Comparing a Function-based and Non-function-based Intervention for Echolalia

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INTRO:

- Echolalia is a restricted pattern of vocal stereotypy that should not always be targeted for change, but for some, it can impact social exchanges, friendships, and hinder progress toward educational goals (Mantzoros et al., 2022)
- Previous research indicates a lack of consideration of a function for echolalia (Blackburn et. al., 2023; Neely et al., 2016)

PURPOSE:

- Compare a function-based (i.e., differential reinforcement of alternative behavior) and a non-function-based (i.e., cue-pause-point) to reduce echolalia in a child with ASD

Participant & Setting

- 9-year-old Male (ASD)
- Participant home

Dependent Variables

- Echolalia (immediate)
- Correct responding
  - Intraverbal response without echolalia

Method

- Paired-stimulus preference assessment (Fisher et al., 1992)
- Functional analysis (Iwata et al., 1982/1994)
- Response identification training (McMorrow et. al., 1987)
- Baseline
- Alternating treatment comparison
  - Cue-pause-point (McMorrow et. al., 1987)
  - Differential reinforcement of alternative behavior (DRA; Athens & Vollmer, 2010)

Cue-pause-point (CPP) was more effective than DRA in reducing escape-maintained echolalia in a child with ASD. Examination of echolalia with a functional analysis offers guidance for future research to explore alternative function-based interventions.

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Figure 1. Functional analysis of Echolalia Results

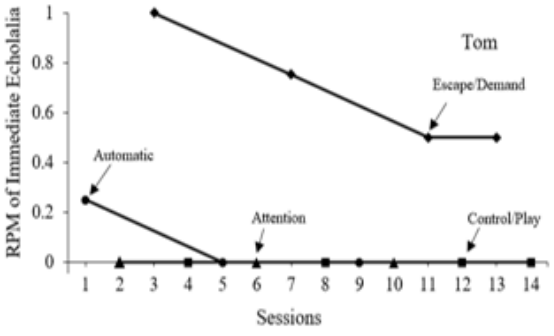
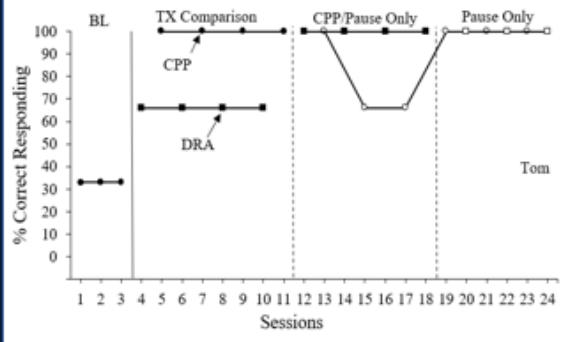


Figure 2. Percentage of correct responding during baseline and treatment comparison

