RUNNING HEAD: Emotion Regulation

Examining The Relationships Between Emotion Regulation, Social Relationships, and Temperament

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Abstract

The present study investigated the relations between emotion regulation, temperament, and the quality of social relationships. Previous research has examined these variables and determined emotion regulation abilities and temperament were appropriate predictors of social functioning. However, the majority of research examining such variables has been conducted in younger populations, outside of Canada. Therefore, the present study contributed to the knowledge base because of the age of participants as well as the location of the research.

Within the Cape Breton Victoria Regional School Board, parents and teachers of 31 Grade One students completed questionnaires assessing temperament, social functioning, and emotion regulation abilities. Specifically, teachers completed the *School Social Behavior Scale* (Merrell, 2002) and parents completed the *Emotion Regulation Checklist* (Shields& Cicchetti, 1997) and the *Colorado Child Temperament Inventory* (Buss & Plomin, 1984). This thesis explored two main hypotheses: children rated as possessing a difficult temperament (i.e. high on scales of emotionality and shyness and low on scales of sociability and soothability) would experience greater difficulty regulating emotions and experiencing positive social relationships and children rated as possessing an easy temperament (i.e. low on scales of emotionality and shyness, and high on scales of soothability and sociability) would demonstrate the reverse pattern. Also, children rated as high in emotion regulation would be rated as having positive social relationships and would demonstrate few anti-social behaviors and children rated as low in emotion regulation would demonstrate the reverse pattern.

Following data analyses, several interesting findings were discovered. For example, the first hypothesis was partially supported while there was no evidence to support the second. However, the most interesting finding was the role of temperament. Multiple Regression analyses were conducted to examine if social behavior could be predicted from emotion regulation and temperament variables. While there were significant results for some of the temperament variables in this prediction, no statistically significant results were noted for the emotion regulation variables. Analyses revealed temperament variables account for 41% of the variance in *Peer Relations*, 40% of the variance in *Self-Management,* and 49% of the variance in *Academic Behavior*. Temperament variables were therefore found to be a significantly better predictor of social relationships as compared to emotion regulation abilities.

Significant correlations included *Negativity* showed a significant positive correlation with *Emotionality* as well as a significant negative relationship with *Attention, Soothability*, and *Emotion Regulation. Emotion Regulation* was positively correlated with *Attention* and *Soothability*. In addition, *Attention* showed a significant positive correlation with *Peer Relations*, *Self-Management*, and *Academic Behavior*. Finally, *Shyness* showed a significant negative correlation with *Peer Relations*. A discussion regarding speculation behind the current findings, and implications of the current research is provided.

Introduction

Imagine two children happily playing in a park or on a school's play ground. Both children are enjoying themselves until something happens; either a toy is taken away by an older child, a parent calls out that it is time to go, or one of the children no longer wants to share. What happens next is always a point of interest as many possible reactions could occur. There may be tears of frustration or upset, there may not be any reaction other than momentary disappointment, or there may be a full blown temper tantrum for which there seems to be no end. One may begin to wonder what lies beneath these reactions. What allows one child to overcome their emotions and another to become so overwhelmed? The answer to such questions may begin with a greater understanding of the concept of emotion regulation.

Emotion regulation is a significant element of child development to consider as the ability to do so impacts many aspects of every-day living. In fact, the most common reason for parents to seek professional assistance with their child stems from a difficulty with emotion regulation (Linscott & DiGiuseppe, 1994 as cited in Tobin, Sansoti, & McIntyre, 2007). The following sections highlight the relevant literature surrounding emotion regulation and its' impact on aspects of functioning including social relationships. Also discussed are factors, such as temperament, that are associated with the development of emotion regulation and may further interact with emotion regulation to predict varying levels of social relationships.

While many individuals may benefit from enhancing their understanding of emotion regulation, research within the elementary age population is lacking. Many studies focus on early infant responses to situations and this extended focus has left a

void in the research. The ability to deal with one's emotions effectively and appropriately many be one of the few skills that pervade so many aspects of functioning. A child who is unable to do so experiences difficulties making friends, keeping friends, and gaining acceptance of peers. The importance friends play during development is global in nature and any information that would inform such difficulties would be useful. The purpose of the current study is not only to glean information related to this population but also to contribute to the small body of Canadian research on the topic.

Many possibilities exist for application of knowledge within this area of study. Parents, teachers, and school psychologists have much to gain from widening the knowledge base on the topic. Difficulties with emotion regulation are related to many serious challenges including mood disorders, anxiety disorders, and severe behavioral problems. The potential impact of early identification and prevention programs on the lives of children, families, teachers, and entire classrooms would be significant.

Relevant Literature

The study of emotional development and regulation has been a prominent theme in child development. This may be due in part to the large role emotions play in the lives of children as they shape behavior and perceptions (Langlois, 2004). Emotions also serve as a tool by which situations can be evaluated and prepare us for action. It is interesting that while emotions are fluid and are currently beyond technology's ability to detect with certainty, their study remain of great interest to researchers (Cole, Martin, & Dennis, 2004).

Although emotions remain a fundamental component of life, challenges exist within developmental stages. Children must navigate the process of emotional

development through interactions with family members, peers, and friends (von Salisch, 2001). Such development occurs via an extensive process of socialization which includes learning to interpret emotions, achieving some control over them, and learning when, where, and how to display emotions appropriately (Lefrancois, 2000, p. 338). Given the complexity of emotions, it is not surprising the study of emotions is extensive and has expanded to include a number of related topics including emotion regulation.

Emotion Regulation

Within the first eight years of a child's life they must learn to deal with a range of complex emotions in socially acceptable ways (Bronson, 2000 as sited in Craig & Dunn, 2007, p. 210). This process is known as emotion regulation and occurs as the result of biological and psychological system development (Shields & Cicchetti, 1997) and occurs at the behavioral, cognitive and physiological levels (Rydell, Berlin, & Bohlin, 2003). As noted, in its simplest form, emotion regulation refers to dealing with emotions appropriately. However, emotion regulation may be further defined to include a child's ability to remain flexible and respond to various situations, and control emotions in order to engage effectively with the environment (Shields & Cicchetti, 1997; Rydell, et al., 2003). It is important to note that all emotions are regulated and therefore, emotion regulation is not influenced by which emotions arise within an individual (Cole, et al., 2004).

Why study emotion regulation? Emotion regulation has been shown to be connected with aspects of resiliency such as coping with stress and life challenges (Cicchetti & Rogosch, 1997). In addition, low emotion regulation has been associated with behavioral problems which impact functioning (Eisenberg, Fabes, Guthrie, &

Reiser, 2000). For example, while emotion dysregulation is not considered a disorder unto itself, it is associated with a variety of disorders including conduct disorder, anxiety disorder, and mood disorders which impact development (Tobin, et al., 2007). Fabes and Eisenberg (1994) also report that children who are unable to successfully regulate their own emotions when faced with empathy evoking situations are more likely to be consumed by their own emotions rather than engage in pro-social behaviors. Conversely, children who are able to regulate their emotions effectively are able to engage in positive, comforting behaviors. From these findings, one can quickly imagine the impact such abilities exert.

Given a large portion of child development is shaped by interactions with others, it is likely that effective emotion regulation has the potential to either inhibit or promote positive interactions. Some research has gone as far as to suggest that emotions and their regulation impact the *entire* development of self (Strayer, 2002). The study of emotion regulation may also provide information that differs from that gleaned from the study of emotion expression, the language of emotions, and the general understanding of emotions. That is, the study of emotion regulation attempts to account for how and why emotions impact relationships and other areas of functioning including the ability to focus on tasks (Cole, et al., 2004).

Of additional interest is the potential impact effective emotion regulation may exert in later development. For example, Pulkkinen, Nygren, and Kokko (2002) conducted a longitudinal study beginning at age eight and ending at age 36. Participants of the study were assessed on a number of variables including emotion regulation. Researchers found a significant correlation between appropriate or effective emotion

regulation at age eight and positive social functioning in adulthood, especially for men (Pulkkinen, et al., 2002). Within the study, social functioning was defined as the ability to maintain a career, socialize with others, and control personal consumption of alcohol.

Given the dynamic nature of research on emotions, it is critical to define the variables of interest. For the purpose of the current study, emotion regulation was defined in terms of ability to adapt (i.e. lability and flexibility) as well as the ability to respond to various situations appropriately. Emotion regulation was also understood as the capacity to control one's emotions in order to engage effectively with the environment (Shields & Cicchetti, 1997; Rydell, Berlin, & Bohlin, 2003). This definition of emotion regulation was selected as it is the definition used by the creators of the Emotion Regulation Checklist (Shields & Cicchetti, 1997), which was the scale used to assess emotion regulation within this study.

Theories of Emotion Regulation

As noted, the development of emotion regulation results as biological and psychological systems develop (Shields & Cicchetti, 1997). The biological component of emotion regulation may begin to be impacted during infancy. During this early stage in development, regulation is focused on basic needs being met and feeling a connection with one's caregiver (Tobin, et al., 2007). In addition, the parasympathetic branch of the autonomic nervous system acts to sooth and restore calmness to the system by decreasing heart rate and blood pressure; this is known as the vagal tone (Katz & Gottman, 1995). While this process seems relatively automatic, research has shown that the body's ability to sooth and calm itself is impacted by treatment from caregivers. For example, negative control behaviors by mothers such as threatening, making derogatory remarks, hand

slapping, and verbal control was found to suppress the vagal tone (Calkins, Smith, Gill, & Johnson, 1998). In addition, this suppression was consistently linked to less adaptive emotion regulation and misbehavior (Calkins, et al., 1998). Researchers have also shown that infants who demonstrate greater adrenocortical activity during times of stress also have greater amounts of stress hormones within the bloodstream (Gunnar, Mangelsdorf, Larson, & Hersgaard. 1990). Such findings demonstrate the biological component of emotion regulation development.

Researchers have also shown that individual differences in temperament, specifically, the ability to self-sooth, as well as interactions with caregivers impacts the development of emotion regulation (Stifer & Braungart, 1995). Tobin and colleagues (2007) cite early research which suggested infants begin to regulate emotions through social referencing with a parent. In addition, infants with a secure attachment style to a caregiver demonstrate greater emotion regulation as compared to children who are insecurely attached to one or both parents (Diener, Menegelsdorf, McHale, & Frosch, 2002). Researchers have suggested that these early relationships impact the development of both psychological and biological systems within the body and exert an influence well into later childhood (Tobin, et al., 2007).

Challenges

Challenges exist when studying emotion regulation. Researchers have not strayed away from addressing the difficulties in studying and defining the process. When research on emotion regulation was growing in popularity, Walen and Smith (1997) attempted to address the challenges inherent in the study of a subjective experience that was connected with many aspects of functioning including emotional intelligence,

temperament, and self-regulation. Langlois (2004) also highlights that while an intuitive understanding of emotion regulation exists we must also question if emotions are regulated or regulating, at what level emotion regulation occurs, and if such a difference exists between emotions and emotion regulation? In an effort to address potential challenges Cole and colleagues (2004) describe a number of steps that can be taken to minimize confusion; one such recommendation includes defining variables of interest carefully. This recommendation has been heeded and is carried out within this proposal.

One area of children's lives that has been shown to be related to emotion regulation is social relationships. As the following research will highlight, social relationships play a key role in many areas of healthy development.

