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**A CORRELATIONAL STUDY OF EMOTIONAL INTELLIGENCE
AND AGGRESSION IN ADOLESCENTS**

by

Andrew W. Johnston

**A Thesis
Submitted to the Faculty of Graduate Studies and Research
through the Faculty of Education
in Partial Fulfillment of the Requirements for
the Degree of Master of Education at the
University of Windsor**

Windsor, Ontario, Canada

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ABSTRACT

The relationship between adolescent emotional intelligence and adolescent aggression was investigated. Seventy one 7th and 8th grade students participated in the study. The students ranged in age from 11 to 14 years. All subjects completed the BarOn Emotional Quotient Inventory: Youth Version (BarOn EQ-i:YV) as a measure of emotional intelligence. They also completed an Aggression Questionnaire (Buss & Perry, 1992, *Journal of Personality and Social Psychology*, 63, 452-459). Pearson product-moment correlations were examined indicating an overall significant negative correlation between Emotional Intelligence and Aggression ($r = -.693$, $p < .001$). Stepwise multiple regression analysis was used to further investigate relationships between components of Aggression and Emotional Intelligence. Analysis indicated that Stress Management ($\beta = -.736$, $p < .001$) and Intrapersonal ($\beta = -.268$, $p < .001$) measures were significant predictors of Physical Aggression. A second stepwise multiple regression analysis indicated that Anger ($\beta = .591$, $p < .001$) and Hostility ($\beta = .292$, $p < .05$) were also significant predictors of Physical Aggression. A one-way analysis of variance indicated significant gender differences with males scoring higher on Physical Aggression ($p < .001$) and Total Aggression ($p < .01$) and females scoring higher on Emotional Intelligence ($p < .05$).

DEDICATION

Thanks to Dr. Morton for his assistance and statistical guidance. Thanks also to the school board, school administration, and students of the participating school. A very special thank you to my wife, Lisa, for her continuing inspiration and support. Thank you also to Paige and Chloe for adding spice to the experience.

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CHAPTER 1

INTRODUCTION

A. General Statement of the Problem

Adolescent aggression is a problem in society and educational systems. News agencies frequently broadcast and print stories of violence, bullying and violent crime amongst our youth. In educational research circles, staff room chat sessions, parent council meetings and school improvement discussions, bullying and violence prevention programs are often discussed and debated. In a Gallup poll of current attitudes toward public schools, educators ranked aggression in the schools as the number one concern confronting educators (Elam, Rose, & Gallup, 1994). Since the recent tragedy of highly publicized school shootings, violence in schools has been discussed with even greater urgency. At the same time, a public and political agenda has pushed affective programs to the rear, opting for increased academic accountability through standardized testing.

It is a popular opinion that aggressive behaviors are increasing in our school systems. It is also plausible that this perception is made worse by sensationalistic media interested at least as much in viewer ratings and newspaper circulation as truth. In its annual report on school safety, The United States Department of Education (2000) released the following data. In 1998, all nonfatal crimes- including theft, rape, sexual assault, robbery and aggravated assault against students at school declined to 101 per 1,000 students from 144 per 1,000 students in 1992. While the Department of Education

seemed pleased with this decline, it still means that 2.7 million students in America were victims of nonfatal crimes at school during the 1998 calendar year. Additionally, the report indicated that 5% of all 12th grade students in the United States reported being injured on purpose with a weapon, such as a knife, gun or club during the previous 12 months. This figure was also a decrease from the 1992 report of 11%. On average from 1994 to 1998 there were 133, 700 violent crimes against teachers at school and 217, 400 thefts from teachers at schools. This translates to 31 violent crimes for every 1,000 teachers and 51 thefts for every 1,000 teachers during each of the four years. While the report indicates an overall decline in criminal activity between 1992 and 1998 in American schools, the number of reported incidents of violence and crime still seem unacceptably high. Consider that these are only incidents reported to police. On any given day thousands of aggressive, anti-social, and bullying type incidents are being investigated and addressed by school administrators in our schools. These incidents do not merit police reports but certainly detract from the learning environment and have lasting emotional consequences (Ballard, Argus, & Remley, 1999; Sagarese & Giannetti, 1999).

Goleman (1995) offered further evidence regarding the moral and emotional state of today's school children. In 1990, compared to the previous two decades in America, the juvenile arrest rate for violent crimes was the highest of any previous time. He stated that the teen arrest rates for rape had doubled (10.9 per 100,000 in 1965 to 21.9 per 100,000 in 1990), that teen murder rates had quadrupled (2.8 per 100,000 to 12.1 per

100,000) and that suicide rates for teenagers had tripled (4.5 per 100,000 to 13.3 per 100,000). Goleman's sources for these statistics included the National Center for Education in Maternal and Child Health as well as the Department of Justice. This is not just a North American phenomenon. Owens and MacMullin (1995) state that aggression and violence is perceived by the general public of Australia to be on the increase.

In schools and school districts across North America there has been a rush to adopt emotional competency programs which address the issues of aggression and bullying. Numerous programs exist which claim to address the affective difficulties of today's school systems. National organizations, such as the "Character Counts! Coalition" have been developed to address a perceived lack of moral education in today's society. For some, programs of social learning and affective development are of prime importance. Exposure to aggression and bullying by peers in school settings has been linked with increased dropout rates, lower self esteem, fewer friends, declining grades and increases in illness (Ballard, Argus, & Remley, 1999; Sagarese & Giannetti, 1999).

There is a growing trend to group the character based skills of social learning and affective education under the umbrella of "emotional intelligence". A variety of definitions, theories, and measures have recently been developed in regard to the concept of emotional intelligence. Some researchers have made strong positive claims regarding its predictive value. Goleman (1995) stated that emotional intelligence is at least as important as Intelligence Quotient, when determining one's future or life success. A great deal of popular writing has evolved around the subject of emotional intelligence. Many

of the articles support Goleman's views and advocate for the importance of emotional intelligence in today's education system (Harrington-Lueker, 1997; Murray, 1996; Pool, 1997; Reissman, 1999; Sylwester, 2000; Elias, Butler, Blum & Schuyler, 1997). Upon close examination of these articles, one is hard pressed to find supporting scientific studies. Pool (1997) states that "... according to recent research, emotional well being is the strongest predictor of achievement in school and on the job and according to other research, today's children are down on all indicators of emotional health" (Pool, 1997, pg 12). Unfortunately, studies to support this claim were not cited or referenced in the article. Thus, the credibility of the claim is open to question.

If a student's emotional intelligence can be developed and improved using developmental programs and if emotional intelligence can be scientifically linked with aggression, then certainly educational organizations would be well advised to support programs which develop emotional intelligence and address socially appropriate choices for adolescents. If there is a link between one's emotional intelligence and one's frequency of socially inappropriate behaviors, certainly there is a need to develop the emotional intelligence of adolescents. An increasing number of educators share the view that middle schools must pay closer attention to students' emotional development. Their concerns go beyond efforts to boost self-esteem. In a sense, they are talking about survival skills needed to participate effectively as citizens of a democracy (Grant & Johnson, 1997).

Recently many school systems have felt pressure to "get back to basics" and

pressures to achieve higher grades on standardized tests. School systems face a demand for more rigorous curriculum, more academic accountability and they have fewer dollars with which to work. The challenge remains to meet these criteria and still find time and money to educate students to make socially appropriate choices, to take responsibility for their actions, and to accept others, regardless of differences. “As one Brooklyn teacher put it, we care more about how well school children read and write, than whether they’ll be alive next week” (Goleman, 1995).

Morality is a socialized concept. Arguments are certainly common regarding who should be responsible for moral education. Choices include parents, churches, religious bodies, and school systems. While an argument can be put forth that all citizens and institutions are responsible for the moral development of our youth, it seems that all too often schools, parents and other institutions are pointing the finger at each other.

In order to justify time and money being spent in the school system, a reasonable statistical and scientific body of knowledge needs to be established regarding the importance of emotional intelligence and its correlation, if any, to aggression in adolescents. What is the best way to develop the skills children need to handle disagreements, make socially appropriate choices, take responsibility for actions, and deal with negative peer pressures? Do female students require different training or techniques than male students? Better understanding of aggression and emotional intelligence are important issues in today’s school systems. Research in this area is important so that society can work towards the reduction of aggression in school systems.

Investigations are needed to strengthen or to refute the possible link between emotional intelligence and aggression. Better understanding will lead to more effective programs which develop children's abilities to work cooperatively, accept responsibility and make socially appropriate choices.

CHAPTER II

REVIEW OF LITERATURE

A. Studies of Emotional Intelligence

A relatively new concept, there have been many attempts to incorporate emotional intelligence within the framework of human cognitive abilities (Goleman, 1996; Mayer & Salovey, 1997; Mayer & Geher, 1996). To engage in scientific discussions of emotional intelligence it is first important to define the concept. "It is safe to say that no other century has seen such a shift in the definition of intelligence as we have in the 20th century. This recent evolution corresponds with our increasing understanding of the human brain and its cognitive processes"(Silver, Strong & Perini, 2000, p. 5). For this reason, much of the study surrounding emotional intelligence has dealt with defining, quantifying and measuring it. According to Davies, Stankov and Roberts (1998) if there are unique abilities that involve the processing of affective information, then this construct would be of obvious psychological importance.

Emotional intelligence has many varied and fundamentally different definitions. It has been defined as "the ability to monitor one's own and others' emotions, to discriminate among them, and to use the information to guide one's thinking and actions" (Salovey & Mayer, 1990, p.189). According to the Bar-On model, emotional intelligence is defined as an array of emotional, personal, and interpersonal abilities that influence one's overall ability to cope with environmental demands and pressures (Bar-On & Parker, 2000). As such, one's emotional intelligence is an important factor in

determining one's ability to succeed in life. "Emotionally intelligent people are people who recognize and express their emotions, possess positive self-regard, and are able to actualize their potential capacities and lead fairly happy lives. They are able to understand the way others feel and are capable of making and maintaining mutually satisfying and responsible interpersonal relationships, without becoming dependent on others. These people are generally optimistic, flexible, realistic, and successful in solving problems and coping with stress, without losing control" (Bar-On, 1997, pp. 155-156).

