

CAN ADOLESCENTS' ATTENTIVENESS BE PREDICTED FROM EMOTION
REGULATION AND PERSONALITY CHARACTERISTICS?

BY

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Abstract

This study examined the attentiveness levels of 58 adolescent students between the ages of 12-15. All students were surveyed using three measures: Conners Rating Scale-Revised, Early Adolescent Temperament Questionnaire-Revised and the HEXACO-60. The CRS-RS was used to measure participants' attentiveness, while the EATQ-R measured how well each participant regulated their emotions. The HEXACO-60 measured the participants' personality factors. Results indicated that male participants had significantly higher levels of inattentiveness compared to female participants. Further, correlations were noted among personality factors, and inattention was negatively correlated with emotionality and conscientiousness. Finally a regression analysis revealed that personality factors significantly accounted for variance in attention levels, and emotionality was a significant predictor. Personality factors may play a key role in predicting adolescents' attentiveness in the classroom.

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Can Adolescents' Attentiveness be Predicted from Emotion Regulation and Personality Characteristics?

Many developmental changes occur during the adolescent years (Compas, Hinden, & Gerhardt, 1995). From physical growth to increased independence, there are multiple factors that contribute to adolescent development. One factor of interest in this study is attentiveness. The ability to attend to information in and outside the classroom often allows for increased learning and success (Sohlberg & Mateer, 1989). Knowing that attentiveness contributes to learning begs the question: What factors influence an adolescent's ability to attend to information? Two specific factors that may play a role are emotion regulation and personality. This is a preliminary study investigating if these two factors, independent or combined, are capable of predicting levels of attentiveness in an adolescent sample.

Emotion Regulation and Behavior Regulation

The ability to regulate emotions is recognized as a vital component to children's success in numerous areas, such as social functioning (socially appropriate behavior), coping at school, and emotionality (Calkins et al, 1999; Eisenberg & Fabes, 1995; Eisenberg et al, 1998; Spinrad et al, 2006). Regulation, also known as emotional self-regulation is the ability to control and adjust one's own emotions. The process of regulation is complex and can involve such steps as preventing situations that elicit certain emotions, initiating coping mechanisms to relieve emotions, or shifting attention to reduce emotional responses (Eisenberg & Spinrad, 2004). Emotion regulation targets

four aspects of functioning: internal feeling states, emotion-related cognitions, emotion-related physiological processes and emotion-related behavior (Siegler, 2006).

After examining the body of research on this topic. Eisenberg and Spinrad (2004) defined emotion regulation as “the process of initiating, avoiding, inhibiting, maintaining, or modulating the occurrence, form, intensity, or duration of internal feeling states, emotion-related physiological, attentional processes, motivational states, and/or the behavioral concomitant of emotion in the service of accomplishing affect-related biological or social adaptation” (pg. 337). Emotion regulation can also be subdivided into two broader components. According to Eisenberg et al. (1999) the two types of regulation are emotion regulation (ER) and behavior regulation (BR). ER refers to the internal emotion-related processes, such as the ability to initiate, maintain or change one’s internal state or feeling. Eisenberg’s theory is based on temperament and suggests that those with competent emotion regulation abilities are able to alleviate upsetting emotions and exercise coping mechanisms to alleviate negative feelings, such as attention shifting (Eisenberg & Spinrad, 2004).

Behavior regulation (BR) refers to overt behaviors that are associated with emotions that are experienced intrinsically and it involves the ability to control impulses, such as lashing out physically when feeling angry. Children with BR abilities are able to manage their behavior even if they may be experiencing a strong emotion. BR could also include overt behaviors that are meant to modulate an emotion through affecting a social context (Eisenberg et al, 1999). For example, if a child has a toy taken away, the overt behavior may be to cry or scream. The intent of the overt behavior is to modify the situation and have the toy returned to the child.

Eisenberg and Spinrad (2004) noted the importance of dividing emotion regulation into these two components. By having two aspects of emotional regulation, it allows the definition of regulation to be both an experience of emotion and a regulation of the behaviors that are associated with the emotion experience. Cole, Martin & Dennis (2004) stated that there is a heuristic advantage to dividing ER into two processes because it provides a larger scope of ER than the past definition of the term. Eisenberg and Spinrad (2004) did acknowledge that these processes are intricately related; however, the distinction is made in order to better measure the various aspects of regulation.

In another study, Spinrad et al. (2006) discussed emotion regulation as two components (ER and BR), however; described overall regulation as effortful control. Effortful control was defined as “the efficiency of executive attention, including the ability to inhibit a dominant response and/or to activate a subdominant response, to plan, and to detect errors” (Rothbart & Bates, 2006, pg. 230). The main component of effortful control is the ability to shift or focus attention based on emotional responses. The secondary component of effortful control is using activational or inhibitory control to react to the emotions that one is experiencing. Spinrad et al. (2006) found that children who were high in effortful control were better able to modulate their negative emotions compared to those who were not high in effortful control. They were also found to be more competent at interacting with others.

Muris and Meesters (2009) evaluated the Early Adolescent Temperament Questionnaire-Revised as a measurement of both emotion and behavior regulation. , Based on the research of Rothbart and Bates (2006), the EATQ-R measures reactive and regulative temperamental traits, proposing that temperament not only consists of reactive

characteristics as the basis of emotionality, but also includes the self-regulative factor of effortful control. The EATQ-R was developed to measure reactive and regulative temperament factors from the child participant's point-of-view. It consists of 11 scales for measuring aspects of temperament and two scales for assessing symptoms of aggression and depression. Muris and Meesters (2009) stated that this measure positively related to constructs of behavioral inhibition and they found that effortful control was positively associated with prosocial behavior. Their findings indicate that the EATQ-R is a survey that effectively measures emotion-regulation quantitatively and was used in this study.

Personality

Another area of an adolescent's social functioning is his or her personality. Personality has been defined in many ways depending on the specific field of psychological study. Bradberry (2007) defined personality as an organized set of characteristics possessed by a person. These characteristics uniquely define this person and influence his or her cognitions, motivations, and behaviors in different situations. One of the first personality researchers, Gordon Allport (1937), initially described two ways to study personality: nomothetic and idiographic. Nomothetic is the study of general laws, such as self-actualization whereas idiographic psychology is the study of uniqueness among individuals.

From some of the earliest personality research, Allport and Odbert (1936) created a list of trait names. From there, Cattell grouped these terms into clusters (sixteen) then eventually created the Sixteen Personality Factor Questionnaire (16PF) (Cattell, Eber, &

Tatsuoka, 1970). Stemming from the 16PF, the factors were then clustered into three main components: Neuroticism – sensitive/nervous vs. confident, Extraversion – outgoing vs. shy, and Openness – inventive/curious vs. cautious, better known as the NEO (Costa & McCrae, 1985). Costa and McCrae developed scales to measure these three components, and created personality structures with different rates for each of the three scales. McCrae (1989) developed two more dimensions to the NEO model: Agreeableness – friendly vs. competitive and Conscientiousness – organized vs. careless, creating the widely used Five-Factor Model of personality measurement. The Five-Factor model was able to accommodate a wide variety of personality constructs and many personality inventories were based on this model (Ashton & Lee, 2005).

The Five-Factor model was investigated cross culturally and in many languages. From this, support was made for four of the five factors of the Big Five (Extraversion, Agreeableness, Conscientiousness, and Neuroticism) however, Openness was a factor that was not supported or did not emerge as a factor in all other languages, questioning its universality as a personality factor (Ashton & Lee, 2005). To better describe Openness, Ashton divided this factor into two slightly different factors to better explain these aspects: Openness to experience and Honesty-Humility (a new factor). Honesty-Humility would be described using terms like sincere, fair vs. greedy and pretentious. This sixth-factor was supported in numerous languages/cultures (Ashton et al., 2004). Ashton and Lee (2005) named their personality measure HEXACO and it contains all six personality factors: Honesty-Humility, Emotionality (similar to the Neuroticism factor in the Big Five), eXtraversion, Conscientiousness, and Openness to experience.

HEXACO personality measure. In 2005, Ashton & Lee conducted a study to compare the Five-Factor model of personality constructs to the new HEXACO model. They found that the proposed sixth factor of personality, Honesty-Humility, correlated with the markers of the Five-Factor structure, and it correlated substantially with the Agreeableness domain. They found that including Honest-Humility allowed an improved prediction of personality variables such as Social Adroitness and Self-Monitoring. These variables would be associated with low Honesty-Humility measures but not low Agreeableness measures, allowing for a distinct difference between these two personality factors.

