal Measures

- Social Skills Rating System (SSRS)
 - Problem Behavior subscale
 - Social Skills subscale
- Academic Engaged Time
- Social Validity (Treatment Acceptability Rating Form; Reimers and Wacker)
- Fidelity of Implementation



Results

- Social Skills --- Difference in standard scores from baseline to post-test:
 - PTR = + 7.38; SAU = + 1.25 ($p < .001$)
- Problem Behavior --- Difference in standard scores from baseline to post-test:
 - PTR = - 5.30; SAU = - 0.76 ($p < .001$)
- Academic Engaged Time --- Difference in rates from baseline to post-test:
 - PTR = + 0.13; SAU = + .02 ($p < .001$)

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- Fidelity: Data showed that almost all teachers (> 80%) were able to implement the intervention plans with high fidelity
 - Social Validity: Data on the TARF showed that teachers found the PTR process to be highly acceptable and efficacious. Teachers were very willing to use the PTR process in the future.



Time Series Analyses

- 1) BRS case study data
 - From Dunlap et al (2010; JPBI)

- 2) Multiple baseline across participants w/ ASD
 - From Strain, Wilson, & Dunlap (under review)

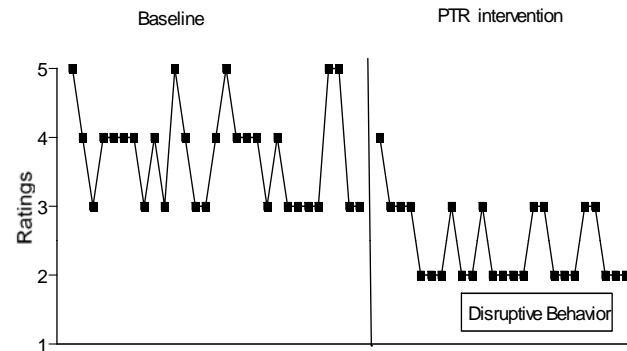
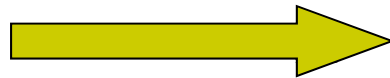


Behavior Rating Scales

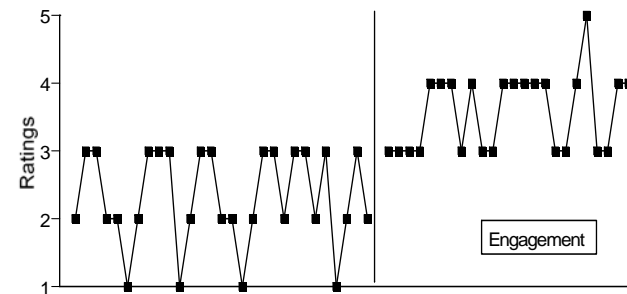
- 5-point scales
- Anchors specify amplitude on relevant dimension (frequency, duration, intensity)
- Teachers and school-based teams define behaviors and anchors on individual basis
- Scales completed retrospectively at end of each session