Goleman (1996) put forth an equally broad definition of emotional intelligence, and made similar claims regarding its predictive value and importance. He stated that: "...conventional wisdom says that a child's IQ is the best predictor of his or her future success. But research indicates that, at most, IQ contributes about 20 percent to the factors that determine success- leaving 80 percent to other forces. These other forces make up what's called emotional intelligence: abilities such as getting along with others, self motivation, persistence, controlling impulses, empathizing and regulating one's moods" (p. 49). Goleman received much criticism for not supporting these claims with scientific study or research. There were no studies or articles referenced in the above article to support these claims.

Many educational institutions incorporated emotional learning along with other affective programs into their curriculum without regard for the lack of empirical evidence to support Goleman's and Bar-On's claims. According to Cobb and Mayer (2000) "...school practices and policies on emotional intelligence have relied on popularizations

that were in some instances, far ahead of the science on which they were presumably based” (p 15). Thus, the early claims of the benefits of emotional intelligence to students, schools, and beyond were made without much empirical justification.

To define and construct a model of emotional intelligence, it would be first prudent to examine the concept of intelligence. Psychologists have sought to define intelligence for many years. A person’s general intelligence represented that individual’s overall level of intellectual attainment and ability, and had often been used to successfully predict a person’s academic and occupational achievement (Mayer & Geher, 1996). A large body of work was compiled involving the division of general intelligence into more specific intelligences that represent either groups of abilities or specific abilities (Cattell, 1963; Gardner, 1983; Guilford, 1967; Sternberg, 1988; Thorndike, 1920; Wechsler, 1987).

Thorndyke (1920) divided the concept of general intelligence into three classes: 1) abstract, analytic, and verbal, 2) mechanical, performance, visual-spatial and synthetic, and 3) social and/or practical intelligences. According to Mayer and Geher (1996) the third class was less studied because it was harder to separate from the others either empirically or theoretically.

Gardner (1993) brought forth new ideas regarding intelligence. He expanded the parameter of intelligent behaviour to include a diversity of human abilities. Gardner’s view of intelligence varied from the existing view in one fundamental way. He did not look at intelligence as one, unitary, quantifiable, isolated thing. Rather, he felt that it

could be demonstrated in a number of ways during real life situations. He believed in the concept of multiple intelligences. Gardner divided the traditional notion of intelligence into seven categories. They were: 1) Verbal Linguistic, 2) Logical Mathematical, 3) Spatial, 4) Musical, 5) Bodily-Kinesthetic, 6) Interpersonal and 7) Intrapersonal. The concept of multiple intelligences, and the notion that intelligence was not fixed, but rather could be developed was central to the development of many present day theories of emotional intelligence.

Sternberg's (1985) triarchic theory of intelligence has had many implications and undergone a number of practical tests regarding school curricula. According to the theory, human intelligence comprises three main aspects: analytical, creative, and practical. Analytical tasks involve analyzing, judging, evaluating, comparing and contrasting, and critiquing. Creative tasks involve creating, inventing, discovering, imagining, and supposing. Practical tasks involve implementing, using, applying and seeking relevance. Sternberg and others have invested a great deal of time testing the efficacy of instruction based on the triarchic theory in schools (Sternberg & Clinkenbeard, 1995; Sternberg, Ferrari, Clinkenbeard, & Grigorenko, 1996; Sternberg, Grigorenko, Ferrari, & Clinkenbeard, 1999). They have predicted that triarchic instructions should improve school performance relative to many other forms of instruction for four basic reasons. First, triarchic instruction should enable students to encode information in three different ways (analytically, creatively, and practically). The multiple method approach to learning should improve learning. Second, this approach

usually results in more elaborative and meaningful rehearsal of information. Third, this approach would allow students to capitalize on their strengths and correct for their weaknesses. Fourth, the method should be more motivating to students because the information should be more interesting. Fifth, the approach strikes a balance. This balance would seem to meet the needs of different students and promote learning.

Recently, Grigorenko, Jarvin and Sternberg (2002) conducted three studies at the middle and high school levels to assess the effectiveness of triarchic based instruction and assessment for reading skills. There were 809 fifth grade students in the first study, 62 middle school students in the second study, and 432 high school students in the third study. Almost all of the students were from relatively lower socioeconomic status backgrounds and they were highly diverse in terms of ethnic background. The studies were experimental in design, having two randomly assigned test groups, one of which underwent different triarchic based instruction and one which did not. In all three studies, triarchic instruction was more effective than conventional instruction in improving student reading achievement.

Mayer and Salovey (1997) defined emotional intelligence as an ability to recognize the meanings of emotions and their relationships and to reason and problem solve on the basis of them. Emotional intelligence was involved in the capacity to perceive emotions, assimilate emotion-related feeling, understand the information of those emotions, and manage them. This view of emotional intelligence differed from Goleman's view in a very important manner. Goleman's views, according to Mayer,

Caruso, and Salovey (2000), included not only emotion and intelligence, but also motivation, non ability dispositions and traits, and global personal and social functioning. They argued that the broadening of the concept to include these ideas undercut the utility of the terms under consideration.

Mayer, Caruso, and Salovey (2000) asked the question of the legitimacy of emotional intelligence as a standard intelligence. To be considered an intelligence, emotional intelligence would have to first be capable of being operationalized as a set of abilities. Second, it would have to meet certain correlational criteria: the abilities defined by the intelligence should form a related set, and be related to pre-existing intelligence, while also showing some unique variance. Third, the abilities of the intelligence should develop with age and experience. In two separate studies, a sample of 503 adults was used to determine if emotional intelligence met these three criteria. It was found that emotional intelligence met all three of the criteria and could be labeled a standard intelligence. “The results from Study 1 indicate that emotional intelligence shows a pattern that is consistent with a new domain of intelligence” (Mayer et al., p. 288). Further, they stated that “emotional intelligence represents an important candidate to enlarge the group on which general intelligence is based. Perhaps a general intelligence that includes emotional intelligence will be a more powerful predictor of important life outcomes than one that does not” (Mayer et al., 2000, p. 295).

Davies, Stankov and Roberts (1998) also explored the view that emotional intelligence should be included within the traditional cognitive abilities framework. They

set out to investigate the psychometric status of emotional intelligence and to determine whether it served as a unique type of human ability. They clearly stated that if emotional intelligence was a type of intelligence, then it should be distinguishable from personality traits. They also stated that “while various authors have proposed that emotional intelligence is a type of intelligence, contemporary research lacks any conceptual model within which the construct might be placed” (Davies et al., 1998, p. 990). They undertook 3 studies (total N=530) in which the relations among measures of emotional intelligence, traditional human cognitive abilities, and personality were explored. They indicated from their findings that self report measures of emotional intelligence were strongly linked to personality traits. This was an indication that the concept of emotional intelligence isn’t any different than the age old concept of personality. They also found that consensual scoring techniques exhibited low reliability. They did, however, find evidence for the existence of a separate “emotion perception factor” that might represent the ability of one individual to monitor another individual’s emotions. They went on to state that this ability was much narrower than most current models of emotional intelligence.

Mayer, Caruso and Salovey (in press) acknowledged the conceptual difference of emotional intelligence as a set of personality traits as well as an ability or type of intelligence. They undertook a study of 290 adolescents aged 11 to 18 years which measured emotional intelligence as an ability. They used the Adolescent Multifactor Emotional Intelligence Scale they had developed. The scale consisted of eight sub-scales

and measured four emotional intelligence competencies. They found the measure of emotional intelligence to be reliable, and they indicated that it demonstrated low, but statistically significant positive correlations to self-reported empathy, pro-social behavior and school grades. They had hypothesized that an ability based model of emotional intelligence (rather than a set of personality traits) would demonstrate a small positive correlation with the above concepts as well as with analytic intelligence. They also found that girls outperformed boys.

Much of the research involved with emotional intelligence dealt with defining, quantifying and measuring it. The conceptualization differed dramatically with the researcher. Early theorists developed a very broad definition of emotional intelligence with sweeping claims regarding its predictive value and importance regarding life outcomes. Much criticism was aimed at these early theorists as they had little scientific research to accompany their claims. Significant scientific study regarding emotional intelligence can be traced to the work of Gardner (1993) and his view of intelligence as a set of abilities. Recently, researchers have spent time narrowing the definition and attempting to scientifically support an ability based model of emotional intelligence. This recent research made important and significant links between emotional intelligence and other existing intelligences, personality traits and cognitive abilities.

B. Studies of Aggression

The concept of adolescent aggression has undergone a great deal of study. It is a serious and visible problem in school systems and society. This has led to a number of

studies and articles of both a superfluous and a scientific nature. A number of researchers have emphasized the need for greater understanding of the interactions which may lead to, or escalate, aggressive behavior. Aggression has been investigated in respect to gender, age, significant relationships, and emotion.

Of great importance to this study is the work of Buss & Perry (1992). They developed an aggression questionnaire based on the Hostility inventory of Buss and Durkee (1957). The questionnaire will be discussed later in this paper, as it is one of the primary measurement tools used in this study. It is mentioned here for its conceptual importance. The researchers indicated through their questionnaire that aggression was a behavior trait consisting of four different component parts. Physical and verbal aggression, which involve hurting or harming others, represented the instrumental or motor component of behavior. Anger, which involved physiological arousal and preparation for aggression, represented the emotional or affective component of behavior. Hostility, which consisted of feelings of ill will and injustice, represented the cognitive component of behavior. Their confirmatory factor analysis found strong positive correlations between these four component parts. Interestingly, they also found anger to be a bridge between both physical and verbal aggression and hostility. Some sex differences were noted in that men scored slightly higher on verbal aggression and hostility and much higher on physical aggression. There was no sex difference for anger. This questionnaire will be discussed further in the Design and Methodology section of the paper.

