ASSESSMENT AND FUNCTION-BASED INTERVENTIONS OF CHALLENGING BEHAVIORS IN A CHILD WITH AUTISM

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Background

- Autistic children have a higher risk of engaging in challenging behaviors when compared with neurotypical peers (McClintock et al, 2003)
- Functional analysis (FA) has become the gold standard method in applied behavior analysis (ABA) for understanding the environmental variables that come to shape and maintain problematic behaviors such as aggression, self-injury, and property destruction (Saini et al.,2020)
- Challenging behaviors maintained by more than one cause are identified when the outcomes of a FA show high levels of responding in two or more test conditions compared to a control condition.
- The prevalence of multiply controlled behavior has been reported in several studies; however, it represents a challenge to intervention because treatment for one function of problem behavior might be contraindicated for another (Beavers & Iwata., 2011).
- Functional communication training (FCT) is one of the most widely used and most effective forms of treatment for working with children with severe challenging behavior and developmental disabilities such as autism spectrum disorder (ASD) (Tiger et al., 2008)
- The implementation of FCT with schedule thinning
- FCT has been shown to have efficacy when it is implemented with extinction (Rooker et al., 2013)
- Schedule-thinning procedures that use discriminative stimuli can maintain the effectiveness of FCT while they minimize the need for punishment or other supplemental procedures (Greer et al.,2015)

Methodology

Participant

- 5-year-old biracial male diagnosed with ASD.
- Vocal-verbal communication
- He receives ABA and speech therapy services at the Center for Autism Spectrum Disorders (CASD) at SIU.
- **Topography of challenging behavior:** Property destruction, throwing items, vocalizations, physical aggression, banging, and flopping.

Procedure

Materials: Padded room, Colored cards to discriminate conditions, soft toys such as: playdoh, foam blocks, paper blocks, and a limited number of regular toys, FCR Card, white board, dry erase marker,





Design: Alternating treatment, reversal design

Interobserver agreement (IOA): IOA was calculated using a partial agreement within intervals for both treatment functions across all phases of the study. Mean agreement for interruption of ritualistic behavior function treatment was 93% (range, 69% to 100%). Mean agreement for attention function treatment was 98% (range, 86% to 100%).

Assessment

Aman & Singh (1994)	Multielement FA with idiosyncratic potential functions	Pairwise FA -Attention	Pairwise FA - Interruption of ritualistic behaviors
The Aberrant Behavior Checklist consists of 58 questions across 5 different domains.	• Escape from non-preferred person's demands. • Tangible to be fixed • Leisure items included in no-interaction • Divert attention • Attention • Mand function • Play (control)	• Six session trials (3 test and 3 control sessions) • Session: 5 minutes • The results showed differentiation in test condition	• Five session trials (3 test and 2 control sessions) • 5 min session • The results showed differentiation in control condition

Treatment

Attention Function - Treatment	Interruption of Ritualistic Behavior Function - Treatment
• Functional communication training. • Schedule thinning of reinforcement. • Naturalistic • Flipped card	• Functional communication training (using a card of FCR and vocal FCRs) • Extinction • Reinforcement time (20 sec, 30 sec)

Results

- The aberrant behavior checklist revealed a high percentage (more than 65%) in three of the five domains (Figure 1)
- Figures 2 and 3 show differentiated outcomes in both test conditions in a pairwise functional analysis.
- The implementation of FCT plus extinction procedure for interruption of ritualistic behavior function reduced the rate of challenging behavior, however, some resistance to extinction was identified during the implementation (Figure 4).
- The implementation of FCT within schedule thinning for attention function reduced more than 80% the emission of challenging behaviors (Figure 5).
- Using a terminal-probe schedule thinning procedure allowed for identifying the tolerance of the removal of attention. In the presence of the S^{Δ}, the clinician recorded how long after initiation of the session until challenging behavior first occurred (for a 25-minute session).
- Procedural arrangements implementing an FCR Card as a visual prompt and increasing the reinforcement time (from 20 to 30 sec) ensured the reduction of challenging behaviors (80%) to master the criteria.

Discussion

- Our findings have important implications for clinical practice, specifically, the assessment and intervention of multiply controlled challenging behavior.
- The results suggest that an appropriate assessment that included idiosyncratic modifications to a standard FA provided clear outcomes and highlighted potential and effective interventions for problematic behaviors (Schlichenmeyer, et al., 2013)
- The implementation of FCT with schedule thinning improves both the feasibility of treatment and the durability of behavioral treatments (Greer et al., 2016).
- If researchers frequently observe resurgence (re-emergence of behavior) during schedule thinning with FCT, they should consider including more favorable reinforcement conditions for the alternative response (e.g., reinforcement time). (Kranak & Brown, 2023)