S*ocial Relationships*

Researchers suggest that social interactions with others, in addition to those with caregivers, have a fundamental impact on not only our experiences, but also our biology (Goleman, 2006, p. 5). For example, it has been found that positive nurturing relationships can have a beneficial impact on health whereas stressful relationships have been linked to T-cell suppression within the immune system (Goleman, 2006, p. 5). Further support for the biology of social interactions is found in the brain. A specific class of neurons, known as spindle cells, which guide rapid social decisions, are more plentiful in the human brain than in any other species (Goleman, 2006, p. 9). Such findings stem from a body of research known as social neuroscience, a field dedicated to examining the impact of social relationships on the brain.

In addition to the impact on biological functioning, friendships contribute to the development of important social skills including learning to consider another's point of

view, learning the rules of conversation, as well as learning to understand age appropriate behaviors. Friendships also play an important role in the development of self-concept and global self-worth (Erwin, 1998 as cited in Lefrancois, 2001, p. 431). In addition, friendships may provide an avenue for further cognitive development. While the research appears somewhat inconsistent, Kutnick and Kington (2005) demonstrated that when girls in grades one, three, and five were paired with a friend during an academic task, performance was significantly enhanced. The authors suggest that student pairing should occur more frequently as social interaction may promote academic development.

The development of friendships may become increasingly important as children age. According to Selman's Developmental Progression of Friendships (1980, as cited in Lefrancois, 2001, p.429) from age three to seven the perception of a friend shifts from being someone who is played with, to someone who must be cooperated with and who must also share common goals. Perhaps it is this early negotiation and compromise which later impacts the quality of relationships maintained in adolescence and adulthood (Hartup, 1995).

While children appear to form friendships rather easily in early childhood, various factors have been found to impact a child's status within a peer group. These factors include their ability to be friendly, sociable, and modify their behavior when necessary (Lefrancois, 2001, p. 434). A child's level of self-confidence and ability to cooperate also influence the development of friendships (Hartup, 1995). Friendships also appear to serve a protective role. For example, children who experience difficulty maintaining positive relationships with peers and friends are at risk for a number of challenges including depression and loneliness (Hecht, Inderbitzen, & Bukowski, 1998) and victimization or

bullying (Hay, Payne, & Chadwick, 2004; Hodges & Perry, 1999). Such a finding speaks to the importance of maintaining positive relationships during childhood. Further support is found in the work of Dunstan and Nieuwoudt (1994) who found that elementary aged children who demonstrated antisocial behaviors were unable to engage effectively with peers.

The quality of social relationships was another variable of interest for the current study. The quality of social relationships was examined as related to the ability to engage in pro-social behaviors when interacting with others. Pro-social behaviors was understood to include, but was not limited to, helping others, behaving cooperatively, and sharing (Hay, et al., 2004; Craig & Dunn, 2007, p. 592). The ability to engage in pro-social behaviors has been shown to directly impact the quality of interactions with others (Greener, 2000); therefore, the assessment of pro-social behaviors within this study was be sufficient to inform the quality of relationships.

The ability to engage in pro-social behaviors was also reflected in a child's tendency to avoid engaging in antisocial behaviors, such as acts of aggression toward peers. Considering this dimension of behavior was worthwhile; a child who co-operates with others and shares, at times, but consistently quarrels and behaves aggressively will likely not experience the same quality of relationships as a child who is more amicable.

Emotion Regulation and Social Relationships

As the noted literature reports, both emotion regulation and the quality of social relationships a child maintains play important roles in psychological and biological development. It is therefore not surprising that a body of research has examined how emotion regulation and social relationships are related. For example, Ashiabi (2000)

reports that appropriate emotion regulation is paramount to developing positive relationships with peers and the way in which emotions are expressed can be viewed as a marker or measure of social competence. In addition, Fabes, Carlo, Kupanoff, and Laible (1999), report that there is overwhelming evidence to suggest that social competence is very closely tied to the child's ability to identify emotions in both self and others and to regulate these emotions. Hay and colleagues (2004) further propose that the development of successful peer relations is dependent on a number of factors including the ability to effectively manage feelings of anger and fear. Moreover, the ability to regulate emotions impacts feelings of shyness and aggression and difficulty in this area may hider the development of pro-social skills. Each of these factors then impacts gaining acceptance by peers. See Figure 1 (Hay, et al., 2004) below:

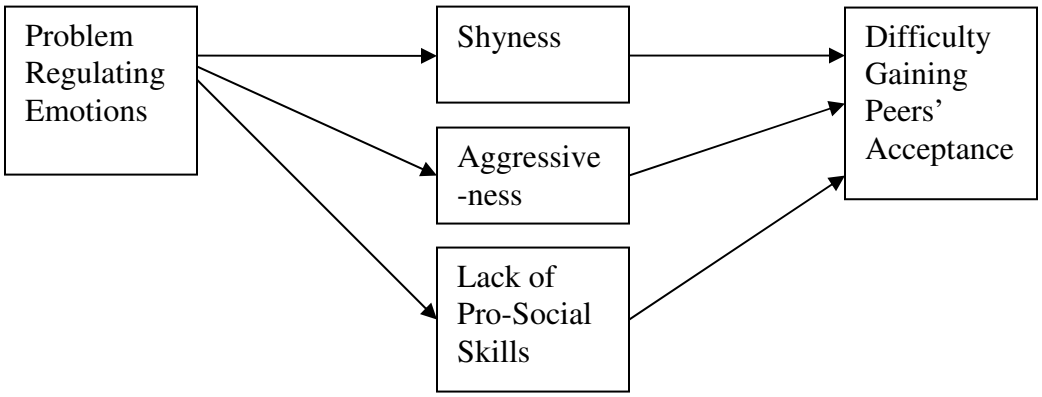

Figure 1: Factors Impacting Peer Acceptance (Hay, et al., 2004).

Research is rather conclusive that social competence is related to a child's ability to express emotions and emotional intentions appropriately (Cassidy, Parke, Butkovsky, & Braungart, 1992; Dodge, Murphy, & Buchsbaum, 1984; Gnepp & Hess, 1986). There is also evidence to suggest that emotion regulation is *the* critical component necessary for positive interactions with others, especially during stressful events. Such events call upon the ability to not only mange personal feelings of distress but also the negative emotions of others. This ability is vital to the development and maintenance of social relationships (Eisenberg & Fabes, 1992 as cited in Blair, Denham, Kochanoff, & Whipple, 2004).

Emotion regulation may also impact other areas of functioning within the school setting. Specifically, Raver (2003) reports emerging research on early schooling suggests the relationships that children build with peers and teachers are based on children's ability to regulate emotions in pro-social versus antisocial ways. Moreover, those relationships then serve as a source of provision that either help or hurt children's chances of doing well academically. Further support for this was also found within a sample of pre-school children. Emotion regulation was found to be positively associated with teacher reports of children's academic success and productivity in the classroom and standardized early literacy and math achievement scores (Graziano, Reavis, Keane, & Calkins, 2005). While social competence is related to emotion regulation so may also a child's temperament. The general tendency to respond to events shapes many aspects of functioning and experiences.

Temperament

The study of infant and child temperament was greatly facilitated by the early work of Thomas and Chess (1977) in the well known New York Longitudinal Study

(Huber, Wachs, Peters-Martin, & Gandour, 1982). Within this study, 133 infants were followed from infancy to adulthood. Characteristics including regulatory habits, reactions to change, responses to caregivers and strangers, and general mood were studied (Craig & Dunn, 2007, p. 148). As a result of this research, nine dimensions of temperament were developed as well as three temperamental styles; easy, difficult, and slow-to-warm-up. While this research did not escape criticism, it contributed significantly to the field. For example, it influenced the work of Rothbart and colleagues who developed a more precise measure of temperament which contained six dimensions; activity level, soothability, attention span and persistence, fearful distress, irritable distress, and positive affect (Rothbart, 1981 as cited in Craig & Dunn, 2007, p. 149).

There is considerable debate surrounding the nature of an individual's temperament. Some argue that temperament is biologically or genetically based and therefore, is relatively consistent throughout the lifespan (Chess & Thomas, 1989 as cited in in LeFrancois, 2001, p. 244). Yet, others suggest it is more malleable and changes in response to life experiences (Rothbart & Bates, 1998 as cited in Craig & Dunn, 2007, p. 149). Rothbart, Ahadi, and Evans (2000) also suggest that an individual's temperament both influences and is influenced by experiences encountered, and plays a significant role in shaping adult personality. Oakland and Joyce (2004) believe temperament is influenced by both environment and genetics and reflects innate personal preferences; much like a preference to write with one's left or right hand. Regardless of its inherent nature or ability to change, temperament is generally understood as the way in which an individual interacts with the world around them. Such interaction includes responses to

events such as the intensity and speed of the activation of emotions and ability to engage in strategies to overcome such emotions (Cole, Martin, & Dennis, 2004).

Considering the population of interest for the current study, temperament is an important dimension related to school functioning. Researchers have demonstrated that difficulty with perusing tasks, remaining focused and seated, and controlling emotions are commonly linked to poor achievement (Bouffard, Roy, & Vezeau, 2006). In addition, Foley (2007) notes that demands placed on a child may be very different once they leave their home environment. Behavior tolerated within a home setting may not be as welcomed by a teacher. Moreover, Foley (2007) presents findings which suggest a teacher's perception of a student is impacted by that student's temperament.

The concept of temperament has also been examined within the context of an interactional perspective to predict later functioning. For example, Paterson and Sanson (1999) suggest that a child's temperament influences their experience within their environments which may later create behavioral difficulty. That is, a child possessing temperamental uncooperativeness may likely experience negative reactions within the environment; such negative reactions may in turn contribute to behavioral problems. Findings similar to this hypothesis confirmed that a difficult temperament may be used to predict problems within the school system. Magee and Roy (2008) conducted an eight year longitudinal study assessing youth on a variety of traits in an effort to predict problem behavior when entering school. These researchers found that young boys with a difficult temperament (as rated by their mothers) were twice as likely to experience difficulty when entering school as compared to those without such a temperament. The statistics rose to eight times more likely to experience difficulty if the boys' mother was

unable to deal with the temperament displayed. The later finding provides support for the notion that a child's temperament may not always mesh with or fit well with that of a caregiver. Paterson and Sanson (1999) believe both temperament and fit are important predictors of later behavioral problems.

The majority of literature available related to this age group deals with the relationship between temperament and predicting behavior upon entering school. While this is an important consideration, more information is needed to better understand temperament within five and six year olds. Within the current study each student's temperament was assessed in an attempt to determine the influence temperament plays within each variable of interest, ie. emotion regulation and social relationships. For the purpose of this study, temperament will be understood as encompassing a number of variables including how attentive, emotional, active, shy, and sociable a child is perceived to be, as well as how easily they are soothed after an upset. Temperament will also be understood as referring to a child's reactivity, that is, the intensity and speed of the activation of an emotion and the child's ability to engage in strategies to alter the experience of intense emotions (Cole, et al., 2004).