In an exhaustive meta-analysis of gender differences, aggression, and emotional arousal, Knight, Gutherie, Page, and Gabes (2002) looked at a sample of studies from 1965-1999. They hypothesized that gender differences in emotional arousal may lead to gender differences in aggression. Using the PsychLIT electronic data base, the researchers searched for studies involving gender differences in aggression from 1965 to 1999. Studies were excluded if they were case studies, investigated spousal/familial or societal violence, war, suicide, or political violence, involved clinical or deviant participants, included fewer than 10 participants or included all male or all female participants. Two hundred seventy three studies met the inclusion criteria. Additionally, the studies had to include enough information for the researchers to calculate an “effect size estimate of gender differences in aggression” (p. 372). All four authors were involved in a masked coding of the effective size estimates. The following information was also obtained from each research report: 1) the level of emotional arousal produced by the research context 2) the design of the study 3) the mean age of the participants; 4) the method of measuring aggression; 5) the year of publication of the research report: 6) the sex of the target of aggression; and 7) the type of aggression exhibited. All four authors were involved in the coding of this information. Intercoder agreement was included in the study and was significantly high (ranging from .72 -1.00) for the seven predictor variables. The gender differences in aggression as a function of the above continuous and categorical predictors was examined using weighted simple and multiple regression analyses. Weighted analyses ensured that effect size estimates that were based

on larger sample sizes had a proportionally greater influence in the analyses. Their findings suggested that the magnitude of gender difference in aggression was relatively small when emotional arousal was very low (.30) or very high (-.15). They also found that the magnitude in gender difference in aggression was significantly high (.51) in contexts that produced small or medium increments in emotional arousal. The researchers hypothesized that contexts that are highly emotionally evocative would create low gender difference scores because both males and females may be aroused enough to disrupt emotion regulation and may more equally respond to the emotion with aggression. Similarly in contexts that are as low in emotional evocativeness as to produce little or no emotional arousal above a baseline level, gender differences in aggression would be less evident because both males and females are relatively unaroused. Contexts that are evocative enough to produce small to medium increments in levels of emotional arousal may produce the largest gender differences in aggression because this evocativeness is likely to result in greater emotional arousal and less regulation among males than females, increasing the likelihood of relatively greater aggressive responding among males.

A study by Worcel, Shields, and Paterson (1999) examined a connection between emotion and aggression in an attempt to identify a critical moment in the onset of aggression. They examined a telegraphed emotion called “the look”. It was a specific emotion conveyed through a subset of its expressive components or through a brief, extreme display of the complete expression. Using focus groups of teenage females, the

girls were asked to define “the look” and to discuss its use amongst their peers. They discussed how “the look” was implicated in emotionally charged peer interactions. Their findings indicated that the look was a common, emotionally charged element of many adolescent interactions. Further, the females in the study indicated that if “the look” did not exist, most of the fights at their school would not happen.

The identification and rating of aggression in schools for research purposes is a difficult problem. Pellegrini and Bartini (2000) undertook a comparison of different methods of aggression identification in American middle schools. They investigated possible correlations between direct observations of student behavior, teacher and researcher ratings of student aggression, student nominations of peer aggression, and student diary or self reports of aggression. Peer measures of bullying (.41), self report bullying (.52), and direct observation of bullying (.35) were all significant positive correlations at the $p < .01$ level. The researchers stated that while direct observational methods of aggression and victimization are probably too expensive for most studies, ratings and nominations completed by youngsters and teachers could provide a useful alternative as all measures were associated, even at low levels of severity. More research is needed in this area before great confidence can be given to correlations between self report measures of aggression and teacher or researcher observations of aggression.

Yoon, Hughes, Cavell, and Thompson (2000), stated that the further advances in treatment for aggressive children depended, in part, on increased understanding of subtypes of aggressive children. Aggressive children are not a homogenous group.

Increased understanding of the different subtypes, might lead to more effective interventions. Their study investigated differences in social cognitive processing between two subtypes of aggressive children: those rejected by peers and those not rejected. Students in grades 2-4 were classified as aggressive-rejected (n=34), aggressive-nonrejected (n=55), or nonaggressive-nonrejected (n=64) on the basis of teacher ratings of aggression. The students were then given the Social Cognitive Assessment Profile (SCAP; Hughes, Hart, & Grossman, 1993). The SCAP is an instrument that assesses attribution, generation of solutions, outcome expectancies for different solutions and self efficacy for solutions. Each child in the study was individually administered the SCAP by a trained undergraduate or graduate student who was blind to subject status. Descriptive discriminant analysis of scores found that aggressive children have a broad range of social cognitive deficits and distortions and provided additional evidence of the criterion validity of SCAP scores. Findings also indicated that aggressive rejected children had a distinct pattern of social processing beliefs that reflected a belief that aggression could be used to obtain goals. The authors inferred from their findings that programs which address multiple aspects of social cognitive processing would be most successful in reducing aggression.

Crick and Grotpeter (1995) proposed that when attempting to inflict harm on others, children do so in ways that are most likely to thwart or damage the social goals of the target. Two sub-sets of aggression called overt and relational were identified. Overt aggression causes harm through physical damage (hitting, kicking, pushing, or

threatening to beat up). Relational aggression harms others through damage to their peer relationships (rumour spreading, social exclusion). They contended that boys tended to be more physical in aggression, placing such importance on physical superiority, and girls tended to be more relational in aggression because it is more effective in hindering affiliative, intimacy goals that tended to be more typical of girls (Block, 1983).

Crick, Casas and Mosher (1997) completed further research in the area of relational and overt aggression. They studied 65 preschoolers using both peer rating, and teacher measures of social behavior with several objectives in mind. They hoped to address a) the psychometric properties of a newly developed peer nomination and teacher measure of children's social behavior, b) distinctiveness of relational and overt aggression, c) the relation between peer and teacher reports of relational and over aggression, d) gender differences in relational and overt aggression, and e) the relation between aggression and social-psychological adjustment. In order to address these objectives, these researchers developed a teacher rating measure of preschoolers' social behavior (Preschool Social Behavior Scale- Teacher Form; PSBS-T). This measure was constructed based on a rating instrument used to assess the social behavior of elementary school children. The resulting measure consisted of 23 items, 8 of which assessed relational aggression, 8 of which assessed overt aggression, 4 of which assessed prosocial behavior, and 3 of which assessed depressed affect. A principal-component factor analysis (varimax rotation) was used to assess whether relational aggression would emerge as a separate factor independent of overt aggression. The analysis yielded four

predicted factors; relational aggression, overt aggression, prosocial behavior, and depressed affect. A factor loading of .40 was used as the criterion for determining substantial cross-loadings. A principal-components factor analysis with varimax rotation of the factors was also conducted on children's scores from the peer-nomination measure. The analysis yielded three predicted factors; relational aggression, overt aggression, and prosocial behavior. Based on these measures, the researchers indicated that preschool girls were significantly more relationally aggressive and less overtly aggressive than preschool boys. Their research also indicated that relational aggression was significantly related to social-psychological maladjustment for both boys and girls.

Tomada and Scheider (1997) attempted to replicate Crick and Grotpeter's (1995) study on an international level. They used peer rating and teacher rating measures with 314 students of ages 8, 9, and 10 in elementary schools in small towns across Central Italy. Contrary to expectations, boys scored higher in both overt and relational aggression. Of interest here, the children were also divided into sociometric status categories. A series of multivariate analyses of variance was performed to compare the prosocial behavior of the members of the social categories. Categories included popular, rejected, neglected, controversial, average, and other. Rejected children scored significantly higher in overt aggression than did the other groups.

French, Jansen and Pidada (2002) also investigated the concept of relational aggression. One hundred four U.S. and 120 Indonesian 11 and 14 year old students gave descriptions of peers that they disliked. These responses were then coded for references

to physical, verbal, and three types of relational aggression (relationship manipulation, social ostracism, and malicious rumors). In the study it was found that physical aggression was mentioned more frequently by boys, but no significant differences were seen with verbal aggression. Girls in both countries, however, described peers as engaging in the three relational aggressions much more frequently than boys. This seemed to support a widespread gender difference in aggression that spanned cultures and is in fact a salient feature of children's lives.

Galen and Underwood (1997) undertook a developmental investigation of social aggression among children. The primary goal of the research was to investigate girls' expressions of anger and contempt toward same sex peers, using a combination of methods including self-report questionnaires, observations of play sessions, and children's judgments of videotaped samples of girls' aggressive behaviors. They proposed that aggression among girls was more subtle, and they termed it social aggression. Social aggression, according to Galen and Underwood is directed toward damaging another's self-esteem, social status, or both and may take direct forms such as verbal rejection, negative facial expressions or body movements, or slanderous rumours and social exclusions. They suggested that aggression takes the form that is most likely to hurt another individual. Two studies were performed to meet the stated objectives. In the first study, 234 students of public schools participated in the study. Participants completed an instrument constructed for the study containing 12 vignettes describing social interactions between same sex peers. Six of the vignettes described physical

attacks against the participant and six described social attacks. Participants answered questions for each vignette on a five point scale. Answers were analyzed using a mixed model analysis of variance with an alpha level of .05. Psychometric analyses indicated that the measure was reliable and internally consistent. In the second study, a laboratory observation setting was created with seventh grade students. One student was assigned the role of confederate. This meant she was to behave in a manner that the other children, who had not previously met her, would find bothersome. Responses to the confederate were video taped and subsequently coded for acts of social aggression. A debriefing session and post observation questionnaire were used to ensure that no ill feelings toward the confederate would persist. From both the first and second study the researchers concluded that physical aggression was more commonplace with males and social aggression was more commonplace with females. They also found that girls view socially and physically aggressive behaviors as equally hurtful. Their findings also supported the idea that social aggression may be more salient to girls than to boys. This study was useful in that it incorporated the use of video tape as well as questionnaire to investigate social aggression.

A study by Paquette and Underwood (1999) refuted the idea that girls are more socially aggressive than boys. Their data demonstrated an equal frequency in social aggression between genders. They did, however find that the girls were significantly more distressed by the social aggression than boys. They determined that the frequency of social aggression was more strongly related to girls' self-concepts than to boys' self

concepts.

In an interesting investigation attempting to study the effect of humour and gender on the “need” of aggression among adolescents, Tomar (1999) found that girls demonstrated a greater need of aggression. Among boys, the need was more pronounced for those with low humour and low economic status. It was determined that sense of humour has a cathartic effect and would work as a therapeutic aid in releasing tension.

Lata (1998) studied the role of modeling in acquisition and expression of aggressive behavior in developing children and adolescents. The study was conducted over three different socioeconomic groups. The adolescents of all three status groups showed a definite impact of sex-role identification. Specifically, adolescent boys showed a strong relationship in their reactions to frustration with their parents.

