Teaching Appropriate Social Interaction Responses and Mood Regulation to an Adolescent in Grade 8 Using Self–Monitoring

by

Tabitha Swerdfeger

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Dedication

I would like to dedicate my thesis to all those in my life who have supported me and put up with me when I was stressed.
Abstract

This case study looks at using self-monitoring to teach the use of mood regulation when dealing with social interactions. An AB design was used to implement the program. The client was a student in a grade 7/8 classroom. Intervention took place in the classroom. Results were looked at using a single subject design. Due to unforeseen complications there was little data to yield results that would provide a more clinically significant numbers. The case study discusses the challenges, recommendations, implications and limits of the intervention.
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Chapter I: Introduction

One in every 68 children are affected by Autism Spectrum Disorders (Centers for Disease Control and Prevention, 2014). Autism is characterized by deficits in social interaction, communication and repetitive behaviours and is classified as a developmental disorder (Autism Speaks Canada, 2014). Autism ranges in severity which hinders the ability for medical screening and known causes. Due to the range in severity diagnosis is more difficult as it is only based on observable behaviours and developmental milestones (Autism Speaks Canada, 2014). Symptoms displayed include limited expressions and communication skills which later on become part of major core deficits that hinder child development (KinderCare Learning Centers, 2014). KinderCare Learning Centers state that social interactions are critical in the development of children as they build on compassion, empathy and respect as well as help facilitate language and problem solving skills.

Both children and adolescents face numerous social issues that hinder upon establishing and maintaining social relationships (State and Kern, 2012). Those diagnosed with high-functioning autism are able to communicate effectively but still face the challenges of being able to correctly respond to peers, take turns and expand conversational interests (State and Kern, 2012). These issues can persist into adolescences and adulthood and can become very difficult to modify, therefore the key to successful intervention is early intervention, as this treatment option will benefit them consistently throughout their lives.

Interactions with others can have lasting effects on those involved and create different emotions that affect how the interaction goes and can be changed to fit the context of the interaction (Ekman & Friesan, 1969 as cited in Nelson, 1997). Nelson (1997) states that difficulties can arise when those involved in situations try to figure out the best way to regulate the emotions to the situation. The solution that people tend to use instead is to display no emotion at all until there is some ‘clue/cue’ given that gives the information about which emotions or moods are appropriate (Nelson, 1997).

When faced with new situations individuals will often find different positive and negative ways that to help them deal with thoughts and feelings that develop based on their uncertainties (Totterdell & Parkinson, 1999). Those thoughts and feelings that developed in those situations can then change and individual’s emotions or the mood they are in (Totterdell & Parkinson, 1999). Totterdell and Parkinson (1999) state that mood regulation strategies are then relied upon to help individuals cope with different moods.

Self –monitoring is a strategy used to increase independence in order to shift from continuous management and control under supervision and the individual is taught to be the agent of intervention (Hume, Loftin, & Lantz, 2009). In interventions comprised of self-monitoring individuals are taught to discriminate the difference between an occurrence and non-occurrence (Kamps & Tankersley, 1996 as cited in Hume, Loftin, & Lantz, 2009). Individuals must pay close attention to their behaviours and the conditions/environments in which they occur (Hume, Loftin, & Lantz, 2009). Research on self-monitoring strategies has demonstrated that pro social skills and behaviours are increased for children with autism (Hume, Loftin, & Lantz, 2009).

Social interactions are core to successful social development in children. Children with Autism face numerous social difficulties that hinder their own social development. Intervention early on is key to successfully benefiting those diagnosed with Autism in their own social development so they are able to make and maintain normal friendships. Due to the literature regarding the efficacy of self-monitoring and the utility of The Incredible 5 Point Scale, it is
hypothesised that a self-monitoring program using prompting and The Incredible 5 Point Scale will increase the number of Andrew’s regulated responses.
Chapter II: Literature Review

Self-Monitoring and Autism

Self-monitoring is an effective form of self-management that has been implemented into different general education settings, as it entails less work for teachers and gives the students the power and responsibility of making their own behavioural observations to see if they can successfully meet their success criteria (Workman & Hector, 1978, as cited in Peterson, Young, Salzberg, West, & Hill, 2006). Perterson, Young, Salzberg, West, & Hill (2006) state that self-monitoring increases targeted positive behaviours and can decrease off task or other unwanted behaviours. In self-management individuals are taught to control and/or regulate their own behaviours in some form (State & Kern, 2011). A record of target non occurrences and occurrences are recorded by the individual after they are taught how to control their behaviours (Hume, Loftin, & Lantz, 2009). Social skills improve with the use of different self-management techniques (Scruggs and Mastropieri, 1998; Scruggs et al. 1987). Scruggs et al. (as cited in State & Kern, 2011) evaluated self-management techniques using percentage of non-overlapping data (PND), 81.9% was the overall mean across the studies that were conducted. This study shows that self-management is effective for improving social appropriate behaviours. Kogel et al. (1999) as cited in Smith and Sugai, (2000) state that when using a self-monitoring intervention, there are four steps: define the target behaviour, identify reinforcers, find a method that works for recording, and teach the chosen method. Other studies indicate that by self-monitoring individuals are also inadvertently affecting other areas of functioning unrelated to the target behaviour (e.g., Stahmer and Schreibman, 1992; Pierce and Schreibman, 1994, as cited in Hume, Loftin, & Lantz, 2009). Generalization must occur in order to promote the new social skills that have been acquired (Fox and McEvoy, 1993 as cited in Peterson, Young, Salzberg, West, & Hill, 2006). Self-management has been shown to be an effective strategy for improving social interaction skills (State & Kern, 2012). State and Kern, (2012) state that by using self-management individuals are taught to control and/or regulate their own behaviours in one way or another.

