

Evaluation of Conditioned Aversive Stimuli Associated with Past Traumatic Events on Choice-making and Avoidance Behaviors

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Introduction

- People with ASD and ID
 - Experience high rates of exposure to potentially traumatic events (Daveney et al., 2019)
 - Often have communication difficulties that can prevent reporting traumatic events and symptoms of stress disorders (Mevisen et al., 2014)
 - Can demonstrate increased problem behavior following traumatic events (Roswell et al., 2013)
- Conditioned Aversive Stimuli (CAS)
 - Neutral items prior to trauma
 - Following trauma elicit emotional reactions (Fletcher, 2007)
 - Commonly called “triggers” (Van der Kolk, 2015)
- Behavior Analysis
 - Limited assessment procedures to evaluate the effects of CAS on behavior

Purpose

- Evaluate
 - Effects of two CAS on choice latency and avoidance
 - Treatment effects of teaching a break request on compliance

References

Daveney J, Hassiotis A, Katona C, Matcham F, Sen P. (2019). Ascertainment and prevalence of post-traumatic stress disorder (PTSD) in people with intellectual disabilities. *Journal of Mental Health Research in Intellectual Disabilities*, 12(3-4), 211-233.

Fletcher, R., Barnhill, J., & Cooper, S. (2007). *DM-ID: Diagnostic manual—intellectual disability: A textbook of diagnosis of mental disorders in persons with intellectual disability*. (2nd ed.). Kingston, NY: National Association for the dually Diagnosed.

Mevisen, L., Barnhoorn, E., Didden, R., Korzilius, H., & De Jongh, A. (2014). Clinical assessment of PTSD in children with mild to borderline intellectual disabilities: A pilot study. *Developmental Neurorehabilitation*, 17(1), 16-23. doi:10.3109/17518423.2013.834998

Rowell, A. C., Clare, I. C. H., & Murphy, G. H. (2013). The psychological impact of abuse on men and women with severe intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities*, 26(4), 257-270. doi:10.1111/jar.12016

Van der Kolk, B A. (2015). *The body keeps the score: Brain, mind, and body in the healing of trauma* Penguin Books.

*10 second whole interval agreement used for IOA (# of agreement intervals/total intervals)*100

Method

Participant:

- 24-year-old male with ASD and ID
- Communication of 2-3 signs
- History of exposure to traumatic events

Setting:

- Apartment in residential facility

Materials:

- Morning hygiene materials and data collection devices

Interobserver Agreement

Total Sessions	Sessions with IOA	Percent Agreement*
28	8 (29.63%)	93.66%

Definitions

1. Choice latency:
 - time from presentation of objects/pictures to selection
2. Compliance:
 - completion of instruction
3. Resistance/avoidance:
 - refused prompt or moved away from staff for > 1 sec.
4. CAS present/absent:
 - conditioned aversive stimulus within 3.3m/visible for > 25% of session duration (present) OR further than 4.5 m/visible for <25% of session (absent)

Analysis 1 Procedure:

- Choices offered during morning hygiene routines

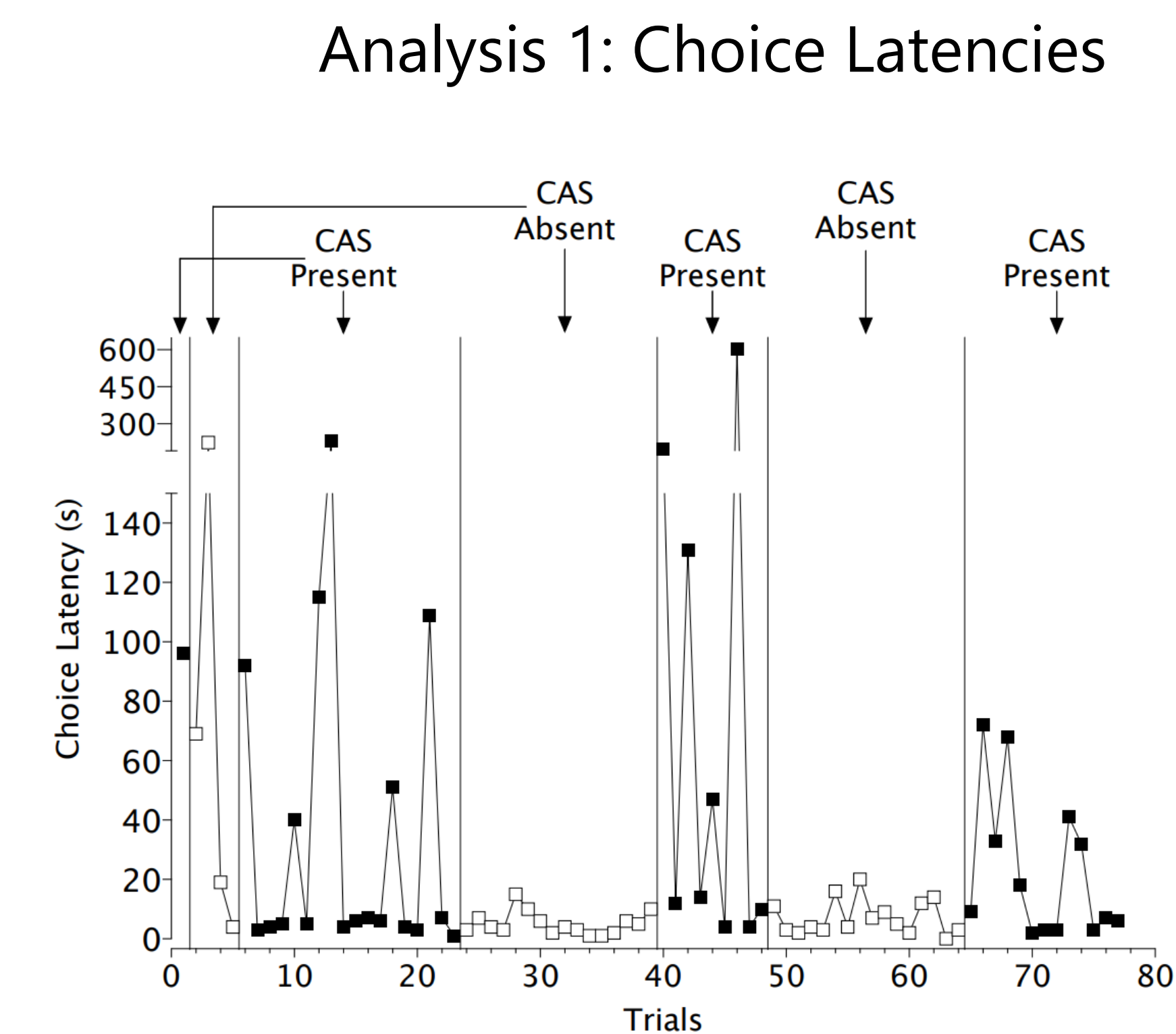
Analysis 2 Procedure:

- Choice of preferred items, consumption after imitation
- “break” request always available

Analysis 3 Procedure:

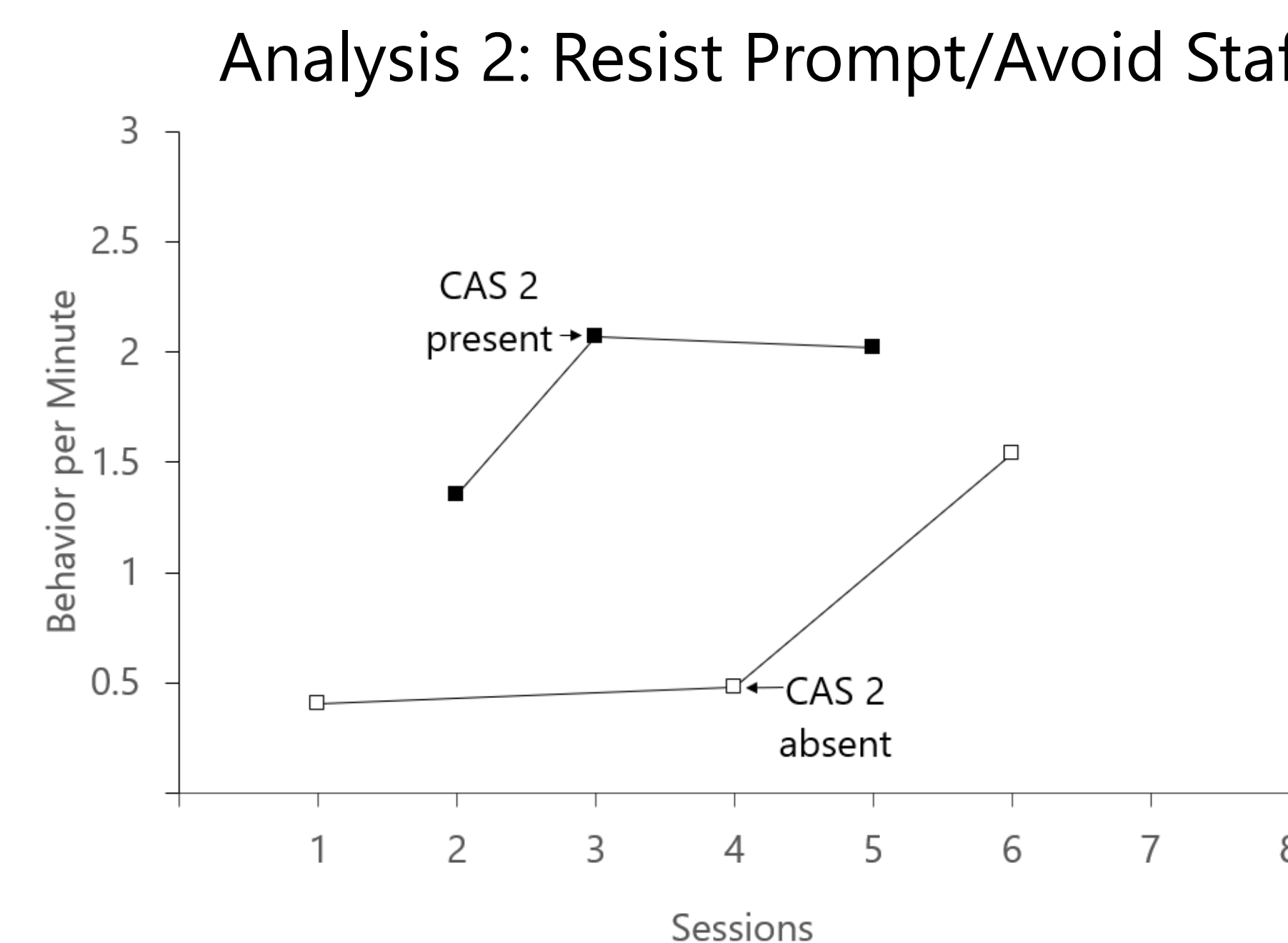
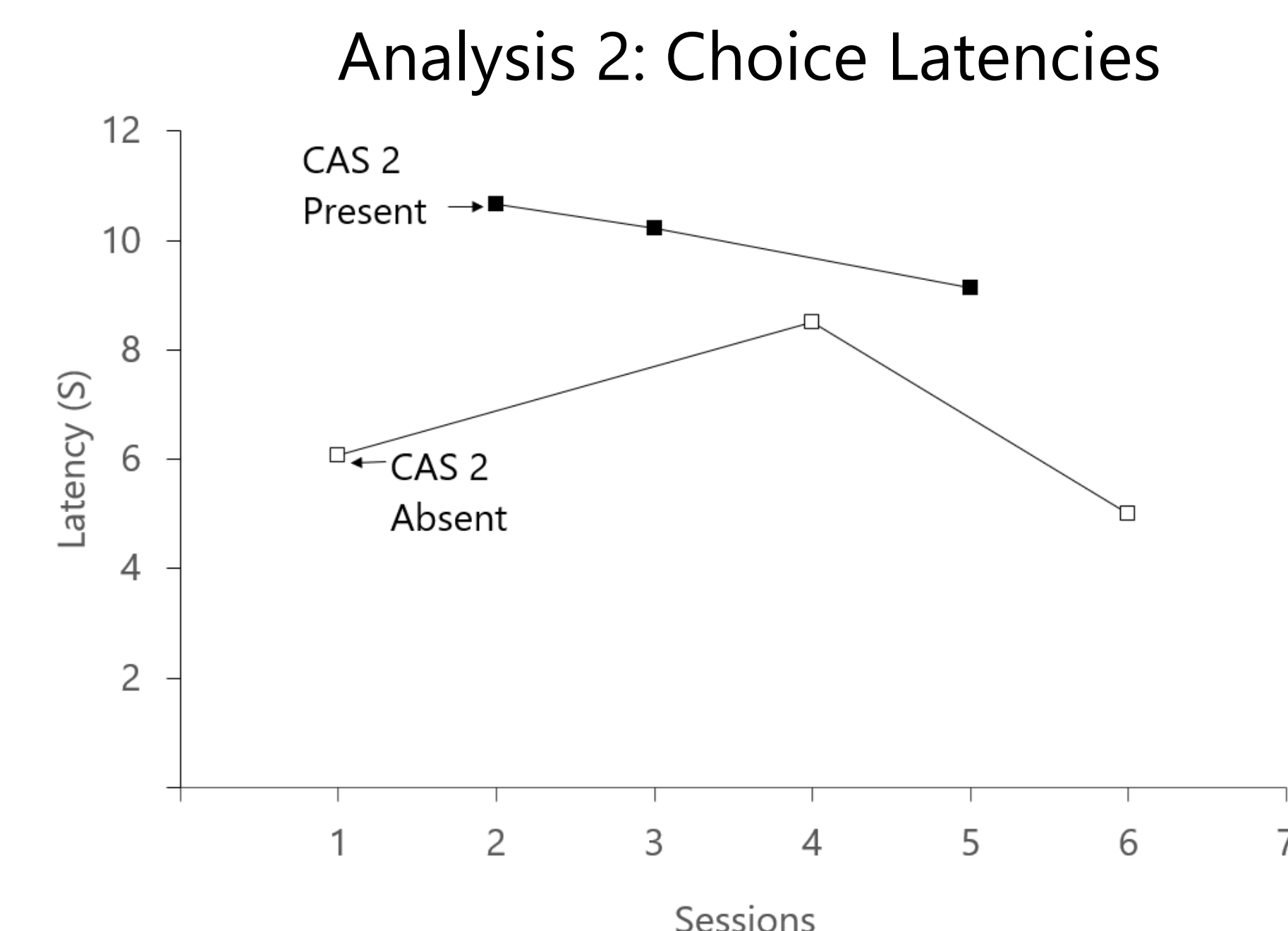
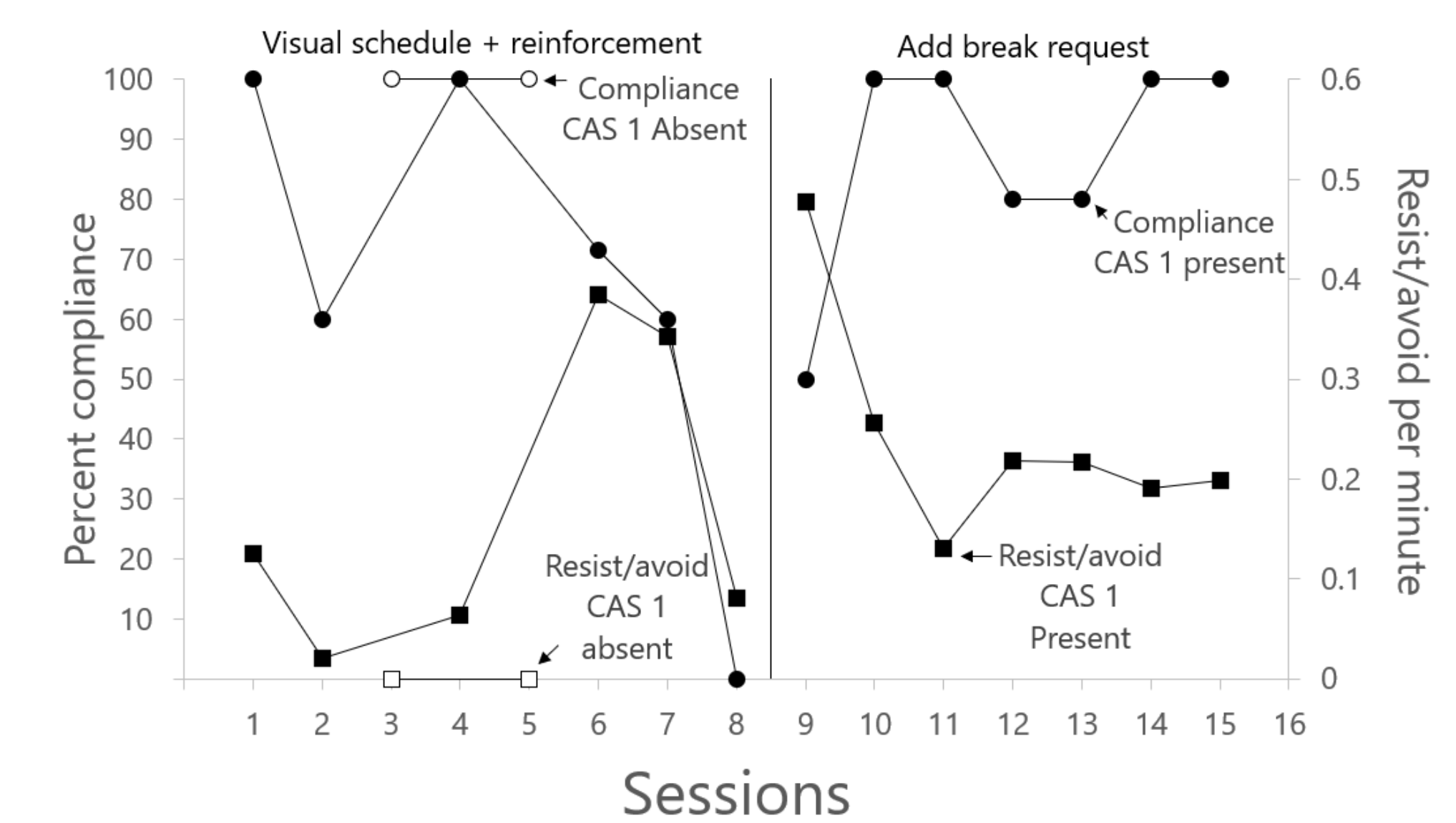
- Morning hygiene routine
- Phase 2: taught “break” request

Results



1. Exposure to CAS associated with traumatic events increased
 - Variability of choice latency
 - Latency to make choices
 - Resistance/avoidance responses per minute
2. CAS 1 and 2
 - Could not be removed from the environment
3. Following introduction of break request
 - Compliance with morning routine tasks improved

Analysis 3: Morning Routine Treatment



Discussion

We hope that continuation of this project will contribute to the development of effective and compassionate treatments for people with limited verbal communication skills and exposure to traumatic events.

Some of the questions we hope to answer are:

- Are choice latency and/or variability measures useful in evaluating potential CAS for other individuals?
- How can we improve functional analysis procedures to evaluate the effects of possible CAS for people who have been exposed to potentially traumatic events?
- What treatments could be helpful in re-conditioning CAS following exposure to trauma (especially when CAS cannot easily be removed from the environment)?