The concept of social reasoning and social beliefs as a predictor of conventional school rules violations as well as aggressive behavior in adolescents aged 14-19.5 years was investigated by Crane-Ross, Tisak, and Tisak (1998). They looked at the extent to which adolescents engaged in both aggressive behavior and conventional school violations using self ratings and peer nominations. They determined from their data that, in contrast to females, male students committed more aggressive acts and conventional rule violations and reported beliefs and values that were more supportive of aggressive behavior and conventional rule-violation behavior. Gender differences in beliefs and values were greater for aggressive acts than conventional acts.

A study by Lindeman, Harakka, and Keltikangas (1997) examined how

aggression, prosociality, and withdrawal techniques manifested themselves as reactions to interpersonal conflict. They looked at 2, 594 adolescents aged 11, 14, and 17 years. The ages were used to create three separate groups; pre-adolescents, mid-adolescents, and late adolescents. The subjects filled out a questionnaire containing two everyday problem situations with a set of problem solving strategies from which to pick. Their results showed that prosociality and withdrawal techniques decreased with age. Direct and indirect aggression was found to be more typical among boys than among girls. The most often used strategy in pre-adolescence was prosociality and in mid-adolescence was aggression. In late adolescence, girls were most likely to use prosociality and boys were most likely to use aggression.

Many studies of aggressive behavior were found. A number of these studies dealt primarily with gender differences. Some evidence that girls were less physically aggressive than boys and that girls were more socially aggressive than boys was common in most studies. Some studies indicated that this trend crosses cultural and geographical boundaries. A significant difficulty with aggression studies was consistency of measurement. The methods of identification and measurement of aggression included direct observations of student behavior, teacher and researcher ratings of student aggression, student nominations of peer aggression, and self report questionnaires and diaries of aggression.

A number of studies have indicated a possible link between emotion and aggression (Galen & Underwood, 1997; Knight, Gutherie, Page, & Gabes, 2002; Tomare,

1999; Worcel, Shields & Patterson, 1999) Studies demonstrated that emotional constructs such as social reasoning, humor, self concept, anger, facial expressions, peer interactions and others significantly linked to acts of social and physical aggression. Many adolescent aggressive acts were deemed to originate from emotionally charged situations. Gender differences in regard to emotional intelligence have not yet been adequately studied. Gender differences in regard to aggression have demonstrated a significant pattern. Greater understanding of emotional intelligence and its negative correlation with aggression in adolescent males and females is an essential step in affecting change in student behavior.

C. Research Questions

The basic research question addresses the relationship between emotional intelligence and aggression. The research literature reviewed leads to the predictions that emotional intelligence will correlate negatively with aggression and therefore predict aggression. What is not clear is which aspects of emotional intelligence will best predict physical aggression nor how males and females might differ on specific aspects of emotional intelligence and aggression. To address this question multiple regression will be used to examine the emotional intelligence predictors of aggression in comparison with four component subtraits (anger, hostility, verbal aggression) of aggression as defined by the Buss and Perry Questionnaire (1992).

CHAPTER III

DESIGN AND METHODOLOGY

A. Subjects

Three hundred 7th and 8th grade students at a suburban middle school were presented with the opportunity to participate in this study. The school is a self contained middle school, housed within a larger high school of fifteen hundred 9th through 12th grade students. A basic description of the study was presented to all 7th and 8th grade students along with the parent and participant consent forms. (See Appendix A and B for copies of the consent form and letter to parents). Students were encouraged to ask questions about the study and were frequently reminded that participation was completely optional. The researcher offered pizza as an incentive for participating in the study. It was hoped that the pizza offer would help to facilitate greater participation by students not so otherwise enthused. Eighty one students returned permission forms to participate in the study. Of these forms, five were not completed properly and the students did not participate in the study. Three students were absent on the day of the study. Seventy three students completed the two questionnaires. Two of the questionnaires were rendered invalid due to incomplete sections.

B. Instrumentation

Two measurement instruments were used in the study. The BarOn Emotional Quotient Inventory: Youth Version (BarOn EQ-i:YV) and the Buss and Perry (1992) Aggression Questionnaire.

The BarOn Emotional Quotient Inventory: Youth Version (BarOn EQ-i:YV) is a self-report instrument designed to measure emotional intelligence in young people aged 7 to 18 years. It is based on the Bar-On model of emotional and social intelligence (Bar-

On & Parker, 2000). There is a long version with 60 items distributed across 7 scales and a short version containing 30 items. This study used the 30 item short form due to the time constraints involved in the administration of the instrument. The following information regarding the reliability and validity for the BarOn EQ-i:YV is taken from the technical manual by Bar-On and Parker (2000).

A large normative sample exists for the BarOn EQ-i:YV. It consists of 9172 children and adolescents (4625 males and 4547 females) ranging in age from 7 to 18. The mean age for males was 11.63 (SD = 3.07) years and for females was 11.71 (SD = 3.08) years. Respondents identified themselves as Caucasian/White (50.8%), Hispanic (35.0%), Black/African (3.8%), Black/Caribbean (1.25%), Asian (2.2%), Native American (0.4%), Multiracial (2.0%), and Other (2.1%). Ethnicity information for 1.5% of the sample was missing (Bar-On & Parker, 2000).

The internal reliability was measured using Cronbach's alpha. Table 1 represents the reliability coefficients for the BarOn EQ-i:YV short form presented separately by gender and age group. The coefficients were more than satisfactory across the various normative groups.

Table1

Internal Reliability Coefficients for BarOn EQ-i:YV Short Scales

Gender		
BarOn EQ-i:YV Scale	10-12 yrs	13-15 yrs
<hr/>		
Males		
Intrapersonal	.72	.81
Interpersonal	.75	.77
Adaptability	.81	.84
Stress Management	.81	.84
Total EQ	.84	.84
Females		
Intrapersonal	.74	.82
Interpersonal	.77	.73
Adaptability	.80	.85
Stress Management	.82	.84
Total EQ	.84	.85

Note. From BarOn Emotional Quotient Inventory: Youth Version (p. 43), by R.

Bar-On and J. D. A. Parker, 2000, Toronto, Ontario: Multi-Health Systems.

Test-retest reliability was examined using an interval of 3 weeks in a sample of 60 children and adolescents. Table 2 represents the test-retest reliabilities for the instrument. In general they are excellent.

Table 2

Test-Retest Reliability Coefficients for BarOn EQ-i:YV Short Scales

Scale	Coefficient
Intrapersonal	.84
Interpersonal	.81
Adaptability	.85
Stress Management	.88
Total EQ	.87
Positive Impression	.77

Note. From BarOn Emotional Quotient Inventory: Youth Version (p. 43), by R. Bar-On and J. D. A. Parker, 2000, Toronto, Ontario: Multi-Health Systems.

The authors of the instrument offer two main statistical arguments to support the instrument's validity. 1) The scale structure of the BarOn EQ-i:YV is appropriate and makes sense both empirically and theoretically. 2) The BarOn EQ-i:YV scales correlate well with measures believed to tap similar or related constructs (Bar-On & Parker, 2000).

The factor structure of the BarOn EQ-i:YV was examined using exploratory factor analysis based on the total normative sample (N=9172). This analysis also used principal components analysis with a varimax rotation. The four empirical factors that emerged from the exploratory factor analysis closely match the four emotional intelligence scales that appear on the BarOn EQ-i:YV short form. All 24 items loaded at least moderately on their matching factor, and had very low loadings on the other three factors (Bar-On & Parker, 2000).

A number of correlational studies were completed in order to establish the construct validity of the BarOn EQ-i:YV. Reker and Parker (1999), asked 179 children and adolescents to complete the BarOn EQ-i:YV as well as the Children's Depression Inventory (CDI; Kovacs, 1992). The CDI measures a number of symptoms associated with mood including Negative Mood, Interpersonal Problems, Ineffectiveness, Anhedonia, and Negative Self Esteem. Moderate negative correlations were found between the various measures of the CDI and the total emotional quotient (EQ) of the BarOn EQ-i:YV. Correlations were significant at the $p < .05$ level. Some might question the importance of a correlation between depression and emotional intelligence with regard to validity.

Costa & McCrae (1992) developed a 60 item self-report inventory called the NEO-Five Factor Inventory (NEO-FFI). It measures personality dimensions related to a five-factor model of personality: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Bar-On and Parker (2000) administered the BarOn EQ-i:YV as well as the NEO-FFI to 102 adolescents between the ages of 12 and 17 years. They found meaningful positive and negative correlations between the two instruments and their measures. The Intrapersonal scale demonstrated statistically significant ($p < .05$)

but low positive correlations with two (extraversion and agreeableness) of the five personality scales on the NEO-FFI . Adaptability negatively correlated significantly with only one (Neuroticism) dimension of the NEO-FFI. Stress Management negatively correlated with Neuroticism and positively correlated with three other dimensions (Extraversion, Agreeableness, and Conscientiousness) of the NEO-FFI.

Bar-On and Parker (2000) asked 110 adolescents between the ages of 12 and 17 to complete the BarOn EQ-i:YV and the long form from the Conners-Wells Adolescent Self-Report scale (CASS: Conners, 1997). The CASS measures a variety of problematic behaviours including Family Problems, Conduct Problems, Emotional Problems, Cognitive Problems, Anger Control Problems, and Hyperactivity. Some significant negative correlations ($p < .05$) were demonstrated in this study. A high (negative) association was demonstrated between the Stress Management scale and the Anger Control scale from the CASS. A moderate correlation (negative) was also demonstrated between the emotional problems scale on the CASS and the Intrapersonal scale of the BarOn EQ-i:YV.

The Aggression Questionnaire (Buss & Perry, 1992) was selected to measure aggression (See Appendix C). It is a 29 item self reporting questionnaire based on the Hostility Inventory developed by Buss and Durkee (1957). This original inventory was cited 242 times in the Social Science Citation Index between 1960 and 1989 (Bushman, Cooper, & Lemke, 1991). It was a frequently used questionnaire. Despite this popularity, the Hostility Inventory was a 35 year old true, false instrument that lagged behind current psychometric standards. Thus, Buss and Perry (1992) constructed a new questionnaire on aggression. They claim that the new questionnaire maintains the essence of the original instrument but meets current psychometric standards.