State and Kern (2012) conducted a study on a 14-year-old adolescent male with a diagnosis of autism. Carl attended a private school for students with severe emotional and behavioural problems and was described by his teachers as inquisitive, creative and intelligent, he was at or above grade level in all school subjects. Carl’s teachers and parents reported that Carl and issues interacting with others during social situations. Intervention took place in both the participant’s school and home. Carl had a self-monitoring sheet that was divided into three columns; the interval number, a question and the choice of response, and an agreement column that the observer would compare with Carl. During baseline sessions Carl had a mean of 24.8% of inappropriate interactions during different intervals and a mean of 37.95% (26.66%-58.33%) of inappropriate noises. During the self-monitoring phase there was a slight reduction in the number of inappropriate interactions (10.07%) and noises (10.42%). One of the limitations of this study was that intervention lasted throughout the entire school year and there was no time to fade, therefore the authors suggest that future research needs to focus on fading techniques to see if the reduction in problem behaviour can be maintained and generalized. Carl was also not interacting with typical peers as he attended a private school for students with behavioural and emotional issues.

Self-monitoring has been shown to be successful in modifying a number of different behaviours for individuals with autism, it has shown to reduce some stereotypic behaviours (Koegel and Koegel 1990, as cited in Hume, Loftin, & Lantz, 2009). Hume, Loftin, & Lantz,
(2009), state that self-monitoring is an effective strategy for increasing pro-social behaviours. By learning and using the different self-monitoring techniques, staff members who work in schools, assisted living, and employment areas will increase their capacity to effectively implement time efficient interventions to individuals with autism (Hume, Loftin, & Lantz, 2009). Morrison et al. 2001 as cited in Hume, Loftin, & Lantz, 2009, conducted a study where students with autism were taught to request, comment, and share as well as monitor their own behaviours, the results where that those students increased the number of social interactions/initiations between different group members. The authors report that there have been more investigations that have found that self-monitoring is a useful tool for social skills teaching packages (Hume, Loftin, & Lantz, 2009). Self-monitoring may not be useful for all individuals with autism, as some methods of monitoring may require a higher level of cognitive ability, yet it is important to note that there can be modifications and adaptations made for each individual (Hume, Loftin, & Lantz, 2009).

Social Interactions and Autism
Conn (2014) describes a social interaction between a child with autism and her friend. Conn’s account shows how individuals can make hasty conclusions about interaction styles of children with autism:

“Sophie is running round the edges of the playground, running along the lines that are marked on the ground. A girl in her class, Abby, who school staff describe as a friend, runs towards her to say hello, Sophie veers quickly around Abby, not looking at her and leaving Abby looking puzzled by this lack of engagement. Abby goes to join small group of girls who are picking dandelions. When Sophie has completed a circle of the playground, she joins Abby and looks at her flower. Abby blows the clocks of the dandelion into the air for Sophie to see, who smiles as she watches them fly away” (Carmel Conn, pg. 1, 2014).

This helps in the understanding of the process of social experience for children with autism (Conn, 2014). Interaction styles directly or indirectly influence how staff and students treat and perceive students with autism. Recent findings show that children with autism are more likely to be found in small groups or one-to-one situations interacting and that the engagement is directed by the children and not an adult (Boyd et al, 2008 as cited in Conn, 2014). Children with autism have a mode of communication that is often put forward as a message transmission; this involves a person, a message, relaying the message, verbally or non-verbally, receiving the message and the understanding of the message (Conn, 2014). Communication is more than it seems as it involves many different layers of interaction and a high number of meanings between the two communicating parties (Conn, 2014). Communication does not have a clear beginning or a clear ending, this makes it an ongoing process (Conn, 2014), and social interactions are a form of communication and are therefore also an ongoing idea.

Autism Spectrum Disorder (ASD) is characterized by qualitative impairments in social interactions (DSM-I V, APA 2000) as cited in Scheeren, Koot, & Begeer, 2012). Inclusion of students with ASD in general education classrooms is still limited (U.S. Department of Education, 2010, as cited in Hughes et al, 2013), as students with ASD will be isolated from their peers yet will still be physically included in class or other activities (Newman, 2007). Strain and Schwartz (2001) as cited in Feldman and Matos (2012) state that children with ASD are at risk of being socially isolated from their peers.

One of the most striking features of autism is the difficulty in forming affective connections with others (Losh & Capps, 2006) Children with ASD spend a significant amount of their day at school with peers and is seems that some type of social interaction intervention
should be incorporated into the school day (Kohler, Strain, & Shearer, 1996). Individuals with ASD tend to not ask for help or support when they need it (Hume, Loftin, & Lantz, 2009). Koegel; et al, (1999), as cited in Hume, Loftin, & Lantz, (2009), that individuals with ASD lack the opportunities and independence that allow them to seek information from their environment. 

Generalization may not occur if skills are not mastered (Hume, Loftin, & Lantz, 2009). Responses displayed by children and adolescence to different social situations are often inappropriate in manner (Wing, 1992 as cited in Loveland, Pearson, Tunali-Kotoski, Ortegon, and Gibbs, 2001). Reasons behind the inappropriate responses could be due to the fact that individuals with autism do not understand cognitive models such as Theory of Mind (Baron-Cohen, 1995; Baron-Cohen, Lesile, & Frith, 1985 as cited in Loveland, Pearson, Tunali-Kotoski, Ortegon, and Gibbs, 2001), which prevents them from having a decent awareness of others thoughts, feelings, and beliefs. It is thought that these deficits account for different specific manifestations of social impairments with autism (Loveland, Pearson, Tunali-Kotoski, Ortegon, and Gibbs, 2001).