Temperament, Emotion Regulation, and Social Relationships

Research has suggested a child's ability to self-regulate, which is heavily influenced by temperament, can be used to predict social adjustment (Kyrios & Prior, 1990). Research examining the relationship between temperament, emotion regulation, and the impact on social relationships has revealed significant findings. For example, Eisenberg, Fabes, Guthrie and Reiser (2002 as cited in Blair, et al., 2004) found that temperament and the ability to regulate emotions predicted aspects of social functioning

including the ability to engage in pro-social behaviors, adjust to novel situations, and gain peer acceptance. In addition, emotion regulation has been shown to act as a better predictor than temperament when examining the incidence of low rates of problem behavior for children prone to intense negative emotionality; however, this predictive ability is not as strong when examining children who do not experience high negative emotions (Eisenberg, Fabes, Guthrie, Murphy, Maszk, Holmgrem, and Suh, 1996; Eisenberg, Guthrie, Fabes, Shepard, Losoya, Murphy, Jones, Poulin & Reiser, 2000; Eisenberg, et al., 2002). Negative temperament has also been found to predict problem behaviors, especially when the ability to self-regulate is low (Eisenberg, Fabes, Gutherie, et al., 1996; Eisenberg, Fabes, Murphy, Karbon, Smith & Maszk, 1996). These findings suggest that, although temperament and regulation are able to predict aspects of social functioning and problem behavior, their interaction may predict the quality of children's social functioning to a greater extent than either variable alone (Eisenberg et al., 2002 as cited in Blair, et al., 2004).

In addition, research has suggested that emotion regulation may be most important when dealing with negative emotions. Children who experience positive emotions consistently (or those with an easy temperament) may be less likely to behave in socially inappropriate ways as compared to children who experience predominantly negative emotions, thereby maintaining high social status (Fabes, Eisenberg, Jones, Smith, Guthrie, Poulin, Shepard, & Friedman, 1999).

Blair and colleagues (2004) present a model of emotion regulation as outlined by Eisenberg and Fabes (1992) and further explored by Eisenberg and colleagues (2002). This model of emotion regulation suggests how temperament and differing styles of

regulation (highly inhibited, under-controlled, or optimally regulated) interact to produce adaptive or maladaptive social functioning. The model proposes that under-controlled children are typically low in pro-social behavior overall and engage in non-constructive regulatory methods. Such children possess a temperament characterized by moderately high levels of emotional intensity, impulsive and active behaviors, become frustrated easily, and react aggressively. It is expected that these children are less popular with peers due to these characteristics. Conversely, children who are described as highly inhibited demonstrate socially withdrawn behavior and more likely to experience a temperament that is characterized by unhappiness and a regulatory style that lacks flexibility. Children who are optimally regulated experience most success. These children demonstrate most positive, adaptive behavior as they are flexible and cope with emotions effectively; they are seen as sociable, relatively popular, and socially competent. According to this model, positive social behavior is associated with individual variations in optimal regulation and a temperament predisposed to experience highly intense positive, rather than negative, emotions. This model may also begin to account for the many variations in behavior observed and provide some insight into a child's functioning. Further insight is anticipated from the proposed study.

Presenting the Problem

Many individuals have a vested interest in learning more about the impact of emotion regulation. From a psychologists' perspective, increasing one's knowledge base about the factors which may impact emotion regulation and therefore relationships with others, may allow for greater understanding of clients experiencing difficulty in this area. Teachers would also benefit from such information as they are required to deal with a

high volume of children on a daily basis; each possessing various needs as related to their emotional development. Parents would likely appreciate any information that provides insight into the nature of their child's particular challenges and informs their course of action. However, as noted, the large body of literature that exists related to this area surrounds infant interactions and development and is conducted outside of Canada.

Purpose of the Current Study

Interacting with others is an inevitable component of living in a social world. Children are born into a world where they are cared for and exist within broader social systems; families, communities, societies, countries, etc. As children grow and develop, their social worlds become increasingly complex and require many skills for successful navigation. Based on the literature presented, academic and mental health practitioners have a keen interest in understanding the relationship between biologically based temperament and emotion regulation for several reasons. First, a greater understanding may assist in the identification of what may cause one individual to be aggressive and another pro-social, adjusted, or maladjusted. Second, such understanding could assist in the development of strategies and interventions designed to address difficulties with social and emotional competence (Blair, et al., 2004). As Figure 2 below depicts, emotion regulation, social relationships, and temperament interact in multiple ways. Examining the relationship further will provided needed information.

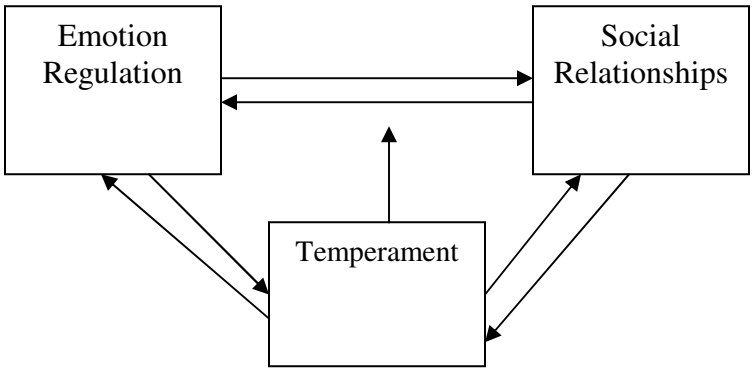

Figure 2: The interaction of emotion regulation, social relationships, and temperament to be examined.

Age of Sample

Research on emotion development and regulation has mainly focused on preschool aged children. While some researchers are moving toward studying the construct in older populations, additional research is warranted (Langlois, 2004). According to Piaget's theory of cognitive development, children enter the Intuitive Period around age 4 and remain at this stage until age 7. This period of development is characterized by a number of thought processes including heavy reliance on feelings rather than logic. Children are also prone to inject their personal point of view into any situation and experience difficulty taking another's perspective into consideration (Lefrancois, 2001, pg. 306). Given such tendencies, dealing with others positively may be challenging when emotions are running high. However, as children's cognitive development progresses Saarni (1997) argues many more strategies become available to deal with emotions, including:

- Problem solving: learn to deal with the problem.
- Externalizing: behaving aggressively to relieve the feelings created by negative emotions.
- Support-seeking: seek assistance when confronted with a problem.
- Distancing: avoid the situation creating the negative emotions.
- Internalizing: attempt to distract yourself when confronted with the problem.

Based on Saarni's (1997) work, it appears that some strategies may be more beneficial than others and begs the question, why are some children able to regulate emotions and use effective strategies better than others? The answer to such a question will remain elusive unless further research is conducted with this demographic. Furthermore, Shields

and Cicchetti (1997) present numerous works which highlight the importance of furthering the understanding of emotions during this stage of development; regulatory capacities become more refined, representational thought develops and allows for greater emotional understanding (Saarni and Harris, 1989 as cited in Shields and Cicchetti, 1997), and complex social cues are understood with greater accuracy.

Implications for the School Psychologist

Emotion regulation is considered to be a fundamental component of normal childhood development (Tobin, et al., 2007). When development is interrupted, difficulties can be experienced in almost all areas of social functioning (Hay, et al., 2004; Tobin, et al., 2007). Research has shown that positive social interactions are linked to a number of important accomplishments including overall life satisfaction (Clay, Mutran, & Reitzes, 1999). Individuals working with children in the school setting should be provided with information related to the nature of emotion regulation, temperament, and the impact on relationships. For example, research has shown that classroom teachers are often required not only to teach necessary material but also to act as a therapist (Culp, Howell, McDonald-Culp, & Blankemeyer, 2001). This finding is concerning as Tobin and colleagues (2007) suggest there is a lack of application from research findings to basic treatment in regards to emotion regulation difficulties. School psychologists in particular are in a unique position to begin implementing findings as they understand the need to develop programs that fit within a school, as well as within a child and family. School psychologists also maintain an interest in early identification and developing programs which are preventative in nature. Parent training programs may be one such preventative program where the impact of emotion regulation could be discussed. As

noted, children who present with significant behavior disorders, mood disorders, or anxiety disorders also experience emotion regulation deficits (Tobin, et al., 2007). Such disorders may include, but are not limited to, Oppositional Defiant Disorder, Conduct Disorder, Major Depressive Disorder, Separation Anxiety Disorder, and Generalized Anxiety Disorder. These behavioral challenges disrupt not only a child's development but also the functioning of entire family units. The importance of bringing harmony to the family environment cannot be underestimated.

While the importance of the parent-child relationship is discussed within the literature, the teacher-student relationship deserves equal attention. For example, researchers have shown that positive relationships between early educators and students predict academic and socio-behavioral adjustment during elementary school (Hamre & Pianta, 2001). School psychologists are in a position to work within the school team to assist in the development of programs which provide the opportunity for students to develop skills necessary to develop appropriate emotion regulation. In addition, relationships with teachers may be forged which encourage more consultation when a student presents with additional challenges. Growing a knowledge base on such an important topic ensures that children's experiences within school systems provides them with access to professionals who are well informed of the many aspects of their development.

Hypothesis

Previous studies have shown that children who are perceived to possess a difficult temperament (i.e. intense and negative mood and socially unapproachable) display behavior problems such as behaving impulsively, acting out, and experiencing minor life

stresses as more severe (Carson & Bittner, 1994). Perhaps because children whose temperament is characterized by moderately high levels of emotional intensity are believed to be impulsive and active, easily frustrated, and most likely react aggressively. It is anticipated that these children are less popular with peers due to their impulsivity, lack of social skills, and tendency toward aggression (Eisenberg, et al., 2002 as cited in Blair, et al., 2004). Based on the research, the hypothesis was tested that children with a difficult temperament (i.e. high on scales of emotionality and shyness and low on scales of sociability and soothability) will also experience greater difficulty regulating emotions and experiencing positive social relationships. While it is intuitive that a child with an easy temperament (i.e. low on scales of emotionality and shyness, and high on scales of soothability and sociability) will maintain effective emotion regulation and will therefore experience positive social relationships, such a hypothesis needed to be tested. For example, one must also consider that an emotional child may have more experience dealing with feelings of frustration or anger and may therefore be able to deal with such emotions better than a child who does not experience such emotions regularly (Blair et al., 2004).

Additional hypothesis tested included; children high in emotion regulation would be rated as having positive social relationships and demonstrate few anti-social behaviors and children low in emotion regulation would be rated as having few positive social relationships and demonstrate antisocial behaviors.

Methodology

Overview

The purpose of the current study was to examine the relationship between a child's ability to regulate their emotions, the quality of social relationships, and the child's temperament. Furthermore, it was endeavored to discover if emotion regulation and temperament could predict social relationships. Data related to each variable of interest was collected from parents and teachers using questionnaires. Questionnaires were coded to ensure confidentiality was maintained. The research design of the study was Correlational.

Data Collection and Analysis

Consistent with previous studies measuring emotion regulation as related to distinct variables, questionnaire methodology was most appropriate (e.g. Shields & Cicchetti, 1997; Merrell, 1993; Curtis & Cicchetti, 2007). Such methodology did not create excessive participant burden as each questionnaire required approximately 10 minutes or less to complete. In addition, questionnaires provided flexibility and confidentiality.

All data collected were analyzed using SPSS to determine if a correlation existed between emotion regulation, the quality of social relationships, and temperament using the Pearson equation. The type of analysis was limited to determining correlations given the variables of interest and the design of the study. Correlations which appeared to be present within the analysis were further analyzed to determine their significance. Specifically, initially significant Pearson (r) values were further examined with t-Tests

which indicated their true significance. To examine emotion regulation and temperament in the prediction of social relationships, Multiple Regressions were conducted.

Procedure

Upon approval from both the Mount Saint Vincent Ethics Committee and the Cape Breton Victoria Regional School Board, teachers within the school board were approached to determine if they would be interested in participating in the study. The study was described during a brief meeting during which time teachers received consent forms detailing ethics approval, the purpose of the study, as well as an explanation of how teachers' participation may help to provide an understanding of children's behavior. Consent forms also included information related to the length of participation, the steps to ensure confidentiality was maintained, and the voluntary nature of participation (See Appendix A). Teachers were instructed to direct any inquires from parents about the study to the principal researcher or Mount Saint Vincent University Research Ethics Board as information between parents and teachers was not to be shared. Once consent from teachers was received, the study proceeded.

