

A Preliminary Evaluation of Stability in Behavioral Function

JONATHON METZ and Tracy L. Kettering (Bancroft)

INTRODUCTION

Functional analysis methodology is the gold standard for identification of variables maintaining problem behavior (Hanley, Iwata, & McCord, 2003). Some functional analysis researchers have identified ways to move from brief to more complex functional analysis procedures (Vollmer, Marcus, Ringdahl, & Roane, 1995) and clarify initially ambiguous functional analysis outcomes (Rooker, DeLeon, Borrero, Frank-Crawford, & Roscoe, 2015). Although research has explored stability in preference over time (Hanley, Iwata, & Roscoe, 2006), no known research has examined changes in behavioral function over time.

The purpose of the current research was to evaluate stability of behavioral function using data, from archival records, for individuals that experienced 2 functional analyses.

METHOD

Participant and Data Selection

Ella: female diagnosed with autism, intellectual disability, and impulse control disorder.

Brian: male diagnosed with autism and intellectual disability.

Wally: male diagnosed with autism, intellectual disability, and impulse control disorder.

Calvert: male diagnosed with autism and intellectual disability.

Matthias: male diagnosed with autism, intellectual disability, and pica.

- Archival data from a residential treatment facility for the assessment and treatment of problem behavior were analyzed to identify participants exposed to at least 2 functional analyses.
- Data were included for analysis if (1) at least 2 functional analyses were conducted, with original graphs and protocols available, (2) the target behaviors in each functional analysis were identical, and (3) the functional analysis were conducted at least 3 months apart.

Dependent Variables and Data Analysis

Frequency data were collected on laptop computers using a computerized data collection system during all sessions.

Problem behaviors were selected and operationally defined on an individual basis and included aggression, self-injury, and property destruction.

Procedures

Functional Analysis: Various test (e.g., attention, escape, ignore, alone, tangible, and self-restraint) and control conditions were evaluated for each participant in a multielement design.

- Sessions were 10 min in duration with the exception of Brian, whose sessions were 5 min in duration during his second assessment. Sessions were conducted in an 8 x 8 ft session room or in the common area of the residential facility.
- Reinforcement during all test conditions was 15 to 30 s in duration.
- No consequences were provided for problem behavior during the ignore, alone, or control conditions.
- The average duration between assessments was 15 mos, with a range of 4 mos to 4 years

Participant	Age (at time of first assessment)	Target	Time Between Assessments	Initial Assessment Outcome	Follow-up Assessment Outcome
Brian	19 years old	Self-injurious Behavior	11 mos.	Automatic	Automatic
Wally	9 years old	Self-injurious Behavior	10 mos.	Self-restraint	Self-restraint
Ella	14 years old	Self-injurious Behavior	4 mos.	Automatic	Automatic
Calvert	16 years old	Aggression	4 yrs.	Tangible	Tangible
Matthias	13 years old	Combined Inappropriate	4 mos.	Tangible	Tangible

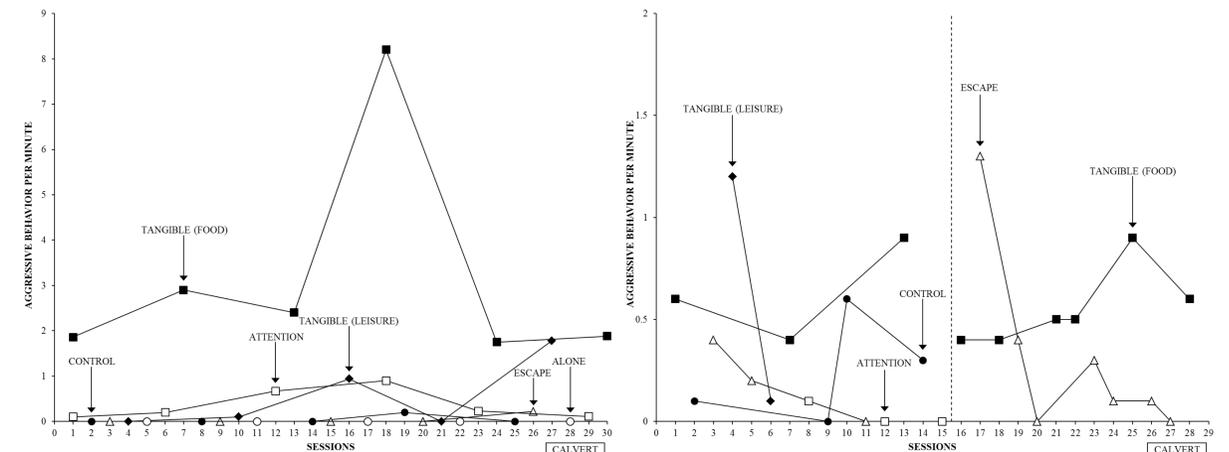


Figure 1 displays aggressive behavior per minute during the first (left panel) and second (right panel) functional analysis for Calvert.