Rimland (1964) as cited in Hume, Loftin, & Lantz, (2009), states that children with autism have a hard time relating to new stimuli to new experiences, as their memory is highly specific and they are unable integrate new experiences into their repertoire. This may cause those individuals to respond to different interactions in an inappropriate manner. Another reason that children with ASD may have a hard time generalizing their responses is that they cannot generalize to the different environments and situations that they encounter (Koegal & Koegal, 1988 as cited in Hume, Loftin, & Lasntz, (2009).

In their study Loveland, Pearson, Tunali-Kotoski, Ortegon, and Gibbs,( 2001), looked at whether or not children with autism would be able to accurately identify if a social interaction was appropriate or not and if they could understand why it was or was not. They were then asked to tell the researchers what was wrong and to give reason why the interactions were wrong. Also verbal and non-verbal forms of communication and interaction were looked at to see what situations were more likely to yield inappropriate responses. In a study done by Pierce et al, (1997), situations that had more than one social cue were more difficult for the participants to understand and that ones with only nonverbal cues were easier. Loveland, Pearson, Tunali-Kotoski, Ortegon, and Gibbs, 2001), asked their participants to judge if an interaction that was shown on video was appropriate or not, and then they were asked three questions. The results indicated that the participants could detect what was inappropriate most of the time and behaviours that were appropriate almost all the time.

Jones and Klin, and Mundy et al. (2007) as cited in Scheeren, Koot, & Begeer, (2012), state that social interaction deficits in individuals with autism can take a number of different forms, and this leads to different intervention needs and responsiveness (Beglinger and Smith, 2005 as cited in Scheeren, Koot, & Begeer, 2012 ). A number of different studies have shown that children diagnosed with ASD play less socially, have less social interactions, and have less friendships than their peers that are developing typically (Scheeren, Koot, & Begeer, 2012). Documentation also shows that there is a significant difference in the quality and quantity of social interactions that different individuals with ASD display (Kasari et al. 2011 as cited in Scheeren, Koot, & Begeer, 2012).

Morrison, Kamps, Garcia, and Parker (2001), state that not only is the deficit of social interaction a challenge to the individual with autism but is a challenge to parents and teachers as well. With these challenges there is a need for promising interventions and they are being developed and the importance of the need for social relationships is being acknowledged
Different nonverbal cues contribute to our understanding of different social situations, such as body language (Centelles, Assiante, Etchegoyhen, Bouvard, Schmitz, 2013). Nonverbal cues include gestures and posture which are the main cues involved and provide social cues to the emotional state and the intentions of others (Centelles, Assiante, Etchegoyhen, Bouvard, Schmitz, 2013). Individuals diagnosed with ASD face impairments in understanding nonverbal cues as well as facial expressions (Pelphrey et al. 2005 as cited in Centelles, Assiante, Etchegoyhen, Bouvard, Schmitz, 2013). When watching different situations children must be able to understand the intention of the partner in order to formulate what the appropriate responses should be (Centelles, Assiante, Etchegoyhen, Bouvard, Schmitz, 2013).

Social interaction with peers is strongly linked to positive academic, behavioural, emotional, and social outcomes (Bukowski, Motzoi, & Meyer, 2009 as cited in Chung, Carter, and Sisco, 2012) alternatively without those interactions research has found a link to social isolation, depression, delinquency and poor academic performance (Wentzel, 2009 as cited in Chung, Carter, and Sisco, 2012). Good quality social relationships are limited for those diagnosed with intellectual (ID) and developmental disabilities (DD) (Carter, Sisco, Brown, Brickham, & Al-Khabbaz as cited in Chung, Carter, and Sisco, 2012). Those with IDs and DDs face different barriers when it comes to general education settings; attitudes, intelligibility and amount of support, which may limit the amount of peer interaction (Beck, 2009 as cited in Chung, Carter, and Sisco, 2012). There are multiple factors that affect communication (Chung, Carter, and Sisco, 2012). Three components that affect communication are; the environment and both the people involved (Siegel-Causey and Bashinski, 1997 as cited in Chung, Carter, and Sisco, 2012).

Wing and Gould, (1979), as cited in Scheeren, Koot, and Begeer, (2012) state that children and adolescents diagnosed with autism have different social interactions styles that can be categorized into three different subtypes; the aloof child who does not seek out or respond to attention or interactions, the passive child who does not seek out but does respond, and the active-but-odd child who seeks attention and responds but not in a necessarily appropriate manner. These different subtypes may also be associated with the different variations of severity (Scheeren, Koot, Begeer, 2012). They state that current research has shown that children with ASD and other intellectual disorders show that the active-but-odd children have higher intelligence, better skills of adapting, and lower autism severity scores then the aloof children. The active-but-odd children also tend to have higher rates of comorbidity defined by deficits in motor control, attention, and perception then the other types (Borden, 2000, as cited in Scheeren, Koot, Begeer, 2012).

Intelligence is considered to be one of the major confounding variables when it comes to the associated characteristics of the different social interaction styles (Scheeren, Koot, Begeer, 2012). Research has also shown that children and adolescence with high function ASD(HFASD) are usually more active when it comes to interacting in different social interactions and show more progress in social development then others with ASD (Bauminger, et al, 2003, as cited in Scheeren, Koot, Begeer, 2012). Scheeren, Koot, Begeer, (2012) mention that age, gender, verbal IQ and interaction styles need to be controlled for in order to understand different social interactions. Individuals with HFASD are able to understand, recognized and express basic emotions and are no less expressive with them than their typical peers (Capps et al. 1993, as cited in Losh & Capps, 2006). Graziano (2000), state that adolescence is fraught with conflict and disruption of social behaviours. Social behaviours lead to experiences that are formative to
later relationships (Cairns & Cairns, 1994), as complex emotions took longer for individuals with HFASD to recognize, as well as needing more prompts (Capps et al. 1993, as cited in Losh & Capps, 2006).

