



Minnesota State University, Mankato

Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato

All Graduate Theses, Dissertations, and Other
Capstone Projects

Graduate Theses, Dissertations, and Other
Capstone Projects

2022

Examining the Effects of an Online Social Skills Program Targeting Emotional Regulation Skills for a Young Adult with an Autism Spectrum Disorder: A Single Case Study.

Danielle Curtis
Minnesota State University, Mankato

Follow this and additional works at: <https://cornerstone.lib.mnsu.edu/etds>



Part of the [Applied Behavior Analysis Commons](#), and the [Clinical Psychology Commons](#)

Recommended Citation

Curtis, D. (2022). Examining the effects of an online social skills program targeting emotional regulation skills for a young adult with an autism spectrum disorder: A single case study [Master's thesis, Minnesota State University, Mankato]. Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato. <https://cornerstone.lib.mnsu.edu/etds/1196/>

This Thesis is brought to you for free and open access by the Graduate Theses, Dissertations, and Other Capstone Projects at Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato. It has been accepted for inclusion in All Graduate Theses, Dissertations, and Other Capstone Projects by an authorized administrator of Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato.

**Examining the Effects of an Online Social Skills Program Targeting Emotional Regulation
Skills for a Young Adult with an Autism Spectrum Disorder: A Single Case Study.**

Danielle Curtis

A Thesis Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Arts

in

Clinical Psychology

Minnesota State University

Mankato, Minnesota

May 2022

4/5/2022

Examining the Effects of an Online Individual Social Skills Program on Emotional Regulation Skills for Adolescents and Young Adults with an Autism Spectrum Disorder.

Danielle Curtis

This thesis has been examined and approved by the following members of the student's committee.

Advisor

Committee Member

Committee Member

Committee Member

Abstract

Social skills deficits have been identified as a core feature deficit in individuals with autism. Several studies have identified the implications that arise when social skills deficits are ignored, such as poor academic performance and challenges with social adjustment. Therefore, it is imperative that professionals find effective interventions to compete with challenges faced in the social environment. The present study uses a behavioral skills training model to teach emotion regulation through video modeling. The results provide potential support for reducing difficulties with emotional regulation. In addition, there were improvements in reducing problematic internalizing behaviors and increases in self-control behaviors.

Key words: Autism Spectrum Disorder, Social Skills, Emotion Regulation, Behavioral Skills Training

Examining the Effects of an Online Social Skills Program Targeting Emotional Regulation Skills for a Young Adult with an Autism Spectrum Disorder: A Single Case Study.

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by deficits in social functioning and restricted or repetitive patterns of behavior. Symptoms of the disorder often are present in early development but may not be observed until social or educational demands exceed one's abilities (American Psychiatric Association, 2013). Current statistics estimate a prevalence rate for ASD at 1 in 44 adolescents. While males are four times more likely to receive a diagnosis, there is no data to support differing prevalence rates in race, ethnic, or socioeconomic groups (Centers for Disease Control and Prevention, 2021). ASD can be diagnosed at any point in a person's life. Making it difficult to identify a single treatment approach.

Several treatment modalities have been identified as effective when managing symptoms of ASD. Common methods of intervention include behavioral, developmental, and social-relational (Centers for Disease Control and Prevention, 2022). Behavioral approaches, often called applied behavior analysis (ABA), focus on using environmental contingencies to change behavior. ABA programs can be used to increase language and communication skills, advance academic skills, and decrease problem behaviors. ABA is often a preferred method of intervention, as it can be widely adapted to fit the individual's needs (Autism Speaks, n.d.). Developmental approaches often focus on the developmental skills deficits of the individual. Speech and Language Therapy or Occupational therapy are commonly used interventions that fall under the developmental approach (Centers for Disease Control and Prevention, 2022). Speech therapy, for example, can be used to promote language and communication through practicing speech sounds, vocal muscle strengthening, and understanding body language.

Furthermore, speech pathologists are able to help build communication skills for those who are considered nonverbal. Alternative Augmentative Communication technologies such as pictures or iPads® to help individuals communicate (Autism Speaks, n.d.). These are just a few examples of empirically supported interventions that can be applied to autism spectrum disorders. These approaches are important, and frequently allow for great treatment outcomes for those with ASD. But often, the focus of these interventions is on adaptive skills, communication, and educational learning. Social skills deficits are a core feature of this disorder but are often challenging to target during treatment. This is due to the fact that social skills are very complex and often require multiple methods of treatment exemplars to see success.

When it comes to adolescents to young adults, there is a lack of resources available to those with ASD. So much so, that Turcotte and colleagues (2016) identified social skills trainings as the most unmet need for adolescents and adults with autism. Elliott and colleagues (1989) have identified the implications that arise from lack of social skills treatment for individuals with ASD. Research indicates that untreated social skills deficits are related to poor academic performance, challenges with social adjustment, and may even lead to serious psychopathological outcomes. As individuals with autism grow up, the demands and challenges of their social environment become more complex. Those without social interventions would only have an increasingly difficult time trying to compete with demands of the environment. Therefore, it is imperative that professionals in the field find effective interventions to compete with the adversity's places on the individual.

Social Skills Programs

The difficulties in treating social skills deficits arise from the variability of deficits in social skills. Examples of deficits include theory of mind, empathy, facial expression

recognition, etc (Baron- Cohen et al., 1985, Baron-Cohen & Wheelwright, 2004, Humphreys et al., 2007 as referenced in Turner & Hammond 2016). In addition, there is a great deal of subjectivity within social skills. Some of this variability comes from cultural differences. Sipes and colleagues (2011) mentioned that when examining differences in autism symptoms, there are significant differences on nonverbal socialization, verbal communication, and restricted interests across cultures. This makes it difficult to adapt a one-size fits all approach for treatment. While treating social skills may come with implications, the importance of social skills interventions has not gone unnoticed. There is evidence that social skills interventions can produce positive outcomes. These interventions often include modeling, coaching, role-playing and reinforcement (Turner and Hammond, 2016). A study conducted by Turcotte, and colleagues (2016) indicates that social skills training was significantly lacking for individuals across all age groups. Social skills trainings frequently apply behavioral techniques to teach problem-solving, decision-making, peer-relationships, and emotional regulation (What Works Clearinghouse, 2013). A common objective of social skills trainings is to teach individuals to develop healthy social relationships (Mansour & Weiner, 2014).

Laugeson and colleagues (2015) conducted a social skills intervention with 22 adults with ASD. Participants were 18-24- years old. The authors used role-play demonstrations, behavioral rehearsals, and in-session homework assignments for the participants to complete, focusing on initiating and maintaining friendships, romantic relationships, and managing conflict and rejection. The findings indicated significant improvements in overall social skills, frequency of social engagement, and social skills knowledge within 16-weekly sessions. Thomson, Riosa, and Weiss (2015) found similar results within their social skills study. Their study included an individualized, spy-themed intervention that focused on emotional regulation. The interventions

included 10 challenge-based modes of instruction including computer games, modeling and role-playing, and educational components. For instance, one of the challenges was “Enemy thought destruction activity” wherein participants must make connections between thoughts and feelings, focusing on helpful thoughts as a way to regulate emotions. The 14 participants we assessed using the emotion regulation checklist, parent interview (anxiety disorders interview schedule), and the behavior assessment system for children. Both participants and their parents indicated significant improvements from this 10-session intervention. Individuals reported overall decrease in dysregulation and increase in appropriate coping strategies. Parents reported less negativity, internalizing, and an increase in adaptive behaviors.

In their article on emotion regulation, coping, and decision making, Midecki, Zimmer-Gembeck, & Guerra (2017) argue that improving those skills is the best method for preventing externalizing behavior in adolescents. This implies that even for neurotypical adolescents, promoting emotion regulation is beneficial for preventing externalizing and problem behaviors, such as aggression toward others, opposition, and delinquency. When it comes to teaching emotion regulation to those with ASD several forms of social skills trainings have been identified. Williams and colleagues (2012) used the *Transformers* program when teaching emotion recognition skills to young children with autism. Participants, 55 children with autism ages 4-7, were randomly assigned to the intervention or control group. The transformers program features vehicles with human faces aimed to teach children with autism about emotions. The program includes 15, 5 minutes, episodes with a different target emotion in each episode. Those in the control group were given a Thomas the Train video to play, instead of the Transformers video. All participants were required to watch their video for 15-minutes a day, for 4 weeks. Measures such as emotion identification and emotion matching, a developmental

neuropsychological assessment focusing on affect recognition and theory of mind (NEPSY-II), and the pictures of facial affect were used to assess changes due to intervention. The results provide little support for the Transporters program. This conclusion was made due to the intervention group showing improvements in identifying and matching anger at posttest, but not being able to maintain during follow up. Additionally, the intervention group demonstrated some improvements within identification of happiness during the maintenance phase. Indicating that there was some improvement within the areas of affect recognition and theory of mind, but not as many as hypothesized.

Virtual Social Skills Programs

As a direct implication of the Covid-19 pandemic, social skills trainings in a clinical or school environment, has become more difficult to implement, requiring the need for further evaluation of an online social skills program for this target population. Hopkins and colleagues (2011) demonstrated the effectiveness of a computer-based social skills intervention. 49 participants with an intellectual age between 6 and 10 years old, as measured using the Kaufman brief intelligence test, were included in the study. Participants engaged in interactive games to enhance eye gaze, expression matching, and more. Their results showed improvement in facial recognition and social interaction, for those they considered low functioning individuals with autism. For their higher functioning group, the results indicated improvement in facial recognition, emotion recognition, and social interactions. These results indicated that there may be some merit to virtual social skills programs, in which the client completes trainings individually.