In a later study, Ashton and Lee (2007) give definitions/adjectives of the six-factors that constitute the HEXACO model. Honesty-Humility would be described as sincere, honest, modest, vs. greedy pretentious and boastful. A person who scores positively in this factor would be sincere and modest. Emotionality is given adjectives such as oversensitive, emotional, anxious vs. brave, tough and independent, and a person scoring high in this measure would be described as anxious and fearful. Extraversion measures if a person is outgoing, lively, and talkative vs. passive, withdrawn and reserved. A person high in extraversion is considered to be expressive, social and lively. Agreeableness, much like previously described by Costa and McCrae, has adjectives such as patient, tolerant vs. ill-tempered or stubborn and a person scoring high in this measure is considered forgiving, flexible and patient. Conscientiousness could be described as someone who is organized and prudent because of its adjectives such as organized diligent, precise vs. sloppy, lazy, and absent-minded. Lastly, Openness to Experiences is

described with adjectives such as intellectual, creative vs. shallow and conventional and a person scoring high in this area is considered inquisitive, creative and unconventional.

In this same article, Ashton and Lee (2007) give advantages of the HEXACO model of personality. As with the Five-Factor Model, the HEXACO model provides factors that encompass the wide definition of personality, but also keeps the number of factors small, as to make it practical for research and assessment purposes. In comparison to the 16PF, the HEXACO has a smaller number of factors, allowing researchers to examine differences among the population that may be significant. Another advantage is that HEXACO predicts several personality phenomena that are not explained in the Five-Factor model such as the relationship between personality factors and altruism. As demonstrated by current research, emotion regulation and personality are predictors for adolescent-related psychological factors, and the factor that is of interest in this thesis is attention.

Attentiveness

Attention is a factor that has been linked to social interaction. Many years ago, Cunningham, Siegel and Offord (1985) suggested that inattentiveness limits a child's behavioral skills and social skills. Researchers claimed that children who were less attentive did not learn as much observationally from social situations. Bandura's (1977) Social Learning Theory may help explain these findings. He stated that there are four conditions for a person to successfully model someone's behavior and one of these processes is the ability to attend. Bandura argued that prior to a person learning a behavior, the observer needed to have the capabilities to attend to a behavior and filter

out distracters that may be co-occurring with the behavior that is to be learned. Furthermore, according to Sohlberg and Mateer (1989) attention is defined as sustained focus of cognitive resources on certain information while being able to filter out extraneous information. Within attention, Sohlberg used a hierarchical model to describe attentional processes. The most basic attentional skill is focused attention, where a person has the ability to respond to a visual, auditory or tactile stimulus. Sustained attention is a more difficult skill, and is the ability to maintain a consistent response during a repetitive activity. The next step in the hierarchic model is selective attention, where a person needs to maintain a response while simultaneously avoiding distracting stimuli. Alternating attention is the fourth step in Sohlberg's model, meaning a person's capability to shift attention between separate tasks that may require different cognitive tasks. The most difficult attention process is divided attention, meaning a person's ability to respond simultaneously to multiple task demands.

Pinel (2008) focused on executive attention as the basis of all attention-related skills. Executive attention is described as the ability to be cognitively independent, regardless of incoming stimulus or motor responses. It is called executive attention because it is an executive system in the frontal cortex that maintains the ability to control thoughts and actions. Executive attention is the basis that allows you to choose what aspects of an environment to attend to and what aspects to ignore. Executive attention can also be described as any process that controls the content or direction of cognitive activity, in the presence of other stimuli (distracters) (Risse & Oberauer, 2010). Executive attention is comprised of three components: shifting, updating, and inhibition (Miyake et al, 2000). Shifting refers to the ability to cognitively change areas of focus;

whereas updating means monitoring surrounding factors and choosing the focus of attention depending on the environment; and inhibition as the ability to not be distracted by other stimuli. St. Clair-Thompson & Gathercole (2006) investigated executive attention as defined by these three components and found that executive attention is highly correlated with school performance. Executive attention has been the focus of measurement in the research of attentiveness. Conners (2006) based the Conners Rating Scale on the three components of executive attention, and when comparing attentiveness to emotion regulation and personality factors, executive attention provides factors for a meaningful comparison. For this project, attentiveness ratings will be descriptors of executive attention functioning.

Attentiveness & Emotion Regulation

One of the questions for this project is if attentiveness is related to emotion regulation. Past researchers have examined how emotion regulation and attention are related. Posner and Rothbart (1998) examined executive attention and found that it develops in very early childhood and its basic elementary purpose for an infant is as a regulation technique for distress. In a similar study, Rothbart and Bates (1998) investigated differences in executive attention and found that these differences have important implications for the early development of behavior regulation and emotion regulation. Posner and Rothbart (1998) described the close association with executive attention and self-regulation, stating that adept cognitive skills such as executive attention coincide with ability to regulate emotions (conflict and behavioral) early in development. In this study, however, Posner and Rothbart's focus was on a younger sample with a goal of identifying when emotion regulation begins to develop. Posner concluded that the

development of executive attention serves to regulate both cognition and emotion but was not able to explain further if emotion regulation could provide as a good predictor of attentiveness. In Dahl et al.'s (2004) book, however, Ellis et al. conducted a study examining executive attention and effortful control. Researchers found that individual differences in executive attention were predictive of self-regulation. Poor executive control was correlated with poor effortful control (as self-reported by a parent).

Combining both the aspects of attention and emotion regulation, little research has been conducted to investigate how these two concepts are related to one another in an early adolescent sample. Many of the researchers who focus on emotion regulation and attention have done so with children who have an ADHD diagnosis. Barkley's (1997) behavioral inhibition theory helps to illustrate how emotion regulation and attention are related. Barkley stated that children with ADHD should have deficits in four functions, one being emotion regulation. Barkley explained that part of the reason children with ADHD struggle with emotion regulation is that there is a significant deficit in inhibition. Inhibition includes resisting temptation or restricting behavior that may come automatically, such as a burst in rage when initially becoming frustrated.

Both of these factors are closely related to emotion regulation, and demonstrate an assumption that children with high levels of inattentiveness may be worse at regulating their emotions. In another study, Maedgen and Carlson (2000) found that when comparing ADHD children to children with no attentional problems, children with ADHD were more intense at displaying emotions and less capable at regulating their emotions. Children with ADHD also displayed more aggressive behavior than the control group.

There is a significant gap in research investigating adolescents' attentiveness differences (not at the clinical level for ADHD) and their abilities to regulate their emotions. Based on research investigating those with ADHD, it may be possible to derive assumptions that those with higher levels of inattentiveness may not be as capable at regulating their emotions, because those with ADHD are shown to follow the same trend; however, there are differences between those with elevated levels of inattentiveness and those with ADHD, so this distinction needs to be investigated. Understanding more about how attentiveness and emotion regulation are related, the next question this project hopes to answer is how personality and attentiveness are related.

Personality & Attentiveness

There is little research linking personality and regulation during adolescence. Examining an older population, the relationship between ADHD and personality problems was investigated in college students (Gudjonsson et al., 2010). The participants were screened for childhood as well as current symptoms of ADHD and personality problems (for example did the student ever meet the diagnostic criteria for ADHD). College students with ADHD symptoms were found to have more personality problems. Specifically, those with inattention problems had increased problems with self-control (is self-control a personality problem...or a problem of regulation). Authors concluded that ADHD symptoms are related to maladaptive personality traits; however, ADHD symptoms should be looked into further, determining differences between inattentive ADHD and hyperactive ADHD.

Another study comparing personality and attentiveness was conducted by Smalley et al. (2009). Smalley investigated mindfulness and other personality traits and compared them to ADHD in adults. Researchers found that adults with ADHD self-reported being less mindful than those without having an ADHD diagnosis. Those with ADHD were also more novelty-seeking and less self-directed, as well as more self-transcendent. Mindfulness was positively associated with self-directedness and self-transcendence. Researchers concluded that a large amount of the variability in the mindfulness trait could be explained by ADHD status, self-directedness, and self-transcendence.

The results from these two studies are directly applicable to the current thesis. Self-control could be associated with self-regulation, and given that adults with ADHD have less self-control, it would be worth investigating if adolescents with increased inattentiveness also have problems self-regulating. For example, if a person is inattentive (though may not meet the criteria for ADHD) they may have less self-control (doing things like losing their temper or excessive spending) compared to someone who may be more attentive. Mindfulness could be generalized as conscientiousness on the HEXACO personality scale, given that there are common descriptors such as diligence and prudence. It is worth discovering if adolescents who are more conscientious are also more attentive and vice versa. Now to combine all three variables of this study together, what does the research show about personality and emotion regulation, together, to predict attentiveness?