Students of the teachers who agreed to participate in the study received consent forms for their parents. Consent forms included information related to ethics approval, the purpose of the current study, as well as an explanation of the contribution to research parents' participation would provide. Consent forms also detailed the length of involvement, steps to ensure anonymity and confidentiality was maintained, and the voluntary nature of participation (See Appendix B). Permission to contact the parent via telephone to remind parents to complete and return the questionnaires was also included within the consent form (See Appendix C for phone script).

A master code list was created which matched the first name of a child to a code to ensure confidentiality. The questionnaires parents received were marked with the code for their child and were sent home with an envelope to seal completed questionnaires in and return to the school. Parents were asked to complete questionnaires related to their child's temperament and ability to regulate emotions.

The questionnaires teachers received were marked with the first name of the child only to ensure the teacher is bringing to mind the correct student when completing questionnaires. Teachers were asked to complete questionnaires related to the child's quality of social relationships. Such methodology had been previously employed in studies examining social relationships including Greco and Morris (2005). Once teachers returned completed questionnaires, the code for that child was transferred. Only the principal researcher and supervisor had access to the data which connected a particular student to the random code received.

Teachers were asked to gather returned questionnaires and keep them in a locked cabinet, along with their own completed questionnaires, until collected by the researcher (approximately one week later). Once all questionnaires are completed and returned, the data was entered into SPSS.

Participants

Participants within this study included teachers and parents of 31 grade one students within the Cape Breton Victoria Regional School Board, Sydney, Cape Breton. The parents and teachers of the 31 students completed a series of questionnaires related to each child's temperament, quality of social relationships, and ability to regulate emotions.

In total, 93 questionnaires were collected (31 children X three questionnaires related to each child = 93 questionnaires total).

Measures

A number of measures were used in this thesis. By conducting a reliability analysis, it was determined that all scales and subscales were psychometrically sound.

The Emotion Regulation Checklist (ERC), developed by Shields and Cicchetti, (1997), is a 24-item other-report measure of a child's regulation. Items are rated on a 4-point Likert scale ranging from 1 (Rarely/Never) to 4 (Almost always) and can be completed by either a child's teacher or parent. The measure's 24 items are divided into two subscales; emotion regulation and lability/negativity. Each subscale has demonstrated acceptable internal consistency (alpha from .84 to .92). The ERC contains items including, "Is a cheerful child" and "Exhibits wide mood swings." For the purpose of the current study, parents completed this questionnaire (See Appendix D).

The *Colorado Child Temperament Inventory* (Buss & Plomin, 1984) was used to assess child temperament. The scale contains 30 items to be rated on a 5-point Likert scale ranging from 1 (Not at all – Strongly Disagree) to 5 (A lot – Strongly Agree) and is to be completed by the child's parent. The scale measures emotionality, sociability, soothability, shyness, attention, and activity level and includes items such as, "Child likes to be with people" and "Child tends to be somewhat emotional." Each subscale has demonstrated acceptable internal consistency (alpha from .73 to .88; soothability r = .43). Parents completed this questionnaire (See Appendix E).

The *School Social Behavior Scale Second Edition* (Merrell, 1993) was used to assess the quality of social relationships. This scale contains 64 items to be rated on a

5-point Likert Scale ranging from 1 (Never) to 5 (Frequently) and can be completed by teachers and school personnel. The scale allowed both social skills and antisocial behaviors to be measured. Social skills specifically include peer relations, self-management, and academic behavior. Questions related to social skills include, "Is accepting of other students" and "Is invited by peers to join in activities". Antisocial behaviors specifically include hostile or irritable behavior, aggressive behavior, and defiant/disruptive behavior. Questions related to antisocial behaviors include, "Bothers and annoys other students" and "Is cruel to other students." Each subscale has demonstrated acceptable internal consistency (alpha from .94 to .98). For the purpose of the current study, teachers completed this questionnaire (See Appendix F).

Limitations

Several limitations can be found within the present study because of the topic of interest. For example, a child's ability to regulate emotions and engage effectively with others is subjective. The way in which one individual perceives a child may vary from another individual, including that child's parent. The assumption also exists that emotion regulation, the quality of social relationships, and temperament can be judged accurately.

Results

To investigate the relationship between a child's ability to regulate his or her emotions, their temperament, and quality of social relationships, teachers and parents completed separate questionnaires examining each construct. It will be recalled that teachers completed questionnaires related to social functioning and parents completed questionnaires assessing the remaining variables. Pearson correlational analyses were conducted using SPSS. A number of statistically significant correlations were found and further analyses were conducted using Multiple Regression to determine the quality of social relationships. Following is an in-depth examination of the results.

Descriptive Statistics

All means and standard deviations for the *Emotion Regulation Checklist* (Negativity and Emotion Regulation), the *Colorado Child Temperament Inventory* (Emotionality, Activity, Attention, Soothability, Shyness, and Sociability), and the *School Social Behavior Scale* (Peer Relations, Self-Management, Academic Anti-Social, Hostile, and Defiant) are reported in Table 1.

Correlations

Variables were analyzed to determine if significant Pearson correlations were present. Significant correlations are presented in text, and all analyses are reported in Table 2, 3, and 4.

Table 1
Means and standard deviations obtained for each variable (N=31).

	Descriptive Statistics
Emotion Regulation Checklist *	Mean (Standard Deviation)
Negativity	1.71 (.42)
Emotion Regulation	3.46 (.40)
Temperament Inventory**	
Emotionality	2.45 (.73)
Activity	3.77 (.59)
Attention	3.61 (.77)
Soothability	3.25 (*SD* =.74)
Shyness	2.39 (*SD* =.77)
Sociability	3.75 (*SD* =.47)
Social Relationships Scale**	
Peer Relationships	4.07 (.84)
Self-Management	4.37 (.78)
Academic	3.85 (1.17)
Hostile	1.25 (.52)
Antisocial	1.20 (.48)
Defiant	1.27 (.54)

* 4-point Likert Scale; ** 5-point Likert Scale

Table 2
Correlations between Emotion Regulation Checklist variables and Colorado Child Temperament Inventory variables.

Variables:	*ERC*	
	Negativity	Emotion Regulation
Negativity	1	-.76**
Emotion Regulation	-.76**	1
CCTI		
Emotionality	.36*	-.35
Activity	*.03*	*.16*
Attention	*-.47***	*.52***
Soothability	*-.39**	*.41**
Shyness	*-.07*	*-.04*
Sociability	*.08*	*.31*

** p<.05, **p<.01*

Table 3
Correlations between Emotion Regulation Checklist variables and School Social Behavior Scale variables.

Variables:	*ERC*	
	Negativity	Emotion Regulation
SSBS		
Peer Relations	-.23	.04
Self-Management	*-.22*	*.06*
Academic Behavior	-.31	.16
Hostile	*-.01*	*.07*
Anti-social	*.02*	*.07*
Defiant	*.23*	*-.07*

** p<.05 **p<.01*

Table 4
Correlations between Colorado Child Temperament Inventory variables and School Social Behavior Scale questionnaire variables.

Variables:	*CCTI*					
	Emotionality	Activity	Attention	Soothability	Shyness	Sociability
Peer Relations	*-.24*	*.00*	*.36**	*-.05*	*-.39**	*-.02*
Self-Management	*-.25*	*.05*	*.43**	*-.02*	*-.34*	*.05*
Academic Behavior	*-.26*	*.05*	*.37**	*-.12*	*-.33*	*-.16*
Hostile	*-.11*	*.17*	*-.17*	*.30*	*-.004*	*.02*
Anti-social	*-.11*	*.22*	*-.16*	*.33*	*.07*	*.05*
Defiant	*.07*	*-.01*	*-.30*	*.16*	*.09*	*.11*

** p<.05, **p<.01*

Emotion Regulation Checklist and *Colorado Child Temperament Inventory*

Several significant correlations were found between *Emotion Regulation Checklist (ERC)* variables and the *Colorado Child Temperament Inventory (CCTI)* variables. For example, *Negativity* showed a significant positive correlation with *Emotionality* $r(30) = .36$, $p<.05$. In addition, *Negativity* showed a significant negative relationship with *Attention (*$r(30) = -.47$, $p<.01$), *Soothability* ($r(30) = -.39$, $p<.05$), and *Emotion Regulation* ($r(30) = -.76$, $p<.01$). *Emotion Regulation* was positively correlated with *Attention* ($r(30) = .52$, $p<.01$) and *Soothability* ($r(30) = .41$, $p<.05$).

Emotion Regulation Checklist and *School Social Behavior Scale*

There were no statistically significant correlations found between *Emotion Regulation Checklist* variables and *School Social Behavior Scale* variables.

Colorado Child Temperament Inventory and *School Social Behavior Scale*

Several significant correlations were found between *CCTI* variables and *SSBS* variables. For example, *Attention* showed a significant positive correlation with *Peer Relations* ($r(30) = .36$, $p<.05$), *Self-Management* ($r(30) = .43$, $p<.05$), and *Academic Behavior* ($r(30) = .37$, $p<.05$). In addition, *Shyness* showed a significant negative correlation with *Peer Relations* ($r(30) = -.39$, $p<.05$).

Hypotheses

Based on the literature and research reviewed, several hypotheses were constructed including:

1a. Children rated as possessing a difficult temperament (i.e. high on scales of emotionality and shyness and low on scales of sociability and soothability) would

experience greater difficulty regulating emotions and experiencing positive social relationships.

1b. Children rated as possessing an easy temperament (i.e. low on scales of emotionality and shyness, and high on scales of soothability and sociability) would maintain effective emotion regulation and would therefore experience positive social relationships

2a. Children rated as high in emotion regulation would be rated as having positive social relationships and would demonstrate few anti-social behaviors.

2b. Children rated as low in emotion regulation would be rated as having few positive social relationships and would demonstrate antisocial behaviors.

Results

To appreciate the full impact of the hypotheses, data were analyzed using Multiple Regression and were further explored using two-tailed t-Tests. Results revealed several interesting findings. For example, hypothesis 1 was partially supported. Students rated as being high on scales of *Shyness, Soothability,* and *Negativity* did experience difficulty within peer relationships $F(8, 22) = 2.77$, $p<.05$. Two-tailed t-Tests revealed that *Shyness* $t(30) = -2.76$, $p<.05$, *Soothability* $t(30) = -2.33$, $p<.05$, and *Negativity* $t(30) = -2.10$, $p<.05$ were the most prominent predictors of peer relations.

Negativity also negatively impacted a child's ability for *Self-Management* ($t(30) = -2.13$, $p<.05$) and *Attention* positively impacted such ability ($t(30) = 2.47$, $p<.05$). Students rated as being high on scales of *Soothability* and *Shyness* were also rated as demonstrating negative *Academic Behavior* ($t(30) = -3.49$, $p<.05$; $t(30) = -3.59$, $p<.05$ respectively). Results did not provide any evidence to support hypotheses 2a or 2b.

Multiple Regression Analysis

Additional Multiple Regression analyses were conducted to examine if social behavior (i.e. peer relations, self-management, and academic, hostile, anti-social, and defiant behaviors) could be predicted from emotion regulation and temperament variables. Specifically, the regression analysis was performed to determine if temperament could predict the social behaviors (separately) over and above the contribution of emotion regulation[1]. Below is a summary of significant and non-significant findings.

