

Using Social Stories and Differential Reinforcement to Increase Academic Functioning For an Adolescent with Autism Spectrum Disorder

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INTRO

Social Impairments are one of the core deficits of autism spectrum disorder (ASD), which can persist and sometimes worsen during adolescence (Anderson et al., 2011). When adolescents with ASD struggle to communicate with others, not only it impacts their peer relationships socially, but it can also impact their academic functioning with difficulties communicating with and getting support from teachers when they have academic challenges. Social stories are commonly used in clinical settings to help individuals with ASD improve their social functioning. Given its effectiveness, it is possible that skills coaching using social stories can also be effective in improving academic functioning for adolescents, especially during the COVID-19 pandemic when in-person school attendance was frequently interrupted, potentially hindering students' academic engagement.

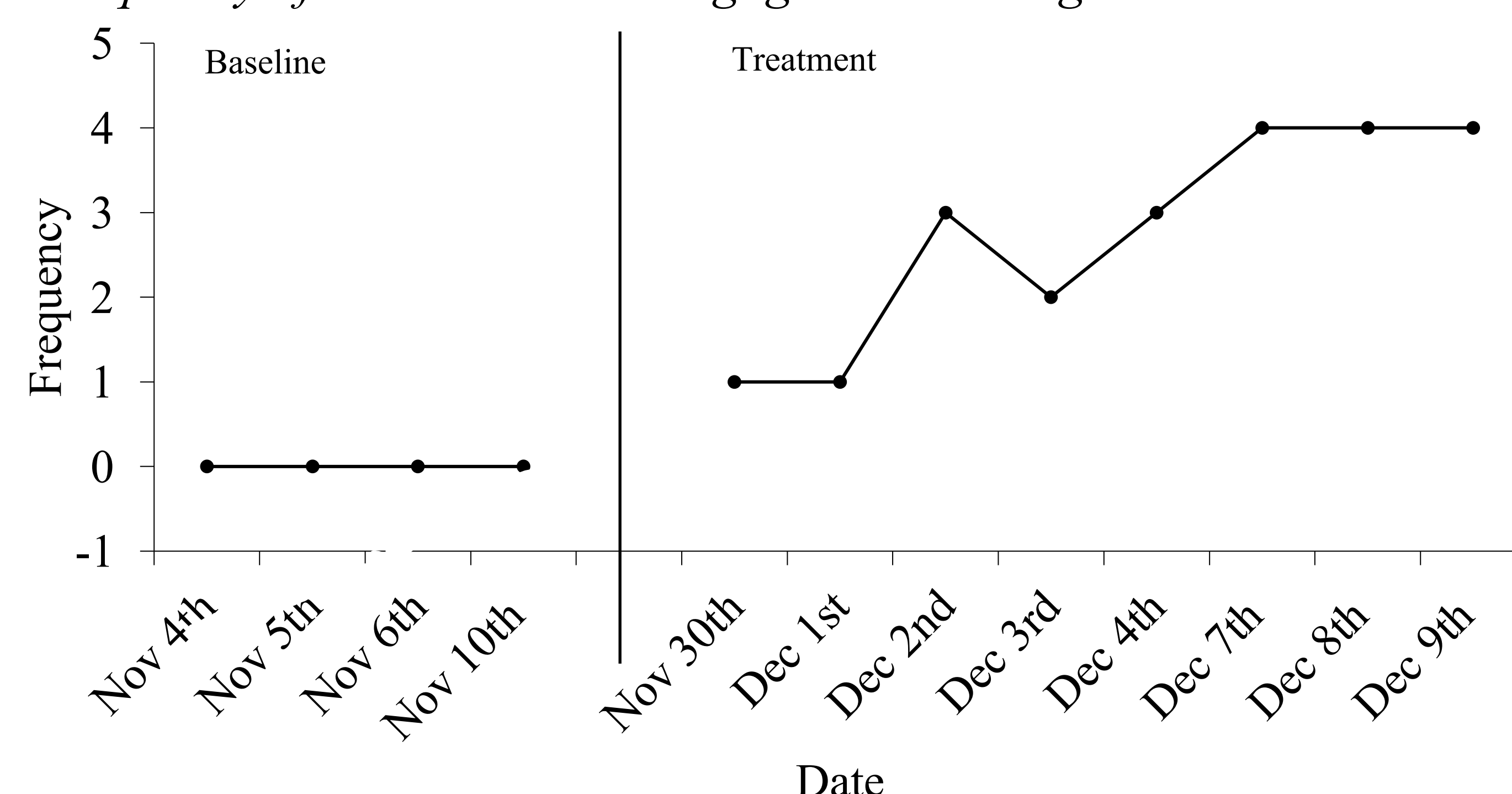
METHODS

- Participants
 - The participant was a grade nine student diagnosed with ASD
 - They were in a mix of applied and locally developed classes at a regular high school
- Measures
 - Functional Assessment Interview (O'Neill et al., 2015)
 - Questions About Behavioural Function (Paclawskyj et al., 2000)
 - Student Reinforcer Survey (Larriba-Quest, 2017)
- Data collection & analysis methods
 - Frequency Recording (Baseline/Treatment)
 - Single-subject, A-B design
 - Percent Exceeding the Median analysis

Hypothesis 1: Social stories can be used to increase academic functioning for adolescents with ASD.