Additionally, Kandalaft and colleagues (2012) found similar results within their ‘virtual reality social cognition training’. Their study included 8 young adults, ages 18-26, with autism,

who participated in virtual reality sessions. Each participant engaged in the virtual reality session with a coach (clinician). The coach prompted the participants to navigate through the virtual scene and interact with avatars placed within the virtual scene. The avatars, or confederate clinicians, would engage in the social scenario with the participant. These virtual scenarios were created to model social scenes in various contexts, some of the scenarios included meeting new people, dealing with conflict, negotiating social decisions, and interviewing for a job. The results indicate a direct improvement in various areas of social skills functioning. These areas include, but are not limited to, recognizing other's emotions, maintaining a conversation, and establishing relationships. Overall, these results suggest that virtual reality is a promising method of contriving social skills scenarios. Current adolescents and young adults have grown up in a virtual society. Permitting them with the opportunity to engage in a virtual social skills intervention, allows them to learn social skills in an environment that is comfortable for them. As illustrated, online social skills interventions have been mixed, concluding the need for examining other evidence-based approaches in a virtual format.

Behavioral Skills Training

Behavioral skills training (BST) is a behavioral technique, often implemented by ABA therapists. The training is a four-part method used to teach a variety of new skills. BST consists of instruction, modeling, rehearsal, and feedback. Instruction involves giving clear and concise guidance on what the person should be doing. It often includes explaining why the person will be doing the training. Then, the professional will model the task, being as precise as possible. Providing the learner with an accurate model of what the task will look like, will give little room for misunderstandings, and allow for the learner to see the task in process. Modeling can take form of in vivo modeling or prerecorded videos. Next is rehearsal. This is a chance for the

learner to practice what they have learned and watched in the previous phases. This gives the individual a chance to rehearse the skills in real time. Rehearsal can be independent or take form of a role-play with the professional. Finally, the caregiver or professional would provide feedback based on the individual's performance in the rehearsal session (Aguirre et al., 2014).

BST has frequently been used to teach various skills to individual with autism. For instance, Kos (2019) used a BST model to teach children with ASD to seek help from law enforcement when they are lost. The instruction portion of the training taught the participants how to discriminate police officers from other community members. Modeling was implemented to show participants how to identify when they are lost, and how to seek help. Participants followed through with the rehearsal portion while researchers provided feedback. The results of this study show that two out of three participants were able to seek help from police officers independently. While the other participant required gestural prompt to complete the task. Additionally, Ryan and colleagues (2018) found success in using a BST model to increase appropriate conversational skills in adults with an intellectual disability and ASD. In this study, the researchers used the BST model to instruct and model appropriate conversational skills. The participants were able to practice having a conversation within the session. The results indicated that all six participants showed significant improvement in conversational skills at follow up, as well as, within the 4-week post intervention period.

Present Study

The present study is aimed at investigating the effects of an online social skills program on emotional awareness for an adolescents with an autism spectrum disorder. Using the BST model, we aim to increase appropriate emotion regulation skills to the individual with ASD. The

objective is to discover if there is an increase in appropriate emotion regulation skills after implementing an individual online social skills program with adolescents and young adults.

Methods

Participants

The participant of this study was a 16-year-old, Caucasian male, with a reported diagnosis of autism spectrum disorder. Core features of Autism for the participant included a deficit in social skills, and low to zero rate of challenging behaviors (e.g., noncompliance, aggression toward self and/or others). Participant was recruited through social media. The participant's guardian responded via email. Consent and assent were obtained for participation.

Setting

The social skills training was conducted virtually, via zoom. The participant engaged in individual sessions, meaning one participant was in the lesson at a time. The participant was asked to attend zoom session from a quiet, comfortable location of their choosing. One zoom session was conducted each week for a total of four weeks. Lessons lasted approximately an hour per session.

Materials

Laptops, desktops, or tablets with access to Wi-Fi and zoom were used by participants and researchers.

Dependent Measures

The participant was assessed for inclusion using the Vineland-3 to measure social and communication abilities, prior to the study. The Vineland-3 is a standardized assessment measure

that examines adaptive behaviors, such as social and communication skills, to assist in the diagnosis and treatment planning of various development and intellectual disabilities (Vineland Adaptive Behavior Scale, n.d). Participant/guardians met with a research assistant to answer the questions from the Vineland-3 related to social and communication domains.

The Difficulties in Emotion Regulation Scale (DERS) and the Social Skills Improvement System Rating Scale (SSISRS) will be conducted during pretests and posttests with the participant. The DERS is an assessment examining difficulties in emotional regulation. It is a 36-item self-report scale in which participants rate how frequently they identify with the given statement. There are six subscales within the assessment. Measuring respondents on concepts such as impulse control, lack of emotional awareness, and lack of emotional clarity (NovoPsych, 2021).

The SSISRS is a 75-item self-report scale, measuring social skills and problem behaviors (Social Skills Improvement System Rating Scale, n.d.). The participant responded to the prompts with how true and how important each statement is. Items include “I feel bad when others are sad” and “No one cares about me”. Pretest and Post test scores on the previous assessments were compared to assess treatment effectiveness.

Procedure

Upon expressing interest, the participant signed consent forms and was administered the Vineland-3 assessment. Scoring below 25% on the standardized score for each the social and communication domains indicated that the participant could continue in the study. Three total participants continued through this process. Those three, were then randomly selected to be within one of two conditions, individual treatment, or group treatment. Testing the effectiveness

of group treatment was considered a variation of this study and is beyond the scope of the current paper.

The DERS and the SSISRS assessment were given to the participant. These scores were recorded as their pretest scores. The participant then engaged in four zoom sessions, one each week. The topic changed each week, but the format of the sessions remained consistent.

Lessons

Emotions such as happiness/excitement, sadness, anger/jealousy were covered throughout the training (See appendix A for sample lesson plan). Lessons followed a behavioral skills training model of instruction, modeling, rehearsal, and feedback. Each session started with an introduction to the emotion that was to be covered. Instruction was discussion based, where the participant was asked to describe and identify the target emotion(s). The research assistants then demonstrated an inappropriate way to handle the target emotion, via pre-recorded video. The researcher helped identify why that was incorrect, and the participant was shown an appropriate way to express the emotions. Following this discussion, research then modeled another inappropriate expression of the target emotion. The participant was then prompted to identify what was inappropriate. Finally, the participant recreated the previous scenario in an appropriate way. If the participant was comfortable with the lesson and had no further questions, they were thanked, and the following session was scheduled. One week following the final session, all participants were given the DERS and the SSISRS assessments to measure post treatment scores.

Results

Prior to study implementation, the participant was assessed using the Vineland-3 on the communication and social domains. The participant scored a 37 on the socialization domain. In standardized measure, this falls below 1% of the population due to the participant's age. The participant scored strongly on questions regarding following social rules. For instance, following rules in games or sports without being told to do so or asking for permission before using things that belong to others. However, when it comes to concepts such as, emotion control and perspective taking of others the participant did not score as well. Questions in these categories include transitioning from one activity to another and being able to start a conversation about something that interests the other person. For the communication category, the participant scored a 75. This falls within the 14th percent rank among peers. The participant scored well on vocabulary, understanding questions, use of grammar, following instructions, and reading/writing. However, some areas of difficulty include attending to informational material and expressing ideas.

At pretest, the participant scored 45 out of 180 on the DERS assessment. A score of 45 falls below the clinical range for this assessment. At posttest, the participant was measuring at 60. Which still falls below the clinical level of significance. With this assessment, higher scores indicate greater difficulties in emotion regulation. An exploratory factor analysis of the assessment indicated there was a 6-factor structure within the assessment. Subscales include unwillingness to accept emotional responses (nonacceptance), difficulty in engaging with goal directed behaviors (goals), difficulty within regulating behavior (impulse), lack of emotional awareness (awareness), lack of access to strategizing (strategies), and lack of emotional clarity (clarity) (Hallion, et. Al. 2018). In a pretest -posttest comparison of subscale scores, the participant only improved within the impulse category. Results can be seen in figure 1. The

participant increased on scores of nonacceptance, goal directed behaviors, awareness of emotional responses, strategizing, and emotional clarity.

For the SSISRS, social skills component, the participant scored a 78 at pretest and 95 at posttest. This is within the 24% and 53% rank, respectively. When looking at the subscales, the participant scored below average on communication, and self-control. But was within the average range in cooperation, assertion, responsibility, empathy, and engagement at pretest. All scores increased at posttest, falling within the average range with the exception of assertion. Assertion now falls within above average range. Visual comparisons can be seen in figure 2.

On the behavioral component of the SSISRS, the participant scored 30 at pretest and 25 at posttest. Falling within the 76th and 63rd percentile, respectively. Results can be seen in figure 3. The participant fell within average levels of externalizing, bullying, hyperactivity/inattention, and internalizing. At posttest, the participant increased on externalizing and bullying. There was no change within hyperactivity/inattention and decreased on internalizing.

Discussion

As indicated, the participant increased scores from pretest to posttest for the DERS assessment. This means the participant reported an increase in difficulties regulating emotions. While this is inconsistent with the hypothesis, this could be due to an increase in emotional awareness. For instance, there was a decrease in emotional clarity whereas the participant score went down 6 points. Most notable, the participant score changed on items such as “I have no idea what I am feeling” and “I have difficulty making sense of how I am feeling”. Prior to intervention, the participant scored low on those measures, implying they had a good grasp on

their thoughts. However, post intervention, the participant revealed that they may not actually understand how they are feeling. This may be due to an increased awareness of emotional regulation which lead the participant to be more cognizant of how they complex emotions are. Additionally, there was an increase in nonacceptance of emotions for the participant. At posttest, the participant indicated that after getting upset, they feel embarrassed and weak. This may be due to an increased perception of how his behaviors impact others leading to greater feelings of embarrassment and weakness. These findings are in line with Laugeson and colleague's (2015) conclusions that their role-play social skills demonstration increased participant's social skills knowledge.