The Roles of Personality and Emotion Regulation in the Prediction of Attentiveness

The current research looking at personality, emotion regulation and attentiveness in one study is almost non-existent although a study conducted by John and Gross (2004) may begin to tie these variables together. This study evaluated emotion regulation strategies and re-appraisal, an attempt to look at an event differently. Re-appraisal is a strategy that was common among individuals regulating emotions after an emotion-eliciting event. John and Gross (2004) found that if emotions were regulated using the appraisal method, then this was less taxing on the cognitive profile. From this result, one could suggest that if adolescents used the reappraisal strategy to regulate their emotions, this would be less cognitively taxing and they could therefore focus and attend better in the classroom. Another measurement of John and Gross' study was socialization, and they found that those who used the appraisal strategy were more aware of people around them and socialized with peers more than those who had no strategy to regulate emotions. Being aware of others around them could be understood as being more conscientious, and it may also be assumed that those that use the appraisal strategy would score higher on the conscientious rating of a HEXACO measure.

Rothbart (2007) conducted a study comparing temperament, development, and personality. Though her work was conducted with children much younger than adolescents, she found that emotion regulation (effortful control) was correlated with a decrease in negative affect, demonstrating that children who are better at regulating their emotions are less likely to be fearful and experience sadness. These children were also more likely to be considered extraverted. In addition, Rothbart discussed aspects of executive attention and its relation to personality and emotion regulation. Executive

attention efficiency was found to be of the same genetic component that was related to emotion regulation and extraversion surgency. From this, it may be possible to claim that those with better attentive abilities are also better at regulating emotions and may be considered extraverted.

Present Study

The research mapping the relationship between personality and regulation in the prediction of attention is extremely sparse within the adolescent population. The present study was exploratory in nature and was designed for the expressed purpose to predict adolescents' levels of attentiveness from their emotion regulation abilities and their personality characteristics. In all, these predictions were made in three ways. First, each factor of emotion regulation and personality was assessed as independent predictors of attentiveness and then they were aggregated to examine their combinatorial associations with attentiveness. Currently, there is very little research in this area and researchers have neglected to investigate these associations with a sample of adolescents.

Hypotheses

It was hypothesized that adolescents who regulate their emotions poorly would have higher levels of inattentiveness and adolescents who were better at regulating their emotions would have lower levels of inattentiveness (Ellis et al., 2004). It is also hypothesized that adolescents who scored higher in the personality factor of conscientiousness would be more attentive than adolescents who scored lower in the area of conscientiousness (Smalley et al., 2009). The last hypothesis investigated in this study was rather exploratory in nature. It hoped to discover if emotion regulation and

personality combined would be a better predictor of attentiveness compared to the individual contributions of each.

Method

Participants

The sample for this study consisted of 58 students from the Chignecto-Central Regional School Board in New Glasgow, NS. Participants volunteered from classrooms assigned to the research study. Participants' ages ranged from 12-15 years. Participants were not sampled if there was a history of learning problems, attentional problems (such as a diagnosis of ADHD), or school failure. Students were required to have an uninterrupted educational history. Participants provided informed consent, as well as consent from a guardian. Teachers also provided consent to participate in the study. An information sheet describing this study, as well as the consent forms were provided and are shown in Appendices A, B and C. A copy of the questionnaire that was used to determine participants' demographics, as well as educational history is provided in Appendix D.

Materials

Attentiveness

To measure attention, the Conners Rating Scale-Revised (Conners, 2008) was administered to the parent and the teacher of each participant. The CRS-R short form consists of a 27-item parent scale and a 28-item teacher scale. The scale is comprised of four indices: Oppositional, Inattention, Hyperactivity and ADHD Index. The Inattention

scale was used in this study. The parent and teacher forms have both showed high internal consistency (ranging from 0.85 to 0.92). This measure also has an acceptable convergent validity. Indices measured on a four-point likert scale from 0 (not at all) to 3 (very frequently). The purpose of this score was to compare the adolescent's emotion regulation and personality outcomes and determine if this inattentiveness score was predicted from emotion regulation and personality. A copy of the CRS-R self-report parent and teacher form are given in Appendices E and F.

Emotion Regulation

To measure temperament The Early Adolescent Temperament Questionnaire-Revised (Ellis & Rothbart, 2001) was administered to each participant (self-report).

The EATQ-R measures the following temperament traits in 9-15 year-old children/adolescents: activation control – the ability to perform an action when there is a desire to not perform it, activity level – participating in activities that require high levels of physical exertion, affiliation – the desire to be close with others, attention – the ability to focus and shift attention, fearfulness – the tendency to worry about future distresses, frustration – the tendency to become unpleasant when there is a goal-blocking interruption, high intensity pleasure – tendency to enjoy activities of high excitement, inhibitory control – the ability to suppress inappropriate responses, perceptual sensitivity – the detection and awareness of low-intensity stimulation, pleasure sensitivity – the amount of pleasure related to activities with low-intensity and complexity, and shyness – inhibition to novel things or social challenges. The EATQ-R also includes two behavioral scales: aggression – the amount of hostile or aggressive actions including physical

violence and verbal aggression, and depressive mood – unpleasant affect, with a loss of interest in enjoyment and activities. All EATQ-R factor scales show acceptable internal consistency with Cronbach's alpha scores ranging from 0.61 to 0.74. Personality and psychopathology correlates of the EATQ-R support the validity of the scales. Each item in the survey was answered on a five-point Likert scale ranging from 1 (almost never true) to 5 (almost always true). A copy of the EATQ-R is provided in Appendix G.

Personality

To measure personality, the HEXACO-60 personality measure was utilized. The HEXACO-60 personality inventory (Ashton & Lee, 2009) is a 60-item questionnaire that assessed individual differences in six personality dimensions: honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience. All HEXACO-PI-R factor scales show high internal consistency (reliability) ranging from 0.86 to 0.92. All factor scales also show adequate convergent validities with external variables. The questionnaire was self-report where each participant responded to reflective statements based on a five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree). Data was organized to see how the participants scored on each dimension of the personality inventory. A copy of the HEXACO-60 questionnaire is provided in Appendix H.

Procedure

Prior to completing the battery of surveys (parent surveys were completed at home, child surveys were completed at school) the parents of the participants were first given an information and consent form indicating that their child could participate in this

study (Appendix A). The parents were then given the CRS-R parent short form and were asked to return the CRS-R with the child back to school. After receiving consent, the homeroom teacher of each student were given the CRS-R teacher short form to be completed. Adolescent participants were given the EATQ-R self-report form and the HEXACO questionnaire at school. Adolescents filled-out their self-report forms and then all the forms (parent, teacher and student forms) were collected from each school by the examiner.

Results

The primary goal of this study was to examine the associations between inattentiveness, personality styles, and emotion regulation within a sample of adolescents. This thesis describes predictive pathways to attentiveness from personality characteristics and emotion regulation. The results section is presented as follows. First, preliminary analyses are presented where assumptions are explored and associations with demographic variables are presented. The second section contains correlations between all major variables and finally, regression analyses are performed to determine if attentiveness can be predicted by personality styles and emotion regulation.

Preliminary Analyses

Data screening. All data were examined for outliers, linearity, normality and homogeneity of variance. While there were some irregularities, further exploration deemed analyses with transformed data to be unnecessary.

T-Tests. T-tests were performed to explore sex differences between all variables: inattentiveness, personality characteristics, and emotion regulation. Means and standard

deviations are presented in Table 1. Male adolescents' inattentiveness scores ($M= 5.28$, $SD=5.05$) were significantly higher than female adolescents' scores ($M=2.87$, $SD=2.85$); $t(56) = -2.32$, $p = .02$.

Correlations. Pearson correlations were then computed for all paired combinations of inattentiveness, personality variables, and emotion regulation using untransformed data (see Table 2). Inattentiveness was significantly negatively correlated with emotionality ($r = -.39$, $p < .01$). Inattentiveness showed a significant negative relationship with conscientiousness ($r = -.27$, $p < .05$). Emotion regulation was significantly correlated with honest-humility ($r = .42$, $p < .01$), agreeableness ($r = .36$, $p < .01$), and conscientiousness ($r = .46$, $p < .01$).

Honesty-humility showed a significant positive correlation with conscientiousness ($r = .42$, $p < .01$). Emotionality was significantly negatively correlated with extraversion ($r = -.33$, $p < .05$) and positively correlated with openness to experience ($r = .33$, $p < .05$). Extraversion showed a significant positive correlation with agreeableness ($r = .40$, $p < .01$) and conscientiousness ($r = .34$, $p < .01$). Agreeableness displayed a significant positive correlation with conscientiousness ($r = .38$, $p < .01$). Finally, conscientiousness showed a significant positive correlation to openness to experience ($r = .27$, $p < .05$).