**Mood/Emotional Regulation and Autism**

Interactions between people require different changes in emotional states that fit the social context (Ekman & Friesan, 1996 as cited in Nelson 1997). This can be difficult and is it is sometimes easier for the person to not show any emotion at all (Nelson, 1997). Nelson (1997), states that is best to wait until the other person who is involved in the interaction to show some form of social cue, and then the others interacting are more easily able to show the correct emotion for that given situation.

Emotions are hard for some people to show as they do not like to show them, they are thought as private to that person (Erber, Wegner, Therriault, 1996). The authors state that moods can control the person’s behavior by providing the context for different social interactions that are encountered, personal reverie, and letting the mood take the mind wherever. This can lead to emotions taking the person experiencing them to the extreme end, which is not always present in social situations and interactions. (Erber, Wegner, Therriault, 1996). Emotions/moods that are felt before the social situation/interaction will not be relevant anymore and will be more than likely disrupted, this results one matching the mood of the person that is in the situation as well (Erber, Wegner, Therriault, 1996). Emotions that are unwanted lead to roadblocks in social situations and interactions (Erber, Wegner, Therriault, 1996). There are a number of different methods to control one’s mood that children and adults engage in that allows them to prepare for social situations, this allowing them to have self-presentation. Some examples of these methods as mentioned by Erber, Wegner, Therriault, (1996) are; suppressing emotions, desires, and thoughts.

Erber, Wegner, and Therriault (1996); did three studies to show that when social interaction is anticipated there is an occurrence of emotional/mood regulation. In the first study the participants were exposed to sad or cheerful music, then they were asked to rank the different newspaper articles that were sad, cheerful or neutral based on the desire to read the articles. Two experimenters were used in order to be blind to the mood conditions. Experimenter one put on one of the tapes and would greet the participants and ask them to wait in the room as the main experimenter was running behind. She would leave for 10 or so minutes and come back to inform the participants that the main experimenter was on their way there. After this the participants were told they would be reading some newspaper articles and may or may not be working with a partner. The experimenters found that those who expected to work with a partner preferred the articles that were either cheerful or neutral, thus indicating that there is preference to positive stories when anticipating social interactions.

Emotions are said to involve coordinated changes in response systems that are used when there is evaluation of situations happening (Reijntjes, Stegge, Terwogt, Kamphuis & Telch, 2006). Regulation of one’s mood is the change in topographical intensity and/or duration of emotions (Cole, martin, & Dennis, 2004, as cited in Reijntjes et al, 2006). The authors affirm that during the ages of two to five the repertoire for infants’ emotion regulation strategies is just beginning to expand, and by middle childhood there is more of a central role for cognitions to take place. This is important due to the changes that children face as they are more exposed to any different number of social networks (Reijntjes et al, 2006).

The Incredible 5 Point Scale created by Dunn-Buron & Curtis, (2003), works for self-management for a range of different behaviour’s. The Incredible 5 Point Scale was created to use
with children and adolescence diagnosed with autism and other developmental challenges in order to teach and convey understanding of social situations to them. The Scales aims to teach students in a non-judgmental, systematic and concrete manner that they can understand (Dunn-Buron & Curtis, 2003). These scales are simple and effective ways to teach emotional regulation, rules and expectations to individuals with autism or other social/developmental challenges.

Summary

Autism is a developmental disorder that is characterized by social impairments, communication, repetitive behaviours and restricted interests (American Psychiatric Association, 1994, as cited in Losh & Capps, 2006). One of the biggest concerns for children with autism is their inability to form emotional connections with others (Losh & Capps, 2006). Evidence shows that individuals with HFASD show the ability to understand, recognize, and express different basic emotions and are no less expressive when displaying these emotions (Losh & Capps, 2006). Basic emotions are recognized and understood fairly early on in development and show little variation among different cultures (Ekman, 1982 as cited in Losh & Capps, 2006). Emotion plays into our understanding of different social situations (Losh & Capps, 2006). Thoughts, beliefs, and feelings are not adequately interpreted by children with autism and these results in inappropriate social behaviours (Loveland, Pearson, Tunali-Kotoski, Ortegon, and Gibbs, 2001). Many of those diagnosed with autism lack the ability to understand and recognized different mental states and emotions (Loveland, Pearson, Tunali-Kotoski, Ortegon, and Gibbs, 2001).

Generalization must occur in order to promote social skills training (Fox and McEvoy, 1993 as cited in Peterson, Young, Salzberg, West, & Hill, 2006). Self-management interventions have shown to promote generalization in a number of different settings (Clee, 1994, as cited in Peterson, Young, Salzberg, West, & Hill, 2006) and are easy to use as they require effort from the classroom teacher (Workman & Hector, 1978 as cited Peterson, Young, Salzberg, West, & Hill, 2006). The authors suggest the future studies assess how different levels of behaviour challenges are affected by different self-management techniques. Dunn Buron & Curtis, (2003), The Incredible 5 Point Scale was selected to use with Andrew in this program based on the usefulness and flexibility of how the scales are made and based. Ranges in behaviours can be categorized into the different levels on scales thus making it possible to easily teach and convey to Andrew the appropriate ways of regulating his mood during social situations.