On the SSISRS assessment, the participant showed overall improvement on social skills. This is consistent with the predicted outcomes. There was an increase in all categories. Indicating that the participant was more comfortable with communication, taking responsibility and maintaining self-control within social situations. Most notably, the participant showed increases in self-control, improving from 5 (below average) to 11 (average). This would indicate that the intervention increased self-control of emotions. Although it is unknown the cause of this improvement, an assumption would be that the participant is considering the impact of those behaviors and is trying to remain in control, so his actions don't negatively impact others. Additionally, there was an increase in levels of communication from pretest, 9 (below average), to posttest, 12 (average). It is suspected that, throughout the intervention, the participant became more comfortable in talking about emotions and feelings. This could be in part due to the BST model. After seeing and talking through appropriate ways to handle emotions, the participant was better equipped with communication skills surrounding those emotions.

Overall, there was a decrease in the problem behavior portion of the SSISRS assessment. At pretest, the participant was measuring in the 67th percentile with a score of 30. At posttest, he decreased to the 63rd percentile with a score of 25. However, this decrease was not reflected through all the subscales. There was a slight increase in externalizing and bullying behaviors, increasing only one point for each. There was, on the other hand, an improvement in the internalizing behaviors. Meaning the participant indicated a decrease in those behaviors at posttest, moving from a score of 9 to 4. Examples of internalizing behaviors within the assessment include feeling sad or being nervous around classmates. A decrease in those behaviors indicates that the participant was feeling less withdrawn at the end of the study. Thomson, Riosa, and Weiss' (2015) results showed similar conclusions. In that, participants demonstrated fewer internalizing behaviors at post intervention assessment.

Through direct observation by reviewing recorded session, overall increase in participant engagement was observed. Throughout the intervention, the participant showed increased involvement and on task participation. This was demonstrated by an analysis of on topic vs off topic questions and statements. Off topic was considered any question or comment from the participant that did not align with the current conversation on emotions. During session 1, the participant engaged in off topic conversation an average of 8 times, with a maximum of 4 off topic remarks in a 10-minute interval. In session two, there was 7 instances of off topic conversations, reaching a high of 5 remarks within a 10-minute interval. From there, the off-topic questions and statements decreased, with only one for session 3 and 4. This improvement reflects the improvement in social skills that was demonstrated within the SSISRS, social skills portion. Overall, the participant was very willing and seemed interested in the discussions during intervention. The participant described himself as "having a creative brain" which showed

throughout the study. He often asked really intuitive questions and was curious to learn more about the topics we were discussing.

Overall, there is evidence to support mild improvement in emotional regulation due to the intervention. While we would hope to see more improvement, the results could be due to a couple factors. When it comes to self-report, there is room for subjectivity and bias, and it can be hard to get an accurate picture of what is really happening. For example, people are more likely to over-rate themselves on measure that make them seem like a better person, and vice-versa. For instance, on a question such as ‘I say “thank you” when someone helps me, a person is likely to indicate that they do this frequently. On the other hand, people are likely to underreport how often they engage in negative social behaviors, such as talking back or saying hurtful things. In the future, it would be beneficial to use observer report from a parent or guardian regarding changes in social behaviors.

When considering results of the intervention, it is important to consider historical or contextual factors that may have influenced the data. For example, during intervention, the parents reported that the participant was going through a medication change and was having a “tough time” at school. While this information was not further explored, it may have impacted the results of the study.

A limitation to the study is the small number of participants. Due to the issues of recruitment, obtaining additional participants was not feasible. The scope of recruitment was far too narrow. Looking at local ABA companies and recruitment through social media, did not allow for a range of individuals throughout other states. Additionally, the timeline of recruitment to start of intervention should have been extended. An ideal number of 20-70 participants would be sufficient to demonstrate statistical significance. With only one participant, it is difficult to

say whether the observed differences were due to the intervention or chance alone. With additional participants, statistical analysis could determine if there is a significant difference from score, pre and post intervention.

Furthermore, due to the nature of the intervention, it would be difficult to standardize. Much of the instruction, modeling, rehearsal, and feedback within the session was discussion based. The participant had their own ideas of the topic, which lead to unforeseen discussion. When working with other participants, it would be challenging to keep the discussion consistent between across future participants. In the future, it would be worth considering developing a more scripted lesson plan with follow up questions that can be asked to all participants.

Additionally, in the future, it would be interesting to look at maintenance and generalization. Taking another assessment measure, one month after the end of intervention, would provide data to see if the participant is carrying the skills after the intervention has finished. At this point, a maintenance session may an option to boost scores. Similarly, adding generalization probes would allow insight as to if the intervention is carrying over to other aspects of the individual's environment.

The results found within this study remain consistent with the current literature. Overall, there is limited support for this online social skills intervention. Due to the complexities of social deficits, it is challenging to develop an intervention that supports all areas of need. However, the increase in emotional awareness, social skills, and improvements in internalization are all consistent with previous findings and indicate the need for further investigation within the field of social skills and emotion regulation for adolescents and young adults with autism.

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.).
- Autism Speaks (n.d) *Applied Behavior Analysis (ABA)*. Retrieved from <https://www.autismspeaks.org/applied-behavior-analysis-aba-autism-treatment>
- Centers for Disease Control and Prevention. (2021). *Data & Statistics on Autism Spectrum Disorder*. Retrieved from <https://www.cdc.gov/ncbddd/autism/data.html>
- Centers for Disease Control and Prevention. (2022). *Treatment and Intervention Services for Autism Spectrum Disorder*. Retrieved from <https://www.cdc.gov/ncbddd/autism/treatment.html>.
- Elliott, S. N., Sheridan, S. M., Gresham, F. M. (1989). Assessing and treating social skills deficits: A case study for the scientist-practitioner. *Journal of School Psychology*, 27 (2), 197-222.
- Hallion, L. S., Steinman, S. A., Tolin, D. F., Diefenbach, G. J. (2018) Psychometric Properties of the Difficulties in Emotion Regulation Scale (DERS) and its Short Forms in Adults with Emotional Disorders. *Frontiers in Psychology* 9, 539.
- Hopkins, I. M., Gower, M. W., Perez, T. A., Smith, D. S., Amthor, F. R., Wimsatt, F. C., Biasini, F. J. (2011). Avatar Assistant: Improving Social Skills in Students with an ASD Through a Computer-Based Intervention. *J Autism Dev Disord*, 41: 1542-1555.
- How to ABA. The bx Resource. (June 24, 2021). *What is Behavioral Skills Training (BST)*. Retrieved from <https://howtoaba.com/behavioural-skills-training/>.
- Kandalaft, M. R., Didehbani, N., Krawczyk, D. C., Allen, T. T., Chapman, S. B. (2012). Virtual Reality Social Cognition Training for Young Adults with High-Functioning Autism. *J Autism Dev Disord*. 43: 34-44.
- Kos, G. (2019). Using Behavioral Skills Training to Teach Children with Autism to Seek Help from Law Enforcement Offices When Lost. *Cornerstone: A collection of Scholarly and Creative Works for Minnesota State University, Mankato*.
- Laugeson, E. A., Gantman, A. Kapp, S. K., Orenski, K., Ellingsen, R. (2015). A Randomized Controlled Trial to Improve Social Skills in Young Adults with Autism Spectrum Disorder: The UCLA PEERS Program. *J Autism Dev Disord*. 45: 3978-3989.
- Mansour, M., Weiner, J. (2014). Social Skills Training (SST) for Students with Learning Disabilities. *LD at School*. Retrieved from <https://www.ldatschool.ca/social-skills-training/>

- Modecki, K. L., Zimmer-Gembeck, M. J., Guerra, N. (2017). Emotion Regulation, Coping, and Decision Making: Three Linked Skills for Preventing Externalizing Problems in Adolescents. *Child Development*. 88 (2), 417-426.
- NovoPsych. (2021, July 4). *Difficulties in emotion regulation scale (DERS)*. NovoPsych. Retrieved February 8, 2022, from <https://novopsych.com.au/assessments/formulation/difficulties-in-emotion-regulation-scale/>
- Ryan, G., Brady, S. Holloway, J. Lydon, H. (2018). Increasing appropriate conversation skills using a behavioral skills training package for adults with intellectual disability and autism spectrum disorder. *Journal of Intellectual Disabilities*. 23 (4).
- Social Skills Improvement System Rating Scale. (n.d.) Retrived January 19, 2021 from <https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Behavior/Social-Skills-Improvement-System-SSIS-Rating-Scales/p/100000322.html#products>
- Sipes, M., Furniss, F., Matson, J. L., Hattier, M. (2011). A Multinational Study Examining the Cross Cultural Differences in Social Skills of Children with Autism Spectrum Disorders: A Comparison between the United Kingdom and the United States of America. *J Dev Phys Disabili* 24 145-154.
- Thomson, K., Riosa, P. B., Weiss. J. A., (2015)> Brief Report of Preliminary Outcomes of an Emotion Regulation Intervention for Children with Autism Spectrum Disorder. *J Autism Dev Disord*. 45: 4387-3495,
- Turcotte, P., Mathew, M., Shea, L. L., Brusilovskiy, E., Nonnemacher, S. L. (2016). Service Needs Across the Lifespan for Individuals with Autism. *Journal of autism and developmental disorders*, 46 (7), 2480-2489.
- Turner, M. A., Hammond, N. (2016). Cognitive behavioural therapy in the treatment of social skills deficits and social phobia in a man with an autism spectrum disorder: a single-case study. *The Cognitive Behaviour Therapist*, 9
- Williams, B. T., Gray, K. M., Tonge, B. J. (2012). Teaching emotion recognition skills to young children with autism: a randomized controlled trial of an emotion training programme. *Journal of Child Psychology and Psychiatry* 53 (2), 1268-1276.
- What Works Clearinghouse. (2013). *Early Childhood Education Interventions for Children with Disabilities*. U.S. Department of Education. Retrieved from: https://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc_socialskills_020513.pdf.