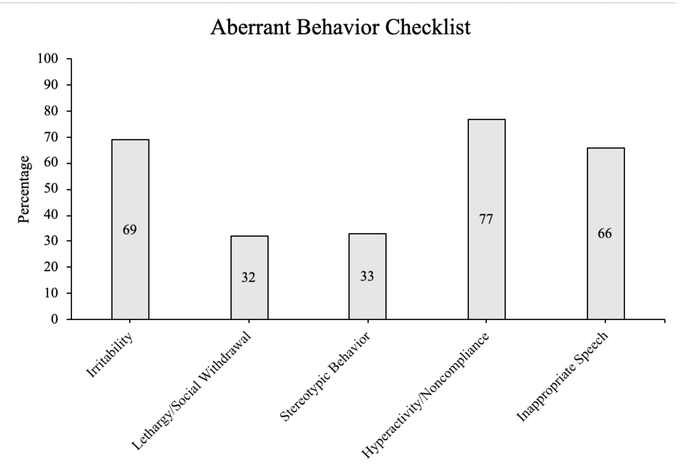

Figure 1. Aberrant behavior checklist results

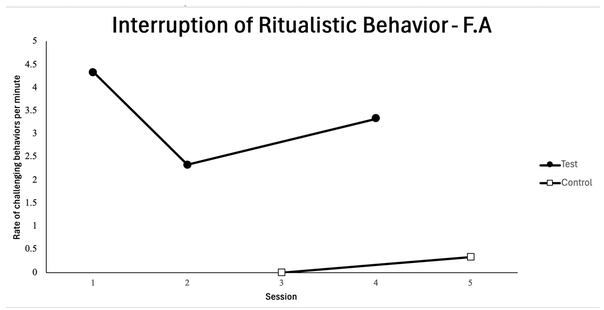

Figure 2. Pairwise Functional Analysis of interruption of ritualistic behavior function.

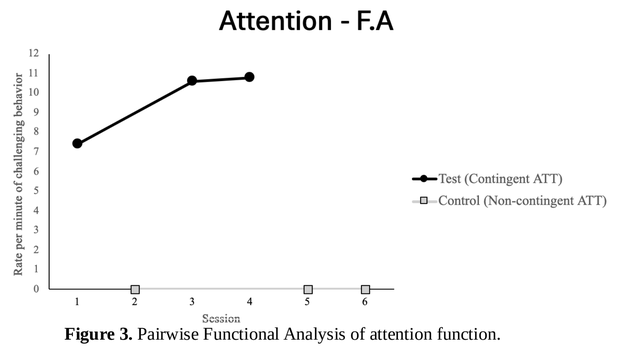

Figure 3. Pairwise Functional Analysis of attention function.

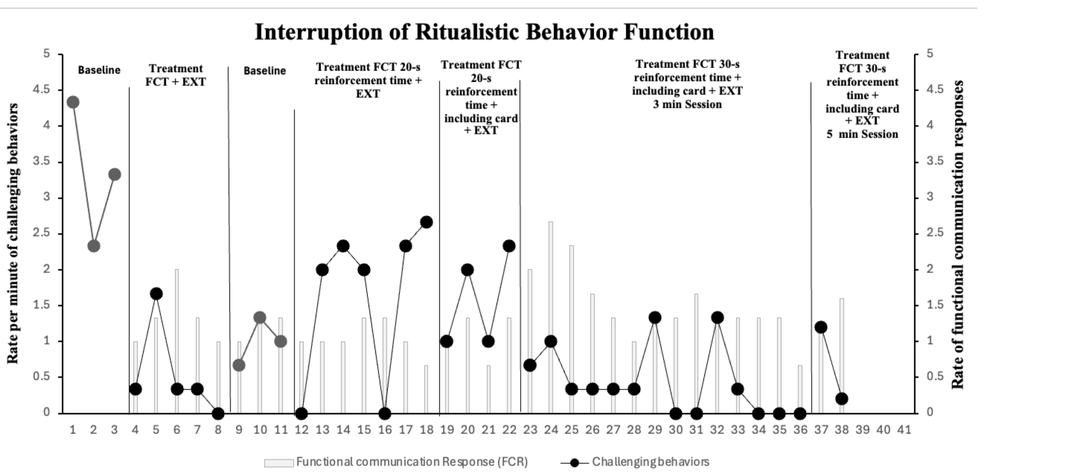

Figure 4. Treatment implemented for interruption of ritualistic behavior function

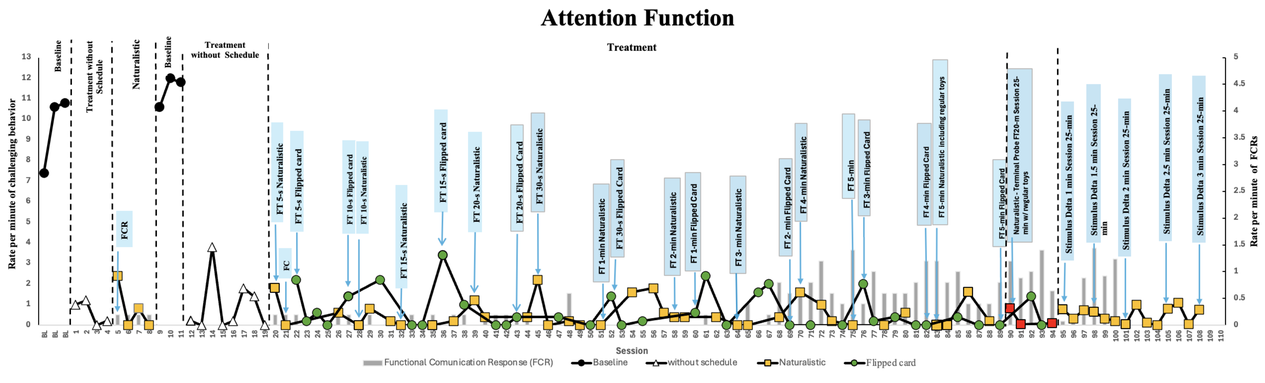

Figure 5. Treatment implemented for attention function

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References & Contact information :
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