Word count: 3533
Chapter III: Format/Methodology

Participant and Selection

One adolescent male in Grade 8 participated in the study. The participant, who will be referred to as Andrew for this study, was selected based on recommendations made by his teacher, Mrs. Sommers. Mrs. Sommers, reported that Andrew frequently demonstrated inappropriate behaviours, such as yelling at teachers, walking out of class, and storming out of the gym, and other situations where he experienced conflict with his peers. However, Andrew also exhibited very high enthusiasm and was driven to succeed at school. Andrew did have difficulty with writing at school, and used a computer whenever a task required written work. Andrew had a different interaction style that influence how staff and students interacted, treated, and perceived him. Andrew is highly functioning in everyday life and was on medications for his mood. Andrew’s mother did not disclose the name or type of medication that he took. Anecdotally, Andrew’s teacher reported a suspected lack of positive interactions at home. Andrew had previously attended a behavior program at another school before transferring the year before. This research study was approved by the Research Ethics Board at St. Lawrence College. Consent for the study was also obtained from Andrew’s mother (Appendix A).

Design

Target Behaviour: Andrew’s target behaviour was to work on regulating his mood during social situations and to work on being able to reduce the instances of non-regulated mood.

Operational Definition: Regulated responses are defined as the client responding to social situations calmly using what the teachers deemed an appropriate inside voice, a calm tone of voice, and eye contact. Non regulated responses are defined as yelling, swearing, and name calling (e.g., calling a staff or student stupid or dumb). The non-regulated responses were measured using the five point scale that was made based on the baseline observations.

An example of a regulated response is when Andrew was asked to get to work he started the task right away without being told a second time. Another example could be when a classmate or peer was talking to him about something exciting that happened and he listened to them.

Baseline Phase: Baseline data was taken for three days to observe Andrew’s responses in a variety of conflict and social situations, based on how he had regulated his mood. Events were considered anytime that Andrew was put in a social situation with peers or staff that required a response. It was only counted if the initial response was regulated or not. For each of Andrew’s social interactions, data were taken on instances of regulation or non-regulation of Andrew’s mood. The morning block had four different subject periods and therefore there were only four times to collect the data. Data were recorded by the researcher for this phase and were collected using event recording. This was done by dividing a sheet into three columns: the time, what happened, and appropriate/regulated. Time here refers to the subject (e.g., French, silent reading, etc.). Reinforcers where not included due to the time limit.

Intervention Phase: An AB design was used for this intervention. Responses that were considered regulated were ones that Andrew had to look at the person he was interacting with and respond in a manner that suited the situation. Andrew was given sheets divided into different columns; date with time/class, situations/event/responses, and in control or not in control and was told he had to make notes in each section about the above mentioned items. Andrew did not take data for the intervention; however, Andrew used a data collection sheet as a self-monitoring activity. This activity was verbally given to Andrew and he would answer the questions being asked. Andrew was verbally praised contingent on when he would respond appropriately to
different social situations without prompting. If Andrew responded inappropriately he was prompted to use his 5 point scale, called Andrew’s Anger Scale. Verbal prompts consisted of the researcher asking “what level do you think you were at?” or “what is a better way to respond to that?” These prompts were given when Andrew was moving from the low end of the scale to the higher end (e.g., when Andrew’s behaviour was observed to be a 3 or higher. Teaching appropriate responses was done using scales from The Incredible 5-Point Scale (Dunn Buron & Curtis, 2003). The authors provide blank scales for client/parents to create themselves, as well as provide examples on how to fill them out. Andrew’s 5-point scale was created based on observations made in the classroom (see Appendix D). Observations about Andrews behaviour’s were recorded for the sole purpose of the scale and labeled according to the different levels (Appendix D). An example of this is Andrew was asked to get to work and did not, he put his head down on his desk ignoring everyone, this was labeled a level 2 as it was not disruptive everyone.

Setting and Materials

Intervention took place during the regular school day in the participant’s regular classroom. The intervention did not take place on days that the class was doing any kind of special activity, including field trips and athletic tournaments. The day was divided into different time blocks according to the schedule Mrs. Sommers provided to the students. Self-monitoring was used to record if Andrew felt a response was regulated or not to a social situation. Recording took place during the entire morning period, 8:30am to approximately 12:30pm every school day. Materials that were used were recording sheets for self-monitoring, and a pen or pencil to write on the recording sheet.

Measures Used

A functional assessment was planned but was not conducted due to time constraints. Baseline data gathered from observation informed the intervention procedures. Event recording was used for both baseline and intervention. Baseline data were collected on the frequency of appropriate regulated responses. Praise was selected as the reinforcer for Andrew as he typically responded well to verbal praise. Prompts were selected to use in the intervention as they could be delivered privately to Andrew without his peers hearing. Self-monitoring and the 5 point scale were independent variable of this program. The number of regulated response Andrew displayed during both baseline and treatment was the dependent variable. Every time Andrew engaged in a social interaction, staff and students included, data were recorded for appropriate regulated responses. Andrew was asked to mark the date/time/class, the situation and responses, and if the response was regulated according to his 5 point scale. Using the 5 point scale the researcher would redirect Andrew to the correct mood for the situation (Appendix C).
Chapter IV: Results

During the baseline phase Andrew was able to exhibit appropriate reactions three out of four times each day (Appendix B). This may be due to the absence of fellow students, which seem to encourage unwanted behaviour, during the baseline phase. This phase lasted for a total of three days. A fourth day of baseline was planned; however, Andrew was absent for nearly half a day during the fourth day. Any behaviours Andrew exhibited in response to different social interactions were categorized using the Incredible 5 Point Scale (Appendix D).