Peer Relations

Multiple Regression analysis revealed that temperament predicted *Peer Relations* above and beyond the contribution of emotion regulation ($F^{Change}(6,30) = 2.98$, $p<.05$, $R^{2Change} = .41$). T-Tests confirmed that *Soothability* and *Shyness* ($t(30) = -2.33$, $p<.05$ and $t(30) = -2.76$, $p<.05$ respectively) statistically predict *Peer Relations* most prominently, but together, all temperament variables account for 41% of the variance in *Peer Relations.*

Self-Management

Multiple Regression analysis revealed that temperament predicted *Self-Management* above and beyond the contribution of emotion regulation ($F^{Change}(6,30) = 2.85$, $p<.05$, $R^{2Change} = .40$). T-Tests confirmed that *Soothability* and *Attention*

[1] Emotion regulation and temperament were examined separately to predict social behaviors. While there were significant results for some of the temperament variables in this prediction, no statistically significant results were noted for the emotion regulation variables. As well, emotion regulation variables did not predict social behavior over and above temperament. Therefore, the focus of this analysis is on temperament as the driving force in the prediction of social behaviors.

($t(30) = -2.06$, $p<.05$ and $t(30) = 2.47$, $p<.05$ respectively) statistically predict *Self-Management* most prominently, but together, all temperament variables account for 40% of the variance in *Self-Management*.

Academic Behavior

Multiple Regression analysis revealed that temperament predicted *Academic Behavior* above and beyond the contribution of emotion regulation ($F^{Change}(6,30) = 4.45$, $p<.05$, $R^{2Change} = .49$). T-Tests confirmed that *Soothability* and *Shyness* ($t(30) = -3.49$, $p<.05$ and $t(30) = -3.59$, $p<.05$ respectively) statistically predict *Self-Management* most prominently, but together, all temperament variables account for 49% of the variance in *Academic Behavior*.

Non-Significant Findings

The regression analysis revealed non-significant findings in the prediction of *Hostile, Antisocial,* and *Defiant* behavior using *CCTI* variables ($F^{Change}(6,30) = .99$, $R^{2Change} = .21$; $F^{Change}(6,30), = 1.21$, $R^{2Change} = .25$; $F^{Change}(6,30) = 1.42$, $R^{2Change} = .26$) respectively.

Discussion

The Issue

Child development is a dynamic and changing process with many aspects requiring additional research and understanding. The purpose of the current research was to examine the relations between emotion regulation, social relationships, and temperament in early childhood. Additionally, it was endeavored to determine if social relationships could be predicted by emotion regulation abilities and temperament and to determine which of the two was most predictive of social behaviors. Such constructs are of interest for many reasons. Emotion regulation and the quality of social relationships a child maintains play an important role in overall development. Emotion regulation has been described the ability to adapt to (i.e. lability and flexibility) as well as respond to various situations appropriately. Emotion regulation is also understood as the capacity to control one's emotions in order to engage effectively with the environment (Shields & Cicchetti, 1997; Rydell, Berlin, & Bohlin, 2003). Several researchers have examined this area of development. For example, Ashiabi (2000) reports that appropriate emotion regulation is a necessary component to developing positive relationships with peers and the expression of emotions can be viewed as a measure of social competence. In addition, Fabes, Carlo, Kupanoff, and Laible (1999), report evidence to suggest that social competence is very closely tied to a child's ability to identify emotions in both self and others and to regulate these emotions. Moreover, the ability to regulate emotions impacts feelings of shyness and aggression and difficulty in this area may hinder the development of pro-social skills. Each of these factors then impacts peer acceptance. Such acceptance is significant as it has been suggested that friendships contribute to the development of

self-concept and global self-worth (Erwin, 1998 as cited in Lefrancois, 2001, p. 431). There is also evidence to suggest that emotion regulation is *the* critical component necessary for positive interactions with others, especially during stressful events. Such events call upon the ability to not only mange personal feelings of distress but also the negative emotions of others. This ability is vital to the development and maintenance of social relationships (Eisenberg & Fabes, 1992 as cited in Blair, Denham, Kochanoff, & Whipple, 2004).

Within the present study no significant findings were revealed when examining the relation between variables measuring emotion regulation abilities and those measuring social behavior. However, the absence of significant findings is interesting in itself. As indicated, previous researchers have found a correlation between emotion regulation abilities and peer relationships as well as academic behavior. Such results were not replicated within the current study. Perhaps the age of the sample (five and six year olds) or the location of the study impacted the results. The possibility also exists that cultural factors played a role in the results. Reviewing other Canadian research of similar content would help to answer such speculations. Unfortunately, Canadian research projects published on this topic are lacking and results have been largely from samples taken from the United States. Further Canadian research may be necessary to determine if established correlations are unique to a specific American population. In addition, as the majority of the research has been conducted within preschool population, emotion regulation or dysregulation may be more prominent at that stage in development and may therefore exert more influence. As Saarni's (1997) work suggested, cognitive development allows for additional strategies to deal with emotions that do not involve

outbursts or the lashing out behavior typically associated with younger children. Perhaps children at this advanced development stage are making use of such strategies that are not observable to other (e.g. internalizing or attempting to distract oneself from the problem). Therefore, emotion regulation abilities are not as apparent.

What factors impact the ability to regulate one's emotions? One such factor may be related to a child's overall temperament. A debate exists surrounding the inherent nature of an individual's temperament. Some believe that it is a biological aspect of our functioning, whereas others believe it reflects more of a personal preference. Regardless of such disputes, temperament is generally understood as the way an individual interacts with the world around them. Such interaction includes responses to events such as the intensity and speed of the activation of emotions and ability to engage in strategies to overcome such emotions (Cole, Martin, & Dennis, 2004). Research examining the relationship between temperament, emotion regulation, and the impact on social relationships has revealed significant findings. For example, Eisenberg, Fabes, Guthrie and Reiser (2002 as cited in Blair, et al., 2004) found that temperament and the ability to regulate emotions predicted aspects of social functioning including the ability to engage in pro-social behaviors, adjust to novel situations, and gain peer acceptance. Additional research examining the relationships between these variables is scarce however, and it was anticipated that the current research would provide further information and insight into a Canadian sample. The present study was also expected to provide information about a population rarely studied in this line of research, five and six year old children.

In fact, the relations uncovered in the current research between emotion regulation abilities and temperament were consistent with what we may expect given our knowledge

of past literature. For example, children who were perceived to be highly negative were also perceived to be highly emotional and have a decreased ability to attend to information, be soothed when upset, and regulate their emotions. These results suggest the sample demonstrated anticipated behaviors. For example, it is highly probable that children who experience predominantly negative emotions, and at a high frequency, will experience difficulty calming themselves down as they are unable to attend to stimuli which may help to sooth them. Researchers have also shown that student negativity within the school setting is related to teacher responsiveness (Herring & Wahler, 2003); suggesting that such students require more intervention compared to less negative peers.

Hypotheses

Results from data analysis revealed support for one of the study's proposed hypothesis. It was predicted that children with a difficult temperament would experience difficulty regulating emotions and maintaining positive relationships. Results confirmed that students rated as high on scales of *Shyness, Negativity,* and *Soothability* were also rated as experiencing difficulty with peer relationships. What was particularly interesting about such findings is that possessing a difficult temperament was defined as being rated high on scales of *Emotionality* and *Shyness* and low on scales of *Sociability* and *Soothability*. What the results essentially communicate about the population studied is that children who are shy, negative, and easily soothed have difficulty with peer relationships. Some of these results initially appear counterintuitive; why would a child who is easily soothed experience difficulty with their peers? A closer review of items measuring *Soothability* reveal that many methods to sooth a child involved adult intervention. For example, three of the five items measuring *Soothability* involve some

form of adult attention such as distracting the child, speaking with the child, or physically picking them up. It appears that children who are unable to sooth themselves after an upset without the assistance of a parent or guardian are not favored by peers. Perhaps at this stage in development, peers maintain expectations for others including the way in which an upset is handled. Considering the time in the school year data was collected (i.e. 7 months into a 10 month term), such expectations are highly probable.

Additional hypotheses were not supported including the suggestion that children rated as high in emotion regulation would also experience positive relationships and would not demonstrate anti-social behaviors and children rated as low in emotion regulation would demonstrate the reverse pattern. A lack of significant findings for this hypothesis in particular was surprising as the body of literature and research noted in previous sections demonstrate correlations similar to the one proposed. As indicted, perhaps the age of the sample or location impacted results. None-the-less, several additional findings were revealed. For example, children rated as being high on scales of *Negativity* experienced difficulty with *Self- Management*. These results suggest that students who maintain a negative outlook and experience life events in a predominantly negative fashion also experience trouble managing their own behaviors. Perhaps the tendency toward negativity clouds the judgment necessary to modify behavior when necessary. Addition results include, children rated high on scales of *Attention* were also rated positively on measures of *Self-Regulation*. Such a finding makes intuitive sense; children who attend to relevant information in their environments are successful regulators. Furthermore, children rated high on scales of *Shyness* and *Soothability* were also rated as experiencing difficulty with *Academic Behavior*. The *Shyness* variable

appears to align with what is generally known about positive school performance such as asking questions, joining in on classroom discussions, and engaging with peers. Children who are more withdrawn or shy do not experience the same benefits as children who are more outgoing and participatory within their environment, particularly in the school setting. For example, elementary school children perceived to be shy by teachers have been found to perform significantly lower than less shy peers on individual tests measuring vocabulary abilities (Crozier & Hostettler, 2003). On the other hand, the *Soothability* variable, is surprising. However, as noted, many of the items measuring *Soothability* related to adult intervention. If a child continually requires adult support to calm down, this is time taken away from academic pursuits. Moreover, if a child requires adult attention to calm down and such attention is unavailable, they may withdraw from assigned tasks or become so upset they are asked to move to an alternate location.

Additional Relationships

As noted within the Results section, several correlations were found between variables; the most interesting of which are discussed below.

Temperament and *School Social Behavior*

Several relations have been noted between temperament and social behavior. For example, children rated highly on their ability to attend to information were also rated positively on measures of *Peer Relations*, *Self-Management*, and *Academic Behavior*. This finding is not surprising as children who are able to attune to their environment are more aware of interactions with peers and are better able pay attention to school requirements. While one's initial understanding of *Attention* may only be related to academics, these results highlight how such ability extends beyond the classroom yet

continues to impact classroom performance. These results further emphasize how *Attention* is related to many important and influential aspects of functioning. The school environment appears to provide many avenues for which to practice the varied ways of attending to information. Perhaps the ability to attend to one's own behavior as well as that of peers is a necessary skill for academic success.