Figures

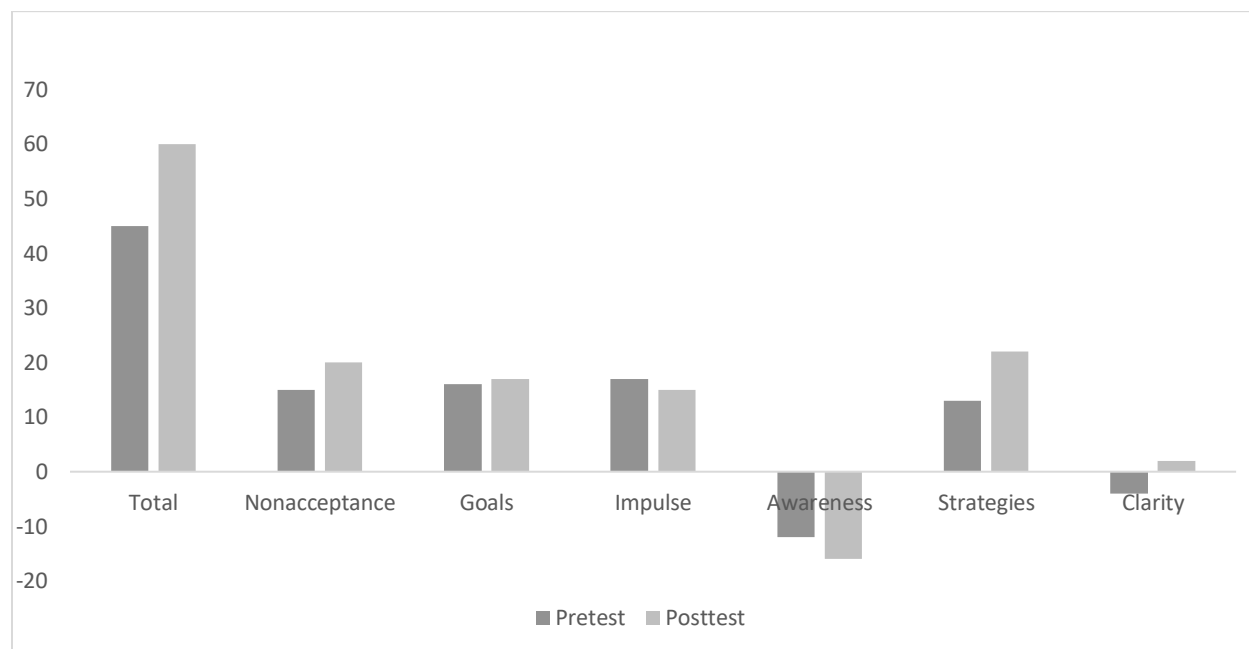


Figure 1. DERS assessment pretest and posttest comparison.

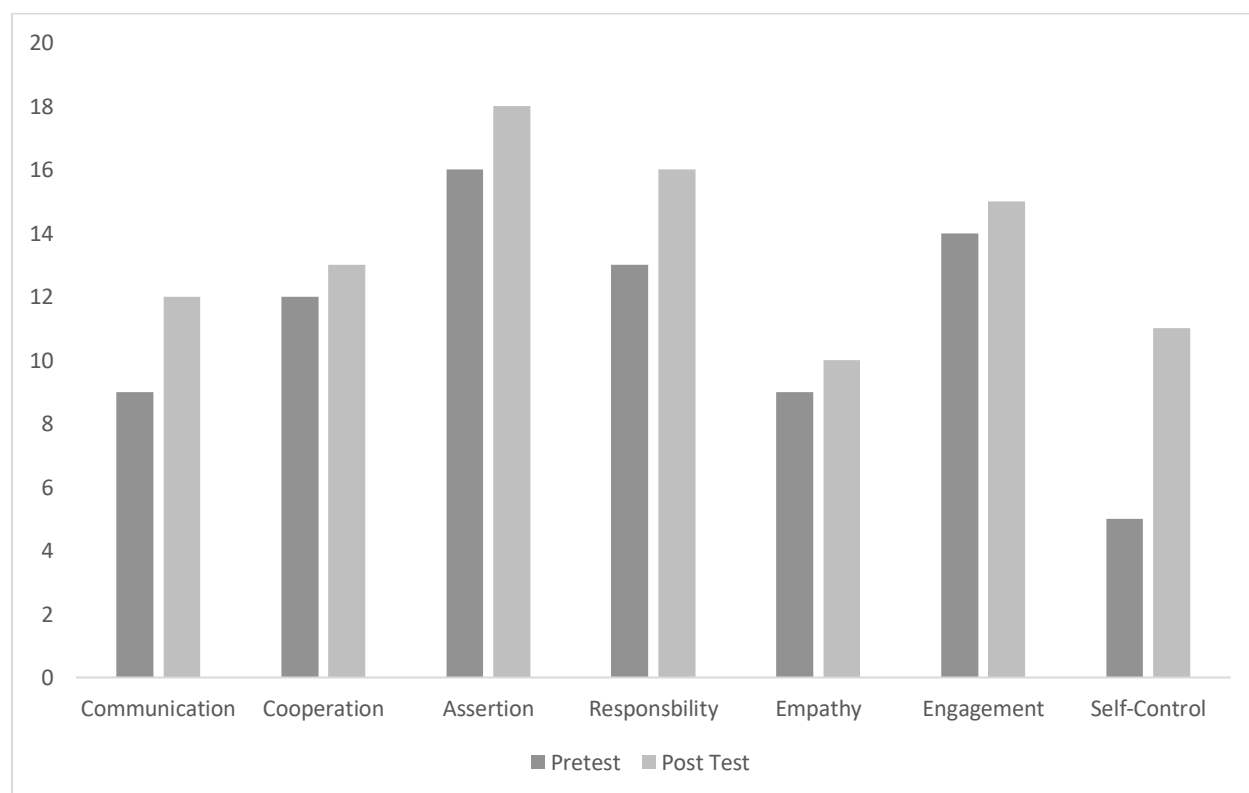


Figure 2. SSISRS assessment, social skills, pretest and posttest comparison.

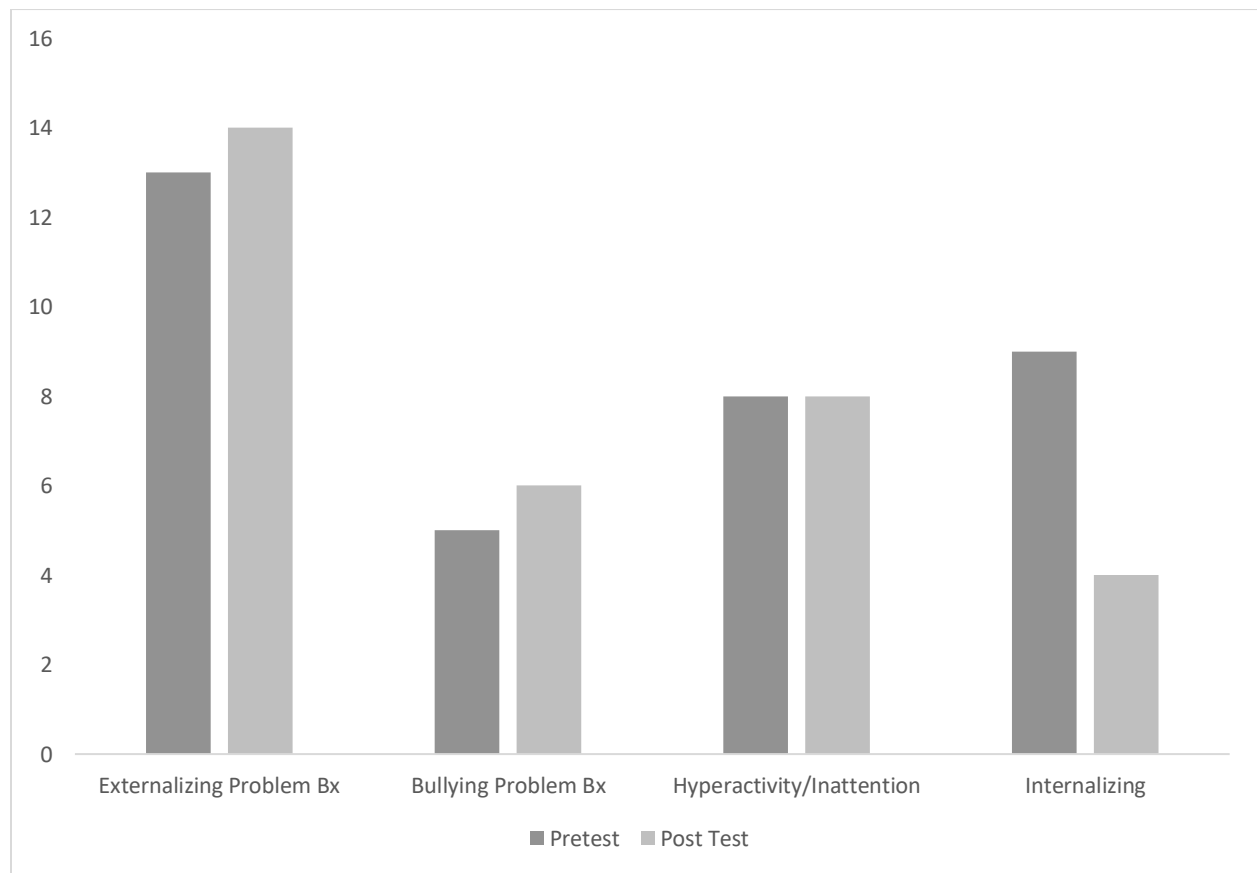


Figure 3. SSISRS assessment problem behaviors pretest and posttest comparison.

