Evaluation of a Competition Assessment for Multiply-Maintained Problem Behavior

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INTRODUCTION

Positive reinforcement has been shown to compete with problem behavior maintained by automatic reinforcement, attention (e.g., Fisher et al., 2004), and escape (Lalli et al., 1999).

Piazza et al. (1997) conducted a competition assessment and found that positive reinforcement alone competed with problem behavior that was maintained by both positive and negative reinforcement.

Assessing relative preference between positive and negative reinforcement may be difficult because a demand or an aversive stimulus must be present in order to assess escape as a reinforcer. In addition, the duration of positive reinforcement must be controlled to prevent unintended access to escape, which may alter the value of the positive reinforcer. Finally, availability of the reinforcer may differ depending on the arrangement (positive reinforcement may be available during negative reinforcement periods).

The current study extends existing research by utilizing a competition assessment to determine relative reinforcer preference for two individuals with multiply-controlled problem behavior.

METHOD

Participant and Setting
Lennon: 14-year-old male diagnosed with autism and moderate intellectual disability.
Harrison: 18-year-old male diagnosed with autism and intellectual disability.

Dependent Variables and Data Analysis
Frequency data were collected using laptop computers using a computerized data collection system during all sessions.

Problem Behavior (PB): Disruption only (Lennon); aggression, disruption, and self-injury (Harrison).
Compliance (Comp): Completion of the task within 5 s of the verbal or model prompt.

Procedures

Functional Analysis
Four test items (attention, escape, ignore, and tangible) and one control condition were evaluated. Reinforcement during the attention, escape, and tangible conditions was 30 s in duration. No consequences were provided for problem behavior during the ignore and control conditions.

• Sessions were 10 min in length.

Competition Assessment
Twenty task demands were presented using least-to-most prompting. Access to positive (i.e., edible items) and negative (i.e., 30 s escape) reinforcement were simultaneously available.

• If compliance or problem behavior was not observed, the prompting sequence continued and the next task was presented.

SR+ (PB)/SR− (Comp)
Positive reinforcement was provided on a FR 1 schedule for problem behavior and 30 s escape was provided contingent on compliance with the demand.

SR+ (Comp)/SR− (PB)
Positive reinforcement was provided on a FR 1 schedule for compliance with the demand and 30 s escape was provided contingent on problem behavior.

SR+ (Comp)/ESC (PB) (Lennon only)
Positive reinforcement was provided on a FR 1 schedule for compliance and problem behavior was placed on extinction. The schedule of reinforcement for compliance was faded from FR 1 to FR 14 during the final phase of the assessment.

Experimental Design

Functional Analysis: Multielement design.
• Additional comparisons between test and control conditions within alternating treatment designs (i.e., pairwise evaluations) for Lennon.

Competition Assessment: Concurrent operant schedule within an ABAB reversal design.

Interobserver Agreement (IOA)
IOA data were collected during 44% and 27% of all sessions during the functional analysis for Lennon and Harrison, respectively. Mean agreement was 97% (range, 80% to 100%) for Lennon and 99% (range, 93% to 100%) for Harrison. IOA data were collected during 56% and 72% of all sessions during the Competition Assessment for Lennon and Harrison, respectively. Mean agreement was 94% (range, 87% to 100%) for Lennon and 93% (range, 82% to 100%) for Harrison.

DISCUSSION

• During all phases of the competition assessment, Lennon allocated higher rates of responding to gain access to positive reinforcement. The schedule of positive reinforcement was thinned to FR 14 schedule for Lennon to effectively reduce problem behavior.

• The results of the competition assessment support within session data analysis of the functional analysis escape conditions for Lennon, which found high rates of disruptive behavior during periods of reinforcement.

• Although Harrison’s competition assessment, compliance was relatively high, regardless of the reinforcer that compliance produced. However, when compliance was provided with positive reinforcement, compliance was slightly higher and problem behavior was lower.

• Although not depicted in the current data, Harrison also continued to have problem behavior and frequently engaged in mand for positive reinforcement during the escape reinforcement intervals.

• One limitation to this study was that positive reinforcement and negative reinforcement were not compared concurrently at thinner schedules of reinforcement.

REFERENCES