Predicting Variables

Previous researchers have suggested that examining both emotion regulation abilities and temperament together were a better predictor of social functioning than either variable alone (Eisenberg et al., 2002 as cited in Blair, et al., 2004). Therefore, it was decided that the elements of social behavior would be examined separately to determine if each could be predicted by temperament or emotion regulation. However, current results did not replicate previous findings but have none-the-less expanded our knowledge of the interconnection between variables. Emotion regulation variables were not able to predict any of the social behavior variables. In fact, as previously noted, emotion regulation variables were unrelated to *any* social behavior variables. Temperament variables however, were able to predict several aspects of social functioning over and above the contributions of emotion regulation. For example, after accounting for emotion regulation variables, it was found that the combination of temperament variables accounted for almost 41% of the variance in *Peer Relations* and that *Soothability* and *Shyness* held the most predictive power. The combination of temperament variables also accounted for almost 49% of the variance in *Academic Behavior* and again, *Soothability* and *Shyness* held the most predictive power. In addition, the combination of temperament variables accounted for more than 40% of the variance

in *Self-Management* behavior and *Soothability* and *Attention* were the "driving" variables. More significantly however, was the finding that temperament was the only variable able to predict aspects of social functioning including academic behavior. Interestingly, as noted, researchers have demonstrated that difficulty with perusing tasks, remaining focused and seated, and controlling emotions are commonly linked to poor achievement (Bouffard, Roy, & Vezeau, 2006). Such characteristics relate well to temperament variables of *Attention* and *Soothability*, which provides support for present findings.

Implication and Application of Results

Within the present study, temperament was a strong predictor of several aspects of social functioning including relationships with others, managing behavior, and engaging in positive academic behavior. Perhaps the age of the sample may account for such emphasis being placed on temperament variables. For example, as noted *Soothability* and *Shyness* variables were found to impact almost every aspect of social functioning found to be statistically significant. Considering the educational stage of participants, such characteristics are highly influential. If soothability is understood to involve a substantial adult component, children may appear to be less independent than expected or desired for their second year in a school setting. Such reliance on adult figures may be further compounded by a tendency to avoid engaging with others and withdrawing from social situations. In addition, as noted, researchers have shown that the ability to self-sooth impacts the development of emotion regulation abilities (Stifer & Braungart, 1995); perhaps the sample is still in the process of developing such regulatory abilities.

Further interest in the results comes from revisiting one of the initial debates outlined at the beginning of this research; is temperament genetically based and unchangeable or is it continually changing in response to experience? While the current results do not attempt to answer such a question, for the sake of children rated low on variables of *Soothability* and *Attention*, one would hope that aspects of temperament can be developed and are not all-or-nothing traits. Effectively interacting with peers, participating in academic endeavors, and managing one's behavior are critical skills necessary to enjoy and thrive in the school environment.

One goal of the present research was to contribute the knowledge base surrounding the impact of emotion regulation abilities and guide the development of early intervention programs. Based on the current findings however, the most useful application of the information gathered would be to target children who appear to lack the ability to sooth themselves and those who are generally shy. The ability to self-sooth as well as a tendency toward shyness appears to exert an influence similar to the ability to regulate emotions effectively as both variables predicted relationships with others as well as academic behavior. Strategies to self-sooth could be practiced through role play or social story telling to begin developing this ability. Children who are highly inhibited or shy may be comfortable within a group therapy setting to practice skills such as asking another child to play, joining in on a group, or answering questions aloud. The abilities needed to sooth oneself after an upset as well engage with the environment are skills that will be necessary throughout the lifespan, particularly in the school setting. These findings may also encourage parents to support the development of such skills. The findings may also encourage teachers, as well as school psychologists to expand upon the

skills they seek to develop in students. As the findings have shown, tendencies that are generally overlooked, such as shyness, exert a very significant impact on relationships and academic work. It is of utmost importance that each child is treated as an individual and receives services that are tailored to his or her needs; doing so ensures that our responsibility to students is met. The application of research findings ensures services meet each students needs and therefore, prepares them for future growth.

Future Directions

The present research did not replicate previous findings in relation to the predictive ability of emotion regulation on social functioning. However, current findings did provide useful information about a unique sample of participants not frequently studied. Within this sample, temperament variables maintained the ability to predict several aspects of social functioning. In future, it will be worthwhile to replicate this study within various age groups to determine if temperament, and not emotion regulation, is able to retain its predictive ability in various samples or if such ability was exclusive to the present study. It is yet to be determined if emotion regulation abilities continue to play a significant role in functioning as children age. While its impact may diminish over time, it may also continue to influence functioning. However, temperament may also become the dominant variable as it acts as a filter for life experiences and thus reactions to events.

Future research may also consider examining academic behavior more in-depth. It would be interesting to determine if specific temperament variables were predictive of not only academic behavior but also academic achievement and overall school enjoyment. Regardless of the exact specifications of the research, future investigators

would do well to continue examining the variables identified in the present study. Many questions remain to be answered but one is certain; children will continue to require assistance navigating their social worlds and the more information that can be gathered to support that process, the healthier they will be.

Appendix A: Consent Form for Teachers

Free and Informed Consent Form for Teachers

Title of Study:
Examining The Relationships Between Emotion Regulation, Social Relationships, and Temperament

Student Researcher:
Beth MacDonald

I am a graduate student in the Master of Arts in School Psychology program within the Faculty of Education at Mount Saint Vincent University. As part of my master thesis, I am conducting research under the supervision of Dr. Daniel Lagacé-Séguin. I am inviting you to participate in my study, Examining The Relationships Between Emotion Regulation, Social Relationships, and Temperament. The purpose of the study is to better understand how a child's ability to regulate their emotions impacts their relationships with others. The study is also interested in learning more about the impact a child's temperament makes on both emotion regulation and the relationships they form.

Within the study, parents and teachers are being asked to complete questionnaires related to emotion regulation, social relationships and temperament. However, successful completion of this study requires the assistance of classroom teachers. As a teacher, you would be asked to gather consent forms from students and complete a questionnaire about a child's social relationships. The amount of time it takes to complete the questionnaire less than 10 minutes per participating child. You would also be asked to gather completed questionnaires from students and keep them in a locked cabinet for a one week period. File folders will be provided for easy organization and will be promptly collected. Parents will be asked to complete questionnaires about emotion regulation and temperament. The results of the study may be given to interested teachers within the school board to help them better understand the role emotion regulation plays on functioning. Information would also be readily available for any interested parent. It is important to note that only my supervisor and I will have access to individual results and information between teachers and parents is not to be shared. If a parent contacts you about the study, you are asked to please refer them to my supervisor or myself as you are not able to discuss the study.

There are no risks to participation but there are significant benefits. By participating in the study you are providing information about an age group that has not been involved in extensive research. The more that can be learned about an age group the better the services they receive. The findings of the study may also help to design future interventions for children who struggle with emotion regulation. Your participation is completely voluntary. You may withdraw from this study at any time without penalty.

Any information provided about a child is sensitive material. To ensure information related to each child remains anonymous, each will be assigned a code. This code will be placed on the top of questionnaires sent home to parents. Only my supervisor and I will have access to the list of codes and names. In addition, only a child's first name will be placed on the questionnaire you complete. Once the questionnaire is completed, the name will be removed and replaced with a code. All questionnaires will be kept within a locked filing cabinet. No individual participant will be identified within the study.

A teacher's time is very valuable and I recognize the request being made of you. As a token of my appreciation for your participation, your classroom will receive two new educational books related to building emotion regulation and emotional awareness.

If you have any questions about this study, please contact Beth MacDonald (at [redacted] or through email at [redacted]) or Dr. Daniel Lagacé-Séguin (at 902-457-6460 or through email at Daniel.Lagace-Seguin@msvu.ca). This research activity has met the ethical standards of the University Research Ethics Board at Mount Saint Vincent University. If you have any questions or concerns about this study and wish to speak with someone who is not directly involved with this study, you may contact the University Research Ethics Board, by phone at 902-457-6350 or by e-mail at research@msvu.ca.

By signing this consent form, you are indicating that you fully understand the above information and agree to participate in this study. Please keep a copy for your records.

_____	_____
Participant's signature	**Date**
_____	_____
Researcher's signature	**Date**

Appendix B: Consent Form for Parents

Free and Informed Consent Form for Parents

Title of Study:
Examining The Relationships Between Emotion Regulation, Social Relationships, and Temperament

Student Researcher:
Beth MacDonald

I am a graduate student in the Master of Arts in School Psychology program within the Faculty of Education at Mount Saint Vincent University. As part of my master thesis, I am conducting research under the supervision of Dr. Daniel Lagacé-Séguin. I am inviting you to participate in my study, Examining The Relationships Between Emotion Regulation, Social Relationships, and Temperament. The purpose of the study is to better understand how a child's ability to regulate their emotions impacts their relationships with others. The study is also interested in learning more about the impact a child's temperament makes on both emotion regulation and the relationships they form.

Within the study, parents and teachers are being asked to complete questionnaires related to emotion regulation, social relationships and temperament. As a parent, you would be asked to complete questionnaires about emotion regulation and temperament. The amount of time it takes to complete both is approximately 20 minutes. Teachers would then be asked to complete a questionnaire about your child's social relationships. The results of the study may be given to teachers within the school board to help them better understand the role emotion regulation plays on functioning. Information would also be readily available for any interested parent. It is important to note that all information reported will be in summary form and no individual child would be identified.

There are no risks to participation but there are significant benefits. By participating in the study you are providing information about an age group that has not been involved in extensive research. The more that can be learned about an age group the better the services they receive. The findings of the study may also help to design future interventions for children who struggle with emotion regulation. Your participation is completely voluntary. You may withdraw from this study at any time without penalty.

Any information provided about a child is sensitive material. To ensure information related to your child remains anonymous, each child within the study will be assigned a code. This code will be placed on the top of questionnaires you receive. Only my supervisor and I will have access to the list of codes and names. In addition, only your child's first name will be placed on the questionnaire the teacher completes. Once the questionnaire is completed, the name will be removed and replaced with a code. All questionnaires will be kept within a locked filing cabinet.

If you have any questions about this study, please contact Beth MacDonald (at [redacted] or through email at [redacted] or Dr. Daniel Lagacé-Séguin (at 902-457-6460 or through email at Daniel.Lagace-Seguin@msvu.ca). This research activity has met the ethical standards of the University Research Ethics Board at Mount Saint Vincent University. If you have any questions or concerns about this study and wish to speak with someone who is not directly involved with this study, you may contact the University Research Ethics Board, by phone at 902-457-6350 or by e-mail at research@msvu.ca.

As it can be difficult to keep track of every commitment we have made, I can provide you with a reminder call to complete and return the questionnaires. If this would be helpful for you, I will contact you to set up the time for a reminder call.

Would a reminder call be helpful? Please check one.

- o Yes, please contact me at: _____.
- o No, I do not need a reminder call.

If you wish to participate in the study, please return one signed copy of this letter to your child's school in the envelope provided. Envelopes will be collected by the classroom teacher.

By signing this consent form, you are indicating that you fully understand the above information and agree to participate in this study. Please keep a copy for your records.

_____	_____
Participant's signature	**Date**
_____	_____
Researcher's signature	**Date**

Please keep one copy for your records.

Appendix C: Phone Script

Telephone Script

Hello, Mr./Mrs._____. This is Beth MacDonald phoning, I received your completed consent form and noted you checked the option of the reminder call. I wanted to speak with you today to ensure you understood the study and to set up a time to call you back.

As mentioned on the letter that went home, the study is looking at the relationship between emotion regulation, social relationships and temperament. We are asking parents to fill out questionnaires about their child's ability to regulate emotions as well as their temperament. We are asking teachers to fill out questionnaires about the child's social relationships such as how they get along with peers, and their general social behavior. Your child's full name will not appear on any material and in fact, will receive a special code that ensures anonymity. Do you have any questions?

When would be the best time to provide you with the reminder call? Thank you again for your participation. I will either speak with your or leave a message on (date/time indicated by parent).

Appendix D: Emotion Regulation Checklist

EMOTION REGULATION CHECKLIST

For_____

Please answer the items on these pages about the behavior of this child by circling one of the numbers following each item. We know that no item will apply to the child in every situation, but try to consider his/her usual general behavior. Please answer honestly – there are no right or wrong answers.