In developing the instrument, Buss and Perry created an initial set of 52 items which they administered to 1,253 subjects between the ages of 18 and 20. There were 612 men and 641 women. The items were administered to three successive samples of 406, 448, and 399 subjects. The subjects were asked to rate each item on a five point Likert scale from one (is extremely uncharacteristic of me) to five (is extremely characteristic of me). The resulting matrix was subjected to an exploratory factor analysis. Specifically, it was subjected to principal-axis factoring and oblimin rotation. Items to be included in the questionnaire had to meet two criteria. An item had to have a minimum load of .35 on its own factor and less than .35 on any other factor. It also had to meet this criteria for all three samples. Of the 52 items, 29 met the criteria.

A confirmatory factor analysis was then completed on the second sample of subjects. The LISREL VI program (Joreskog & Sorbon, 1984) was used. According to this method, the chi square is divided by the degrees of freedom. A ratio of 2.0 or greater is a poor fit and a ratio below 2.0 is a reasonable fit. The model created by Buss and Perry had a ratio of 1.95.

Alpha coefficient using all 1,253 subjects was used to evaluate internal consistency of the four factors. The alphas were as follows: Physical aggression, 0.85; Verbal Aggression, 0.72; Anger, 0.83; and Hostility, 0.77. The alpha for the total score (0.89) indicated considerable internal consistency.

To test reliability, a sample of subjects (n=372) was tested twice over a 9 week interval. The test-retest correlations were as follows: Physical Aggression, 0.80; Verbal Aggression, 0.76; Anger, 0.72; and Hostility, 0.72. The total score was 0.80.

Harris (1995) attempted to replicate the confirmatory analysis of Buss and Perry (1992) using an additional independent sample of three hundred and six university

students. Confirmatory factor analysis using LISREL VII (Joreskog & Sorbon, 1989) was employed to assess how well the data fit the 4 factor solution. The goodness of fit index was acceptably high (0.825) for the data. Harris did find that two items involving hostility presented low factor loadings. It was suggested that by removing these two items the internal consistency of the questionnaire might be slightly higher.

Meesters, Muris, Bosma, Schouten and Beuving (1996) performed a confirmatory factor analysis attempting to replicate Buss and Perry's (1992) factor structure with a Dutch sample. The results of three successive confirmatory factor analyses confirmed the 4 factor model which was originally found by Buss and Perry (1992). In order to obtain a goodness of fit, however, they did have to remove 3 items from the questionnaire (1 Verbal Aggression Item and 2 Hostility items). Further, the study contributed to the reliability and validity (cross cultural). Cronbach's alphas were computed for the four factors and the total score. The alpha for the total score was 0.84, indicating good internal consistency. A sub-sample (N=71) was tested twice with a 6 week interval. Test retest correlations were 0.76 for Physical Aggression, 0.78 for Verbal Aggression, 0.79 for Anger, 0.77 for Hostility and 0.80 for total score. These data are similar to the Buss and Perry (1992) findings and indicate that the questionnaire is reasonably stable over time.

Further cross cultural validity was investigated by Nakano (2001). A Japanese translation of the Aggression Questionnaire was administered to 425 undergraduate students. The correlation matrix of the 29 aggression items was subjected to principal axis factoring and oblimin rotation. Again, four factors proved to be the maximum number interpretable: Physical Aggression, Verbal Aggression, Anger and Hostility. Cronbach's alpha again demonstrated acceptable internal consistency coefficients ranging

from 0.77 to 0.75. The two factors which have reversed scoring items and negatively worded items were found to have relatively low factor loadings. It was suggested by the author that differing responses to affirmatively worded items and those of negatively worded items have much greater significance for Japanese individuals than for North American individuals. The results of the study suggested that the Aggression Questionnaire may be improved psychometrically if the two reversed scored items were removed from the scale for cross-cultural use.

With regard to the present study, the Aggression Questionnaire was used to evaluate adolescents. A number of studies provide support for the validity of adolescent use of the Aggression Questionnaire (Decarlo, 2000; Kunugimoto, 2002); Morren & Meesters, 2002; Reynes & Lorant, 2002).

C. Design and Procedures

The study was correlational in design. Prior to the selection of subjects, permission was sought and granted from the University Ethics Committee as well as the participating School Board's Research Committee. Permission was also sought and granted from the administration of the middle school to be used in the study. As was stated earlier, the potential subjects were presented with the opportunity to participate in the study and given a package containing a description and thorough explanation of the study and its purpose. Subjects were guaranteed anonymity and confidentiality. To be eligible to participate, subjects had to return signed parent and subject consent forms. The students had one week to return the permission forms. A subject list was created from the returned permission forms.

Two questionnaires were administered. Both questionnaires were self measurement and the entire group completed the instruments in approximately 45

minutes. One questionnaire measured the concepts of overall aggression as well as components of aggression including; anger, hostility, verbal aggression and physical aggression. The other instrument measured emotional intelligence, including the sub scales of intrapersonal, interpersonal, stress management, adaptability, and positive impression. Raw and standardized scores were then generated for overall emotional intelligence, as well as separate indicator scales (as defined by BarOn and Parker 2000). The resulting indicators were entered into a spread sheet for analysis. The emotional intelligence scores were generated on a four point Likert scale as follows: 1) not true of me, 2) just a little true of me, 3) pretty much true of me and 4) very much true of me. The aggression scores were generated on a 5 point Likert scale as follows: 1) not like me, 2) sometimes like me, 3) often like me, 4) pretty much like me, and 5) very much like me. On two of the aggression questions the scoring was reversed but the Likert scale was not changed in any way for the subjects.

D. Data Analysis

From the two measurement instruments or questionnaires, eleven scores were generated for each subject. The first six scores were from the Emotional Intelligence Inventory (Bar-On, 2000) and were identified as: Intrapersonal, Interpersonal, Stress Management, Adaptability, Emotional Quotient Total (EQ Total) and Positive Impression. The remaining five scores were from the Aggression Questionnaire (Buss & Perry, 1992) and were: Physical Aggression, Verbal Aggression, Anger, Hostility, and Aggression Total. The data were analyzed using stepwise multiple regression analyses, one-way analyses of variance (ANOVA) and correlational analysis.

Physical Aggression was identified as the dependent measure. The scores were configured into two models to predict physical aggression. The first model was the

Emotional Intelligence model where Intrapersonal, Interpersonal, Stress Management, Adaptability, and Positive Impression were the independent variables. The second model was the Emotional Charge model where Verbal Aggression, Anger, and Hostility were the predictor variables. Since the structure of the Aggression Instrument was designed to reduce correlation amongst the four scales, one would expect that Emotional Intelligence could be a stronger predictor of Physical Aggression than Emotional Charge.

CHAPTER IV

RESULTS

Thirty males ranging in age from 11 to 14 and 41 females ranging in age from 11 to 13 participated. The means and standard deviations for all scores are presented Tables 3 and 4. The means and standard deviations for emotional intelligence demonstrated similarity to the normative data presented in the technical manual for the BarOn EQ-i:YV. A stepwise multiple regression analysis was conducted with Physical Aggression as the dependent variable and the five emotional intelligence measures (Intrapersonal, Interpersonal, Stress Management, Adaptability, and Positive Impression) as the predictor variables. The model was significant, $R^2 = .362$ with Stress Management emerging on the first step ($\beta = -.736$, $p < .001$) and Intrapersonal on the second step ($\beta = .268$, $p < .001$). Interpersonal, Adaptability, and Positive Impression scores were all excluded. A second stepwise multiple regression analysis was run using Physical Aggression as the dependent variable, Emotionally Charged variables (Anger, Hostility, Verbal Aggression) as well as Age as the predictor variables. As might be expected aggression scores also demonstrated prediction strength for Physical Aggression, $R^2 = .363$. Anger emerged on the first step ($\beta = .591$, $p < .001$) and Hostility on the second step ($\beta = .292$, $p < .05$). Verbal Aggression and Age were excluded. It would appear that an Emotional Intelligence model has about the same predictive power as an Emotional Charge model in predicting Physical Aggression.

To examine the responses with respect to gender, one-way analyses of variance (ANOVA) were computed for each variable. Gender differences were evident with males being higher on Physical Aggression ($p < .001$), and Total Aggression ($p < .01$) and females were higher on the Emotional Quotient Total ($p < .05$). Means and standard deviations are

reported in Tables 3 and 4.

To examine the relationships more closely the Pearson product-moment correlations were examined (see Table 5). A number of significant correlations were observed. Of interest was the significant negative correlation found between Emotional Quotient Total and Aggression Total ($r = -.693, p < .001$), indicating that aggressing ratings decreased as the emotional intelligence quotient increased. In fact, the Emotional Quotient correlated with Physical Aggression ($r = -.592$), Anger ($r = -.563$), and Hostility ($r = -.529$). All were significant ($p < .001$). The Aggression Total variable also demonstrated significant negative correlations with two of the EQ variables: Intrapersonal ($r = -.421$) and Stress Management ($r = -.736$) ($p < .001$). Stress Management demonstrated a particularly strong negative correlation. Lower aggression scores were associated with higher scores on the Intrapersonal measure and on Stress Management. It would seem that Interpersonal strengths and Stress Management skills would be important variables to consider in dealing with Aggression.