Appendix A: Lesson Plan Scripts

Lesson 1:

Hi, my name is _____ and I am a student at MSU, Mankato. I will be working with you today as we walk through what this study is about and what we will be focusing on. If at any point you have any questions, feel free to let me know.

Introduce anyone else in the zoom meeting

Now we would like to learn more about you. Please share your name, age, where you are from, and something that makes you interesting (fun fact).

Just to give you an idea, we meet once a week for 4 weeks. Each time we meet, we will spend about an hour together. During each of the sessions we will focus on a different emotion or set of emotions. Today will be a general overview of emotions. Next week will be focused on happiness and excitement. Week 3 we will talk about sadness. And finally, week 4 will be focused on anger and jealousy.

Do you have any questions? Remember, you can stop me at any point and ask a question or let me know that you need a break.

So now, we are going to start talking about emotions. I am going to ask you a few questions to get you thinking about emotions. There are no right or wrong answers here. So please feel free to share whatever comes to mind.

What do you already know about emotions?

What are they?

What are some emotions that you usually feel?

How do emotions affect us?

How do our emotions affect other people?

Thank you for sharing what you know about emotions today. Do you have any questions about what we talked about?

Just as a reminder, we have three more sessions left. Next week we will talk about happiness and excitement. We will ask some more questions about those, but then we will also watch a couple short videos and talk about how to handle the emotions appropriately.

Well, that is it for our session today. Do you have any last questions before we end? I want to thank you for participating today. And we will see you next week!

Lesson 2:

Hi, my name is _____ and I am a student at MSU, Mankato. I will be working with you today as we walk through some emotions. If at any point you have any questions, feel free to let me know.

Today we will be talking about happiness and excitement. We are going to have some discussion about what these emotions are and how they affect us. We will watch a couple examples of what emotions might look like. And how our emotions can affect others. At the end, there will be time for questions if you have any.

What does it feel like to be happy?

What does it feel like to be excited?

How do you know when others are happy or excited?

What are appropriate ways to show happiness or excitement?

What are inappropriate ways to show happiness or excitement?

Now we are going to look at an example of someone being happy and excited.

In this example, PersonA was excited about _____. But how did she treat the other person? What could PersonA have done differently?

Let's take a look at an appropriate way to handle that same situation.

What did PersonA do differently? And how do you think that made the other person feel?

Great. Now let's watch another video.

How do you think the other person felt in this example?

Now we are going to pretend you are PersonA.. What could you have done differently?

Are there any other examples that you can think of where a person could be happy and excited?

How would they act in that situation?

Thank you for sharing what you know about happiness and excitement today today. Do you have any questions about what we talked about?

Just as a reminder, we have two more sessions left. Next week we will talk about sadness and anger. We will ask some more questions about those, but then we will also watch a couple short videos and talk about how to handle the emotions appropriately.

Well, that is it for our session today. Do you have any last questions before we end? I want to thank you for participating today. And we will see you next week!

Lesson 3:

Hi, my name is _____ and I am a student at MSU, Mankato. I will be working with you today as we walk through some emotions. If at any point you have any questions, feel free to let me know.

Today we will be talking about sadness and anger. We are going to have some discussion about what these emotions are and how they affect us. We will watch a couple examples of what sadness and anger might look like. And how our emotions can affect others. At the end, there will be time for questions if you have any.

So now, we are going to start talking about anger and sadness. I am going to ask you a few questions to get you thinking about these emotions. There are no right or wrong answers here. Please feel free to share whatever comes to mind.

What does it feel like to be sad? Angry?

How do you know when others are sad? Angry?

What are appropriate ways to show sadness? Anger?

What are inappropriate ways to show

Sadness? Anger?

Now we are going to look at an example of someone being sad and angry. In this example, Person A was angry about the dog getting out. How did she treat the other person? What could Person A have done differently?

Let's take a look at an appropriate way to handle the same situation.

Person A: My pet bunny dies today. I'm really sad about it.

Person B: That is so sad. You must be really mad at the person who hit your bunny.

Person A: I am very sad about it. And you're right. I really am mad at that person. But it wasn't their fault. I just need some time to be sad.

What did Person A do differently? How do you think that made the other person feel?

Great! Now let's watch another video.

How do you think the other person (person on the couch) felt in this example?

Now we are going to pretend you are Person A (the person on the couch)... What could you have done differently?

Are there any other examples that you can think of where a person could be sad or angry? How would they act in that situation?

Thank you for sharing what you know about sadness and anger today. Do you have any questions about what we talked about?

Just as a reminder, we have one more session left. Next week we will talk about being flexible and compromising. We will ask some more questions about that, but then we will also watch a couple short videos and talk about how to handle these things appropriately.

That is it for our session today. Do you have any last questions before we end? I want to thank you for participating today, we will see you next week!

Lesson 4:

Today we will be talking about flexibility. We are going to have some discussion about what these emotions are and how they affect us. We will watch some more video examples of what emotions might look like. And we will be talking through the examples and how we can be flexible. This will be similar to what we have been doing the last couple weeks. If you have any questions or comments at any time, feel free to let me know.

We are going to get started today by having a discussion about being flexible. Remember, there are no wrong answers here, so just say whatever comes to mind with these questions.

What does it look like to be flexible?

What are some ways you can be flexible?

What are appropriate ways to be flexible?

What are inappropriate ways to be flexible?

Now we are going to watch an example of someone needing to be flexible. In this example, the person on the right was not being considerate. How do you think it made the person on the left feel? What could the person on the right have done differently?

Great, now let's take a look at how they should have handled it. What was different this time?

Okay, now we are going to look at another example. In this example, two friends are trying to come up with a plan of what to do when they hang out. Pay attention and try to see what you would have done differently.

What did you notice?

What could you have done differently (as the person on the right)?

What are some examples that you can think of, where you needed to be flexible?

What did you do?

What could you have done differently?

Thank you for sharing what you know about being flexible today. Do you have any questions about what we talked about?

Just as a reminder, today was our last session all together. I will be meeting with you individually, one last time to ask the assessment questions I asked before we started.

That's it for our session today. Do you have any last questions before we end? I want to thank you for participating today! It has been really fun working with you and getting to know you.

Appendix B: Vineland-3 (Communication and Socialization)

COMMUNICATION			
			Response Options: 2 = Usually, 1 = Sometimes, 0 = Never
INTERVIEW TOPIC A: VOCABULARY			
Suggested Interview Question: What objects and actions does [name] say the words for, like "dog" or "eat"?			Check if Est.
1. Names at least three actions (for example, drink/drinking, eat/eating, play/playing). ① What about labeling actions, like drinking, eating, or playing?	2	1	0 <input type="checkbox"/>
2. Says at least 50 words. ☑ Score 2 for Yes or 0 for No. ① About how many total words does he/she say?	2	0	<input type="checkbox"/>
INTERVIEW TOPIC B: UNDERSTANDING QUESTIONS			
Suggested Interview Question: Tell me how [name] responds to "wh" questions, like "what, where, and who?"			
3. Responds to questions that use <i>what</i> (for example, when asked "What is this?" replies "A ball"). ① How about questions that use <i>what</i> ?	2	1	0 <input type="checkbox"/>
4. Responds to questions that use <i>where</i> (for example, when asked "Where did Felipe go?" points where Felipe went). ① How about questions that use <i>where</i> ?	2	1	0 <input type="checkbox"/>
5. Responds to questions that use <i>who</i> (for example, when asked "Who is that?" replies "Auntie Kesha"). ① How about questions that use <i>who</i> ?	2	1	0 <input type="checkbox"/>
INTERVIEW TOPIC C: USE OF GRAMMAR			
Suggested Interview Question: What are some examples of the sentences that [name] says?			
6. Uses phrases with a noun and a verb (for example, "Mommy stay," "Give ball"). ① What about using both a noun and a verb, such as "Mommy stay" or "Give ball"?	2	1	0 <input type="checkbox"/>
7. Uses simple adjectives to describe things (for example, <i>dirty</i> , <i>pretty</i> , <i>big</i> , <i>loud</i>). ① What about using adjectives to describe things, such as "Pretty picture" or "Big doggie"?	2	1	0 <input type="checkbox"/>
8. Uses possessives in phrases or sentences; grammar need not be correct (for example, "This is mine," "Your book," "This is Carol's desk"). ① What about using possessives, words like "mine," "Mommy's," or "your"?	2	1	0 <input type="checkbox"/>
9. Uses pronouns correctly; pronoun gender and grammar must be correct (for example, "I want," "Their ball," "Call her"). ① What about using pronouns correctly?	2	1	0 <input type="checkbox"/>
10. Uses <i>behind</i> , <i>in front of</i> , and <i>between</i> correctly in phrases or sentences (for example, "Terrell is behind you," "I walked in front of her," "The ball went between the cars"). ① How about using the words <i>behind</i> , <i>in front of</i> , and <i>between</i> ?	2	1	0 <input type="checkbox"/>
INTERVIEW TOPIC D: FOLLOWING INSTRUCTIONS			
Suggested Interview Question: What are the most complicated kinds of instructions that [name] follows?			
11. Follows instructions with two related actions (for example, "Pick up those toys and put them away"; "Get your coat and put it on"). ① What about instructions to do two things that go together, like "Get your coat and put it on"?	2	1	0 <input type="checkbox"/>
12. Follows instructions with two unrelated actions (for example, "Turn off the TV and get my keys"). ① What about instructions to do two things that don't go together, like "Turn off the TV and get my keys"?	2	1	0 <input type="checkbox"/>
13. Follows instructions requiring three actions (for example, "Get dressed, eat breakfast, and brush your teeth"). ① What about three-step instructions, like "Get dressed, eat breakfast, and brush your teeth"?	2	1	0 <input type="checkbox"/>
14. Follows instructions in "if-then" form (for example, "If you're thirsty, then get a drink"; "If you are cold, then get a sweatshirt"). ① What about if-then instructions, like "If you're thirsty, then get a drink" or "If you are cold, then get a sweatshirt"?	2	1	0 <input type="checkbox"/>
15. When instructed to do something several hours later, remembers to do it (for example, "When you get home from school, let the dog out"). ① How often does he/she remember to do something that you ask to be done much later that day, for example, letting the dog out after school?	2	1	0 <input type="checkbox"/>

