

# Punishment Procedure vs. Positive Reinforcement: Increasing Appropriate Transitions for a Student with ASD

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## INTRODUCTION

- This case study focuses on the comparative impact of a punishment-based procedure (PBP) and two positive reinforcement (PR) interventions targeting a student participant with ASD who experiences difficulty transitioning (e.g. running away) from a preferred (e.g., school playground) to non-preferred activity (e.g., IEP goal tasks)
- The delay in transitions often resulted in less instructional time and progress on IEP goals
- This intervention came after multiple attempts of using positive reinforcement strategies that did not appear conducive to successful transitions and the participant's access to the curriculum
- One punishment-based procedure and two positive reinforcement interventions were utilized as a response to the delayed transitions.
- In this intervention, a punishment-based procedure is defined as the addition or removal of a stimulus to decrease the likelihood of a behavior from occurring in the future
- A positive reinforcement procedure is defined as the addition of a stimulus to increase the likelihood of a behavior of occurring in the future
- The goal of the intervention was to increase the number of successful transitions the participant made from preferred activities (e.g., playground) to non-preferred activities (e.g., work in the classroom).

## PARTICIPANT & SETTING

- Participant:** The participant was an 11-year-old Filipino-American male diagnosed with Autism Spectrum Disorder (ASD). He communicates both vocally and by utilizing an Augmentative Alternative Communication (AAC) device.
- Setting:** This case study took place at a self-contained non-public school. The participant attends school 5 days a week for 5 hours per day. The classroom set up included two teachers, five paraprofessionals, and 9 students. Across the school day, he received either 1:1 or 2:1 instruction depending on staff availability.

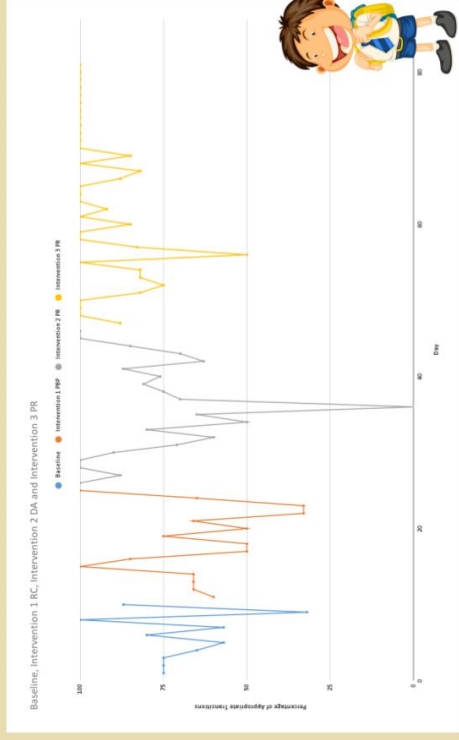
## MATERIALS



## METHODS

- Materials:** Token board, in-area reinforcer menu, places reinforcer menu, general reinforcer menu, transition checklist (with and without "extra minutes" program), transition data sheets
- Independent Variables:**
  - Response Cost (PBP)
  - Delayed Access (PR)
  - Extra Minutes (PR)
- Dependent Variable:**
  - Percentage of appropriate transitions
- Measurement Tools:**
  - Discrete categorization
    - Coded using (+) for an appropriate transition (i.e., transitioning from a preferred activity with the instructor in less than one minute) and (-) for an inappropriate transition (i.e., transition from a preferred activity with the instructor in greater than one minute).
  - Timer used to record latency periods for each transition
  - Percentage of appropriate transitions
    - Calculated by dividing the number of appropriate transitions per day by the total number of transitions completed throughout the day
- Data Collection:** Number of transitions and additional behavioral data was routinely collected by two teachers and five paraprofessional teachers as a part of the student's educational programming
- Procedures:**
  - Response Cost (Day 1-11): If the participant did not transition appropriately, he could only access reinforcers at his desk for one session (i.e., earning 10 tokens). The following session, all of his reinforcers would be available to earn again.
  - Delayed Access (Day 12-42): An additional token economy was implemented which increased the "cost" to access location-based reinforcers.
  - Extra Minutes (Day 42-81): Contingent on satisfying appropriate behavior criteria (e.g., safe hands, quiet voice, and stay with teacher), the participant could earn "extra minutes" toward his turn. The teacher and paraprofessionals would check in intermittently about the appropriate behavior criteria, and if he satisfied all criteria, he could earn 1-2 extra minutes per opportunity.

## RESULTS



## SUMMARY OF RESULTS

- Baseline:** During baseline, the participant's percentage of successful transitions is high in variability with a decreasing trend.
- Intervention 1:** Implementation of intervention 1, incorporating PBP of response cost, researchers observed an increase in tantrum behaviors and data indicated lower rates of success for transitions with a decreasing trend.
- Intervention 2:** Implementation of intervention 2, incorporating PR of delayed access, researchers and data show high rates of successful transitions with lower variability than baseline, with a slight decrease in trend
- Intervention 3:** The final intervention, including PR of earning extra minutes, showed the most significant findings of high rates of successful transitions and the only intervention with an increasing trend for successful transitions.
- Findings of this project indicated that the PR intervention was more effective and acceptable for the student.**

Percentage of Successful Transitions	
Baseline	70.3%
Intervention 1	64.3%
Intervention 2	76%
Intervention 3	93.5%



## CONCLUSIONS

- A positive reinforcement procedure of earning extra minutes may contribute to the increase of successful transitions from preferred unstructured activities to instructional teacher-directed activities for students with ASD.
- The punishment-based procedure was least effective in supporting transitions for a student with ASD.
- The outcomes of the project are supported by the findings from the student's Functional Behavior Assessment. Understanding the function behind the behavior, lead to the development of the successful intervention of earning extra minutes, by understanding that the student wanted access of their preferred activity for a longer duration of time.
- This project included a highly collaborative relationship within the cross-disciplinary team of a school psychology student, special education teacher, and BCBA supervisor. Note: the outliers shown in the graph could be explained by setting events (e.g. dysregulated sleep schedule) which may have influenced the student's response to intervention.

## LIMITATIONS

- Inter-Observer Agreement (IOA) was not collected across all teachers and paraprofessionals that worked with the student.
- Since a single subject research design was used, results are not as easily generalizable to other students or settings.
- There is little literature surrounding the social-emotional consequences of punishment-based procedures (punishment procedures should be the last resort)
- This project occurred only at the school. It did not generalize across other settings (e.g., home, community)

## REFERENCES