The time for implementing the intervention was severely limited due to unforeseen circumstances; therefore, the intervention phase lasted only three days and there were only a few situations where Andrew was prompted to regulate his mood during the intervention time frame. Praise was offered when Andrew elicited a regulated response. A decreasing trend (Appendix E) was observed during the intervention phase, demonstrating the possibility of a moderate negative effect (Appendix C).

Andrew had a mean of 3 regulated responses during baseline and 2 during the intervention. Median for baseline and intervention was the same as his means of 3 and 2 respectively. Percentage of non-overlapping data (PND) is used to measure the effectiveness of the treatment (Struggs, Mastropieri & Castro, 1987). Andrews PND is this intervention is 0%; this represents the data for this participant in this program as ineffective (Appendix E). Percentage of data point exceeding the median (PEM) is used when there is higher numbers in the baseline phase then there is in the intervention phase (Ma, 2006). Andrew’s PEM was also 0% effectively displaying that this intervention was not effective for Andrew. This data does not present any effective numbers; concluding that this intervention was ineffective for Andrew and regulating his mood.

Figure 1 shows the number of instances during the baseline phase that Andrew was able to regulate his mood. All three days of data collection showed the same occurrences of the target behaviours. Figure 1 also shows the number of instances during the start of the intervention phase that Andrew was able to regulate his mood. Intervention data was not as consistent as baseline as there were more non regulated instances. Some of these instance got out of control to the point that both the teacher and researcher could not regain control right away. This resulted in Andrew having to be sent to the principal’s office or home, if the principal’s office was not an option.
Figure 1: Baseline and Intervention Data

Regulated Responses

Number of Responses

DAYS

18-Nov 20-Nov 22-Nov 24-Nov 26-Nov 28-Nov
Chapter V: Discussion

An AB design was used as the participant was taught new behaviours in the form of appropriate social responses to different situations where he needed to regulate his mood. These cannot be taken away therefore a reversal design is not applicable. The design of the intervention was an AB design as teaching appropriate responses cannot be undone and would not be beneficial to do so.

Overall the results are inconclusive as there were not enough data to base any conclusions on for the behaviour. Data during the baseline phase was stable and appeared to be headed in a stable direction and with the introduction of the intervention phase there was a change to a decreasing trend. This change in the data could have been caused by any number of different variables, most notably the absence of certain students in the classroom. These students would antagonize Andrew by telling him he was wrong or go out of their way to annoy Andrew. This would cause Andrew lash to out at his peers instead of asking them to stop. It should be noted that during intervention if Andrew had said to anyone that he had experienced a bad morning at home this showed in whether or not he was able to effectively regulate his mood for the rest of the day. When a student has a bad morning at home, whether it be from lack of sleep, problems with siblings or anything else, it can affect the client behaviour for the rest of the day. It is important to account for instances like this when developing any type of program as it sets the stage for client compliance/adherence to a program and can provide setbacks and challenges that as a field need to be addressed and work with the client to overcome.

By continuing this program the client will be able to recognize his moods and alter them according to the social situation that he will be put in. It is expected that there will be some occurrences where mood regulation will not occur if the emotion that it is tied to that situation is stronger than normal. This is normal and should be taken into account were any type of mood or emotional regulation will occur; there are some situations that are not going to be regulated by anyone. Some examples of this could be that the client has experience some form of loss in their lives, in this situation you would want the client to show any of the emotions that come with the experience of loss.

Program changes

Some changes with the program were made from the original intervention plan. Due to the limited amount of time for intervention there was no time to teach Andrew how to self-monitor by himself; instead, he was asked by the researcher if he thought he responded appropriately. It is also important to note that due to this change, Andrew did not keep a booklet or a sheet.

Strengths

The 5 Point Scale was developed based on the behaviours displayed by Andrew. Andrew showed a clear range of behaviours that made it easy to pinpoint them from lowest (1) to highest (5). This scale could also be changed to cater to what the behaviours were if they changed and more than one could be potentially developed as well for a range of different behaviours, ie including tone of voice, facial expressions and physical attributes. Scales can be developed by students or staff and can include more than one for different situations. Pocket sales can be made with just the numbers for clients to carry around in order to keep track.

Andrew was previously in a behaviour program and was also more than motivated to work on improving. Andrew’s mother also encouraged this. Andrew was enthusiastic with school work, this encouraged him to work towards his educational goals. Andrew displayed a
good work ethic and would work on his schoolwork when he was in control of his moods. Andrew’s enthusiasm in his school work would show in the finished product.

**Limitations**

Some of the major limitations in this study are that, due to unforeseen issues, the duration of baseline and intervention phases were severely limited. In addition, a functional assessment was not conducted due to the time constraints. Andrew was on medication that helped to control his moods and when it was not taken he would sit out of class until someone from home would come to the school to bring it to him. This also cut into the amount of time to collect data. The medication may have also impacted Andrew’s ability to regulate his mood. Alterations were made to how the program was implemented because of these time restrictions. Andrew was asked if he regulated his mood rather than him recording it himself, as there was no time to teach him how to properly self-monitor.

Client motivation could be considered a limitation as the client may not have motivation to change and, thus, may improperly use self-monitoring strategies. It also implies that the client may or may not be able to make up the data in their own favour if they do not like the outcome of how they are looking to themselves. Clients may also not always notice their own behaviours; they have to be attentive to what they are doing. The client was not the one who monitored his behaviour, so the researcher did, it was part of the original plan to teach Andrew how to self-monitor before getting him to do it on his own. Andrew’s home life would impact how his day would be at school as he would not be as motivated to do his school work and thus he would not be as willing to do school work and follow instructions. As a researcher you cannot control client mood and behaviours at home.