COMMUNICATION

Response Options: 2 = Usually, 1 = Sometimes, 0 = Never

INTERVIEW TOPIC E: STATING PERSONAL INFORMATION

Suggested Interview Question: **What information does [name] state about himself/herself, like his/her name, address, and birthday?**

Check
if
Est

16.	Says own first name or nickname. ① What about his/her own name or nickname?	2	1	0	<input type="checkbox"/>
17.	Says first and last name when asked; saying first name only doesn't count. ① What about when you ask for his/her full name?	2	1	0	<input type="checkbox"/>
18.	Says complete home address correctly when asked (that is, street or rural route, apartment number, city, and state, with or without zip code). ① What about his/her complete home address?	2	1	0	<input type="checkbox"/>
19.	Says both the month and day of his/her birthday when asked. ① How about the month and day of his/her birthday?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC F: ATTENDING TO ENTERTAINING MATERIAL

Suggested Interview Question: **For how long does [name] pay attention to something he/she likes, such as a story, TV show, movie, or live performance?**

20.	Pays attention to a story for at least 15 minutes. ☑ Score 2 if the individual did this when younger, but has now outgrown listening to stories. ① For how long does he/she listen to a story?	2	1	0	<input type="checkbox"/>
21.	Pays attention to a show for at least 30 minutes and understands what is happening. ① For how long does he/she pay attention to a TV show, movie, or live performance, and how can you tell if he/she understands what is happening?	2	1	0	<input type="checkbox"/>
22.	Pays attention to a show for at least 60 minutes and understands what is happening. ① For how long does he/she pay attention to a TV show, movie, or live performance, and how can you tell if he/she understands what is happening?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC G: ATTENDING TO INFORMATIONAL MATERIAL

Suggested Interview Question: **For how long does [name] pay attention in settings such as school, church, or a meeting?**

23.	Pays attention to a 15-minute informational presentation and understands what is being said. ① For how long does he/she pay attention to information being presented that's serious or educational, and how can you tell if he/she understands what is being said?	2	1	0	<input type="checkbox"/>
24.	Pays attention to a 30-minute informational presentation and understands what is being said. ① For how long does he/she pay attention to information being presented that's serious or educational, and how can you tell if he/she understands what is being said?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC H: EXPRESSING IDEAS AND EXPERIENCES

Suggested Interview Question: **How does [name] talk about his/her own ideas and experiences?**

25.	Tells the basic parts of a familiar story or book or movie plot (the characters, what happens, how it ends, etc.). ① How much detail does he/she tell about a familiar story when asked?	2	1	0	<input type="checkbox"/>
26.	Uses own knowledge or opinions to comment on things, situations, and emotions (for example, "I think he's mad at her because she said mean things about him"). ① What about using his/her own knowledge or opinions to comment on things, for example, why a friend is mad at someone?	2	1	0	<input type="checkbox"/>
27.	Tells about everyday (i.e., routine) experiences in detail (for example, when asked what he/she did with a friend today, tells who was involved, where the activity took place, etc.). ① How much detail does he/she give when he/she talks about everyday experiences, like what happened at a friend's house?	2	1	0	<input type="checkbox"/>
28.	Clarifies by restating with different words when he/she is not fully understood at first. ① If he/she is telling you something, and you aren't quite following, what does he/she do to help you understand what he/she is trying to say?	2	1	0	<input type="checkbox"/>

COMMUNICATION

Response Options: 2 = Usually, 1 = Sometimes, 0 = Never

INTERVIEW TOPIC I: LEFT AND RIGHT

Suggested Interview Question: **What kind of instructions involving left and right does [name] follow?**

Check
if
Est

29. Identifies left and right on own body (for example, hands, feet, arms). ① What about identifying left and right on his/her own body?	2	1	0	<input type="checkbox"/>
30. Follows instructions involving left and right (for example, "Go to the left"; "Look to the right"). ① How does he/she respond to directions that involve left and right?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC J: BEGINNING WRITING

Suggested Interview Question: **What kinds of things does [name] write on his/her own, without help?**

31. Copies own first name without mistakes. ☑ Score 2 if the individual did this when younger, but has now outgrown it. ① How well does he/she copy his/her first name?	2	1	0	<input type="checkbox"/>
32. Writes at least 10 simple words from memory (for example, <i>bat</i> , <i>ball</i> , <i>tbe</i>); may make small spelling errors. ☑ Score 2 for Yes or 0 for No. ① What words does he/she write from memory, other than his/her name?	2		0	<input type="checkbox"/>
33. Writes simple sentences of three or more words; may make small errors in spelling or grammar. ① How long are the sentences that he/she writes?	2	1	0	<input type="checkbox"/>
34. Writes emails, stories, letters, journal entries, etc. at least 10 sentences long; may use abbreviated words and make small errors in spelling or grammar. ☑ Score 2 for Yes or 0 for No. ① How long are the emails, stories, letters, or other longer things that he/she writes?	2		0	<input type="checkbox"/>

INTERVIEW TOPIC K: WORKING WITH WRITTEN INFORMATION

Suggested Interview Question: **What does [name] do to find information, like using a dictionary or other sources in a library or on the Internet?**

35. Finds or sorts things in alphabetical order (for example, finds a name in an alphabetized address book or list of phone numbers, finds a word in a dictionary, alphabetizes a list of words or movie titles). ① How often is he/she able to find things that are in alphabetical order—for example, words in a dictionary—or put words or actual things like books or music in alphabetical order himself/herself?	2	1	0	<input type="checkbox"/>
36. Accurately interprets visual instructions (for example, assembly instructions, directions shown on a map). ① How well does he/she understand and follow visual instructions, such as assembly instructions, diagrams, or directions on a map?	2	1	0	<input type="checkbox"/>
37. Uses a table of contents or index to find information within a book or electronic resource. ① What about using a table of contents or index to find information within a book or electronic file?	2	1	0	<input type="checkbox"/>
38. Uses the Internet or a library to find information for writing a paper or completing a job assignment. ① How does he/she go about finding information that he/she needs to write a paper or complete a job assignment?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC L: READING LEVEL

Suggested Interview Question: **At about what grade level is [name] reading and comprehending?**

39. Reads and understands material of a second-grade level or higher. ☑ Score 2 for Yes or 0 for No. ① At about what grade level is he/she reading and comprehending?	2		0	<input type="checkbox"/>
40. Reads and understands material of a fourth-grade level or higher. ☑ Score 2 for Yes or 0 for No. ① At about what grade level is he/she reading and comprehending?	2		0	<input type="checkbox"/>
41. Reads and understands material of a sixth-grade level or higher. ☑ Score 2 for Yes or 0 for No. ① At about what grade level is he/she reading and comprehending?	2		0	<input type="checkbox"/>
42. Reads and understands material of a ninth-grade level or higher. ☑ Score 2 for Yes or 0 for No. ① At about what grade level is he/she reading and comprehending?	2		0	<input type="checkbox"/>

COMMUNICATION

Response Options: 2 = Usually, 1 = Sometimes, 0 = Never

INTERVIEW TOPIC M: ADVANCED WRITING

Suggested Interview Question: **What kinds of papers does [name] write for school, and what is the process that he/she uses to write them?**

Check
if
Est

43. Writes short reports or summaries (for example, a summary of something read) at least three sentences long; must use own words rather than simply borrowing or copying from other sources. ☑ Score 2 if the individual did this when younger, but now no longer needs to write reports or summaries. ① What about writing a short report or summary of three sentences or more?	2	1	0	<input type="checkbox"/>
44. Writes reports, papers, or essays at least one page long; must use own words rather than simply borrowing or copying from other sources. ☑ Score 2 if the individual did this when younger, but now no longer needs to write reports, papers, or essays. ① How long are the reports, papers, or essays that he/she writes using his/her own words, not just copying something?	2	1	0	<input type="checkbox"/>
45. Edits or corrects own written work before handing it in (for example, checks punctuation, spelling, grammar, etc.); use of computer spell-checker is okay. ① What does he/she do to check and correct his/her written work before handing it in?	2	1	0	<input type="checkbox"/>

Office Use Only

No. of Est ÷ 45 × 100 = % Est COM Raw Score

SOCIALIZATION

Response Options: 2 = Usually, 1 = Sometimes, 0 = Never

INTERVIEW TOPIC A: PLAYING WITH OTHERS

Suggested Interview Question: **How does [name] play or socialize with others?**

Check
if
Est

1. Plays interactively with one or more children for at least 5 minutes with someone older supervising. ☑ Score 2 if the individual did this when younger, but has now outgrown it. ① How long does he/she play interactively with one or more other children when someone older is supervising?	2	1	0	<input type="checkbox"/>
2. Plays interactively with one or more children for at least 30 minutes with someone older supervising. ☑ Score 2 if the individual did this when younger, but has now outgrown it. ① How long does he/she play interactively with one or more other children when someone older is supervising?	2	1	0	<input type="checkbox"/>
3. Protects self by moving away from those who try to hurt others or destroy things (those who bite, hit, throw things, smash things, etc.). ① What does he/she do when a child nearby is acting aggressive by trying to hurt other children or destroy things?	2	1	0	<input type="checkbox"/>
4. Seeks out others for play or companionship (for example, asks others to play or spend time together). ① How often does he/she take the initiative to ask other children to play?	2	1	0	<input type="checkbox"/>
5. Joins in with a group when nonverbal cues indicate that he/she is welcome. ① What does he/she do when a group lets him/her know without words that they want him/her to join in, like motioning "come join us" or pointing to an empty chair?	2	1	0	<input type="checkbox"/>
6. Refrains from entering a group when verbal cues indicate that he/she is not welcome. ① What does he/she do when told that he/she is not welcome to join a group activity?	2	1	0	<input type="checkbox"/>

