

Tevin Shadd, BA Psych. Vincent Sacco, BA Psych. Shinice Sutherland, M.ADS

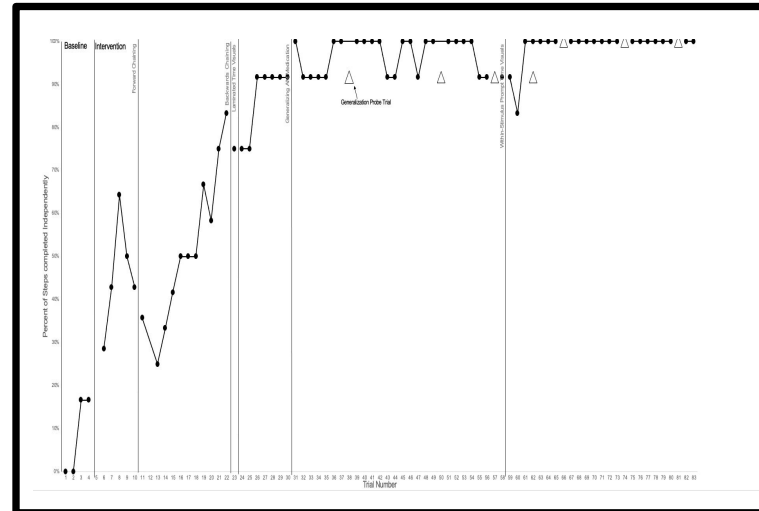
## Background

Our client is a 26-year-old man with autism spectrum disorder (ASD) with a complex biomedical profile including a diagnosed seizure disorder causing the grand mal seizures he experiences, significant chronic gastritis with autistic enterocolitis (a Crohn's like disease); additionally, the client has been diagnosed with small intestinal bacterial overgrowth, which all contribute to a regular experience of stomach pain and discomfort. Our client is low/non-vocal in his communication and engages in Self-injurious Behavior (SIB) of varying intensities. The occurrence of SIB alongside the client's complex biomedical profile has resulted in a need for 24-hour support. Fortunately, the client has a fairly extensive history with Applied Behaviour Analysis (ABA). Having participated in programs and receiving ABA instruction throughout his childhood, our client has acquired a variety of prerequisites for functional living skills providing the ability to live a more independent lifestyle.

## Purpose

The acquisition and retention of functional living skills are amongst the most important skills to target for adults with ASD. Lack of independence can result in a decrease in quality of life for individuals, family members and can be costly in terms of support to ensure an individual's daily needs are met. The A-Team is a dedicated team of individuals supporting a young man with ASD and severe challenging behaviour to live his best life. In addition to implementing a behavioural treatment package to support the reduction of severe challenging behaviour, the team has identified tasks they typically complete for the individual that he can learn to complete independently. One task identified to target was the administration of daily medication. Starting with a forward chaining procedure, the participant was taught to self-administer medication. During teaching, several barriers to independent skill acquisition were observed, including prompt dependency, and discriminating between which medications to take at which times. Modifications to the teaching procedures were implemented including, switching to backward chaining instead of forward chaining, revising prompting strategies, and adding a within-stimulus prompt to aid with independent discrimination (Summers et al., 1993). The participant learned to independently administer his own medication and this skill was generalized across medication times and support staff. This presentation will demonstrate how using behavioural interventions, making data-based decisions, and revising teaching strategies as needed to enhance learning can increase independence with functional living skills with individuals with ASD

## Graph



## Results

The client demonstrated an increase of 47% from baseline to the initial intervention phase when forward chaining was introduced. In contrast, a 62% increase from baseline was observed when the backwards chaining intervention was introduced. Overall, the client was able to achieve mastery of 100% of steps completed independently and consistently across consecutive trials. The current target is currently in daily maintenance. A follow up probe will be conducted 6 months post intervention. The graph demonstrates the percentage of correct steps completely independently with generalization probes which represents novel staff members and novel medications illustrating generalization was effective within this program. The percentage of correct steps completed independently remained stable across various phases and increased in the desired direction once the intervention was introduced. Based on the data, the backwards chaining intervention phase was more effective as a teaching procedure when compared to the forward chaining intervention phase. Thus, the intervention effectively increased the percentage of steps completed correctly and independently throughout the duration of treatment. Based on the results it is imperative as ABA practitioners to make data-based decisions and program revisions to support mastery of skills.

## Discussion & Limitations

A few obstacles to reaching mastery criteria were observed due to the variance in the types of medication, timing of medication and prompt dependency. The instructional strategies of forward chaining, and back prompting procedure, were utilized effectively to overcome these obstacles, contributing to the client's success throughout the program. This is highlighted by the rapid improvement in trials and quick attainment of mastery. Such an approach will be continued onwards as the program progresses to the next step of generalization, wherein the behavior will occur in varying locations. The principal limitation faced was in sample selection and size. As this skill was a teaching program that was conducted as part of a larger focused ABA program for one client within his home. The methodology was curated to align with best practices and empirical evidence while affording the client the best opportunity to succeed. Another limitation is the lack of instructor variability or generalization of the new behavior across various instructors. Since the onset of the program, trials have been conducted by one of the three possible instructors. Suggestions for replicating the results of this program, research and identify the best methodologies for various severities of ASD based on the participant's natural environment e.g., group settings, school, home etc. For use in focused ABA and direct service programs the methodology should be tailored to best suit the client's needs, ensuring their best interests and opportunity for success are upheld while maintaining empirical integrity and best practice strategies (Kelsey, 2020).

## References

- Lilly, Kelsey, "Chaining Techniques: A Systematic Literature Review and Best Practice Recommendations" (2020). Culminating Projects in Community Psychology, Counseling and Family Therapy. 74. [https://repository.stcloudstate.edu/cpcf\\_etds/74](https://repository.stcloudstate.edu/cpcf_etds/74)
- Summers, J.A., Rincover, A. & Feldman, M.A. Comparison of extra- and within-stimulus prompting to teach prepositional discriminations to preschool children with developmental disabilities. *J Behav Educ* 3, 287–298 (1993). <https://doi.org/10.1007/BF00961556>