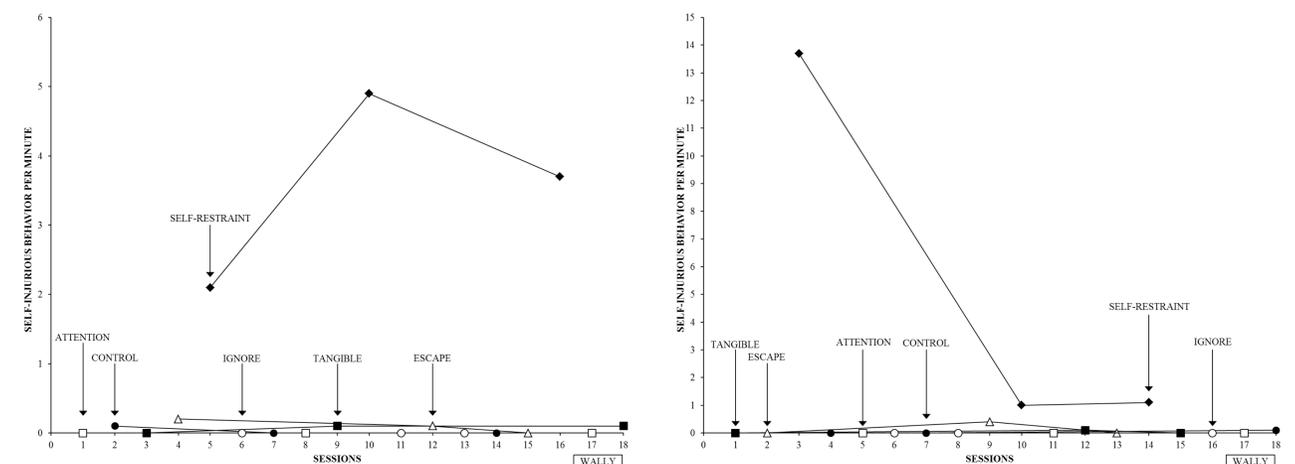


Figure 2 displays self-injurious behaviors per minute during the first (left panel) and second (right panel) functional analysis for Wally.

RESULTS AND DISCUSSION

- Two functional analyses were conducted for 5 participants, and the reason for re-assessment included (1) continued high rates of problem behavior, (2) re-emergence of previously reduced problem behavior was observed, or (3) a new treatment team was involved in the care of the individual.
- Functional analyses were conducted by different treatment teams in 4 of the 5 cases, and procedures varied slightly across assessments within and across participants.
- Functional analyses for all 5 participants remained stable and determined the same functions of behavior, even in the 4 cases that were conducted by different treatment teams.
- Although preliminary, these data suggest that frequent re-assessment of behavior function may not be necessary. Clinicians may be able to conduct less formal assessments to re-assess problem behavior when a clear functional analysis was previously obtained.
- Procedures should be replicated across additional participants to provide greater generality for these findings.

REFERENCES

- Hanley, G. P., Iwata, B. A., & McCord, B. E. (2003). Functional analysis of problem behavior: A review. *Journal of Applied Behavior Analysis*, 147-185.
- Hanley, G. P., Iwata, B. A., & Roscoe, E. M. (2006). Some determinants of change in preference over time. *Journal of Applied Behavior Analysis*, 189-202.
- Rooker, G. W., DeLeon, I. G., Borrero, C. S., Frank-Crawford, M. A., & Roscoe, E. M. (2015). Reducing ambiguity in the functional assessment of problem behavior. *Behavioral Interventions*, 1-35.
- Vollmer, T., Marcus, B., Ringdahl, J., & Roane, H. (1995). Progressing from brief assessments to extended experimental analyses in the evaluation of aberrant behavior. *Journal of Applied Behavior Analysis*, 561-576.