CORE EMOTIONAL REGULATION TRAINING COMBINED WITH DIFFERENTIAL REINFORCEMENT FOR REDUCING EMOTIONAL OUTBURSTS

Lily Wallis[1] and Jessica Jeong [2], M.A.

[1]St. Lawrence College, [2]York University

St. Lawrence College

Honours Bachelor of Behavioural Psychology

Background

In classroom settings, individuals with developmental disabilities (DD) tend to engage in escape-related problem behaviours more often than problem behaviours maintained by other functions. One reason that many students with DD resort to escape more frequently could be that they have skill deficits in emotion regulation (ER).

When supporting individuals with DD in reducing escape-related emotional outbursts, focusing on core ER deficits is crucial. However, **many behaviour-based interventions in school settings neglect the importance of ER training** because it is perceived as resource-intensive. Additionally, students with DD struggle to conceptualize abstract material, therefore, finding suitable ER training strategies can be difficult.

Objectives
The current study aimed to examine whether the escape-related emotional outbursts of a student with DD could be reduced through a brief intervention using core ER training combined with differential reinforcement of alternative behaviours (DRA).
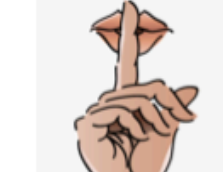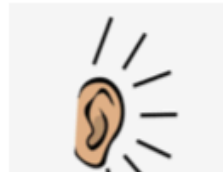
Methods

Participant
The participant in this single-subject study was a 20-year-old male student diagnosed with autism spectrum disorder (ASD) and attention deficit and hyperactivity disorder (ADHD), attending high school in a special education classroom. The participant was referred to treatment because he was engaging in intense emotional outbursts.

Measures
- Functional Assessment Checklist for Teachers and Staff (March et. al, 2000).
- Motivation Assessment Scale (Durand & Crimmins, 1992)
- Student Reinforcement Survey (Larriba-Quest, 2017)

Procedures
- The intervention lasted for 6 full school days (6 hours a day) within the participant's special education classroom.
- Prior to data collection, target and adaptive replacement behaviours were operationally defined and revised for reliability.
- To capture the intensity of the behaviours, duration recording was used for data collection.
- He attended a total of four, 30-minute ER training sessions, and completed 8 dialectical behaviour therapy (DBT) worksheets adapted for DD (Dykstra & Charlton, 2003).
- Reinforced with preferred items for engaging in the ER strategies.
- Emotional outbursts put on extinction by only allowing a break when ER strategies were used.
- Differential reinforcement implemented on FR1, FR4, and VR3 schedules until faded.
- Implementor had regular meetings with other professionals in the participant's support system to ensure proper treatment overlap.

What do I do When I Feel Overwhelmed?

Step 1: Take 3 deep breaths		I slowly breathe in and out. Think about things that make me happy. I think about why I am here. I am capable.
Step 2: Close my eyes and count to 10		Before I react, I will close my eyes and think about what I should do. Other people will feel happy if I think about my actions.
Step 3: Use a quiet voice		When I react, I will be respectful. I don't yell at people. I talk slowly and softly to the people around me.
Step 4: Pause... and listen to who I am talking to		I listen to the people who are trying to help me. They will give me suggestions and advice when I feel upset.
Step 5: Ask for a break		I use my quiet voice to say, "may I take a short break?"

Emotion Regulation Handout 3b
Healthy Model of Emotions

Emotion Regulation Homework Sheet 1
Emotion Chain Analysis 1

Results

The participant demonstrated an 83% reduction in emotional outbursts from an average of 60 minutes a day during baseline to 10 minutes a day by the end of the intervention. The participant's use of adaptive response modulation techniques increased from zero minutes a day at baseline, to an average of 5 minutes a day. Qualitatively, it was observed that the participant became increasingly motivated to use, and be reinforced for, his new ER techniques, which resulted in higher engagement in class activities. The intervention's positive impact can be observed using the Percentage of data points Exceeding the Median (PEM), developed by Ma (2006). According to Scruggs and Mastropieri (1998), a PEM score of 90% or above suggests a very effective intervention. All the intervention data produced a PEM score of 100%