Teacher's Ratings of Mike's Behavior

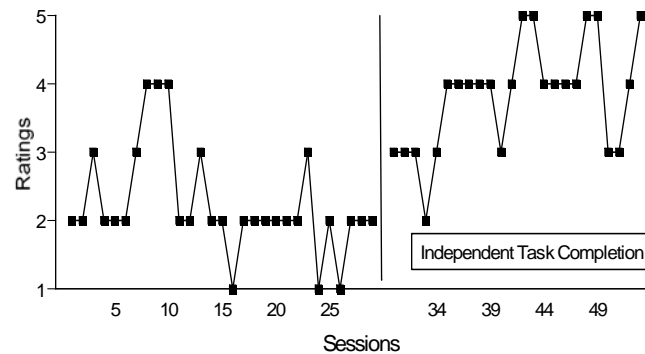
Disruptive Behavior



Engagement

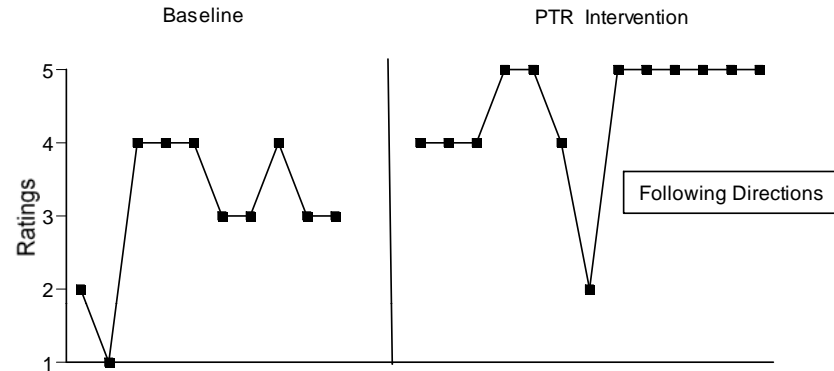


Task Completion

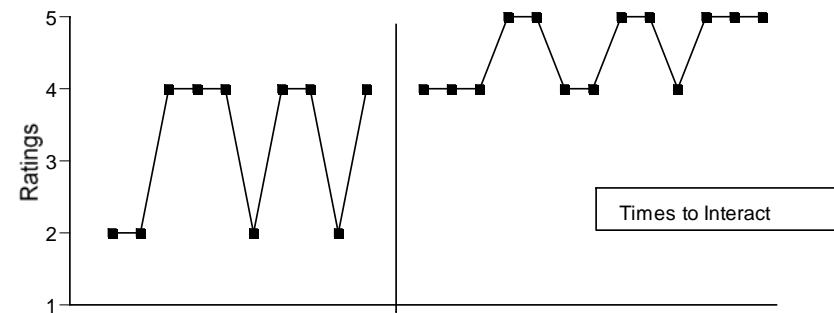


Teacher's ratings of Jose's Behavior

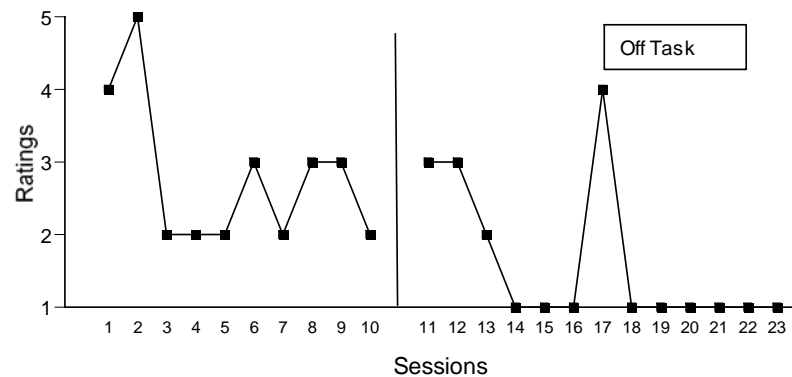
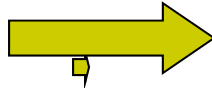
Following Directions



Appropriate Interactions



Off Task Behavior



Multiple Baseline Analysis - Participants

- 3 students with ASD; Josh, Alex, Rosalie
- Kindergarten; Grade 2; Grade 4
- Cognitive functioning = Typical to mild delay
- All had verbal language, but often not used effectively
- Majority of time in general education classes
- All had frequent problem behaviors, and were identified as students with most serious problems in their classes
 - property destruction; disruptive behavior, outbursts, crying, some aggression



Procedures

- Baseline (services as usual)
- PTR = Independent Variable
 - Teaming, goal setting, data collection (BRS)
 - PTR (Functional) Assessment
 - Individualized Behavior Intervention Plans
- Data for study obtained from video recordings
 - 15 minute sessions in regular classroom context
 - 10-second time samples
 - % of samples with occurrence of behavior
- Dependent Variables
 - Problem Behavior
 - Engagement

Behavior Intervention Plans

□ JOSH

- P = explicit expectations on card
- T – instruction on expectations; self-management
- R = self-recruited S^{R+} ; praise for following expectations; “tokens” with stickers/treasures as back ups

□ ALEX

- P = written schedules
- T = self-management (using lists for independent responding)
- R = sea shells + time to examine his sea shells