Another limitation that should be considered was that the study took place during the morning block of the day where there were fewer times that Andrew had problems with his mood. It was noted that most of the higher conflict situations occurred during the lunch hour period this included lunch and recess, that was not observed for the study but would be brought up right after recess ended, this affected the rest of the day. One of the reasons that the study did not take place in the afternoon block was that the school had the researcher in a different classroom two afternoons out of the week, so it was more beneficial to do the study in the morning block every day in order to maximize the outcome.

**Multi-Level Challenges**

When working in the field and with clients it is almost non-existent that there will not be any problems that researchers will face when implementing different programs. There are four different levels that a research may encounter problems with that will affect how they implement and deal with the issues at hand. These levels are client, program, organizational and societal.

**Client Level:** At the program level a challenge is that by being previously in a behaviour program the client had a label. Some staff members would not try to work with the student if he was doing something that he was not supposed to and would instead immediately send him to the office. This presented the challenge that some staff members would unknowing act “cold” toward the student, thus affecting his mood. The school was small and some of the other students did not want to work with the client. The needs of other students also present a challenge as it is difficult to cater to the needs of all the students who may need help.

**Program Level:** At the client level some of the challenges were that the participant had to be reselected by the teacher and the researcher as consent could not be obtained. The school vice principal spoke to the parents on behalf of the research and explain the benefits, but they did not
feel that their child would benefit and blamed it on the other students in his class. This affected the amount of time there was with Andrew for the intervention. Andrew was chosen based on the behaviours he displayed that were very similar so the program could still be done in the way that was planned. Andrew previous experience in a behaviour program helped and also hindered his actions as there were aspects that he would carry over from the program that did not relate to the way he needed to react at school. The other challenge with the client level is that if clients take medications they need to take them at the same time every day in order for them to be effective. When they are not taken at the same time they are less effective than they would be if taken regularly. It also means that if the client takes them for specific things then they are going to play into how the client behaves and the behaviours that are displayed. It would have been more beneficial to Andrew to add in the reinforcement that was planned.

Organizational Level: One of the challenges at this level was that due to the small nature of the school and the limited number of staff members there was a need to be placed where there was a need. The researcher spend two afternoons in a different classroom and did yard duty with another student from another grade, this made it hard to find the best time in the clients class for the program. Some staff members did not realize that there was a need to be in one place in order to help specific students.

Societal Level: There was some issues when implementing the program as that was times that Andrew was doing work at his desk and the research was working with other students and may not have been able to catch some behaviours. This is something that cannot be avoided due to the amount of students in the class. Mood regulations could not occur at home as Andrew was one of 4 children, one of which had her own child; this made it harder for him to obtain reinforcement or praise.

Contribution to the Behavioural Psychology Field

This thesis aimed to demonstrate that the benefits and simplicity of self-monitoring was effective for children with autism when the need to be able regulate their mood for social interactions. Research conducted by the researchers in the literature review showed that there was a strong positive reaction to the use of self-monitoring to increase the number of social interactions as well control/regulating ones mood to fit that current social situation. This study speculates that there could be success if given more time to implement the full program.

This study was done in a classroom environment and showed that situations had similar aspect, this something that will follow students throughout in both high school and college, should they choose to go. It is important that a person is able to follow the rules of the establishment that they are in, which includes acting in an appropriate manner, as moods can control the actions a person makes. This thesis also demonstrated that moods are a big part of how one interacts with others in different social situations and that going into a situation with the right mood will positively influence the outcome of that interaction.

Recommendations for Future Research

Based on this intervention there are several recommendations that can be made for future research in order to obtain the best outcomes possible. First off more baseline observations should be done to see if there are specific social situations that trigger moods that are not regulated and a longer time frame. The longer time frame will allow the behaviour to become stable and will allow for a range of behaviours to be seen. Second, different methods of self-monitoring could be utilized to allow for maximum effectiveness. An example of this could be using both recording sheets and setting up a video camera, if the situation/environment would allow for it. This allows the client to see how they reacted after they have recorded as sometimes
it is hard to pick up on one’s own behaviour. The four steps for self-monitoring should also be more clearly defined in procedure, the steps are, define the target behaviour, identify reinforcers, find a method that works for recording, and teach the chosen method. The four steps to self-monitoring can be an activity that is done by both the participant and the research; by clearly stating these steps and involving the client they will be able to clearly discriminate occurrences and non-occurrences. It is also recommended that not only should the client monitor their own behaviour but have another classmate or adult that is in the room collect the data on their behaviour.

The 5 point scales is recommended to continue to be used but have the client more actively involved in helping to develop the scale. Making more than one scale is also recommended and can be catered to different social situations that may elicit different behaviours that call for mood regulation techniques. Some examples of different social situations are once outside yelling at someone who is across the field is appropriate where it is not in class. It is also appropriate to be physical during certain contact sports, and not in others. The scales can also be used for the use of proper tone of voice in situations and mood control as the tone that a person uses can set the mood of different types of social situations.
References


Appendix A - Consent Form

Project title: Teaching Appropriate Social Responses and Mood Regulation
Principal Investigator: Tabitha Swerdfeger
Name of supervisor: Shaireen Charania
Name of Institution: St. Lawrence College
Name of sponsor: NA
Name of partnering institution/agency: Public School 1630

Invitation
Your child is being invited to take part in a research study lasting for 14 weeks. I am a student in my 4th year of the Behavioural Psychology program at St. Lawrence College. I am currently on placement at Public School 1630. As a part of this placement, I am completing a research project. I would like to ask for your permission for your child’s participation. Please read the information carefully and ask all questions you might have before you decide if you will allow your child to participate.