Multiple Regression Analyses

To examine whether emotion regulation and personality factors could predict inattentiveness, multiple regression analyses were used. The first multiple regression analysis conducted investigated the role personality characteristics had in predicting inattentiveness. The results of this regression indicated that these six personality

Table 1

Means and Standard Deviation for Males and Females on Attentiveness, Personality, and Emotion Regulation.

| | <u>Males</u> | <u>Females</u> |
|---|--------------|----------------|
| Attentiveness _a | 5.28 (5.05) | 2.87 (2.85) |
| Personality | | |
| Honesty-Humility _b | 3.09 (.59) | 3.28 (.66) |
| Emotionality _b | 2.67 (.73) | 3.50 (.53) |
| Extraversion _b | 3.33 (.69) | 3.26 (.60) |
| Agreeableness versus Anger _b | 3.35 (.55) | 3.26 (.60) |
| Conscientiousness _b | 2.35 (.74) | 3.30 (.68) |
| Openness to Experience _b | 2.83 (.60) | 2.97 (.10) |
| Emotion Regulation _c | 3.58 (.60) | 3.29 (.89) |

_a 15-point scale, Max score = 15

_b 5-point scale, Max Score = 5

_c 5-point scale, Max Score = 5

Table 2

Two-tailed Pearson Correlations for Attentiveness, Personality Characteristics, and Emotion Regulation (untransformed data).

| | Attentiveness | Honesty- Humility | Emotionality | Extraversion | Agreeableness versus Anger |
|-------------------------------|---------------|----------------------|--------------|--------------|-------------------------------|
| Attentiveness | 1 | -.24 | -.39** | .00 | -.07 |
| Honesty-Humility | -.24 | 1 | .17 | .05 | .34* |
| Emotionality | -.39** | .17 | 1 | -.33** | -.22 |
| Extraversion | .00 | .05 | -.33** | 1 | .40** |
| Agreeableness versus Anger | -.07 | .34* | -.22 | -.40** | 1 |
| Conscientiousness | -.27* | .42** | .04 | .34** | .38** |
| Openness to Experience | -.21 | .18 | .33* | .14 | .03 |
| Emotion Regulation | -.05 | .42** | -.12 | .05 | .36** |

* shows significance at .05 level or less

** shows significance at .01 level or less

Table 2 continued

Two-tailed Pearson Correlations for Attentiveness, Personality Characteristics, and Emotion Regulation (untransformed data).

| | Conscientiousness | Openness to Experience | Emotion Regulation |
|---------------------------|-------------------|---------------------------|-----------------------|
| Attentiveness | -.27* | -.21 | -.05 |
| Honesty-Humility | .42** | .18 | .42** |
| Emotionality | .04 | .33* | -.12 |
| Extraversion | .34** | .14 | .05 |
| Agreeableness | .38** | .03 | .36 |
| versus Anger | | | |
| Conscientiousness | 1 | .27* | .46** |
| Openness to Experience | .27* | 1 | .21 |
| Emotion Regulation | .46** | .20 | 1 |

* shows significance at .05 level or less

** shows significance at .01 level or less

characteristics explained 13.2% of the variance (R^2 (adjusted) = .13, $F(6,51) = 2.44$, $p < .05$) . Results of this regression are presented in Table 3. It was found that emotionality significantly predicted inattentiveness ($\beta = -.39$, $p < .05$).

A second multiple regression analysis was used to test if both personality factors and emotion regulation predicted inattentiveness. The results of this regression analysis indicated a trend, R^2 (adjusted) = .12, $F(7,50) = 2.09$, $p < .10$. A third multiple regression analysis was used to investigate the role personality factors had predicting inattentiveness, accounting for age and sex of the participants. The results of this analysis also indicated a trend, R^2 (adjusted) = .13, $F(6, 49) = 1.67$, $p < .10$. Lastly, a multiple regression analysis was used to account for the age and sex of participants, investigating if both personality factors and emotion regulation predict inattentiveness and this also indicated a trend, R^2 (adjusted) = .11, $F(7, 48) = 1.45$, $p < .10$.

Table 3

Predicting Inattentiveness from Personality Characteristics

| Variables | Beta | Significance |
|--|-------|--------------|
| Inattention X Honesty-Humility | -.08 | .60 |
| Inattention X Emotionality | -.39* | .01 |
| Inattention X Extraversion | -.04 | .78 |
| Inattention X Agreeableness versus Anger | -.04 | .80 |
| Inattention X Conscientiousness | -.19 | .22 |
| Inattention X Openness to Experience | -.01 | .93 |

* shows significance at .05 level or less

Discussion

The purpose of the present study was to examine the relationship between personality and regulation in the prediction of attention. Given the limited amount of research in this area, using all three variables with an adolescent sample, this study was deemed exploratory in nature. It was hypothesized that adolescents who were better at regulating their emotions would be more attentive than adolescents who were poorer at regulating emotions (Ellis et al., 2004); however, this study's current findings did not support the hypothesis. No correlation was found between inattention and emotion regulation scores. It was also hypothesized that adolescents who scored higher on the personality factor of conscientiousness would be more inattentive compared to adolescents who scored lower on conscientiousness (Smalley et al., 2009). The findings revealed a correlation between conscientiousness and inattention, confirming this hypothesis, and demonstrating that within the adolescent sample, participants who scored higher on the conscientiousness measure scored lower on the inattention measure. Although a correlation was found, this did not indicate a causal effect, because this correlation does not indicate if higher conscientiousness led to lower inattentiveness or if lower inattentiveness predicted higher conscientiousness. The current findings did not reveal that conscientiousness was a significant predictor of attention. A third hypothesis in this study was exploratory in nature and predicted that emotion regulation and personality factors combined would be a better predictor of attentiveness compared to the individual contributions of each. Support for this hypothesis was not found given the results of this study; however a trend was found in which emotion regulation and personality factors predicted inattention, but this result only approached significance.

One reason that may explain why the results did not support the hypotheses may be the sample used for the study. The sample size was small, and this leads to less statistical power to find significant results if significant differences exist. Another reason that may explain why some hypotheses were not supported was due to the fact that the present study was exploratory. Past research in this area, using personality, emotion regulation and attention together was very limited, which led to many predictions made with little research support.

Although this study had only three hypotheses, interesting results were also found in other areas of the collected data. Looking at the sex of the participants in this study, a significant difference was found between male and female participant's inattention scores, where male participants scored significantly higher than female participants. Looking at research in this area, a study conducted by Gershon (2002) investigated gender differences and ratings on inattention, hyperactivity, and externalizing within an ADHD population, and it was found that girls had lower ratings of inattentiveness than boys. This may explain the sex differences found in the current study; however, Gershon also noted in his study that girls tend to internalize more behaviors compared to boys, explaining that boys tend to act outwardly, and be noticed by parents and teachers as being more inattentive. Given that this present study used self-report measures to evaluate each adolescent's inattentiveness score, it is difficult to determine if the adolescent males in the current sample were more inattentive than the adolescent females, or if the males were just perceived as being more inattentive. Quinn and Wigal (2004) conducted another study looking at parent and teacher perceptions of inattention. Parents and teachers perceived inattention more often in males than females, despite the actual

behavioral symptoms of both sexes. Further study in the area of perceiving inattention may be warranted.

Looking at the correlational results of this study, there were numerous correlations among the personality factors. For example, agreeableness was positively correlated with honesty-humility and conscientiousness was positively correlated with agreeableness. These correlations are not that surprising, given they are factors from the same self-report personality measure. Goldberg (1993) described how each individual is made up of numerous characteristics, and to organize these characteristics into different factors, no matter what organizational structure is employed, there would be overlap among the factors. This overlap of personality characteristics may explain the correlations among the six personality factors found in this study.

Although no correlations between attention and emotion regulation were found, emotion regulation was correlated with several personality factors. Emotion regulation was significantly positively correlated with honesty-humility. Research looking specifically at this personality factor of the HEXACO model is sparse, because this factor is a recent development as compared to previous personality models, such as the five-factor model, which does not contain an honesty-humility factor (Ashton & Lee, 2005). Although there is little research specifically on this honesty-humility factor, research has been done investigating honesty and the regulation of emotions. Emotion regulation has been explained as the ability to self-regulate ones emotions and actions, and a study conducted by Bolin (2004) investigated self-control and its relation to academic honesty. Bolin found that students who had better self-control were more likely to be honest. Students who had low levels of self-control were more likely to engage in academic

dishonesty, such as stealing papers or plagiarizing. Although Bolin's participants were young adults, this may help explain the correlation in the current study between high scores on honesty-humility and better emotion regulation abilities. For future research, it would be interesting to investigate the characteristics that make-up the honesty-humility factor and see how they relate to regulation.