Emotional Outbursts
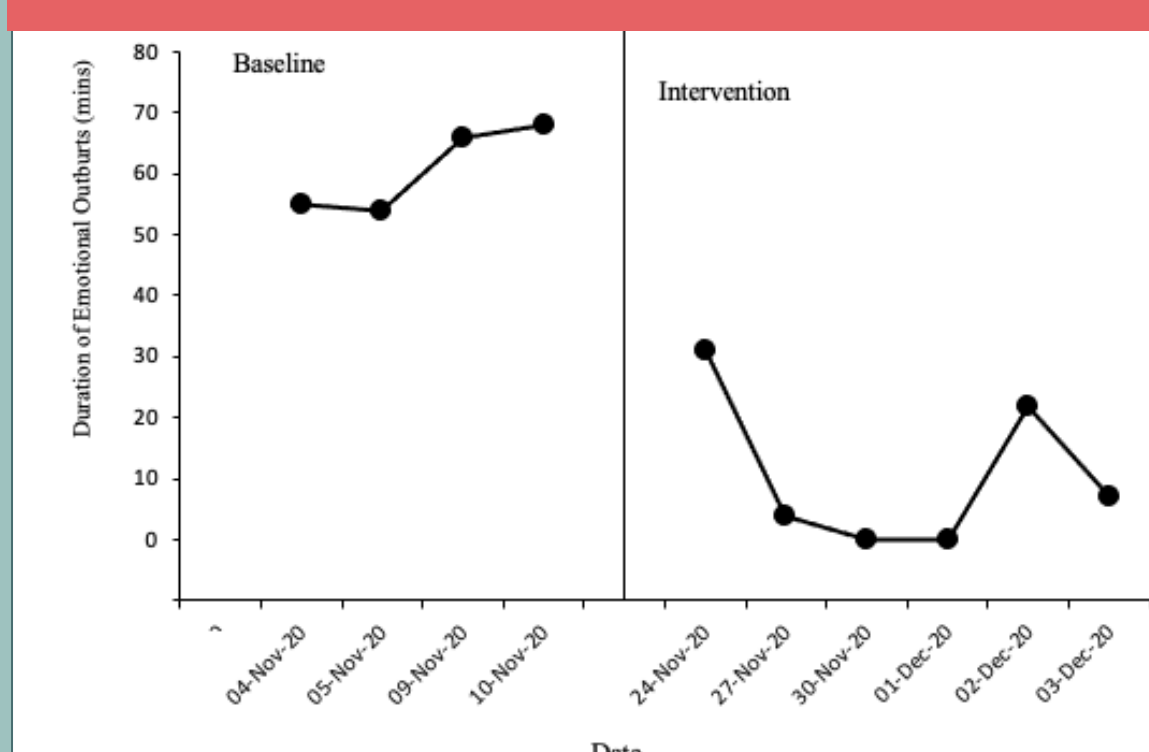
Note. This figure represents the duration (minutes) of the participant's emotional outbursts across the baseline and intervention phases.

Response Modulation (ER)
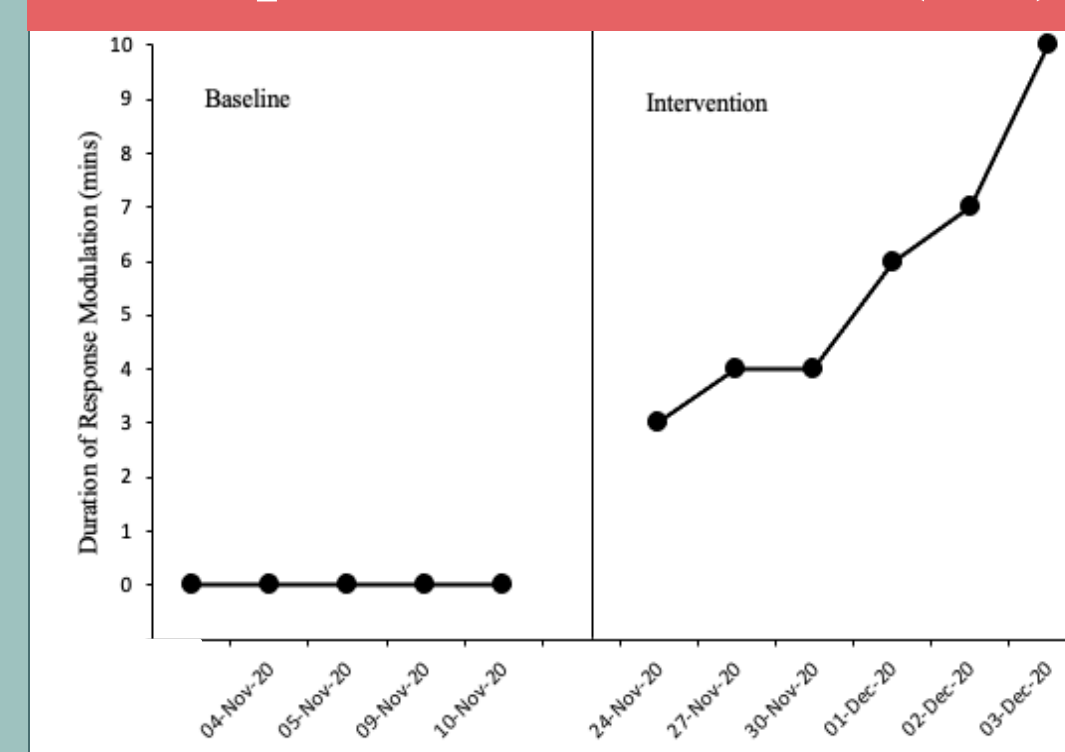
Note. This figure represents the duration (minutes) of the participant's response modulation across the baseline and intervention phases.

Discussion

The findings of the study provide preliminary evidence that decreases in escape-related emotional outbursts can be achieved using brief, targeted interventions focused core ER training combined with DRA.

The current study also provided insight into:
- Clinical/observational research that is fully conducted in the naturalistic environment.
- The importance of considering emotional aspects, such as ER training, when implementing behaviour-based interventions.
- The positive impact of the collaborative-care model and having the client's support system working towards a common goal.
- The importance assessing behavioural function.
- How brief, targeted interventions in the school setting can create positive change, even with the added restrictions of the Covid-19 pandemic.

Limitations
- The single-subject design greatly limits the generalizability of the results.
- Time-restraints resulted in a very brief intervention.
- More research is needed to determine the long-term effectiveness of ER training with individuals with DD.
- Replicating the findings with a larger sample of participants is an important next step.

References

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