Table 3

Means and Standard Deviations from the BarOn EQ-i:YV Short Form

Scale	Male		Female		p
	Mean	Standard Deviation	Mean	Standard Deviation	
Intrapersonal	94.6	13.630	97.37	14.891	NS
Interpersonal	93.73	12.811	99.24	11.368	NS
Stress Management	98.53	13.493	103.27	12.791	NS
Adaptability	93.33	15.586	96.68	11.559	NS
Emotional Quotient	94.30	13.919	100.80	12.775	<.05
Positive Impression	90.00	12.959	89.27	14.965	NS

Table 4

Means and Standard Deviations from the Buss and Perry (1992) Aggression Questionnaire

Scale	Male		Female		p
	Mean	Standard Deviation	Mean	Standard Deviation	
Physical Aggression	24.86	7.463	17.61	6.078	<.001
Verbal Aggression	14.21	3.353	12.59	3.721	NS
Anger	18.52	5.269	16.63	4.311	NS
Hostility	22.24	6.479	20.10	5.957	NS
Aggression Total	79.83	18.97	66.93	16.28	<.01

Table 5

Intercorrelations Between Aggression and Emotional Intelligence Scales

Pearson Correlations		1	2	3	4	5	6	7	8	9	10	11
1 Emotional Quotient	1	.698**	.726**	.646**	.583**	.343**	-.592**	-.366**	-.563**	-.592**	-.639**	
2 Intrapersonal	.698**	1	.411**	.224	.166	.087	-.370**	-.208	-.298*	-.450**	-.421**	
3 Interpersonal	.726**	.411**	1	.314*	.357**	.376**	-.308**	-.116	-.266*	-.160	-.272*	
4 Stress Management	.646**	.224	.314**	1	.102	.296*	-.609**	-.572**	-.654**	-.607**	-.736**	
5 Adaptability	.583**	.166	.357**	.102	1	.205	-.205	.006	-.209	-.042	-.151	
6 Positive Impression	.343**	.087	.376**	.296*	.205	1	-.070	-.264*	-.337**	-.304*	-.271*	
7 Physical Aggression	-.592**	-.370**	-.308**	-.609**	-.205	-.070	1	.442**	.591**	.570**	.841**	
8 Verbal Aggression	-.366**	-.208	-.116	-.572**	.006	-.264*	.442**	1	.471**	.617**	.708**	
9 Anger	-.563**	-.298*	-.266*	-.654**	-.209	-.337**	.591**	.471**	1	.739**	.843**	
10 Hostility	-.529**	-.450**	-.160	-.607**	-.042	-.304*	.570**	.617**	.739**	1	.883**	
11 Aggression Total	-.639**	-.421**	-.272*	-.736**	-.151	-.271*	.841**	.708**	.843**	.883**	1	

** . Correlation is significant at the .01 level (2 tailed). * . Correlation is significant at the .05 level (2 tailed).

CHAPTER V

DISCUSSION

The purpose of the study was to investigate possible correlations between emotional intelligence and aggression in male and female adolescent students. The following questions were specifically asked:

1. Is emotional intelligence significantly correlated with aggression?
2. Are there aspects or components of emotional intelligence that significantly correlate with aggression?
3. Are there aspects or components of aggression that significantly correlate with emotional intelligence?
4. Are there significant differences in gender with respect to aggression and emotional intelligence?

The results indicate a statistically significant negative correlational relationship between an adolescent's Emotional Quotient and his/her Total Aggression score. There are, however, many possible underlying factors which may or may not contribute to this correlation. Evidence that improved emotional intelligence may reduce acts of aggression would be significant. Much more research, including studies of an experimental design are required to further investigate this relationship.

More specifically, the study found significant relationships between components of aggression and components of emotional intelligence. Significant relationships were found between an adolescent's ability to manage stress, intrapersonal development and

tendency toward physical aggression. Again, research of an experimental design would be helpful in understanding this relationship. Should the relationship between aggression and stress management and interpersonal skills be confirmed, a logical extrapolation of this finding is that schools might want to invest in programs that will reduce and manage stress for adolescents. Student stress is a significant problem and has many contributing factors. This logically introduces two steps which can be taken to reduce aggression in schools. First, teach students strategies for dealing with stress and stressful situations. Second, decrease where possible causes of unnecessary stress within the school environment. Schools may find it beneficial to examine their overall climate and look for ways to reduce student stress. It would be of interest to determine how stress levels vary throughout the school year and if office discipline interventions vary similarly. Further implications would include the testing and development of educational programs which teach adolescents how to handle stress and stressful situations, as well as programs which develop intrapersonal skills. It would also be interesting to determine what percentage of student stress is created by school environments and what percentage is created by home life. This would vary greatly from student to student. It is not within the scope of this paper to examine the effectiveness of social programs in the schools, but certainly the findings of this study lead one to believe that any program which can improve adolescent Emotional Quotient scores might significantly reduce aggressive acts within the school system.

Gender differences were found to be a significant factor when investigating aggression. The findings of this study are consistent with previous research. Boys were found to be more physically aggressive ($p < .001$) and they also scored higher on Total Aggression ($p < .01$). Previous literature demonstrated that boys were at a minimum

perceived to be more physically aggressive than girls (Block, 1983; Crane-Ross, Tisak & Tisak, 1998; Lindeman, Harakka & Keltikangos, 1997; Owens & MacMullin, 1995). Some literature also indicated that girls were generally more socially aggressive than boys (Block, 1983; Crick, Casas & Mosher, 1997; French, Jansen & Pidada, 2002; Galen & Underwood, 1997). Nakano (2000) also found that men scored significantly higher than women on physical aggression and verbal aggression ($t=8.33$, $p<.001$, and $t=3.08$, $p<.005$) using the Buss and Perry (1992) Aggression Questionnaire. Buss and Perry (1992) put forth the possibility that women may become just as angry as men, but inhibit the expression of this anger.

Girls scored moderately yet significantly higher on total Emotional Quotient than boys ($P<.05$). Caruso, Mayer & Salovey (in press) found that adolescent girls outperformed adolescent boys on all four components of their ability based model of emotional intelligence. Because girls scored better on overall emotional intelligence, and components of emotional intelligence were significantly correlated with aggression, it stands to reason that girls are generally less physically aggressive than boys. Intrapersonal and Stress Management scores were statistically significant indicators of Total Aggression as well as Physical Aggression. This is a good fit with previous research in that it supports the idea that girls may be less physically aggressive than boys. It also supports the notion that girls are perceived as more socially aggressive. This study did not find a significant relationship between Emotional Quotient and Verbal Aggression scores. Thus, while girls may be more emotionally intelligent they could still be verbally or socially aggressive. In the absence of physical aggression, this may be perceived as having even greater significance.

This study may be significant in that relationships were found amongst the

variables of gender, emotional quotient, and aggression. It demonstrates significant relationships between components of emotional intelligence (stress management, intrapersonal skills) and aggression. It also demonstrates significant gender differences with regard to emotional intelligence. Significant gender differences were also found with the components of aggression (physical aggression) and with Total Aggression.

A. Limitations of the Study

The foregoing discussion must be viewed in light of several limitations on the generality of the results.

Two types of standard error are most relevant to the BarOn EQ-i:YV. They are the standard error of measurement (SEM) and standard error of prediction (SEP) (Bar-On & Parker, 2000). The SEM is an indication of how much an individual's score might vary from his or her true score. The SEP estimates and gives an indication of the degree of fluctuation that would be expected between original scores for respondents and retest scores.

All subjects were from one suburban 7th and 8th grade middle school. Students were generally of similar socioeconomic and experiential background. Further, these students were given the task of returning a lengthy consent form in order to participate. This might lead to participating subjects having a personality trait in common which would facilitate the prompt return of the consent form. In addition to this possible similarity, additional extraneous variables may account for some of the correlations demonstrated in the study. For example, it is possible that characteristics such as general intelligence might affect both adolescent aggression and emotional intelligence.

Adolescents may have a desire to “fake good” or to attempt to give results that will please others. The BarOn EQ:-iYV long version has a built in positive impression

scale and an inconsistency index. The short version has the positive impression scale but does not have the inconsistency index. As the short version was used in the study, there was no manner in which to check the consistency of answers. Further, the Aggression Questionnaire (Buss & Perry, 1992) did not contain such internal safe guards.

Testing bias was another possible limitation of the study. Both questionnaires were administered at the same time and in the same location. This creates a possibility that one questionnaire may have affected answers given for the other questionnaire.

B. Recommendations for Further Research

Currently there are measurement and definitional issues surrounding the concept of Emotional Intelligence. The depth and width of the concept is yet to be standardized as a psychological term. The literature continues to struggle with a working model. Further research is needed to investigate the psychometric status of emotional intelligence and to determine whether it serves as a unique human ability.

Many other research ideas are generated by this study. Further work on stress management and stress management programs is justified. Programs which develop stress management techniques and studies which examine their utility would be beneficial.

A further examination of gender differences, aggression and emotional intelligence is warranted. Do the gender differences seen with emotional intelligence lessen with increased age? Do post adolescents, and aged peoples demonstrate the same differences in emotional intelligence as adolescents? Further research regarding these variables and possible positive and negative correlations is recommended.

Significant negative correlations were found between Emotional Quotient scores and Aggression scores. One wonders if there is a possible link between Emotional

Quotient scores and other indicators of school performance such as grades and standardized intelligence tests. It stands to reason that an adolescent in control of his or her emotions may outperform a peer in many areas if the peer did not have the same emotional control.

An examination of the psychometric properties of the Aggression Questionnaire when dealing with adolescents is warranted. Can the four factor model of the Questionnaire be replicated when dealing with adolescents?

There continue to be many unsubstantiated claims regarding the importance of emotional intelligence (Goleman, 1995). It is important to examine the role emotional intelligence might play in various different aspects of human functioning. Some examples might include career success, annual income, job satisfaction, and university or college undergraduate success.

REFERENCES

- Ballard, M., Argus, T., & Remley, T. P. Jr., (1999). Bullying and school violence: A proposed prevention program. NASSP Bulletin, May, 39-47.
- Bar-On, R., & Parker, J. D. A. (1997). BarOn emotional quotient inventory: Technical manual. Toronto, ON: Multi-Health Systems Inc.
- Block, J. H. (1983). Differential premises arising from differential socialization of the sexes. Some conjectures. Child Development, 54, 1335-1354.
- Bridges, L., & Grolnick, W. (1995). The development of emotional self regulation in infancy and early childhood. In N. Eisenberg (Ed.), Social development: Review of personality and social psychology (vol. 15). Thousand Oaks, CA: Sage.
- Bushman, B. J., Cooper, H.M., & Lemke, K.M. (1991). Meta-analysis of factor analyses: An illustration using the Buss-Durkee hostility inventory. Personality and Social Psychology Bulletin, 17, 344-349.
- Buss, A. H., & Durkee, A. (1957). An inventory for assessing different kinds of hostility. Journal of Consulting Psychology, 21, 343-349.
- Buss, A. H., & Perry, M. (1992). The aggression questionnaire. Journal of Personality and Social Psychology, (63), 3, 452-459.
- Cattell, R. B. (1963). Theory of fluid and crystallized intelligence: A critical experiment. Journal of Educational Psychology, (54), 1-22.
- Cobb, C. C., & Mayer, J. D. (2000). Emotional intelligence: What the research says. Educational Leadership, 14-18.
- Conners, C.K. (1997). Conners' Rating Scales-Revised: Technical manual. Toronto, ON: Multi-Health Systems Inc.
- Costa, P.T., JR., & McCrae, R.R. (1992). Revised NEO Personality Inventory (NEO-PIR) and NEO Five-Factor Inventory (Neo-FFI) professional manual. Odessa, FL: Psychological Assessment Resources, Inc.
- Crane-Ross, D., Tisak, M.S., & Tisak, J. (1998). Aggression and conventional rule violation among adolescents: Social-reasoning predictors of social behavior. Aggressive Behavior, (24), 5, 347-365.

- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. Child Development, 66, 710-722
- Crick, N. R., Casas, J. F. & Mosher, M. (1997). Relational and overt aggression in preschool. Developmental Psychology, (33), 4, 579-588.
- Davies, M., Stankov, L. & Roberts, R. D. (1998). Emotional intelligence: In search of an elusive construct. Journal of Personality and Social Psychology, 75, (4), 989-1015.
- Decarlo, A. (2000). The interrelationships of identity, self efficacy and aggression with African American male adolescents. Dissertation Abstracts International, 61, 1670.
- Eisenberg, N., Fabes, R.A., Nyman, M., Bernzweig, J., & Pinuelas, A. (1994). The relations of emotionality and regulation to children's anger-related reactions. Child Development, 66, 1179-1197.
- Elam, S.M., Rose, L. C., & Gallup, A. M. (1994). A 26th annual PDS/Gallup poll of the public's attitudes toward the public schools. Phi Delta Kappan, 76, 41-56.
- Elias, M. J., Bruenne-Butler, L., Blum, L., Schuyler, T. (1997). Social and emotional learning. Educational Leadership, (54), 6-10.
- Ferguson, T., Stegge, H., & Damhuis, I. (1991). Children's understanding of guilt and shame. Child Development, 62, 827-839.
- French, D.C., Jansen, E.A, & Pidada, S. (2002). United States and Indonesian children's and adolescents' reports of relational aggression by disliked peers. Child Development. 73, (4), 1143-1150.
- Galen, B. R., & Underwood, M. K. (1997). A developmental investigation of social aggression among children. Developmental Psychology, (33), 4, 589-600.
- Gardner, H. (1983). Frames of mind. New York: Basic Books
- Gardner, H. (1993). Frames of mind: The theory of multiple intelligences. New York: Basic Books
- Goleman, D. (1995). Emotional intelligence. Toronto: Bantam Books.
- Goleman, D. (1996). Emotional intelligence. Why it can matter more than IQ. Learning, (24), 49-50.

- Grigorenko, E.L., Jarvin, L. & Sternberg, R. J. (2002). School-based tests of the triarchic theory of intelligence: Three settings, three samples, three syllabi. Contemporary Educational Psychology, 27, 167-208.
- Guilford, J. P. (1967). The nature of human intelligence. New York: McGraw-Hill.
- Harrington-Lueker, D. (1997). Students need emotional intelligence. The Education Digest, (63), 7-10.
- Harris, J. A. (1995). Confirmatory factor analysis of the aggression questionnaire. Behaviour Research Therapy, (33), 8, 991-993.
- Harris, P. (1989). Children and emotion. NY: Blackwell Scientific.
- Hughes, J.N., Hart, M. T., & Grossman, P. B. (1993). Development and validation of an interview measure of social cognitive skills. Paper presented at the annual meeting of the American Psychological Association, Toronto, Canada, August.
- Joreskog, K.G., & Sorbon, D. (1984). LISREL VI: User's guide (3rd. ed.) Mooreseville, IN: Scientific Software, Inc.
- Knight, G.P., Guthrie, I.K., Page, M.C., & Gabes, R. A. (2002). Emotional arousal and gender differences in aggression: A meta-analysis. Aggressive Behavior, (28), 5, 366-393.
- Kovacs, M. (1992). Children's Depression Inventory (CDI): Manual. Toronto: Multi-Health Systems Inc.
- Kunugimoto, N. (2002). The influence of antagonistic humor on anger and cardiovascular reactivity in hostile young men. Japanese Journal of Health Psychology. (15), 10-20.
- Lindeman, M., Harakka, T., Keltikangas-Jaervinen, L. (1997). Age and gender differences in adolescents' reactions to conflict situations: Aggression, prosociality, and withdrawal. Journal of Youth & Adolescence, 26,(3), 339-351.
- Lata, P. (1998). Sex-role identification and reactions to frustration. Journal of Personality & Clinical Studies, (14), 15-18.
- Mayer, J. D., & Geher, G. (1996). Emotional intelligence and the identification of emotion. Intelligence. (22), 89-113.
- Mayer, J. D., & Salovey, P. R. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), Emotional development and emotional intelligence: Implications for educators (3-31). New York: Basic Books.

- Mayer, J. D., Caruso, D. R. , & Salovey, P. R. (2000). Emotional intelligence meets traditional standards for an intelligence. Intelligence, 27, (4), 267-298.
- Mayer, J. D., Caruso, D. R. , & Salovey, P. R. (in press). Emotional intelligence, empathy and analytic intelligence in adolescents.
- Meesters, C., Muris, P., Bosma, H., Schouten, E. & Beuving, S. (1996). Psychometric evaluation of the Dutch version of the aggression questionnaire. Behavior Research and Therapy, (34), 10, 839-843.
- Morren, M. & Meesters, M. (2002). Validation of the Dutch version of the aggression questionnaire in adolescent male offenders. Aggressive Behavior, 28, 87-96.
- Murray, W. (1996). Are your students emotionally intelligent? Instructor, (105), 52-54.
- Nakano, K. (2000). Psychometric evaluation on the Japanese adaptation of the aggression questionnaire. Behaviour Research and Therapy, 39, 853-858.
- O'Neil, J. (1996). On emotional intelligence: a conversation with Daniel Goleman. Educational Leadership, (54), 6-11.
- Owens, L.D., & MacMullin, C.E. (1995). Gender differences in aggression in children and adolescents in South Australian schools. International Journal of Adolescence & Youth, 6, (1-2), 21-35.
- Paquette, J.A. & Underwood, M.K. (1999). Gender differences in young adolescents' experiences of peer victimization: Social and physical aggression. Merrill-Palmer Quarterly, (45), 2, 242-66.
- Pellegrini, A. D. & Bartini, M. (2000). An empirical comparison of methods of sampling aggression and victimization in school settings. Journal of Educational Psychology, (92), 2, 360-366.
- Pool, C. R. (1997). Up with emotional health. Educational Leadership. (54), 8, 12-14.
- Reker, D., & Parker, J.D.A. (1999). Relationships between emotional intelligence, mood, and problem behaviours in children and adolescence. Poster presented at the annual meeting of the American Psychological Association, Boston, MA.
- Reissman, R. (1999). Emotional intelligence. Mailbox Teacher (28), 1, 34-37.
- Reynes, E. & Lorant, J. (2002). Effect of traditional judo training on aggressiveness among young boys. Perceptual & Motor Skills, 94, 21-25.

- Sagarese, M., & Giannetti, C. C. (1999). Getting to the heart of school safety. Schools in the Middle, 9, 7-10.
- Salovey, P., & Mayer, J.D. (1990). Emotional Intelligence. Imagination, Cognition and Personality, 9, 185-211.
- Sylvester, R. (2000). Unconscious emotions, conscious feelings. Educational Leadership, 20-24.
- Silver, H. F. , Strong, R. W. , & Perini, M. J. (2000). So each may learn integrating learning styles and multiple intelligences. Alexandria, Virginia: Association for Supervision and Curriculum Development.
- Sternberg, R. J. (1985). Beyond IQ: A triarchic theory of human intelligence. New York: Cambridge University Press.
- Sternberg, R. J. (1988). The triarchic mind: A new theory of human intelligence. New York: Viking Penguin.
- Sternberg, R. J. & Clinkenbeard, P. (1995). A triarchic view of identifying, teaching, and assessing gifted children. Roeper Review, 17, (4), 255-260.
- Sternberg, R. J., Ferrari, M., Clinkenbeard, P., & Grigorenko, E. L. (1996). Identification, instruction, and assessment of gifted children: A construct validation of a triarchic model. Gifted Child Quarterly, 40, 129-137.
- Sternberg, R.J., Grigorenko, E.L., Ferrari, M. & Clinkenbeard, P. (1999). A triarchic analysis of an aptitude-treatment interaction. European Journal of Psychological Assessment, 15, 1-11.
- Thorndike, E. L. (1920). Intelligence and its uses. Harper's Magazine, (140), 227-235.
- Tomada, G., & Schneider, B. H. (1997). Relational aggression, gender, and peer acceptance: Invariance across culture, stability over time, and concordance among informants. Developmental Psychology, (33), 4, 601-609.
- Tomar, V. (1999). Aggression: As a function of humour, economic status and gender. Journal of Personality & Clinical Studies, 15, 52-55.
- United States Department of Education (2000). Annual report on school safety.
- Wechsler, D. (1987). Wechsler memory scale- revised. New York: Psychological Corporation.

- Worcel, S. D., Shields, S. A., & Paterson, C. A. (1999). She looked at me crazy: Escalation of conflict through telegraphed emotion. Adolescence, (34), 136, 689-697.
- Yoon, J.S., Hughes, J. N., Cavell, T.A., Thompson, B. (2000). Social cognitive differences between aggressive-rejected and aggressive-nonrejected children. Journal of School Psychology. (38), 6, 551-570.

APPENDIX A

Consent to Participate in Research

A Correlational Study of Emotional Intelligence and Aggression in Adolescents

Dear Parent and Student:

You are asked to participate in a research study conducted by Mr. A. Johnston from the Faculty of Education at the University of Windsor, in contribution of a thesis in pursuit of a Master's Degree in Educational Administration. If you have any questions or concerns about the research, please feel free to contact Dr. Larry Morton, Graduate Studies Coordinator for the Faculty of Education (253 3000 ext. 3835) who is acting as the faculty advisor for this project.

Purpose of the Study

The purpose of the study is to investigate a possible correlation (pattern or link) between emotional intelligence, and aggression.

Procedures

The student will be asked to complete two questionnaires that will take approximately thirty minutes or less. Of the two questionnaires, the first will be used to measure your son or daughter's ability to understand his or herself, as well as his or her ability to relate to people, adapt to change, and manage his or her emotions. It is a self reporting questionnaire with statements like "I care what happens to other people." The student would then circle one of four possible responses from "1 not true of me, 2 a little true of me, 3 pretty much true of me, or 4 very much true of me".