Emotion regulation was also correlated with conscientiousness. Participants who were better able to regulate their emotions also scored higher on the personality factor of conscientiousness. Emotion regulation, as defined by Spinrad et al. (2006) can be considered effortful control, such as ability to inhibit actions, control impulses, and regulate emotions. In a study conducted by deVries, deVries, and Feij (2009) risk-taking and sensation seeking was investigated. Risk-taking behaviors as well as sensation seeking are negatively associated with emotion regulation abilities (Eisenberg & Fabes, 1995). deVries found that participants who were sensation seeking and engaged in risky behavior scored lower on the personality factor of conscientiousness. Relating this to the current study, understanding that adolescents who engage in risky behavior tend to have lower emotion regulation, this may be an explanation for the correlation between emotion regulation and conscientiousness. Participants who were more conscientious were better at regulating emotions and therefore, may also be less likely to be sensation seeking.

In another study conducted by Jensen-Campbell et al. (2002), researchers looked at the development of effortful control and self-regulation skills in a university population, and looked at each participant's personality characteristics. This study found that effortful control was a common developmental substrate of the agreeableness factor and conscientiousness factor. Emotion regulation has been defined as effortful control

(Eisenberg & Spinrad, 2004) and Jensen-Campbell's findings may explain the correlation that this current study found, explaining that increased emotion regulation correlates with increased agreeableness and conscientiousness.

A surprising finding in this current study was the correlation between inattention and emotionality, and further the regression analysis indicating that emotionality is a significant predictor of inattention. The emotionality factor includes such characteristics as being overly sensitive, fearful and anxious compared to brave and independent (Ashton & Lee, 2009). Looking at the findings from the current study, the results indicate that adolescents who are high in emotionality, for example, are sensitive and overly anxious are more attentive than adolescents who are not high on the emotionality factor. One explanation may be to look at the cognitions of an adolescent who scores high on emotionality. Adolescents who are overly anxious and sensitive have many emotions and thought processes concerning feelings or appearances running through their heads at one time. These students' ability to attend to all of the different thought processes may also indicate that they can attend better in the classroom (Wharton & Erickson, 1993).

A study conducted by Martel and Nigg (2006) may also help to explain how emotionality and attentiveness are be linked. This study looked at emotionality, temperament and ADHD in a child population, to determine any links between the variables. Researchers found that children who scored lower on ratings of emotionality had greater symptoms of ADHD compared to children who had higher ratings of emotionality. Linking this research study to this present investigation, symptoms of ADHD are associated with inattentiveness. Although our sample did not have clinically elevated rates of inattentiveness, previous findings may map onto our current research. In

Martel's study children with ADHD had lower emotionality, explaining that these children were less anxious and less sensitive. Martel explained further that children with ADHD might not be able to focus on the work at hand, and therefore give up, not feeling the anxiety or being sensitive enough to complete the task at hand. Reaching further, perhaps children who are attending to what is presented or said to them, fully understand when a difficult task or situation is presented, and because of this difficult situation anxiety forms. Adolescents who are inattentive may employ a 'laissez-faire' attitude and not become anxious with stimuli presented.

Trends in the current data were also found indicating that emotion regulation and personality factors combined may predict attentiveness; however these findings were not significant. Expanding the present study by including more participants may give the data statistical power to find significant correlations and regression if they exist.

Implications for School Psychology

The current study provides ample implications for school psychology. Attention is an important factor in a student's learning, from elementary learners to adolescents (St. Clair-Thompson & Gathercole, 2006), and being able to understand what factors contribute to increased attentiveness would be a valuable asset in assisting struggling students. Understanding that emotionality can significantly predict attentiveness can lead to programs being tailored around this emotionality factor to assist students who may not be attending well in the classroom. Factors associated with inattentiveness, such as emotionality and conscientiousness can also be used in a preventative manner. If an adolescent has low emotionality or low conscientiousness, this information could assist

teachers predicting that attention may become a problem, even before attentional problems are manifested. Prevention methods, such as demonstrating to an adolescent the proper ways to attend in the classroom, could be implemented to allow the student to develop skills he or she needs to attend.

Future Directions

Although not all the hypotheses in the current study were supported, interesting findings arose, which may warrant future research in these areas. Given that male participants and female participants differed on their scores of inattention (males being more inattentive than females), further investigation into this difference may be warranted. Perception of attentiveness is also an interesting factor when investigating male and female participants, because although parents and teachers may perceive boys as being more inattentive, they may actually be attending as well as girls (Quinn and Wigal, 2004).

Another surprising finding was the correlation between honesty-humility and emotion regulation. Currently there is little research with the personality factor of honesty-humility, as it is a new factor incorporated into the HEXACO model and not previously used in the Five Factor model. It would be interesting to more closely investigate the honesty-humility factor and define what characteristics within that factor may correlate with emotion regulation.

Finally, there are ample factors that are strongly associated with attentiveness, such as gender, personality factors, and most importantly emotionality. This research project; however, has also noted significant gaps in the research in this area. Personality

and attention research with an adolescent population is sparse, and even less research when a third variable of emotion regulation is introduced. Attention is an important factor in a student's learning, from elementary learners to adolescents (St. Clair-Thompson & Gathercole 2006) and more research is needed in this area. Many research projects have investigated attention with a sample of ADHD students, but it is important to note that even elevated levels of inattentiveness that are not clinically significant may have implications on a child's learning, and further research should investigate such a sample.

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Appendix A.

Dear parents and students,

I am a student in the Master of Arts in School Psychology program at Mount Saint Vincent University, and I am currently investigating the relationship between attentiveness, emotion regulation and personality under the supervision of Dr. Daniel Lagacé-Séguin.

I wish to invite you to participate in the present study. Parents, you will be required to fill out one short questionnaire that will ask you questions about your child's attentiveness. Students, you will be required to fill out one questionnaire about your personality, as well as a questionnaire regarding temperament. In total, the parents' questionnaires should take no more than 15 minutes and the children's 45 minutes.

If you agree to participate you may choose to skip any questions you feel uncomfortable about. Participation is completely voluntary. You may choose to withdraw from the study at any time without penalty.

All responses are confidential. To ensure confidentiality do not place your name on the survey. If you would like to participate please complete the attached informed consent form and hand it in along with your completed survey. You may keep this letter for your own records. Summarized results will be made available to you if you wish to have a copy. The information obtained from the consent forms will be used to send a summary of results. Benefits are that involvement in the study will allow you to learn more about how emotion regulation and personality may influence attentiveness in and out of the classroom. After completion of the study all identifying information will be destroyed.

If you have any questions do not hesitate to contact my thesis supervisor, Dr. Daniel Lagacé-Séguin at (902) 457- 6460. If you have questions about how this study is being conducted and wish to speak with someone who is not directly involved in the study, you may contact the Chair of the University Research Ethics Board (UREB) c/o MSVU Research and International Office, at 457-6350 or via e-mail at research@msvu.ca.

If you agree with the above please sign the consent form on the next page.

Sincerely,

Mallory Mayes
MA Student

Dr. Daniel Lagacé-Séguin
Thesis Supervisor (Department of Psychology)

Appendix B

Participant/Parent Consent Form

PLEASE PRINT CLEARLY IN INK

I, _____ (insert parent full name) have read the information sheet, and agree to participate in the present study concerning the relationship between attentiveness, emotion regulation and personality.

I, _____ (insert student full name) have read the information sheet, and agree to participate in the present study concerning the relationship between attentiveness, emotion regulation and personality.

_____ (Date) _____ (parent) Signature _____ (student) Signature

Please complete this section if you wish to obtain a summary copy of the final results.

_____ Name

_____ Mailing Address

OR

_____ E-mail Address

Appendix C

Teacher Consent Form

PLEASE PRINT CLEARLY IN INK

I, _____ (insert teacher full name) have read the information sheet, and agree to participate in the present study concerning the relationship between attentiveness, emotion regulation and personality.

Date

(teacher) Signature

Please complete this section if you wish to obtain a summary copy of the final results.

Name

Mailing Address

OR

E-mail Address

Appendix D

Demographics Questionnaire

Please check the appropriate box or fill in the blank.

Sex of student:

- Male
- Female

Age of student: _____

Mother's Highest Education:

- High School
- College
- University
- Post-Graduate

Father's Highest Education:

- High School
- College
- University
- Post-Graduate

Number of Siblings: _____

Have you (student) missed any significant time from school?

- No
 - Yes (If so, please explain) _____
-

Appendix E



CONNERS 3™ - Parent Short

C. Keith Conners, Ph.D.

Child's Name/ID: _____ Gender: M F Birth Date: ____/____/____
 Parent's Name/ID: _____ Age: _____ Grade: _____ Today's Date: ____/____/____

Instructions: Here are some things parents might say about their children. Please tell us about your child and what he/she has been like in the **past month**. Read each item carefully, then mark how well it describes your child or how frequently it has happened in the **past month**.