	How often is the child like that?			
1. Is a cheerful child.	1 Never	2 Sometimes	3 Often	4 Almost Always
2. Exhibits wild mood swings (child's emotional state is difficult to anticipate because he/she moves quickly from positive to negative moods.)	1 Never	2 Sometimes	3 Often	4 Almost Always
3. Responds positively to neutral or friendly overtures by adults.	1 Never	2 Sometimes	3 Often	4 Almost Always
4. Transitions well from one activity to another; does not become anxious, angry, distressed, or overly excited when moving from one activity to another.	1 Never	2 Sometimes	3 Often	4 Almost Always
5. Can recover quickly from episodes of upset or distress (for example, does not pout or remain sullen, anxious, or sad after an emotionally distressing event.)	1 Never	2 Sometimes	3 Often	4 Almost Always
6. Is easily frustrated.	1 Never	2 Sometimes	3 Often	4 Almost Always
7. Responds positively to neutral or friendly overtures from peers.	1 Never	2 Sometimes	3 Often	4 Almost Always
8. Is prone to angry outbursts/ tantrums.	1 Never	2 Sometimes	3 Often	4 Almost Always
9. Is able to delay gratification (for example, they could pass up a small chocolate bar if they could have a larger one later).	1 Never	2 Sometimes	3 Often	4 Almost Always

	How often is the child like that?			
10. Takes pleasure in the distress of others (for example, laughs when others get hurt or enjoys teasing.)	1 Never	2 Sometimes	3 Often	4 Almost Always
11. Can modulate excitement in emotionally arousing situations (for example, does not get 'carried away' in high-energy play situations)	1 Never	2 Sometimes	3 Often	4 Almost Always
12. Is whiny or clingy with adults.	1 Never	2 Sometimes	3 Often	4 Almost Always
13. Is prone to disruptive outbursts of energy and exuberance.	1 Never	2 Sometimes	3 Often	4 Almost Always
14. Responds angrily to limit-setting by adults.	1 Never	2 Sometimes	3 Often	4 Almost Always
15. Can say when s/he is feeling sad, angry or mad, fearful or afraid.	1 Never	2 Sometimes	3 Often	4 Almost Always
16. Seems sad or listless.	1 Never	2 Sometimes	3 Often	4 Almost Always
17. Is overly exuberant when attempting to engage others in play.	1 Never	2 Sometimes	3 Often	4 Almost Always
18. Displays flat affect (expression is vacant and inexpressive; child seems emotionally absent.)	1 Never	2 Sometimes	3 Often	4 Almost Always
19. Responds negatively to neutral or friendly overtures by peers (for example, may speak in an angry tone of voice when approached.)	1 Never	2 Sometimes	3 Often	4 Almost Always
20. Is impulsive.	1 Never	2 Sometimes	3 Often	4 Almost Always
21. Is empathetic toward others; shows concern when others are upset or distressed.	1 Never	2 Sometimes	3 Often	4 Almost Always
22. Displays exuberance that others find intrusive or disruptive (for example, they display so much excitement it bothers others).	1 Never	2 Sometimes	3 Often	4 Almost Always
23. Displays appropriate negative emotions (anger, fear, frustration, distress) in response to hostile or aggressive acts by peers.	1 Never	2 Sometimes	3 Often	4 Almost Always
24. Displays negative emotions when attempting to engage others in play.	1 Never	2 Sometimes	3 Often	4 Almost Always

Appendix E: Temperament Scale

COLORADO CHILD TEMPERAMENT INVENTORY

For_____

Please answer the items on these pages about the behavior of this child by circling one of the numbers following each item. We know that no item will apply to the child in every situation, but try to consider his/her usual general behavior. Please answer honestly – there are no right or wrong answers.

	How much is the child like that? Not at All (Strongly DISAGREE)				A Lot (Strongly AGREE)
1. Child persists at a task until successful.	1	2	3	4	5
2. Child gives up easily when difficulties are encountered.	1	2	3	4	5
3. Child tends to be shy.	1	2	3	4	5
4. Child cries easily.	1	2	3	4	5
5. When upset by an unexpected situation, child quickly calms down.	1	2	3	4	5
6. Child goes from toy to toy quickly.	1	2	3	4	5
7. Child likes to be with people.	1	2	3	4	5
8. Child is always on the go.	1	2	3	4	5
9. Whenever child starts crying, he/she can be easily distracted.	1	2	3	4	5
10. Child prefers playing with others than alone.	1	2	3	4	5
11. Child tends to be somewhat emotional.	1	2	3	4	5

12. When child moves about, he/she usually moves slowly.	1	2	3	4	5
13. If talked to, child stops crying.	1	2	3	4	5
14. Child makes friends easily.	1	2	3	4	5
15. Child is off and running as soon as he/she wakes up in the morning.	1	2	3	4	5
16. Child finds people more stimulating than anything else.	1	2	3	4	5
17. Child often fusses and cries.	1	2	3	4	5
18. With a difficult toy, child gives up easily.	1	2	3	4	5
19. Child is very sociable.	1	2	3	4	5
20. Child is very energetic.	1	2	3	4	5
21. Child takes a long time to warm up to strangers.	1	2	3	4	5
22. Child plays with a single toy for long periods of time.	1	2	3	4	5
23. Child gets upset easily.	1	2	3	4	5
24. Child is somewhat of a loner.	1	2	3	4	5
25. Child prefers quiet, inactive games to more active ones.	1	2	3	4	5
26. When alone, child feels isolated.	1	2	3	4	5
27. Child tolerates frustration well.	1	2	3	4	5
28. Child reacts intensely when upset.	1	2	3	4	5
29. Child stops fussing whenever someone talks to him/her or picks him/her up.	1	2	3	4	5
30. Child is very friendly with strangers.	1	2	3	4	5

Appendix F: School Social Behavior Scale

School Social Behavior Scales SECOND EDITION

SSBS

To Be Completed by Teacher or Other School Personnel for Students in Grades K-12

Name of student: _____

School: _____

Grade: _____ Age: years: _____ months: _____ Sex: male ❑ female ❑

Name of person completing form: _____

Date form completed: _____

Relationship of rater to student: _____

List the settings in which you observe or interact with this student: _____

_____

After you have completed the *Identifying Information* section, please rate this student's behavior using all of the items on pages 2 and 3 of this rating form. Ratings should be based on your observations of this student's behavior **during the past three months.** The rating points after each item are based on the following format:

Never If the student does not exhibit a particular behavior, or if you have not had an opportunity to observe a particular behavior, circle 1, which indicates Never.

Frequently If the student often exhibits a particular behavior, circle 5, which indicates Frequently.

Sometimes Circle the numbers 2, 3, or 4, (which indicate Sometimes) if the student exhibits the behavior somewhere in between the two extreme rating points, based on your judgment of how frequently it occurs. The rating points after each item appear in the following format:

NEVER 1 2 **SOMETIMES** 3 4 **FREQUENTLY** 5

Please complete all items, and do not circle between numbers. If you have any additional comments about this student, write them in the space provided at the top of page 4.

1.	Cooperates with other students	1	2	3	4	5			
2.	Makes appropriate transitions between different activities	1	2	3	4	5			
3.	Completes schoolwork without being reminded	1	2	3	4	5			
4.	Offers help to other students when needed	1	2	3	4	5			
5.	Participates effectively in group discussions and activities	1	2	3	4	5			
6.	Understands problems and needs of other students	1	2	3	4	5			
7.	Remains calm when problems arise	1	2	3	4	5			
8.	Listens to and carries out directions from teachers	1	2	3	4	5			
9.	Invites other students to participate in activities	1	2	3	4	5			
10.	Asks appropriately for clarification of instructions	1	2	3	4	5			
11.	Has skills or abilities that are admired by peers	1	2	3	4	5			
12.	Is accepting of other students	1	2	3	4	5			
13.	Completes school assignments or other tasks independently	1	2	3	4	5			
14.	Completes school assignments on time	1	2	3	4	5			
15.	Will give in or compromise with peers when appropriate	1	2	3	4	5			
16.	Follows school and classroom rules	1	2	3	4	5			
17.	Behaves appropriately at school	1	2	3	4	5			
18.	Asks for help in an appropriate manner	1	2	3	4	5			
19.	Interacts with a wide variety of peers	1	2	3	4	5			
20.	Produces work of acceptable quality for his or her ability level	1	2	3	4	5			
21.	Is good at initiating or joining conversations with peers	1	2	3	4	5			
22.	Is sensitive to feelings of other students	1	2	3	4	5			
23.	Responds appropriately when corrected by teachers	1	2	3	4	5			
24.	Controls temper when angry	1	2	3	4	5			
25.	Enters appropriately into ongoing activities with peers	1	2	3	4	5			
26.	Has good leadership skills	1	2	3	4	5			
27.	Adjusts to different behavioral expectations across settings	1	2	3	4	5			
28.	Notices and compliments accomplishments of others	1	2	3	4	5			
29.	Is assertive in an appropriate way when he or she needs to be	1	2	3	4	5			
30.	Is invited by peers to join in activities	1	2	3	4	5			
31.	Shows self-control	1	2	3	4	5			
32.	Is "looked up to" or respected by peers	1	2	3	4	5			
						Totals			
							PR	SM	AB

1.	Blames others for his or her problems	1	2	3	4	5		
2.	Takes things that are not his or hers	1	2	3	4	5		
3.	Is defiant to teachers or other school personnel	1	2	3	4	5		
4.	Cheats on schoolwork or in games	1	2	3	4	5		
5.	Gets into fights	1	2	3	4	5		
6.	Is dishonest; tells lies	1	2	3	4	5		
7.	Teases and makes fun of other students	1	2	3	4	5		
8.	Is disrespectful or "sassy"	1	2	3	4	5		
9.	Is easily provoked; has a "short fuse"	1	2	3	4	5		
10.	Ignores teachers or other school personnel	1	2	3	4	5		
11.	Acts as if he or she is better than others	1	2	3	4	5		
12.	Destroys or damages school property	1	2	3	4	5		
13.	Will not share with other students	1	2	3	4	5		
14.	Has temper outbursts or tantrums	1	2	3	4	5		
15.	Disregards feelings or needs of other students	1	2	3	4	5		
16.	Is overly demanding of attention from teachers	1	2	3	4	5		
17.	Threatens other students; is verbally aggressive	1	2	3	4	5		
18.	Swears or uses offensive language	1	2	3	4	5		
19.	Is physically aggressive	1	2	3	4	5		
20.	Insults peers	1	2	3	4	5		
21.	Whines and complains	1	2	3	4	5		
22.	Argues or quarrels with peers	1	2	3	4	5		
23.	Is difficult to control	1	2	3	4	5		
24.	Bothers and annoys other students	1	2	3	4	5		
25.	Gets into trouble at school	1	2	3	4	5		
26.	Disrupts ongoing activities	1	2	3	4	5		
27.	Boasts and brags	1	2	3	4	5		
28.	Is not dependable	1	2	3	4	5		
29.	Is cruel to other students	1	2	3	4	5		
30.	Acts impulsively without thinking	1	2	3	4	5		
31.	Is easily irritated	1	2	3	4	5		
32.	Demands help from other students	1	2	3	4	5		
						Totals		
							HI	AA DD

SSBS-2

Please use the following space to provide any additional information about this student that you believe would be useful for understanding his or her social behavior:

SSBS-2 Scales	Raw Score	*T*-Score	Percentile Rank	Social Functioning Level
[illegible]				
Peer Relations (PR)				
Self-Management/Compliance (SM)				
Academic Behavior (AB)				
Social Competence Total				
[illegible]				
Hostile/Irritable (HI)				
Antisocial/Aggressive (AA)				
Defiant/Disruptive (DD)				
Antisocial Behavior Total				

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References

Ashiabi, G. S. (2000). Promoting the emotional development of preschoolers. *Early Childhood Education Journal, 28*(2), 79-84.