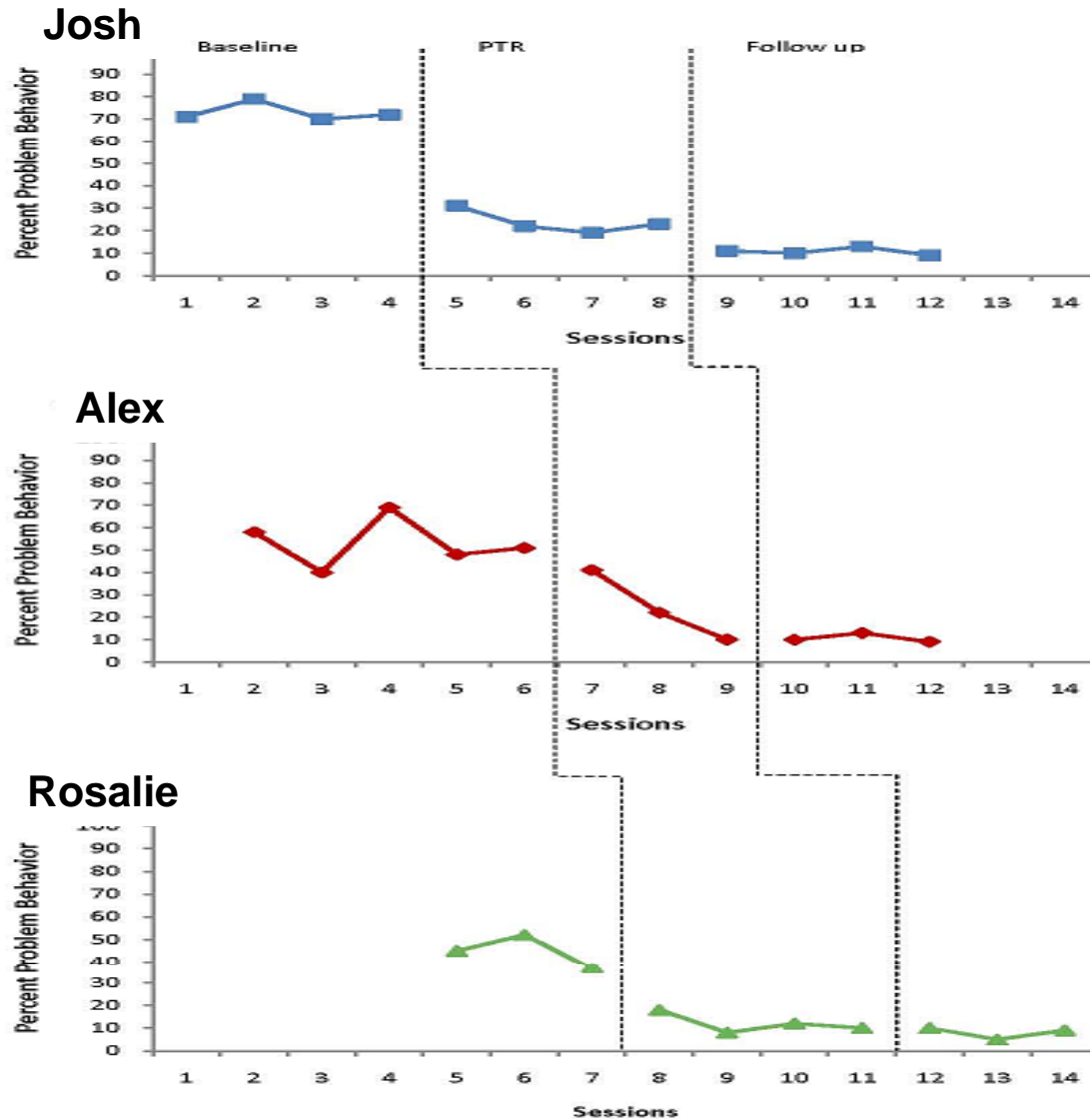


BIPs (continued)