- 0 = In the past month, this was **not true at all** about my child. It never (or seldom) happened.
- 1 = In the past month, this was **just a little true** about my child. It happened occasionally.
- 2 = In the past month, this was **pretty much true** about my child. It happened often (or quite a bit).
- 3 = In the past month, this was **very much true** about my child. It happened very often (very frequently).

Please circle only one answer for each item. It is important to respond to every item. For items that you find difficult to answer, please give your best guess.

Rating: 0 = Not true at all (Never, Seldom) 2 = Pretty much true (Often, Quite a bit)
 In the past month, this was... 1 = Just a little true (Occasionally) 3 = Very much true (Very often, Very frequently)

- | | | | | | |
|-----|---|---|---|---|---|
| 1. | Forgets to turn in completed work. | 0 | 1 | 2 | 3 |
| 2. | Is perfect in every way. | 0 | 1 | 2 | 3 |
| 3. | Fidgets or squirms in seat. | 0 | 1 | 2 | 3 |
| 4. | Is one of the last to be picked for teams or games. | 0 | 1 | 2 | 3 |
| 5. | Restless or overactive. | 0 | 1 | 2 | 3 |
| 6. | Does not know how to make friends. | 0 | 1 | 2 | 3 |
| 7. | Runs or climbs when he/she is not supposed to. | 0 | 1 | 2 | 3 |
| 8. | Cannot grasp arithmetic. | 0 | 1 | 2 | 3 |
| 9. | Is difficult to please or amuse. | 0 | 1 | 2 | 3 |
| 10. | Needs extra explanation of instructions. | 0 | 1 | 2 | 3 |
| 11. | Is hard to motivate (even with rewards like candy or money). | 0 | 1 | 2 | 3 |
| 12. | Makes mistakes. | 0 | 1 | 2 | 3 |
| 13. | Acts as if driven by a motor. | 0 | 1 | 2 | 3 |
| 14. | Starts fights with others on purpose. | 0 | 1 | 2 | 3 |
| 15. | Has trouble getting started on tasks or projects. | 0 | 1 | 2 | 3 |
| 16. | Is happy, cheerful, and has a positive attitude. | 0 | 1 | 2 | 3 |
| 17. | Doesn't pay attention to details; makes careless mistakes. | 0 | 1 | 2 | 3 |
| 18. | Has trouble keeping friends. | 0 | 1 | 2 | 3 |
| 19. | Bullies, threatens, or scares others. | 0 | 1 | 2 | 3 |
| 20. | Loses things (for example, schoolwork, pencils, books, tools, or toys). | 0 | 1 | 2 | 3 |
| 21. | Tells lies to hurt other people. | 0 | 1 | 2 | 3 |
| 22. | I cannot figure out what makes him/her happy. | 0 | 1 | 2 | 3 |
| 23. | Threatens to hurt others. | 0 | 1 | 2 | 3 |
| 24. | Is constantly moving. | 0 | 1 | 2 | 3 |
| 25. | Has trouble with reading. | 0 | 1 | 2 | 3 |
| 26. | Is angry and resentful. | 0 | 1 | 2 | 3 |
| 27. | Has a short attention span. | 0 | 1 | 2 | 3 |
| 28. | Excitable, impulsive. | 0 | 1 | 2 | 3 |
| 29. | Cannot do things right. | 0 | 1 | 2 | 3 |
| 30. | Has trouble concentrating. | 0 | 1 | 2 | 3 |
| 31. | Tells the truth; doesn't even tell "little white lies." | 0 | 1 | 2 | 3 |
| 32. | Has trouble organizing tasks or activities. | 0 | 1 | 2 | 3 |
| 33. | Is fun to be around. | 0 | 1 | 2 | 3 |
| 34. | Inattentive, easily distracted. | 0 | 1 | 2 | 3 |
| 35. | Is messy or disorganized. | 0 | 1 | 2 | 3 |
| 36. | Spelling is poor. | 0 | 1 | 2 | 3 |
| 37. | Is patient and content, even when waiting in a long line. | 0 | 1 | 2 | 3 |
| 38. | Has no friends. | 0 | 1 | 2 | 3 |
| 39. | Does not understand what he/she reads. | 0 | 1 | 2 | 3 |
| 40. | Behaves like an angel. | 0 | 1 | 2 | 3 |
| 41. | Has trouble keeping his/her mind on work or play for long. | 0 | 1 | 2 | 3 |
| 42. | Has to struggle to complete hard tasks. | 0 | 1 | 2 | 3 |
| 43. | Does not get invited to play or go out with others. | 0 | 1 | 2 | 3 |

Additional Questions:

C30010

44. Do you have any other concerns about your child? _____
45. What strengths or skills does your child have? _____



Appendix F



| | | |
|---------------------------|-------------------------|--|
| Student's Name/ID: _____ | Gender: M ___ F ___ | Birth Date: ____/____/____ |
| Teacher's Name/ID: _____ | Age: ____ | Grade: ____ Today's Date: ____/____/____ |
| Time Known Student: _____ | Class(es) Taught: _____ | |

Instructions: Here are some things teachers might say about their students. Please tell us about *this* student and what he/she has been like in the **past month**. Read each item carefully, then mark how well it describes this student or how frequently it has happened in the **past month**.

- 0 = In the past month, this was **not true at all** about this student. It never (or seldom) happened.
- 1 = In the past month, this was **just a little true** about this student. It happened occasionally.
- 2 = In the past month, this was **pretty much true** about this student. It happened often (or quite a bit).
- 3 = In the past month, this was **very much true** about this student. It happened very often (very frequently).

Please circle only one answer for each item. It is important to respond to every item.
For items that you find difficult to answer, please give your best guess.

Rating: **0 = Not true at all (Never, Seldom)** **2 = Pretty much true (Often, Quite a bit)**
In the past month, this was... **1 = Just a little true (Occasionally)** **3 = Very much true (Very often, Very frequently)**

| | | | | | |
|-----|--|---|---|---|---|
| 1. | Is constantly moving. | 0 | 1 | 2 | 3 |
| 2. | Has to struggle to complete hard tasks. | 0 | 1 | 2 | 3 |
| 3. | Inattentive, easily distracted. | 0 | 1 | 2 | 3 |
| 4. | Makes mistakes. | 0 | 1 | 2 | 3 |
| 5. | Bullies, threatens, or scares others. | 0 | 1 | 2 | 3 |
| 6. | Cannot do things right. | 0 | 1 | 2 | 3 |
| 7. | Is angry and resentful. | 0 | 1 | 2 | 3 |
| 8. | Excitable, impulsive. | 0 | 1 | 2 | 3 |
| 9. | Is fun to be around. | 0 | 1 | 2 | 3 |
| 10. | Has trouble keeping his/her mind on work or play for long. | 0 | 1 | 2 | 3 |
| 11. | Has poor social skills. | 0 | 1 | 2 | 3 |
| 12. | Actively refuses to do what adults tell him/her to do. | 0 | 1 | 2 | 3 |
| 13. | Is happy, cheerful, and has a positive attitude. | 0 | 1 | 2 | 3 |
| 14. | Cannot grasp arithmetic. | 0 | 1 | 2 | 3 |
| 15. | Tries to get even with people. | 0 | 1 | 2 | 3 |
| 16. | Has trouble getting started on tasks or projects. | 0 | 1 | 2 | 3 |
| 17. | Acts in sneaky or manipulative ways. | 0 | 1 | 2 | 3 |
| 18. | Does not understand what he/she reads. | 0 | 1 | 2 | 3 |
| 19. | Tells the truth; does not even tell "little white lies." | 0 | 1 | 2 | 3 |
| 20. | Appears to be unaccepted by group. | 0 | 1 | 2 | 3 |
| 21. | Is hard to motivate (even with highly desirable rewards). | 0 | 1 | 2 | 3 |
| 22. | Restless or overactive. | 0 | 1 | 2 | 3 |
| 23. | Is good at planning ahead. | 0 | 1 | 2 | 3 |
| 24. | Fidgets or squirms in seat. | 0 | 1 | 2 | 3 |
| 25. | Is patient and content, even when waiting in a long line. | 0 | 1 | 2 | 3 |
| 26. | Doesn't pay attention to details; makes careless mistakes. | 0 | 1 | 2 | 3 |
| 27. | Is one of the last to be picked for teams or games. | 0 | 1 | 2 | 3 |
| 28. | Spelling is poor. | 0 | 1 | 2 | 3 |
| 29. | Has trouble keeping friends. | 0 | 1 | 2 | 3 |
| 30. | Leaves seat when he/she should stay seated. | 0 | 1 | 2 | 3 |
| 31. | Behaves like an angel. | 0 | 1 | 2 | 3 |
| 32. | Talks out of turn. | 0 | 1 | 2 | 3 |
| 33. | Is difficult to please or amuse. | 0 | 1 | 2 | 3 |
| 34. | Is perfect in every way. | 0 | 1 | 2 | 3 |
| 35. | Forgets things already learned. | 0 | 1 | 2 | 3 |
| 36. | Has a short attention span. | 0 | 1 | 2 | 3 |
| 37. | Does not know how to make friends. | 0 | 1 | 2 | 3 |
| 38. | I cannot figure out what makes him/her happy. | 0 | 1 | 2 | 3 |
| 39. | Is sidetracked easily. | 0 | 1 | 2 | 3 |

Additional Questions:

- 40. Do you have any other concerns about this student? _____
- 41. What strengths or skills does this student have? _____

C30011



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Appendix G

**Early Adolescent Temperament Questionnaire – Revised
Long Form****Directions**

On the following page you will find a series of statements that people might use to describe themselves. The statements refer to a wide number of activities and attitudes.