SOCIALIZATION

Response Options: 2 = Usually, 1 = Sometimes, 0 = Never

INTERVIEW TOPIC B: EXPRESSING AND RECOGNIZING EMOTIONS

Suggested Interview Question: **How do you know what feelings or emotions [name] is having, and whether he/she knows what emotions others are having?**

Check
if
Est

7. Uses words to express own emotions (for example, "I'm happy," "I'm scared," "I don't like him"). ① What words does he/she use to show his/her emotions?	2	1	0	<input type="checkbox"/>
8. Recognizes emotions in others (for example, might say "You look sad" or "Rachel is happy"). ② How can you tell that he/she knows what other people are feeling?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC C: FRIENDSHIPS

Suggested Interview Question: **Tell me about [name]'s friendships.**

9. Tries to make friends with others his/her age (that is, shows particular interest in interacting with certain other children). ① How does he/she try to make friends with others his/her age?	2	1	0	<input type="checkbox"/>
10. Maintains friendships over time (for example, has had the same good friend for over a year). ② How long have his/her best friendships lasted?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC D: FOLLOWING SOCIAL RULES

Suggested Interview Question: **When playing with others, what does [name] do in terms of sharing things, taking turns, and following rules?**

11. Shares toys or possessions when told to do so. ① How often does he/she share when he/she is told to?	2	1	0	<input type="checkbox"/>
12. Asks permission before using things that belong to or are being used by another. ② How often does he/she ask permission before using something that belongs to someone else or that someone else is using?	2	1	0	<input type="checkbox"/>
13. Takes turns when asked while playing games or sports. ③ How often does he/she take turns when he/she is asked to?	2	1	0	<input type="checkbox"/>
14. Follows rules in games or sports without being told to do so. ④ How often does he/she follow rules in games or sports without being told to?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC E: ASKING FOR AND ACCEPTING HELP

Suggested Interview Question: **What does [name] usually do in terms of asking for help when he/she needs it to figure out how to do something and accepting helpful ideas from others?**

15. Requests help when encountering a problem beyond own capability to solve (for example, a computer problem, fixing something). ① How often does he/she ask for help when he/she can't figure out how to do something?	2	1	0	<input type="checkbox"/>
16. Accepts helpful suggestions or solutions from others. ② How is he/she about accepting helpful suggestions from others?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC F: EMOTIONAL CONTROL

Suggested Interview Question: **What kinds of things cause [name] to get upset, and how does he/she usually respond?**

17. Transitions easily from one activity to another. ① How often is he/she able to change from one activity to another, like playtime to bath time, without getting upset?	2	1	0	<input type="checkbox"/>
18. Uses words or gestures to express distress rather than screaming, hitting, throwing something, etc. ② What about using words or gestures when he/she is upset rather than screaming, hitting, throwing something, and so on?	2	1	0	<input type="checkbox"/>
19. Controls anger or hurt feelings when he/she does not get his/her way (for example, when not allowed to watch television or attend a party, when a suggestion is rejected by a friend or supervisor). ③ How does he/she usually respond when he/she doesn't get his/her way, like not being allowed to do something that he/she wants to?	2	1	0	<input type="checkbox"/>

SOCIALIZATION

Response Options: 2 = Usually, 1 = Sometimes, 0 = Never

INTERVIEW TOPIC G: INTERPERSONAL APPROPRIATENESS

Suggested Interview Question: **What does [name] do that shows that he/she understands what people consider proper, like how close to stand to other people, how to adjust his/her voice for the situation, and so on?**

Check
if
Est

20. Maintains an acceptable distance between self and others in social situations (for example, does not get too close to another person when talking). ① What about not standing too close or too far away from other people in social situations?	2	1	0	<input type="checkbox"/>
21. Maintains culturally appropriate eye contact during social interactions. ① What about making proper eye contact when he/she interacts with people?	2	1	0	<input type="checkbox"/>
22. Speaks using a loudness, speed, and level of excitement that is appropriate for the conversation. ① What about adjusting his/her voice to the proper loudness, talking speed, and level of excitement for the conversation?	2	1	0	<input type="checkbox"/>
23. Talks with others without interrupting or being rude. ① What about talking with others without interrupting or being rude?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC H: ADAPTING BEHAVIOR TO THE SITUATION

Suggested Interview Question: **As we get older, we learn to change our behavior to fit the situation, like lowering our voice when others nearby are concentrating. In what ways does [name] adjust his/her behavior to fit the situation?**

24. Changes behavior intentionally depending on how well he/she knows another person (for example, acts more formally with someone new than with a friend or family member). ① What about understanding that people are usually expected to act differently with someone they've just met than with a friend or family member?	2	1	0	<input type="checkbox"/>
25. Copies appropriate behavior of others when in a new situation and unsure how to act. ① What does he/she do when he/she is in a new situation where he/she is not sure how to act?	2	1	0	<input type="checkbox"/>
26. Adjusts behavior to keep from disrupting others nearby (for example, is quiet near others who are working, listening to a show, etc.). ① What about realizing when he/she needs to adjust his/her behavior so that he/she doesn't disturb others nearby, like someone who is working or listening to a show?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC I: CONVERSATIONAL SKILLS

Suggested Interview Question: **Who does [name] have conversations with, and what are his/her conversations like?**

27. Moves easily from one topic to another in conversation when needed; does not "get stuck" on one topic. ① How flexible is he/she at moving from one topic to another in conversations?	2	1	0	<input type="checkbox"/>
28. Stays on topic in conversations when needed; does not digress. ① What about staying on topic in conversations, rather than getting off track?	2	1	0	<input type="checkbox"/>
29. Provides additional explanation when needed in order for someone to follow what he/she is saying (for example, "In case you missed what I said..." "What we were talking about was..."). ① What about recognizing when someone he/she is talking with needs some background information or something explained in order to follow what's being said?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC J: TAKING OTHERS' PERSPECTIVE

Suggested Interview Question: **What are some things that [name] does that show that he/she is thinking about the other person's point of view, like what they think, want, or are interested in?**

30. Recognizes that the likes and dislikes of others can differ from his/her own (for example, might say "Kelly likes pizza, but I don't"; "I liked that movie, but Gretchen hated it"). ① How well does he/she realize that other people might not like and dislike the same things that he/she does, for example, movies or kinds of food?	2	1	0	<input type="checkbox"/>
31. Starts conversations with others by talking about things that interest them (for example, "Tyrone tells me you like cars"). ① How often does he/she start a conversation with someone by bringing up something that he/she knows that the other person is interested in?	2	1	0	<input type="checkbox"/>
32. Participates in conversations on a topic not of interest to him/her. ① What about talking with others about things that they're interested in, even though he/she really isn't?	2	1	0	<input type="checkbox"/>
33. Will engage in activities suggested by friends, even if not preferred. ☑ If the respondent has not had the opportunity to observe this, estimate a score and check the Estimated box. ① How often does he/she do something suggested by friends when he/she would rather do something else?	2	1	0	<input type="checkbox"/>

SOCIALIZATION

Response Options: 2 = Usually, 1 = Sometimes, 0 = Never

INTERVIEW TOPIC K: OBEYING TIME LIMITS

Suggested Interview Question: **How is [name] about following time limits you give him/her and letting you know about his/her plans when he/she goes out?**Check
if
Est

34.	Follows time limits imposed by parent or caregiver (for example, amount of time allowed to watch TV, play a game, use the Internet, or play outside). <input checked="" type="checkbox"/> Score 2 if the individual did this when younger, but has now outgrown it. ? When you tell him/her that he/she is only allowed to do something for a limited amount of time, how often does he/she obey that time limit without having to be reminded; for example, "You can watch TV until this show is over, then you have to turn it off"?	2	1	0	<input type="checkbox"/>
35.	Informs parent or caregiver about his/her plans when he/she goes out (for example, what time he/she is leaving and returning, where he/she is going). <input checked="" type="checkbox"/> Score 2 if the individual did this when younger, but has now outgrown it. ? What about telling you about his/her plans when he/she goes out, like where he/she is going and when he/she will be home?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC L: GULLIBILITY

Suggested Interview Question: **What does [name] understand about different ways that people might try to take advantage of him/her, and what does he/she do to keep from being taken advantage of?**

36.	Understands that a friendly appearing person may actually intend harm. ? What does he/she understand about how a friendly acting person may actually want to take advantage of him/her?	2	1	0	<input type="checkbox"/>
37.	Is aware of and uses caution when encountering risky social situations (for example, Internet solicitations, a stranger's offer of a ride or money, "binge" drinking parties, social media, personal ads). <input checked="" type="checkbox"/> If the respondent has not had the opportunity to observe this, estimate a score and check the Estimated box. ? How is he/she at being cautious when people he/she doesn't know well try to get him/her to do something risky, either in person or through the Internet?	2	1	0	<input type="checkbox"/>
38.	Recognizes that advertising messages may not be accurate. ? What about understanding that the purpose of advertising is to influence our decisions, and that everything in ads isn't always totally true?	2	1	0	<input type="checkbox"/>
39.	Thinks through the consequences of his/her actions before acting (for example, refrains from acting impulsively, considers relevant information). ? How often does he/she think through the consequences before doing something?	2	1	0	<input type="checkbox"/>
40.	Avoids being manipulated, dominated, or taken advantage of by others. ? What does he/she do to keep others from controlling or taking advantage of him/her?	2	1	0	<input type="checkbox"/>