The second questionnaire is also a self reporting questionnaire which means that the student will make decisions about their own tendencies. Examples of some questions include: 1) "When frustrated, I let my irritation show" and 2) "I tell my friends openly when I disagree with them." Students then indicate on a scale from 1 to 5 if the statement is very much like them (5) or not at all like them (1).

These two questionnaires will generate a group scores that will allow me to look at general patterns within the group.

Potential Risks and Discomforts

There are no known, physical, psychological, financial, or social risks associated with this study. Participants have the right to withdraw any time before, during or after the study.

Potential Benefits to Subjects and/or Society

The study of student aggression and a possible link with emotional intelligence may lead to greater understanding of the causes of aggression in adolescents. With this information we might be better able to address inappropriate behaviors and develop programs which help adolescents make better choices. (better understanding may lead to improved educational programs).

Confidentiality

Student names will not be indicated in the findings. All written information will be kept in a locked filing cabinet and all information will only be accessible to the researcher and the faculty advisor. After the

completion of the study, all information will be shredded and destroyed. Confidentiality may and will be broken only in the extreme and unlikely event that a student leads the researcher to believe that the student is seriously in danger or at risk. It must be clear that this would only be done in the best interest of the student and that the information would be made available only to the parents of the student and/or to the appropriate community officials.

(Students- This means that no one but Mr. Johnston will know your answers. The only exception would be if you were to tell him that you are in danger through something that you write. If that happens then he would be obligated to help you. This is always true in a school setting).

Payment For Participation

It is my intention to provide the students with a pizza lunch as a thank you for participating in the study.

Participation and Withdrawal

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from the research if circumstances arise which warrant doing so.

You may withdraw your consent at any time and discontinue participation without penalty. This study has been reviewed and received ethics clearance through the University of Windsor Research Ethics Board. If you have questions regarding your rights as a research subject, contact:

Research Ethics Co-ordinator, University of Windsor, Windsor, Ontario, N9B 3P4
Telephone 519 253 3000, # 3916
E Mail: Ethics@uwindsor.ca

Signature of Research Subject/Legal Representative

I understand the information provided for "The Correlational Study of Emotional Intelligence and Aggression in Adolescents" as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

Name of Subject

Signature of Subject

Date

Signature of Subject Parent/Guardian

Date

Signature of Investigator

In my judgment the subject is voluntarily and knowingly giving informed consent to participate in this research study.

Signature of Investigator

Date

APPENDIX B

October 8, 2002

Dear Parent:

I am a graduate student currently enrolled in the Masters of Education program at the Faculty of Education of the University of Windsor. I am also a vice principal currently on leave.

I am writing to request your permission to include your son/daughter in a study which will be looking at a possible correlation or pattern between emotional intelligence and aggression in grade 7 and 8 students. It is my hope that a better understanding of these two concepts may lead to improved programs which develop children's abilities to work cooperatively, accept responsibility for actions, and make socially appropriate choices.

Participation in the study will involve approximately thirty minutes for your son/daughter to complete two separate questionnaires. Confidentiality and student care are of great importance to me. I would like to stress that all participant questionnaires will be kept confidential. The only time that confidentiality would be broken is to alert you, the parent, and/or the appropriate community officials should the student write something of overwhelming concern to the researcher. Participants may withdraw from the study upon request. A copy of the general conclusions drawn from this research will be available to participants and parents of participants upon request. Your son/daughter's scores on both questionnaires will not be shared with school officials or linked to your son/daughter in anyway other than in the confidential files of the researcher. Questionnaires will be locked in a filing cabinet until after the study is complete and then they will be destroyed.

Your child's participation in the study would be greatly appreciated. Should you agree to allow him/her to participate, please complete and sign the accompanying form. Should you have any questions or need any clarifications at all please feel free to contact me at 734 663 9410. You may also direct concerns to Dr. Larry Morton, Graduate Studies Coordinator for the Faculty of Education at 253 4232 ext.3835. Complaints may be directed to Ms. Mekis, Research Ethics Coordinator, University of Windsor, 519 253 3000 ext. 3916.

Sincerely,

Andrew Johnston

APPENDIX C

Name: _____

Age: _____

Circle: Male Female

Instructions:

Read each statement and decide if you feel that it is very much like you (5) or if you think it is not like you at all (1). Circle the number that goes with your answer. Do not leave any blank. Usually your first feeling is correct. Remember that the far right (5) means the statement describes you very closely, and the far left means the statement does not accurately describe you.

Not like me	Sometimes like me	like me	often like me	Very much like me
1	2	3	4	5

1) Once in a while I can't control the urge to strike another person.
1 2 3 4 5

2) I tell my friends openly when I disagree with them
1 2 3 4 5

3) I flare up quickly but get over it quickly.
1 2 3 4 5

4) I am sometimes eaten up with jealousy.
1 2 3 4 5

5) Given enough provocation, I may hit another person.
1 2 3 4 5

6) I often find myself disagreeing with people.
1 2 3 4 5

7) When frustrated, I let my irritation show.

1 2 3 4 5

8) At times I feel I have gotten a raw deal out of life.

1 2 3 4 5

9) If somebody hits me, I hit back.

1 2 3 4 5

10) When people annoy me, I may tell them what I think of them.

1 2 3 4 5

11) I sometimes feel like a powder keg ready to explode.

1 2 3 4 5

12) Other people always seem to get the breaks.

1 2 3 4 5

13) I get into fights a little more than the average person.

1 2 3 4 5

14) I can't help getting into arguments when people disagree with me.

1 2 3 4 5

15) I am an even tempered person.

1 2 3 4 5

16) I wonder why sometimes I feel so bitter about things.

1 2 3 4 5

17) If I have to resort to violence to protect my rights, I will.

1 2 3 4 5

18) My friends say that I'm somewhat argumentative.

1 2 3 4 5

19) Some of my friends think that I'm a hothead.

1 2 3 4 5

20) I know that "friends" talk about me behind my back.

1 2 3 4 5

21) There are people who pushed me so far that we came to blows.

1 2 3 4 5

22) Sometimes I fly off the handle for no good reason.

1 2 3 4 5

23) I am suspicious of overly friendly strangers.

1 2 3 4 5

24) I can think of no good reason for ever hitting a person.

1 2 3 4 5

25) I have trouble controlling my temper.

1 2 3 4 5

26) I sometimes feel that people are laughing at me behind my back.

1 2 3 4 5

27) I have threatened people I know.

1 2 3 4 5

28) When people are especially nice, I wonder what they want.

1 2 3 4 5

29) I have become so mad that I have broken things.

1 2 3 4 5

APPENDIX D

BarOn EQ-i:YV(S) Sample Questions

1= Not True of Me (Never, Seldom); 2= Just a little True of Me (Sometimes); 3= Pretty Much True of Me (Often); 4= Very Much True of Me (Very Often)

- | | | | | |
|--|---|---|---|---|
| 1. I care what happens to other people. | 1 | 2 | 3 | 4 |
| 2. It is easy to tell people how I feel. | 1 | 2 | 3 | 4 |
| 3. I like everyone I meet. | 1 | 2 | 3 | 4 |
| 4. I am able to respect others. | 1 | 2 | 3 | 4 |
| 5. I get too upset about things. | 1 | 2 | 3 | 4 |
| 6. I can talk easily about my feelings. | 1 | 2 | 3 | 4 |

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APPENDIX E

Glossary of Terms

Adaptability Dimension of Emotional Intelligence: consists of three related abilities: a) reality testing, the ability to validate one's emotions; b) flexibility, the ability to adjust one's emotions, thoughts, and behavior to changing situations and conditions; and c) problem solving, the ability to identify and define problems as well as to generate and implement potentially effective solutions (Bar-On & Parker, 1997).

Anger: physiological arousal and preparation for aggression (Buss & Perry, 1992).

Emotionally Charged Predictors: a cross section of emotions including anger, hostility, verbal aggression, and physical aggression.

Emotional Intelligence: an array of emotional, personal, and interpersonal abilities that influence one's overall ability to cope with environmental demands and pressures (Bar-On & Parker, 1997).

Emotional Quotient: a cross sectional measure of competencies that constitute the core features of emotional intelligence (Bar-On & Parker, 1997).

General Mood Dimension of Emotional Intelligence: consists of two related constructs: a) optimism, the ability to look on the brighter side of life and to maintain a positive attitude even in the face of adversity; and b) happiness, the ability to feel satisfied with one's life, to enjoy oneself and others, and to have fun (Bar-On & Parker, 1997).

Hostility: feelings of ill will and injustice (Buss & Perry, 1992).

Interpersonal Dimension of Emotional Intelligence: consists of three related abilities: a) empathy, the ability to be aware of, to understand, and to appreciate the feelings of others; b) social responsibility, the ability to demonstrate oneself as a cooperative, contributing, and constructive member of one's social group; and c)

interpersonal relationship, the ability to establish and maintain mutually satisfying relationships that are characterized by emotional closeness(Bar-On& Parker, 1997).

Intrapersonal Dimension of Emotional Intelligence: consists of five related abilities including a) emotional self-awareness, the ability to recognize and understand one's feelings; b) assertiveness, the ability to express feelings, beliefs, and thoughts; c) self-regard, the ability to accurately appraise oneself; d) self-actualization, the ability to realize one's potential capacities; and e) independence, the ability to be self-directed and self-controlled in one's thinking and actions and to be free of emotional dependency (Bar-On& Parker, 1997).

Physical Aggression: hurting or harming others in a physical manner (Buss & Perry, 1992).

Relational Aggression: acts such as rumor spreading and social exclusion which harm others through damage to peer relationships (Block, 1983).

Social Aggression: damaging another's self-esteem, social status, or both and may take direct forms such as verbal rejection, negative facial expressions or body movements, or slanderous rumors and social exclusions (Galen & Underwood, 1999).

Stress Management Dimension of Emotional Intelligence: consists of two related abilities: a) stress tolerance, the ability to withstand adverse events and stressful situations without falling apart by actively and positively coping with stress; and b) impulse control, the ability to resist or delay an impulse and to control one's emotions (Bar-On& Parker, 1997).

Verbal Aggression: hurting or harming others in a non physical manner (Buss & Perry, 1992).

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