For each statement, please circle the answer that best describes how true each statement is **for you**. There are no best answers. People are very different in how they feel about these statements. Please circle the first answer that comes to you.

You will use the following scale to describe how true or false a statement is about you:

| <u>Circle number:</u> | <u>If the statement is:</u> |
|------------------------------|--|
| 1 | Almost always untrue of you |
| 2 | Usually untrue of you |
| 3 | Sometimes true sometimes untrue of you |
| 4 | Usually true of you |
| 5 | Almost always true of you |

NOTE: Please make certain to answer all questions on BOTH SIDES of the page.

Please tell us:

Your date of birth: _____

Your gender: M / F

Family ID code: _____

How true is each statement for you?

Almost
always
untrue

Usually
untrue

Sometimes
true,
sometimes
untrue

Usually
true

Almost
always
true

| | | | | | | |
|-----|--|---|---|---|---|---|
| 1) | I would rather play a sport than watch TV. | 1 | 2 | 3 | 4 | 5 |
| 2) | I enjoy going places where there are big crowds and lots of excitement. | 1 | 2 | 3 | 4 | 5 |
| 3) | I worry about getting into trouble. | 1 | 2 | 3 | 4 | 5 |
| 4) | I notice when other people are coughing during movies or shows. | 1 | 2 | 3 | 4 | 5 |
| 5) | If I'm mad at somebody, I tend to say things that I know will hurt their feelings. | 1 | 2 | 3 | 4 | 5 |
| 6) | I feel shy about meeting new people. | 1 | 2 | 3 | 4 | 5 |
| 7) | I have a hard time finishing things on time. | 1 | 2 | 3 | 4 | 5 |
| 8) | I wouldn't like living in a really big city, even if it was safe. | 1 | 2 | 3 | 4 | 5 |
| 9) | I feel shy with kids of the opposite sex. | 1 | 2 | 3 | 4 | 5 |
| 10) | When I am angry, I throw or break things. | 1 | 2 | 3 | 4 | 5 |
| 11) | I notice even little changes taking place around me, like lights getting brighter in a room. | 1 | 2 | 3 | 4 | 5 |
| 12) | When I'm excited, it's hard for me to wait my turn to talk. | 1 | 2 | 3 | 4 | 5 |
| 13) | My friends seem to enjoy themselves more than I do. | 1 | 2 | 3 | 4 | 5 |
| 14) | Skiing fast down a steep slope sounds scary to me. | 1 | 2 | 3 | 4 | 5 |
| 15) | It often takes very little to make me feel like crying. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|-----|--|---|---|---|---|---|
| 16) | When I do things, I do them with a lot of physical energy. | 1 | 2 | 3 | 4 | 5 |
| 17) | I wouldn't be afraid to skateboard or ride a bike really fast down a steep hill. | 1 | 2 | 3 | 4 | 5 |
| 18) | If I get really mad at someone, I might hit them. | 1 | 2 | 3 | 4 | 5 |
| 19) | When someone tells me to stop doing something, it is easy for me to stop. | 1 | 2 | 3 | 4 | 5 |
| 20) | I could easily change a bad habit if I wanted to. | 1 | 2 | 3 | 4 | 5 |
| 21) | I tend to say the first thing that comes to my mind, without stopping to think about it. | 1 | 2 | 3 | 4 | 5 |
| 22) | It's hard for me not to open presents before I'm supposed to. | 1 | 2 | 3 | 4 | 5 |
| 23) | I want to be able to share my private thoughts with someone else. | 1 | 2 | 3 | 4 | 5 |
| 24) | I do something fun for a while before starting my homework, even when I'm not supposed to. | 1 | 2 | 3 | 4 | 5 |
| 25) | It is easy for me to really concentrate on homework problems. | 1 | 2 | 3 | 4 | 5 |
| 26) | I feel pretty happy most of the day. | 1 | 2 | 3 | 4 | 5 |
| 27) | When people tell me about trips to exotic places, it makes me really want to go there. | 1 | 2 | 3 | 4 | 5 |
| 28) | I like the sound of words. | 1 | 2 | 3 | 4 | 5 |
| 29) | I think it would be exciting to move to a new city. | 1 | 2 | 3 | 4 | 5 |
| 30) | I like to look at trees and walk amongst them. | 1 | 2 | 3 | 4 | 5 |
| 31) | I tend to notice little changes that other people do not notice. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|-----|---|---|---|---|---|---|
| 32) | When someone asks me to do something, I do it right away, even if I don't want to. | 1 | 2 | 3 | 4 | 5 |
| 33) | When I compete in games or sports, I really try to crush my opponents. | 1 | 2 | 3 | 4 | 5 |
| 34) | I like the feel of hot water running over me, like in the shower. | 1 | 2 | 3 | 4 | 5 |
| 35) | I am very aware of noises. | 1 | 2 | 3 | 4 | 5 |
| 36) | I like to be physically active whenever I have the chance (sports, dancing, etc.). | 1 | 2 | 3 | 4 | 5 |
| 37) | I tend to be rude to people I don't like. | 1 | 2 | 3 | 4 | 5 |
| 38) | I would like to be able to spend time with a good friend every day. | 1 | 2 | 3 | 4 | 5 |
| 39) | When I'm having a really good time, I have a hard time leaving to go home when I'm supposed to. | 1 | 2 | 3 | 4 | 5 |
| 40) | I am a patient person. | 1 | 2 | 3 | 4 | 5 |
| 41) | I can tell if another person is angry by their expression. | 1 | 2 | 3 | 4 | 5 |
| 42) | It bothers me when I try to make a phone call and the line is busy. | 1 | 2 | 3 | 4 | 5 |
| 43) | If I am asked to deliver a message to an adult, I feel uncomfortable about going up to them. | 1 | 2 | 3 | 4 | 5 |
| 44) | When interrupted or distracted, I forget what I was about to say. | 1 | 2 | 3 | 4 | 5 |
| 45) | I blurt out answers in class before the teacher calls on me. | 1 | 2 | 3 | 4 | 5 |
| 46) | The more I try to stop myself from doing something I shouldn't, the more likely I am to do it. | 1 | 2 | 3 | 4 | 5 |
| 47) | I enjoy exchanging hugs with people I like. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|-----|--|---|---|---|---|---|
| 48) | I like the crunching sound of autumn leaves. | 1 | 2 | 3 | 4 | 5 |
| 49) | I get sad more than other people realize. | 1 | 2 | 3 | 4 | 5 |
| 50) | I like to feel a warm breeze blowing on my face. | 1 | 2 | 3 | 4 | 5 |
| 51) | I will do most anything to help someone I care about. | 1 | 2 | 3 | 4 | 5 |
| 52) | I can generally think of something to say, even with strangers. | 1 | 2 | 3 | 4 | 5 |
| 53) | I would not be afraid to try a risky sport, like deep-sea diving. | 1 | 2 | 3 | 4 | 5 |
| 54) | I get frightened riding with a person who likes to speed. | 1 | 2 | 3 | 4 | 5 |
| 55) | If my friends are mad at me, I try to stay away from them. | 1 | 2 | 3 | 4 | 5 |
| 56) | I find it hard to shift gears when I go from one class to another at school. | 1 | 2 | 3 | 4 | 5 |
| 57) | I worry about my family when I'm not with them. | 1 | 2 | 3 | 4 | 5 |
| 58) | I get very upset if I want to do something and my parents won't let me | 1 | 2 | 3 | 4 | 5 |
| 59) | When I am mad, I slam doors. | 1 | 2 | 3 | 4 | 5 |
| 60) | I get sad when a lot of things are going wrong. | 1 | 2 | 3 | 4 | 5 |
| 61) | I find the idea of driving a race car exciting. | 1 | 2 | 3 | 4 | 5 |
| 62) | When trying to study, I have difficulty tuning out background noise and concentrating. | 1 | 2 | 3 | 4 | 5 |
| 63) | I finish my homework before the due date. | 1 | 2 | 3 | 4 | 5 |
| 64) | I have the energy for hard physical work, like digging in the yard or chopping | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|-----|--|---|---|---|---|---|
| | wood. | | | | | |
| 65) | I tend to be on time for school and appointments. | 1 | 2 | 3 | 4 | 5 |
| 66) | If I have a hard assignment to do, I get started right away. | 1 | 2 | 3 | 4 | 5 |
| 67) | I am good at keeping track of several different things that are happening around me. | 1 | 2 | 3 | 4 | 5 |
| 68) | I tend to talk about other people behind their back. | 1 | 2 | 3 | 4 | 5 |
| 69) | It is a lot easier for me to talk to people I know than to strangers | 1 | 2 | 3 | 4 | 5 |
| 70) | I enjoy listening to the birds sing. | 1 | 2 | 3 | 4 | 5 |
| 71) | It's easy for me to keep a secret. | 1 | 2 | 3 | 4 | 5 |
| 72) | My friends and I make fun of how other people look. | 1 | 2 | 3 | 4 | 5 |
| 73) | It bothers me when people are slow about getting ready for something. | 1 | 2 | 3 | 4 | 5 |
| 74) | I don't criticize other people. | 1 | 2 | 3 | 4 | 5 |
| 75) | It is important to me to have close relationships with other people. | 1 | 2 | 3 | 4 | 5 |
| 76) | I am shy. | 1 | 2 | 3 | 4 | 5 |
| 77) | I am nervous of some of the kids at school who push people into lockers and throw your books around. | 1 | 2 | 3 | 4 | 5 |
| 78) | I like to look at other people's photographs. | 1 | 2 | 3 | 4 | 5 |
| 79) | I get irritated when I have to stop doing something that I am enjoying. | 1 | 2 | 3 | 4 | 5 |
| 80) | I like to look at the pattern of clouds in the sky. | 1 | 2 | 3 | 4 | 5 |
| 81) | I am good at self-discipline. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|-----|--|---|---|---|---|---|
| 82) | I put off working on projects until right before they're due. | 1 | 2 | 3 | 4 | 5 |
| 83) | Long winter weekends make me want to get out of the house and do something physical. | 1 | 2 | 3 | 4 | 5 |
| 84) | When I'm really mad at a friend, I tend to explode at them. | 1 | 2 | 3 | 4 | 5 |
| 85) | I worry about my parent(s) dying or leaving me. | 1 | 2 | 3 | 4 | 5 |
| 86) | I tend to get in the middle of one thing, then go off and do something else. | 1 | 2 | 3 | 4 | 5 |
| 87) | I am not shy. | 1 | 2 | 3 | 4 | 5 |
| 88) | I am quite a warm and friendly person. | 1 | 2 | 3 | 4 | 5 |
| 89) | I can stick with my plans and goals. | 1 | 2 | 3 | 4 | 5 |
| 90) | I feel sad even when I should be enjoying myself, like at Christmas or on a trip. | 1 | 2 | 3 | 4 | 5 |
| 91) | It really annoys me to wait in long lines. | 1 | 2 | 3 | 4 | 5 |
| 92) | I don't really notice the color of people's eyes. | 1 | 2 | 3 | 4 | 5 |
| 93) | I feel scared when I enter a darkened room at home. | 1 | 2 | 3 | 4 | 5 |
| 94) | I like to listen to other people talk about themselves. | 1 | 2 | 3 | 4 | 5 |
| 95) | I wouldn't want to go on the frightening rides at the fair. | 1 | 2 | 3 | 4 | 5 |
| 96) | I pick on people for no real reason. | 1 | 2 | 3 | 4 | 5 |
| 97) | I pay close attention when someone tells me how to do something. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|------|--|---|---|---|---|---|
| 98) | I get very frustrated when I make a mistake in my school work. | 1 | 2 | 3 | 4 | 5 |
| 99) | I wouldn't be afraid to try something like mountain climbing. | 1 | 2 | 3 | 4 | 5 |
| 100) | I prefer outdoor activities to those indoors. | 1 | 2 | 3 | 4 | 5 |
| 101) | It frustrates me if people interrupt me when I'm talking. | 1 | 2 | 3 | 4 | 5 |
| 102) | I get upset if I'm not able to do a task really well. | 1 | 2 | 3 | 4 | 5 |
| 103) | I prefer friends who are exciting and unpredictable | 1 | 2 | 3 | 4 | 5 |

