

Abstract

The concept of modifying the environment to produce a better match with a child’s temperament is commonly used to inform interventions in the child development field. However, temperament has not yet been integrated into problem behavior interventions for children with ASD. In this case study, one of six highly extraverted children with ASD from a larger multiple baseline study, who we will call Elijah, was systematically studied. Elijah’s parents were taught to mitigate challenging situations to make them a better fit for his temperament. Baseline and follow-up data were compared to determine that Elijah’s problem behavior decreased as a result of temperament-based intervention strategies. Additional challenges as a result of Elijah’s parents’ diagnoses of ASD are discussed.

Hypothesis

Temperament-based interventions, implemented to teach parents about temperament and to alter the fit between the child’s temperament and the context, will decrease or eliminate problem behavior in the identified context.

Background and Importance

- It is important to improve interventions targeting problem behavior (e.g. aggression, tantrums, self-injury) in children with ASD because of problem behavior’s pervasive negative impact on socialization, community integration, and overall quality of life.
- Temperament characteristics, such as high surgency, predict problem behavior in children with ASD.
- Surgency is sometimes referred to as extraversion and refers to an individual’s tendency to be more active, enjoy higher intensity activities, be more impulsive, and less shy than his/her peers.
- Temperament-based intervention includes 1) educating parents about temperament, 2) identifying the child’s temperament profile, and 3) choosing situations that are a good fit for the child’s temperament or modifying situations to make them a better fit for the child’s temperament.

Method

Participant Characteristics

- Elijah: 3-year old child diagnosed with PDD-NOS
- Parents: Both diagnosed with autism
- Above 75% on surgency and problem behavior

Measures

- *Severity & Frequency of Problem Behavior Items:* 1 (not intense/frequent) to 7 (extremely intense/frequent).
- *Latency to Problem Behavior*
- *Percent of Task Steps Completed*

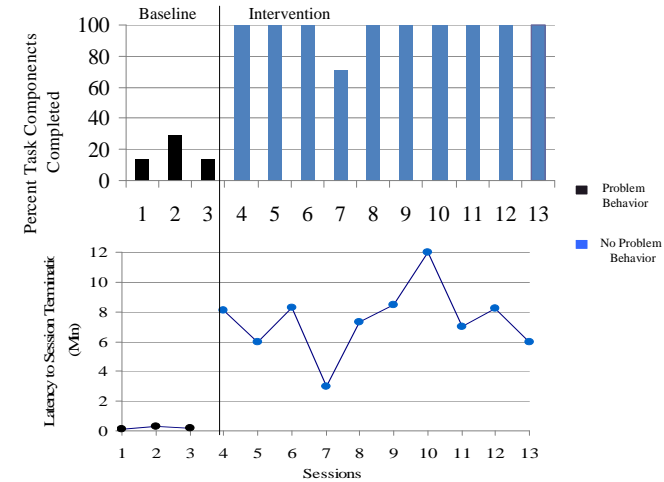
Intervention Components

- **Psychoeducation:** Information about temperament, goodness of fit, and intervention strategies.
- **Choosing the clinical context:** Brainstorming session with parents to choose a low intensity activity that produces problem behavior. Elijah’s parents chose coloring.
- **Intervention Strategies:**
 - Use enthusiastic tone throughout activity.
 - Use “Color Me a Song” board that matches music tempo to coloring speed.
 - Instruct Elijah to push colored buttons on the board.
 - Instruct Elijah to color with the same colored crayon as button.
 - Use large triangular crayons.
 - Use surgent praise; E.g. High-fives, hugs, pats on back, tickle.
- **Training sessions:** Teach parents the intervention strategies. Parents practice implementing the intervention while the researcher observes.
- **Intervention sessions:** Parents implement intervention and the researcher records latency to problem behavior, time engaged in activity, task components completed, and treatment fidelity.

Results

- Problem behavior occurred in all three baseline sessions with average latency to PB of 20 seconds . No PB occurred in any of the intervention sessions, with an average session duration of 6 minutes.
- An average of 19% of task steps were completed during baseline compared to 100% of task steps during intervention.
- Intervention severity decreased from a rating of 6 to 2 and intervention frequency decreased from a rating of 6 to 2.

Results



Conclusions

- Temperament-based strategies decreased problem behavior and improved task completion among surgent/extraverted children.
- Basic principles of temperament-based strategies include:
 1. Increase the child’s physical movement
 2. Modify fine-motor activities to involve gross-motor skills.
 3. Increase the parents physical interaction, engagement, and enthusiasm with their child.
- When working with parents on the autism spectrum intervention strategies should include:
 1. More concrete and specific instructions.
 2. A greater focus on affect and enthusiasm toward their child.
 3. Greater repetition of modeling the intervention components.
 4. Increase prompts to stay on task.
- In the future, studies should include more participants and apply temperament-based strategies for children with other temperament characteristics (e.g. low effortful control or high negative affectivity).

Selected References

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