Why is this study being done?
This study is being done to teach your child different appropriate responses to social situations and interactions he may have in the classroom. This will take place in your child’s regular classroom during the morning Monday to Fridays. Your child will be asked to write down the number of interactions he has and the number of appropriate responses he has to those interactions.

What will your child need to do if he takes part?
If you choose to take part in this study you will be asked to give permission for your child to participate. The program will take place during regular school and classroom times. Your child will be asked to record the number of time he is able to regulate his mood appropriately. Your child will be taught appropriate ways of responding to situations when things get ‘out of control’. He will also be taught to manage his reactions, this will help him advocate for what he needs to feel successful.

What are the potential benefits of taking part? (if applicable)
Benefits of taking part in this study include the ability to be able self-monitor and manage his mood. This helps him to control situations to his own benefit and success.

What are the potential benefits of this research study to others? (if applicable) The potential benefits of this research study will be that your child will improve his self-regulation abilities, improve his mood control, and interact with others in a more appropriate manner.

What are the potential disadvantages or risks of taking part?
Risks from taking part in this research study are minimal but may include the unwillingness to participate, not wanting to interact with others, and the inability to control certain moods.

What happens if something goes wrong?
Your child may stop participating at any time if anything comes up without any further obligations or penalty for doing so. Should a situation upset your child, a teacher or another available staff member will step in and defuse the situation if needed. Your child can then be taught the way that he could have handled the situation himself.

Will my information you collect from my child in this project be kept private?
Yes all information will be numbered and stored on a password encrypted computer in an encrypted file and kept for up to seven years at St. Lawrence College. Your child’s name will not be used; he will be given a fake name. Information will only be shared if there is any harm to self or other present.

**Do you have to take part?**
Your child does not have to participate if you do not wish to do so.

**Contact for further information**
This project has been approved by the Research Ethics Board at St. Lawrence College. The project will be down under the supervision of Shaireen Charania, my supervisor from St. Lawrence College. I really appreciate your cooperation and if you have any additional questions or concerns, feel free to ask me, Tabitha Swerdfeger, tswerdfeger14@sl.on.ca or tswerdfeger14@gmail.com. You can also contact my College Supervisor at scharania@pathwayschildrenyouth.org or you may also contact the Research Ethics Board at reb@sl.on.ca.

**Consent**
If you agree to let your child take part in this research project, please complete the following form and return it to me as soon as possible. A copy of this signed document will be given to you for your own records. An additional copy of your consent will be kept at the agency [and in a secure location at St. Lawrence College, if needed].

By signing this form, I agree that:
- The study has been explained to me.
- All my questions were answered.
- Possible harm and discomforts and possible benefits (if any) of this study have been explained to me.
- I understand that I have the right not to let my child participate and the right to stop at any time.
- I am free now, and in the future, to ask any questions I have about the study.
- I have been told that my personal information will be kept confidential.
- I understand that no information that would identify my child will be released or printed without asking me first.
- I understand that I will receive a signed copy of this consent form.

I hereby consent to take part.

---

**Parent Name**

**Signature of Parent**

**Date**

---

**Student Printed Name**

**Date**
## Appendix B-Baseline Data

<table>
<thead>
<tr>
<th>Regulated Mood</th>
<th>Non Regulated Mood</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
## Appendix C - Intervention Data

<table>
<thead>
<tr>
<th>Regulated Mood</th>
<th>Non Regulated Mood</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>
## Appendix D - 5 Point Scale

Name: Andrew  
My Anger Scale

<table>
<thead>
<tr>
<th>Rating</th>
<th>Looks like</th>
<th>Feels like</th>
<th>I can try to</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Swearing</td>
<td>Feels like punching something or someone. Need to do something</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yelling</td>
<td></td>
<td>Teacher intervenes.</td>
</tr>
<tr>
<td></td>
<td>Red in the Face</td>
<td></td>
<td>Talk to an adult.</td>
</tr>
<tr>
<td></td>
<td>Kicking and/or punching</td>
<td></td>
<td>Take a break(walk)</td>
</tr>
<tr>
<td>4</td>
<td>Swearing</td>
<td>Mad/Anger</td>
<td>Walk away.</td>
</tr>
<tr>
<td></td>
<td>Raised voice</td>
<td></td>
<td>Go to a teacher.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ask for help</td>
</tr>
<tr>
<td>3</td>
<td>Arguing</td>
<td>Upset, frustration</td>
<td>Leave the situation</td>
</tr>
<tr>
<td></td>
<td>Some swearing</td>
<td></td>
<td>Talk to an adult</td>
</tr>
<tr>
<td></td>
<td>Falter voice</td>
<td></td>
<td>Find a safe person to talk to</td>
</tr>
<tr>
<td>2</td>
<td>Head Down on desk</td>
<td>Tired and groggy</td>
<td>Take a 5 min break</td>
</tr>
<tr>
<td></td>
<td>Not listening/paying attention</td>
<td></td>
<td>with an adult</td>
</tr>
<tr>
<td></td>
<td>Forcing interactions with others</td>
<td></td>
<td>Deep breathing</td>
</tr>
<tr>
<td>1</td>
<td>Sitting in desk doing work</td>
<td>Fun</td>
<td>Working on things</td>
</tr>
<tr>
<td></td>
<td>Talking quietly to others or helping</td>
<td></td>
<td>Ask for help if needed</td>
</tr>
</tbody>
</table>
Appendix E: Graph with Trend Line-Regulated Responses

![Graph of Andrew's Regulated Responses]

- **PND**: Baseline Phase
- **PEM**: Intervention
- **Trendline**: Graph with trend line for regulated responses.