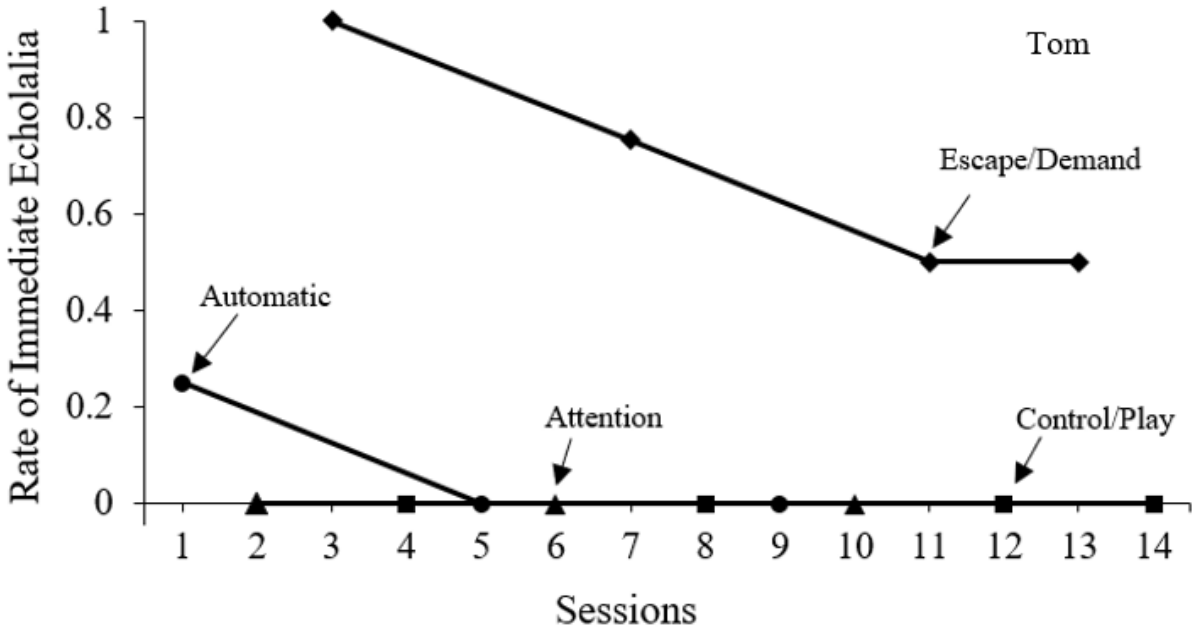


Abstract

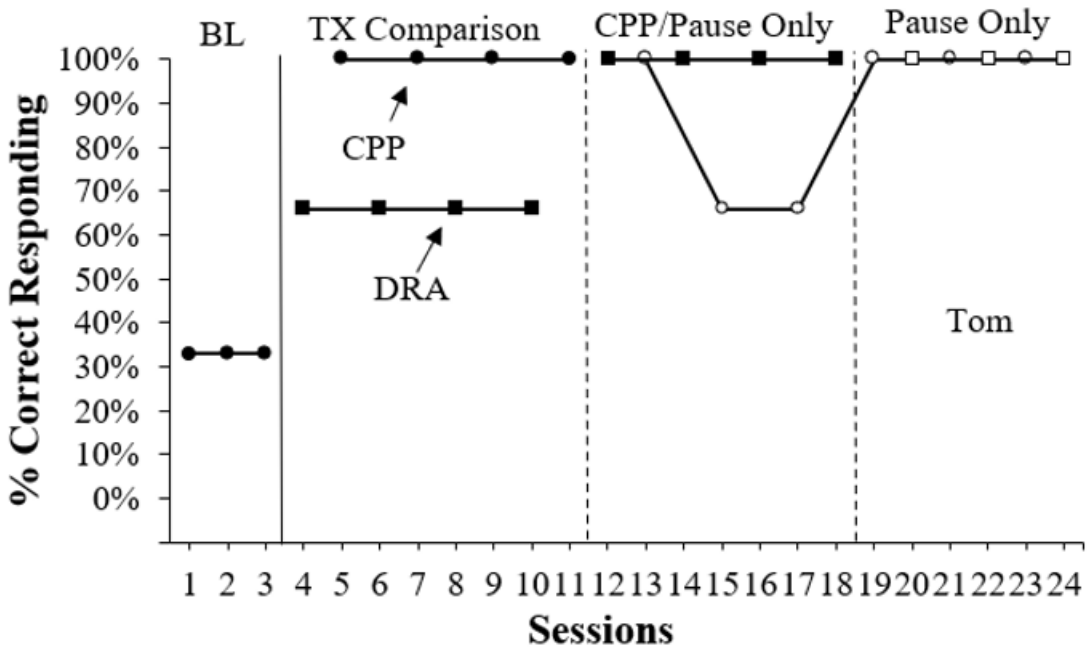
Echolalia is a restricted pattern of vocal behavior in which a person may repeat some or all of a previously spoken utterance and is common in individuals with autism spectrum disorder. While echolalia is not always problematic (and should not be targeted for change), for some individuals, it can impact social exchanges, friendships, and hinder progress toward educational goals. Different treatment packages have been evaluated to reduce echolalia and increase appropriate vocalizations. A limitation to the current research is the inattention to behavioral function when designing these interventions. In the current study, a functional behavior assessment was conducted on the immediate echolalia of a nine-year-old male yielding a social-negative function. An alternating treatment design was used to compare the effects of a function-based (i.e., differential reinforcement of alternative behavior; DRA) and a non-function-based intervention (i.e., cue-pause-point; CPP) on correct responding to two sets of intraverbal responses. For the DRA intervention, emission of a correct response resulted in an immediate break, while incorrect responses were followed by representation of the trial. Results of the treatment evaluation showed that CPP was more effective in reducing echolalia as compared to DRA for this participant. Implications for practitioners and future research will be discussed.

Keywords: autism spectrum disorder, differential reinforcement of alternative behavior, cue-pause-point, alternating treatment design

Functional Analysis of Echolalia Results



Percentage of Correct Responding During Baseline and Treatment Comparison



Functional Analysis:

Automatic Condition. Tom was in the therapy room along with the researcher and BCBA present. The condition was three minutes long and began with the researcher presenting the discriminative stimulus S^D to Tom with directive "you can do whatever you want. I am going to be working". The researcher then moved to a corner of the room and refrained from delivering attention to Tom. No attention was delivered in response to target behavior or any appropriate behaviors. Any attention was withheld from Tom in response to any behaviors exhibited.

Attention Condition. Tom was in the therapy room along with the researcher and BCBA present. Tom was allowed two moderately preferred items (excluding electronics). The condition was three minutes long and began with the researcher presenting the discriminative stimulus S^D to Tom with directive "you can do whatever you want. I am going to be working". The

researcher then moved to a corner of the room and diverted attention from Tom. Attention was only delivered to Tom if he exhibited the target behavior. The consequence was to repeat directive as “I hear you. You play, I am going to work”.

Escape/Demand Condition. Tom was in the therapy room along with the researcher and BCBA present. Tom was not given preferred items during condition. The condition was three minutes long and began with the researcher presenting the discriminative stimulus S^D to Tom with directive “we’re working”. The researcher then began delivering novel questions. If Tom did not exhibit a response, the researcher delivered least to most prompting to elicit a response (i.e. gesturing for client to respond, partial vocal prompting, full vocal prompting). If Tom exhibited the behavior, the researcher then removed materials and turned away for fifteen seconds before readministering the demands again.

Control/Play Condition. Tom was in the therapy room along with the researcher and BCBA present. Tom was given moderately preferred items during condition (excluding electronics). The condition was three minutes long and began with the researcher presenting the discriminative stimulus S^D to Tom with directive “you can do whatever you want”. The researcher delivered attention approximately every thirty seconds to Tom. If echolalia occurred at the time attention was scheduled to be delivered, it was delayed approximately five seconds. No consequences were provided to the participant for exhibiting appropriate behavior.

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