Figure 1

Frequency of Client's Social Engagement During Baseline and Treatment



Note. This graph displays the change of frequency of client's social engagement from baseline to treatment.

My name is _____, I enjoy cooking class.

I Like making cupcakes, cakes, macaroni & cheese and Icing. I am very good at helping making food in class.



In cooking class, sometimes I might need help.

When I need help, I can find a teacher or a peer and ask them "can you help me?".

A question I could ask my teacher or peers is "could you show me where this ingredient goes?"

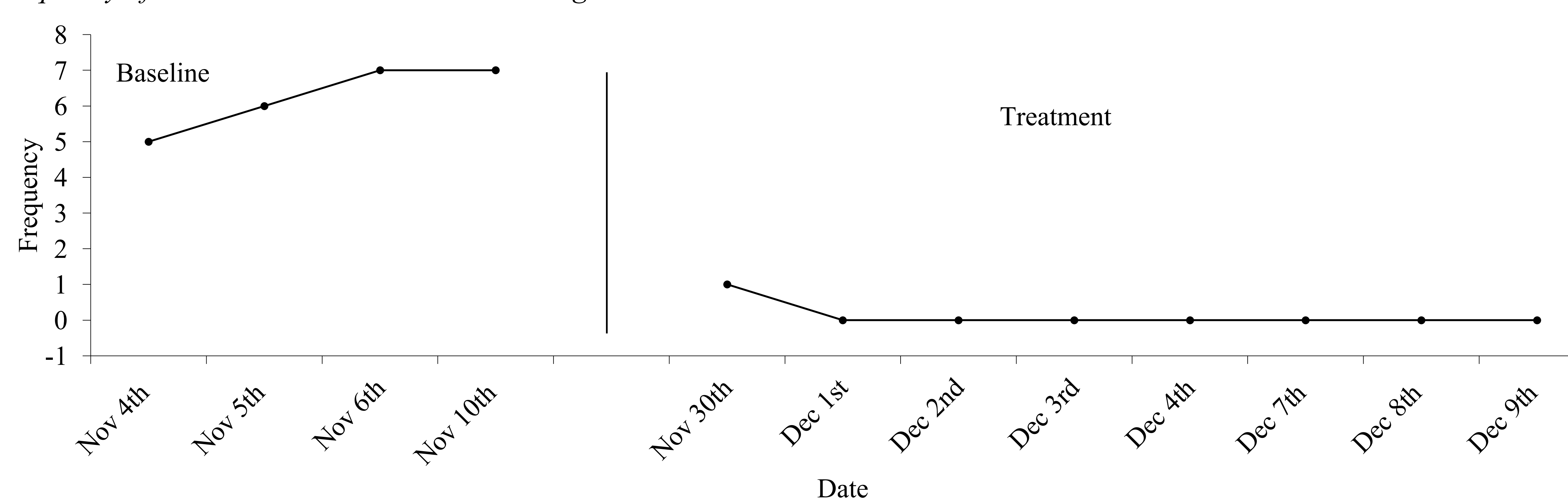


My teachers are happy to help me! I like it when I get help because then I will know how to solve my problem. Another way I can ask for help is to ask, "can you help me find where this is?"

Hypothesis 2: Differential reinforcement can be used to increase academic functioning for adolescents with ASD.

Figure 2

Frequency of Client's Social Withdrawal During Baseline and Treatment



Note. This graph displays the change of frequency of client's social withdrawal from baseline to treatment.

INTERVENTION

- Prior to data collection, the problem and replacement behaviours were operationally defined and revised for reliability.
- The intervention lasted for 8 days, with the social story being implemented once a day, one-on-one, in the classroom before the school day began.
- Differential reinforcement (stickers and verbal praise) was used on a fixed ratio schedule.

RESULTS

The results displayed that there was a significant increase in social engagement and an 84% decrease in social withdrawal behaviours in academic functioning. Qualitatively, it was observed that using a preference assessment was crucial and positively impacted the intervention results since the reinforcement was meaningful to the participant and motivated them for behavioural changes in the beginning.

DISCUSSION

The results seem to highlight that adapting social stories to improve academic functioning can have positive impacts for individuals with ASD (Saad, 2016), particularly when combined with differential reinforcement. For practical implications, this study highlights strategies that are commonly used in school settings with individuals with developmental disabilities, such as social stories, may be modified to address new areas of skill deficit and coaching. Social stories are easy to implement with minor interruption to the client's schedule which allows them to practice the skills in a naturalistic setting (Karayazi & Filer, 2014). One of the main limitations with this study is that it is a single subject design. As such, drawing conclusions regarding the results are preliminary.

REFERENCES

Reference list available upon request.

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