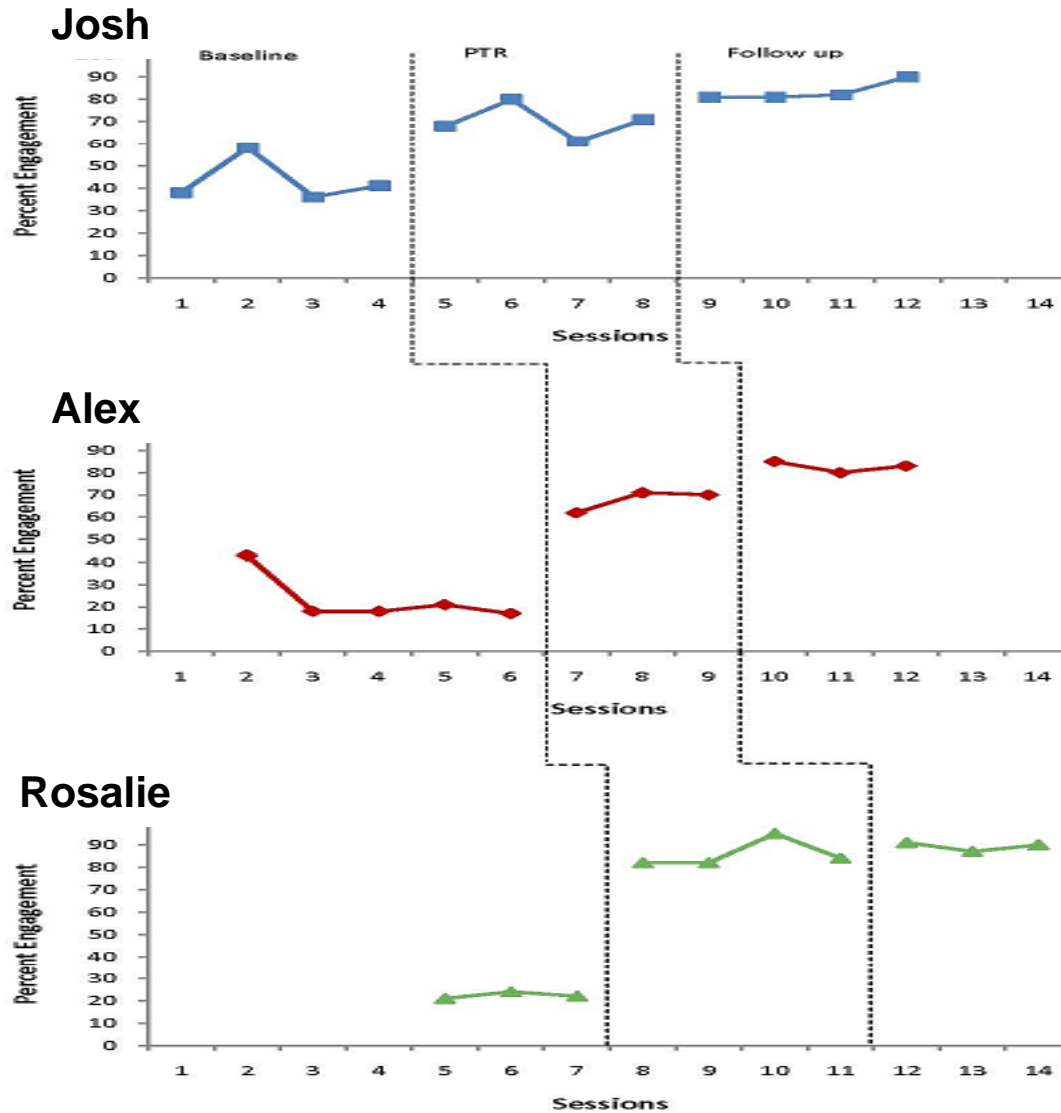
□ Rosalie

- explicit expectations/instructions for social interaction
- instruction on social interactions; problem solving; and self-monitoring (journal)
- “CIA (caught in the act)” credits

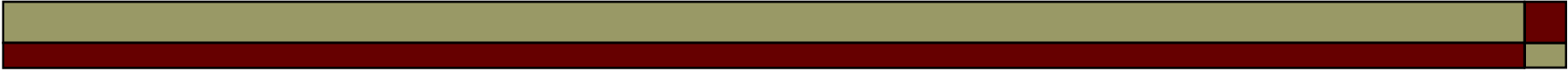
Problem Behavior (% Intervals)

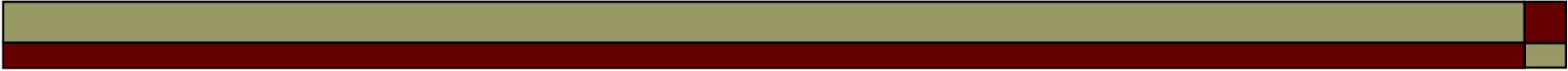


Engagement (% Intervals)



Conclusions

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- In a large RCT, the PTR process has been shown to be effective, when implemented by typical, school-based teams, in: reducing problem behavior and increasing social skills and academic engaged time compared to “services as usual.” PTR was also shown to be implemented with fidelity by teachers approved by
 - Data have also shown PTR to be effective when applied with students with autism (multiple baseline analysis)

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- However, PTR has not yet been demonstrated in conditions without “expert” facilitators
 - In addition, there are students for whom PTR was not as effective as we would like... and we have yet to examine the (mediating) conditions under which the process is more (and less) effective.



□ For young children...

- PTR has been used often with children aged 4-6, but there has been no systematic research in preschool or toddler programs (yet)
- A version of the PTR manual for young children is in development, and pilot research in pre-K settings will commence in January