INTERVIEW TOPIC M: DOING THINGS WITH PEERS

Suggested Interview Question: **How often does [name] get together with others his/her age, what do they do, and who plans it?**

41.	Goes places with peers during the day or evening with someone supervising (for example, shopping, a movie, a sports event). <input checked="" type="checkbox"/> Score 2 if the individual did this when younger, but has now outgrown the need to be supervised. ? What places does he/she go with others his/her age with someone supervising, either during the day or at night?	2	1	0	<input type="checkbox"/>
42.	Goes places with peers during the day without someone supervising (for example, a shopping mall, park, community center). ? What places does he/she go during the day with others his/her age without someone supervising?	2	1	0	<input type="checkbox"/>
43.	Plans ahead to do things with peers on his/her own. ? What kinds of activities does he/she plan ahead with others his/her age?	2	1	0	<input type="checkbox"/>
44.	Obtains schedule information for movies, sports events, concerts, etc. (for example, looks at a newspaper or on the Internet, phones a movie theater). ? What about looking up schedule information for movies, sports events, concerts, and so on?	2	1	0	<input type="checkbox"/>
45.	Plans fun activities with more than two things to be arranged (for example, birthday party, group outing). ? What about activities that require a lot of things to be planned, like a birthday party or group outing?	2	1	0	<input type="checkbox"/>

Office Use Only

No. of Est

÷ 45 × 100 =

% Est

SOC Raw Score

Appendix C: SSISRS

Remember: How True: **N** - Not True **L** - Little True **A** - A Lot True **V** - Very True

How Important: **n** - not important **i** - important **c** - critical

Please mark

Social Skills

- | | | | | |
|--|------------------|---|------------------|--|
| 1. I ask for information when I need it. | N L A V
n i c | 11. I show others how I feel. | N L A V
n i c | 21. I stay calm when I am teased. |
| 2. I pay attention when others present their ideas. | N L A V
n i c | 12. I do what the teacher asks me to do. | N L A V
n i c | 22. I follow school rules. |
| 3. I try to forgive others when they say "sorry." | N L A V
n i c | 13. I try to make others feel better. | N L A V
n i c | 23. I ask others to do things with me. |
| 4. I'm careful when I use things that aren't mine. | N L A V
n i c | 14. I do my part in a group. | N L A V
n i c | 24. I am well-behaved. |
| 5. I stand up for others when they are not treated well. | N L A V
n i c | 15. I let people know when there's a problem. | N L A V
n i c | 25. I say nice things about my friends without bragging. |
| 6. I say "please" when I ask for things. | N L A V
n i c | 16. I look at people when I talk to them. | N L A V
n i c | 26. I stay calm when people point out my mistakes. |
| 7. I feel bad when others are sad. | N L A V
n i c | 17. I help my friends when they are having a problem. | N L A V
n i c | 27. I try to think about how others feel. |
| 8. I get along with other children/adolescents. | N L A V
n i c | 18. I make friends easily. | N L A V
n i c | 28. I meet and greet new people on my own. |
| 9. I ignore others who act up in class. | N L A V
n i c | 19. I do my work without bothering others. | N L A V
n i c | 29. I do the right thing without being told. |
| 10. I take turns when I talk with others. | N L A V
n i c | 20. I am polite when I speak to others. | N L A V
n i c | 30. I smile or wave at people I see. |

Problem Behaviors

- | | | | | |
|---|---------|---|---------|---|
| 47. I'm afraid of a lot of things. | N L A V | 53. I get embarrassed easily. | N L A V | 59. I can't sleep well at night. |
| 48. I make people do what I want them to do. | N L A V | 54. I hurt people when I am angry. | N L A V | 60. I do not let others join my group of friends. |
| 49. I often do things without thinking. | N L A V | 55. I have temper tantrums. | N L A V | 61. I find it hard to sit still. |
| 50. I often feel sick. | N L A V | 56. I think bad things will happen to me. | N L A V | 62. I feel lonely. |
| 51. I swear or use bad words. | N L A V | 57. I lie to others. | N L A V | 63. I cheat when playing games. |
| 52. I find it's hard to focus on what I am doing. | N L A V | 58. I often get distracted. | N L A V | 64. I make careless mistakes on schoolwork. |

item.

SSiS

Rating Scales
Student
(Ages 13–18)
Hand-Scoring Form

N L A V n i c	31. I try to find a good way to end a disagreement.	N L A V n i c	41. I stay calm when others bother me.	N L A V n i c
N L A V n i c	32. I pay attention when the teacher talks to the class.	N L A V n i c	42. I work well with my classmates.	N L A V n i c
N L A V n i c	33. I play games with others.	N L A V n i c	43. I try to make new friends.	N L A V n i c
N L A V n i c	34. I do my homework on time.	N L A V n i c	44. I tell people when I have made a mistake.	N L A V n i c
N L A V n i c	35. I tell others when I'm not treated well.	N L A V n i c	45. I ask for help when I need it.	N L A V n i c
N L A V n i c	36. I stay calm when dealing with problems.	N L A V n i c	46. I stay calm when I disagree with others.	N L A V n i c
N L A V n i c	37. I am nice to others when they are feeling bad.	N L A V n i c		
N L A V n i c	38. I ask to join others when they are doing things I like.	N L A V n i c		
N L A V n i c	39. I keep my promises.	N L A V n i c		
N L A V n i c	40. I say "thank you" when someone helps me.	N L A V n i c		

10/5

N L A V	65. I think no one cares about me.	N L A V	71. I feel nervous with my classmates.	N L A V
N L A V	66. I try to make others afraid of me.	N L A V	72. I say things to hurt people's feelings.	N L A V
N L A V	67. I break things when I'm angry.	N L A V	73. I fight with others.	N L A V
N L A V	68. I often get tired.	N L A V	74. I feel sad.	N L A V
N L A V	69. I talk back to adults.	N L A V	75. I break the rules.	N L A V
N L A V	70. I waste a lot of time.	N L A V		

DATE _____

Page _____

School/Center _____

Grade/Class _____

Other Data _____

Birth Date _____

Month _____ Day _____ Year _____

Sex: ☐ Female ☐ Male

Appendix D: DERS

Difficulties in Emotion Regulation Scale (DERS)

Please indicate how often the following statements apply to you by writing the appropriate number from the scale below on the line beside each item.

1	2	3	4	5
almost never (0-10%)	sometimes (11-35%)	about half the time (36-65%)	most of the time (66-90%)	almost always (91-100%)
_____	1) I am clear about my feelings.			
_____	2) I pay attention to how I feel.			
_____	3) I experience my emotions as overwhelming and out of control.			
_____	4) I have no idea how I am feeling.			
_____	5) I have difficulty making sense out of my feelings.			
_____	6) I am attentive to my feelings.			
_____	7) I know exactly how I am feeling.			
_____	8) I care about what I am feeling.			
_____	9) I am confused about how I feel.			
_____	10) When I'm upset, I acknowledge my emotions.			
_____	11) When I'm upset, I become angry with myself for feeling that way.			
_____	12) When I'm upset, I become embarrassed for feeling that way.			
_____	13) When I'm upset, I have difficulty getting work done.			
_____	14) When I'm upset, I become out of control.			
_____	15) When I'm upset, I believe that I will remain that way for a long time.			
_____	16) When I'm upset, I believe that I will end up feeling very depressed.			
_____	17) When I'm upset, I believe that my feelings are valid and important.			
_____	18) When I'm upset, I have difficulty focusing on other things.			
_____	19) When I'm upset, I feel out of control.			
_____	20) When I'm upset, I can still get things done.			
_____	21) When I'm upset, I feel ashamed at myself for feeling that way.			
_____	22) When I'm upset, I know that I can find a way to eventually feel better.			
_____	23) When I'm upset, I feel like I am weak.			
_____	24) When I'm upset, I feel like I can remain in control of my behaviors.			
_____	25) When I'm upset, I feel guilty for feeling that way.			
_____	26) When I'm upset, I have difficulty concentrating.			
_____	27) When I'm upset, I have difficulty controlling my behaviors.			
_____	28) When I'm upset, I believe there is nothing I can do to make myself feel better.			
_____	29) When I'm upset, I become irritated at myself for feeling that way.			
_____	30) When I'm upset, I start to feel very bad about myself.			
_____	31) When I'm upset, I believe that wallowing in it is all I can do.			
_____	32) When I'm upset, I lose control over my behavior.			
_____	33) When I'm upset, I have difficulty thinking about anything else.			
_____	34) When I'm upset I take time to figure out what I'm really feeling.			
_____	35) When I'm upset, it takes me a long time to feel better.			
_____	36) When I'm upset, my emotions feel overwhelming.			

Reverse-scored items (place a subtraction sign in front of them) are numbered 1, 2, 6, 7, 8, 10, 17, 20, 22, 24 and 34.

Calculate total score by adding everything up. Higher scores suggest greater problems with emotion regulation.

SUBSCALE SCORING:** The measure yields a total score (SUM) as well as scores on six sub-scales:

1. Nonacceptance of emotional responses (NONACCEPT): 11, 12, 21, 23, 25, 29
2. Difficulty engaging in Goal-directed behavior (GOALS): 13, 18, 20R, 26, 33
3. Impulse control difficulties (IMPULSE): 3, 14, 19, 24R, 27, 32
4. Lack of emotional awareness (AWARENESS): 2R, 6R, 8R, 10R, 17R, 34R
5. Limited access to emotion regulation strategies (STRATEGIES): 15, 16, 22R, 28, 30, 31, 35, 36
6. Lack of emotional clarity (CLARITY): 1R, 4, 5, 7R, 9

Total score: sum of all subscales

**"R" indicates reverse scored item

REFERENCE:

Gratz, K. L. & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment*, 26, 41-54.