Appendix H
HEXACO-60

- 1 _____ I would be quite bored by a visit to an art gallery.
- 2 _____ I plan ahead and organize things, to avoid scrambling at the last minute.
- 3 _____ I rarely hold a grudge, even against people who have badly wronged me.
- 4 _____ I feel reasonably satisfied with myself overall.
- 5 _____ I would feel afraid if I had to travel in bad weather conditions.
- 6 _____ I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.
- 7 _____ I'm interested in learning about the history and politics of other countries.
- 8 _____ I often push myself very hard when trying to achieve a goal.
- 9 _____ People sometimes tell me that I am too critical of others.
- 10 _____ I rarely express my opinions in group meetings.
- 11 _____ I sometimes can't help worrying about little things.
- 12 _____ If I knew that I could never get caught, I would be willing to steal a million dollars.
- 13 _____ I would enjoy creating a work of art, such as a novel, a song, or a painting.
- 14 _____ When working on something, I don't pay much attention to small details.
- 15 _____ People sometimes tell me that I'm too stubborn.
- 16 _____ I prefer jobs that involve active social interaction to those that involve working alone.
- 17 _____ When I suffer from a painful experience, I need someone to make me feel comfortable.
- 18 _____ Having a lot of money is not especially important to me.
- 19 _____ I think that paying attention to radical ideas is a waste of time.
- 20 _____ I make decisions based on the feeling of the moment rather than on careful thought.
- 21 _____ People think of me as someone who has a quick temper.
- 22 _____ On most days, I feel cheerful and optimistic.
- 23 _____ I feel like crying when I see other people crying.
- 24 _____ I think that I am entitled to more respect than the average person is.
- 25 _____ If I had the opportunity, I would like to attend a classical music concert.
- 26 _____ When working, I sometimes have difficulties due to being disorganized.
- 27 _____ My attitude toward people who have treated me badly is "forgive and forget".
- 28 _____ I feel that I am an unpopular person.
- 29 _____ When it comes to physical danger, I am very fearful.
- 30 _____ If I want something from someone, I will laugh at that person's worst jokes.

- 31 _____ I've never really enjoyed looking through an encyclopedia.
- 32 _____ I do only the minimum amount of work needed to get by.
- 33 _____ I tend to be lenient in judging other people.
- 34 _____ In social situations, I'm usually the one who makes the first move.
- 35 _____ I worry a lot less than most people do.
- 36 _____ I would never accept a bribe, even if it were very large.
- 37 _____ People have often told me that I have a good imagination.
- 38 _____ I always try to be accurate in my work, even at the expense of time.
- 39 _____ I am usually quite flexible in my opinions when people disagree with me.
- 40 _____ The first thing that I always do in a new place is to make friends.
- 41 _____ I can handle difficult situations without needing emotional support from anyone else.
- 42 _____ I would get a lot of pleasure from owning expensive luxury goods.
- 43 _____ I like people who have unconventional views.
- 44 _____ I make a lot of mistakes because I don't think before I act.
- 45 _____ Most people tend to get angry more quickly than I do.
- 46 _____ Most people are more upbeat and dynamic than I generally am.
- 47 _____ I feel strong emotions when someone close to me is going away for a long time.
- 48 _____ I want people to know that I am an important person of high status.
- 49 _____ I don't think of myself as the artistic or creative type.
- 50 _____ People often call me a perfectionist.
- 51 _____ Even when people make a lot of mistakes, I rarely say anything negative.
- 52 _____ I sometimes feel that I am a worthless person.
- 53 _____ Even in an emergency I wouldn't feel like panicking.
- 54 _____ I wouldn't pretend to like someone just to get that person to do favors for me.
- 55 _____ I find it boring to discuss philosophy.
- 56 _____ I prefer to do whatever comes to mind, rather than stick to a plan.
- 57 _____ When people tell me that I'm wrong, my first reaction is to argue with them.
- 58 _____ When I'm in a group of people, I'm often the one who speaks on behalf of the group.
- 59 _____ I remain unemotional even in situations where most people get very sentimental.
- 60 _____ I'd be tempted to use counterfeit money, if I were sure I could get away with it.

5 = strongly agree, 4 = agree, 3 = neutral (neither agree nor disagree), 2 = disagree, 1 = strongly disagree