Blair, K., Denham, S., Kochanoff, A., and Whipple, B. (2004). Playing it cool: Temperament, emotion regulation, and social behavior in preschool. *Journal of School Psychology, 42*(6), 419-443.

Buss, A.H., and Plomin, R. (1984). *Temperament: Early developing personality traits*. Hillsdale, NJ: Erlbaum.

Bouffard, T., Roy, M., and Vezeau, C. (2005). Self-perceptions, temperament, socioemotional adjustment and the perceptions of parental support of chronically underachieving children. *International Journal of Educational Research, 43*(4/5), 215-235.

Calkins, S., Smith, C., Gill, K., and Johson, M. (1998). Maternal interactive style across contexts: Relations to emotional, behavioral, and physiological regulation during toddlerhood. *Social Development, 7*(3), 35-369.

Carson, D.C., and Bittner, M.T. (1994). Temperament and school-aged children's coping abilities and responses to stress. *Journal of Genetic Psychology, 155*(3), 289-303.

Cassidy, J. and Parke, R. D., Butovsky, L., and Braungart, J.M. (1992). Peer-family connections: The role of emotional expressiveness within the family and children's understanding of emotions. *Child Development, 63*(3), 603-618.

Chess, S., and Thomas, A. (1989). Temperament and its functional significance. In S.I. Greenspan & G.H. Pollock (Eds.), The course of life: Vol. II. Early Childhood. Madison, Conn.: International Universities Press.

Cicchetti, D., and Rogosch, F.A. (1997). The role of self-organization in the promotion of resilience in maltreated children. *Development and Psychopathology, 9,* 799-819.

Clay, S., Mutran, E., and Reitzes, D. (1999). Friendship and social support: The importance of role identity to aging adults. *Social Work, 44*(6), 522-533.

Cole, P., Martin, S., and Dennis, T. (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. *Child Development,* 75(2), 317-333.

Craig, G. and Dunn, W. (2007). *Understanding Human Development*. New Jersey: Pearson, Prentice Hall.

Crozier, W. R., and Hostettler, K. (2003). The influence of shyness on children's test performance. *British Journal of Educational Psychology, 73*(3), 317-328.

Culp, R., Howell, C., McDonald-Culp, A., and Blankemeyer, M. (2001). Maltreated children's emotional and behavioral problems: Do teachers and parents see the same things? *Journal of Child & Family Studies, 10*(1), 39-50.

Curtis, W.J. and Cicchetti, D. (2007). Emotion and resilience: A multilevel investigation of hemispheric electroencephalogram asymmetry and emotion regulation in maltreated and nonmaltreated children. *Development and Psychopathology, 19,* 811-840.

Diener, M., Mengelsdorf, S., McHale, J., and Frosch, C., (2002). Infants' behavioral strategies for emotion regulation with fathers and mothers: Associations with emotional expressions and attachment quality. *Infancy, 3*(2), 153-174.

Dodge, K.A, Murphy, R.M., and Buchsbaum, K. (1984). The assessment of intention-cue detection skills in children: Implications for developmental psychopathology. *Child Development, 55*(1), 163-173.

Dunstan, L., and Nieuwoudt, J. (1994). The relationship between indexes of childhood friendship and biographical, personality, and behavioral variables. *Journal of Genetic Psychology, 155*(3), 303-312.

Eisenberg, N., and Fabes, R. A. (1992). *Emotion and its regulation in early development.* Jossey-Bass/Pfeiffer, San Francisco, CA.

Eisenberg, R.A. Fabes, J., Bernzweig, M., Karbon, R., Poulin, R., and Hanish, L. (1993). The relations of emotionality and regulation to preschoolers' social skills and sociometric status, *Child Development, 64*(5), 1418–1438.

Eisenberg, R.A., Fabes, J., Guthrie, I.K., Murphy, B.C., Maszk, P., Holmgrem, R., and Suh, K. (1996). The relations of regulation and emotionality to problem behavior in elementary school children. *Development and Psychopathology, 8,* 141–162.

Eisenberg, R.A., Fabes, J., Guthrie, I.K., and Reiser, M. (2002). The role of emotionality and regulation in children's social competence and adjustment In: L. Pulkkinen and A. Caspi, Editors, *Paths to successful development: Personality in the life course*, Cambridge University Press, New York pp. 46–70.

Eisenberg, R.A. Fabes, J., Murphy, B.C., Karbon, M., Smith, M., and Maszk, P. (1996). The relations of children's dispositional empathy-related responding to their emotionality, regulation, and social functioning, *Developmental Psychology, 32*(2), 195-209.

Eisenberg, N., Fabes, R. A., Guthrie, I. K., & Reiser, M. (2000). Dispositional emotionality and regulation: Their role in predicting quality of social functioning. *Journal of Personality and Social Psychology*, *78*(1), 136–157.

Eisenberg, R.A., Guthrie, I.K., Fabes, J., Shepard, S., Losoya, S., Murphy, B.C., Jones, S., Poulin, R., and Reiser, M. (2000). Prediction of elementary school children's externalizing problem behaviors from attention and behavioral regulation and negative emotionality, *Child Development, 71*(5), 1367–1382.

Fabes, R. A, and Eisenberg, N. (1994). The relations of children's emotion regulation to their vicarious emotional responses and comforting behaviors. *Child Development, 65 (6),* 1678-1693.

Fabes, R. A., Eisenberg, N., Jones, S., Smith, M., Guthrie, I.K., Poulin, R., Shepard, S., and Friedman, J. (1999). Regulation, emotionality, and preschoolers' socially competent peer interactions. *Child Development, 70*(2), 432-442.

Foley, M. (2007). School-age temperament: Implications for school nurses. *School Health, 12*(2), 128-131.

Gnepp, J., and Hess, D. (1986). Children's understanding of verbal and facial display rules. *Developmental Psychology, 22*(1), 103-108.

Greener, S. H. (2000). Peer assessments of children's pro-social behavior. *Journal of Moral Education, 29*(1)*,* 47-60.

Greco, L. and Morris, T. (2005). Factors influencing the link between social anxiety and peer acceptance: Contribution of social skills and close friendships during middle childhood. *Behavior Therapy, 36*(2), 197-205.

Gunnar, M. R., Mangelsdorf, S., Larson, M., and Hertsgaard, L. (1990). Attachment, temperament, and adrenocortical activity in infancy: A study of psychoendocrine regulation. *Developmental Psychology, 33*(6), 355-363.

Hamre, B.K. and Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*(2)*,* 625-638.

Hartup, W. W. (1995). The three faces of friendship. *Journal of Social & Personal Relationships, 12*(4)*,* 569–574.

Hay, D., Payne, A., and Chadwick, A. (2004). Peer relations in childhood. *Journal of Child Psychology & Psychiatry, 45*(1), 84-108.

Hecht, D. B., Inderbitzen, H.M., and Bukowski, A. L. (1998). The relationship between peer status and depressive symptoms in children and adolescents. *Journal of Abnormal Child Psychology, 26,* 153-160.

Herring, M., and Wahler, R. G. (2003). Children's cooperation at school: The comparative influences of teacher responsiveness and the children's home based behavior. *Journal of Behavioral Education, 12*(2), 119-130.

Hodges, E.V. and Perry D. (1999). Personal and interpersonal antecedents and consequences of victimization by peers. *Journal of Personality and Social Psychology, 76,* 677-685.

Huber, N., Wachs, T., Peters-Martin, P., and Gandour, M. (1982). The study of early temperament: Measurement and conceptual issues. *Child Development, 82*(53), 571-601.

Katz, L.F., and Gottman, J.M. (1995). Vagal tone protects children from marital conflict. *Development and Psychopathology, 7,* 82-92.

Kutnick, P. and Kington, A. (2005). Children's friendships and learning in school: Cognitive enhancement through social interaction? *British Journal of Educational Psychology, 75,* 521-538.

Kyrios, M., and Prior, M. (1990). Temperament, stress, and family factors in behavioral adjustment of 3-5 year old children. *International Journal of Behavioral Development, 13*(1), 67-93.

Langloise, J. H. (2004). Emotion and emotion regulation: From another perspective. *Child Development, 75*(2), 315-316.

Lefrancois, G.R. (2000).Of children: An introduction to child and adolescent development, 9th edition. Wadsworth/Thomson Learning: Belmont, CA.

Magee, T., and Roy, C. (2008). Predicting school-age behavior problems: The role of early childhood risk factors. *Pediatric Nursing, 34*(1), 37-44.

Merrell, K. W. (1993). Using behavior rating scales to assess social skills and antisocial behavior in school settings: Development of the school social behavior scales. *School Psychology Review, 22*(1), 115-133.

Oakland, T. and Joyce, D. (2004). Temperament-based learning styles and school based application. *The Canadian Journal of School Psychology, 19* (1/2), 59-74.

Paterson, G. and Sanson, A. (1999). The association of behavioral adjustment to temperament, parenting, and family characteristics among 5-year-old children. *Social Development, 8*(3), 293-309.

Pulkkinen, L, Nygren, H., and Kokko, K. (2002). Successful development*:* Childhood antecedents of adaptive psychosocial functioning in adulthood. *Journal of Adult Development, 9*(4), 251 – 266.

Rothbart, M. K. (1981). Measurement of temperament in infancy, *Child Development, 52*(2), 569-578.

Rothbart, M., Ahadi, S., and Evans, D. (2000). Temperament and personality: Origins and outcomes. *Journal of Personality and Social Psychology, 78*(1), 122-135.

Rothbart, M.K., and Bates, J.E. (1998). Temperament. In N.Eisenberg (Ed.), *Handbook of child psychology; Vol. 3. Social, emotional, and personality development* (5th ed., 105-176). New York: Wiley.

Rydell, A., Berlin, L., and Bohlin, G. (2003). Emotionality, emotion regulation, and adaptation among 5- to 8-year-old children. *Emotion, 3*(1), 30-47.

Saarni, C. (1997). Coping with aversive feelings. *Motivation & Emotion, 21*(1)*,* 45-63

Shields, A. and Cicchetti, D. (1997). Emotion regulation among school-age children: The development and validation of a new criterion Q-sort scale. *Developmental Psychology, 33*(6), 906-916.

Stifter, C., and Braungart, J. (1995). The regulation of negative reactivity in infancy: function and development. *Developmental Psychology 31*(3), 448-455.

Strayer, J. (2002). The dynamics of emotion and life cycle identity. *Identity: An International Journal of Theory and Research, 2*(1), 47- 79.

Tobin, R., Sansosti, F., and McIntyre, L. (2007). Developing emotional competence in preschoolers: A review of regulation research and recommendations for practice. *California School Psychologist, 12,* 107-120.

von Salisch, M. (2001). Children's emotional development: Challenges in their relationships to parents, peers, and friends. *International Journal of Behavioral Development, 25*(4), 310 -319.

Walden, T. A., and Smith, M. C. (1997). Emotion regulation. *Motivation and Emotion, 21*(1), 7-25.